Version information

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1 AS 2.5.2.0020 version information

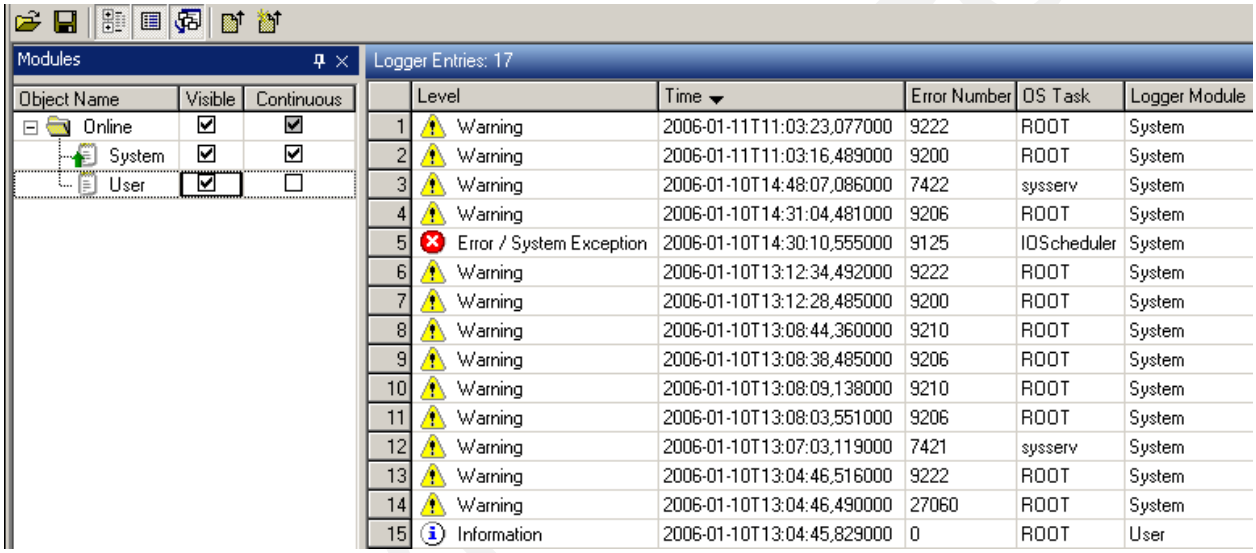
1.1 New functions

1.1.1 Logger diagnostic tool

The new AR/AS logger provides fast response times between when errors occur and when they are displayed in Automation Studio. This reduces the time needed to look for or analyze errors, as well as making it easier overall.

It it also possible to separate system errors from user errors. Storing logger data in several logger modules allows logging to take place per user.

In addition, there is better support for determining and displaying exceptions.



1.1.2 Profiler diagnostic tool

1.1.2.1 Displaying profiling data in plain text

For certain error analyses, it makes since to view the recorded data in the order in which it was recorded. For this reason, a new view with the profiling data has been created. This can be displayed in table form (if it's fast enough for large profilings) or as text.

1.1.2.2 Filtering objects

Filtering objects has been expanded in all views.

1.1.2.3 Boot profiling

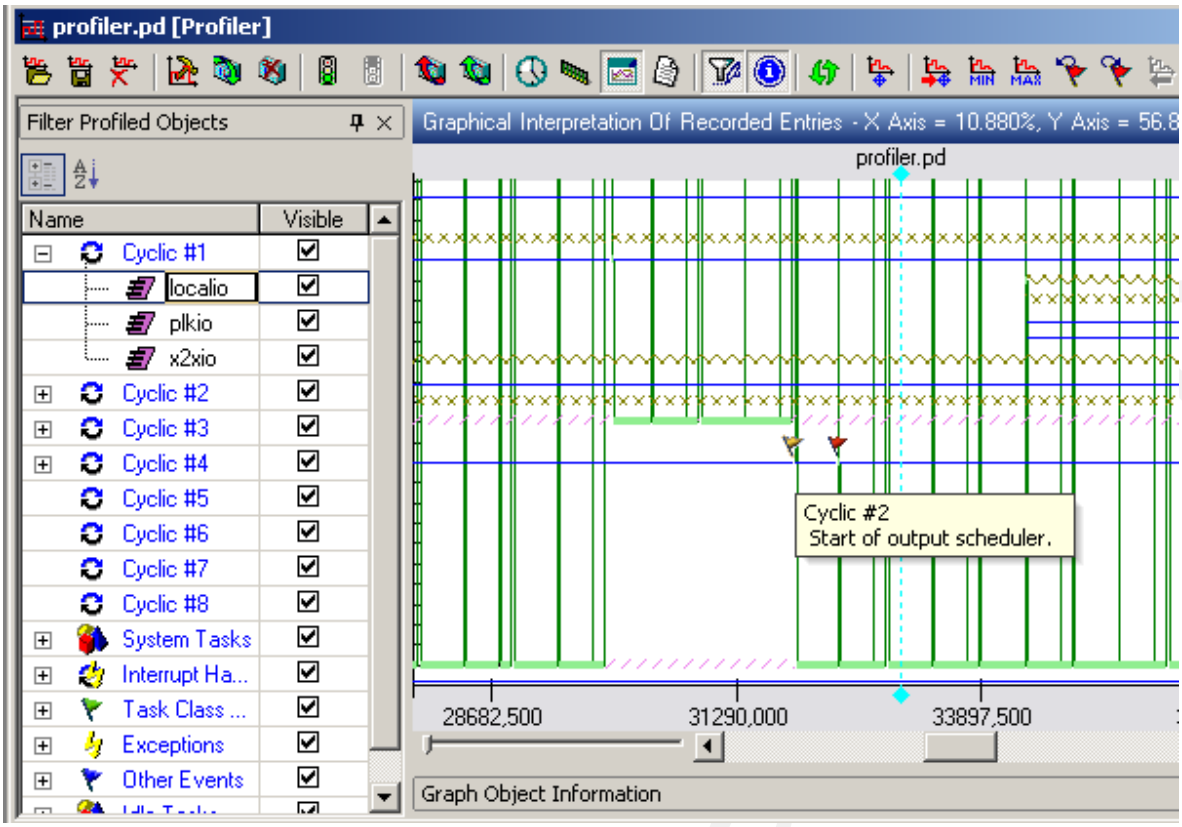
Boot profiling is now also possible so that errors that occur during booting can also be logged.

1.1.2.4 Documenting all B&R objects

The profiler contains documentation of all B&R objects, which allows the user to clearly see what each task in the system is doing. This information can be displayed in the profiler as a tooltip.

1.1.2.5 Changes in the table and graphic views

Changes were made regarding user-friendliness and improved analysis options.



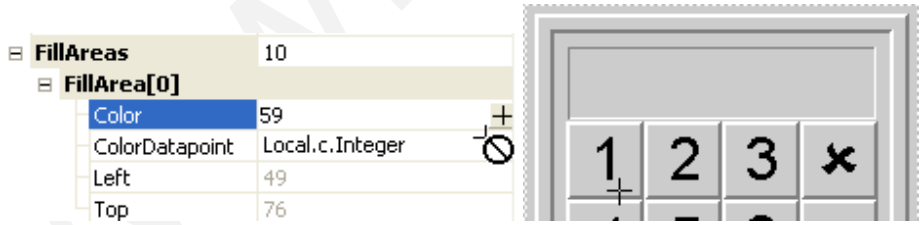
1.1.3 BR bitmap file

A third BR module has been created for the VC visualization. It only contains bitmaps so not as much data needs to be transferred when other resources are modified.

1.1.4 Floodfill

It is now possible to use variables to switch the color for up to 20 bitmap areas at runtime.

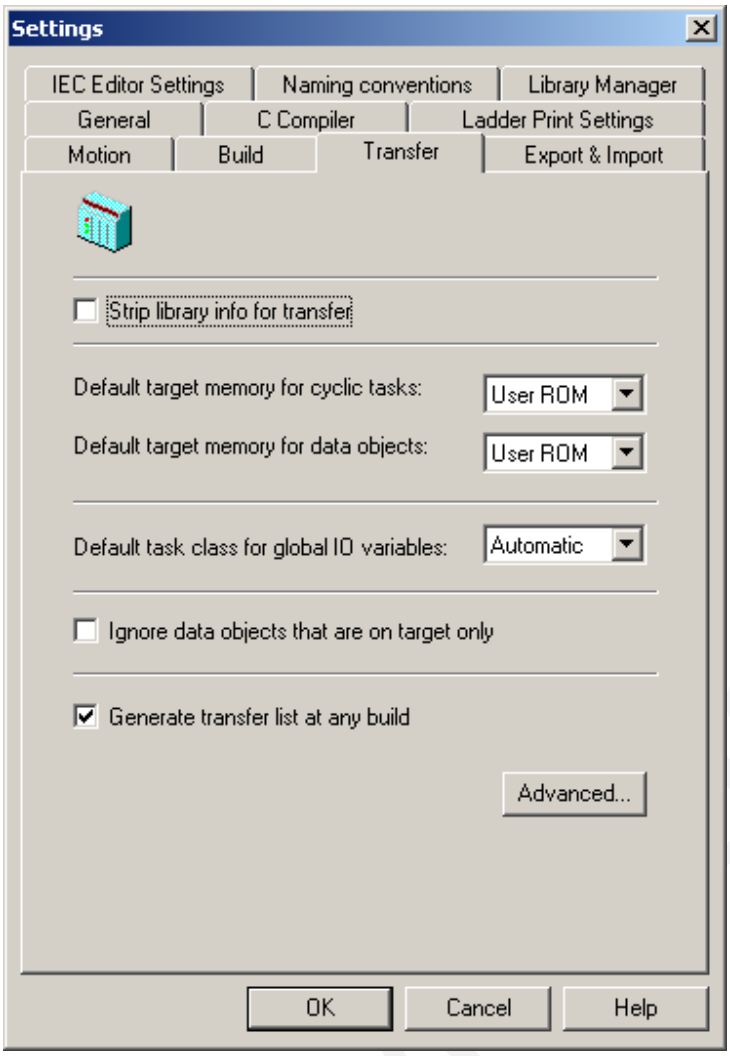
A crosshair is used to select the desired color area in the bitmap and to connect the color data point:



All bordering pixels that have the same color are controlled by this color data point. In this case, the color for the gray area of the "1" key can be modified.

1.1.5 Issue transfer list for each build

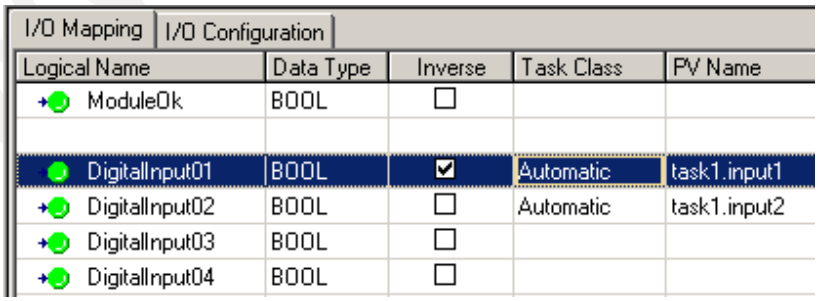
The Transfer tab in the project settings now allows you to specify whether the transfer list (PIL list) should be generated during each build.

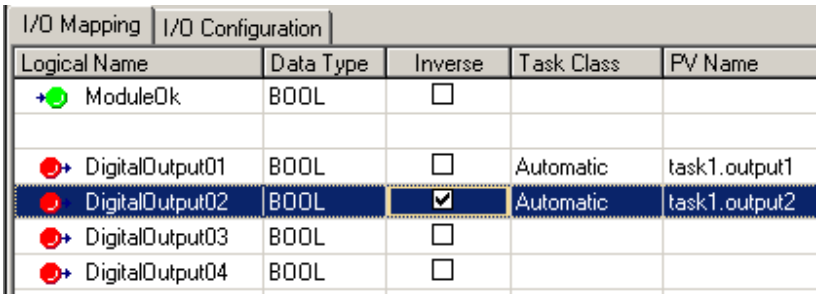


1.1.6 Inverting Boolean variables

The I/O value can be inverted for I/O mappings with the Boolean data type (TRUE becomes FALSE, FALSE becomes true).

For inputs, this means that the value for the respective channel is taken, inverted, and transferred to the mapped variable. For outputs, this means that the value of the mapped variable is taken, inverted, and then transferred to the respective output channel.





1.1.7 Key actions

There are two additional key actions for focus-dependent actions:

Edit_Up and **Edit_Down**

These key actions can only be used on touchpads and make it possible to increment or decrement a variable value without its having to take effect right away (as is the case with Step_Up and Step_Down).

1.1.8 Lifesign data point

The lifesign data point makes it possible to determine whether the visualization can be addressed. This is especially useful when using the terminal to find out if the connection has been interrupted. As long as a connection exists, the connected variable is increased.

1.1.9 Visapi functions

VA_LoadBitmap

The VA_LoadBitmap function loads the graphics file from the removable drive (hard disk, USB stick, or CF) to memory.

VA_BlitBitmap

The VA_BlitBitmap function outputs the graphic previously loaded to memory with the VA_LoadBitmap function to the screen.

VA_FreeBitmap

The VA_FreeBitmap function frees up memory reserved for the graphic.

VA_LangIsAvailable

The VA_LangIsAvailable function can check whether a certain language is available on the target system.

VA_ExtractKeyMatrix

The VA_ExtractKeyMatrix function returns information about whether and which keys on a target system are currently being pressed.
The major difference between the VA_ExtractKeyMatrix function and the VA_GetKeyMatrix function is that the

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VA_ExtractKeyMatrix function can monitor how current the key matrix is by specifying a timeout. Using the key matrix together with terminal mode may cause problems if there is a high network or CPU load. If it's not possible to adhere to the specified timeout, then the key matrix is reset. The user does not need to worry about resetting the keys.

VA_TimeSynchonize

The VA_TimeSynchronize function is used to synchronize the date and time on the terminal target with the data and time on the server.

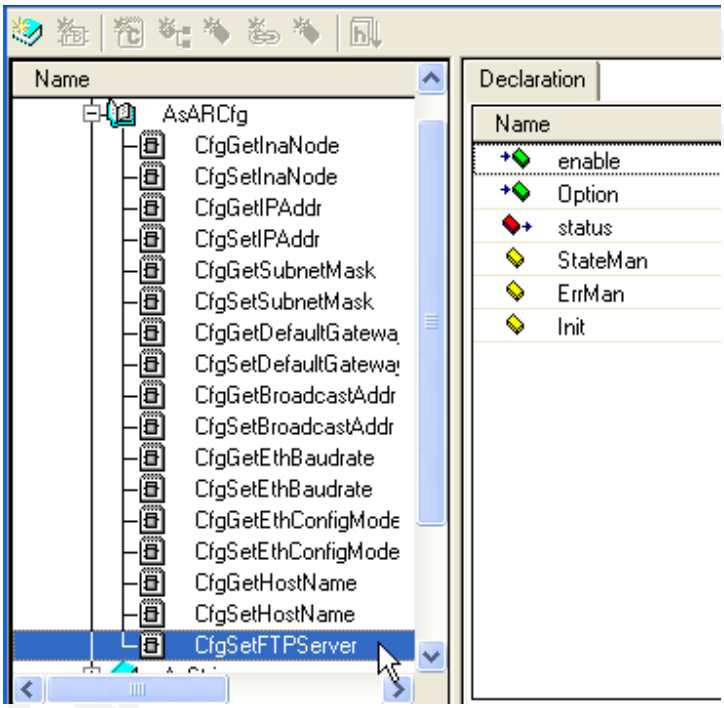
1.1.10 VNC on the terminal

It is now possible to view and operate the terminal visualization using VNC.

1.1.11 Retaining the input value if the module is disconnected

If a module is disconnected, the PVs connected to the input channels retain their last values.

1.1.12 Turning the FTP server on/off



The FTP server can be enabled/disabled with the CfgSetFTPServer() function block in the AsArCfg library.

1.1.13 FileIO - Expansion of functions

File I/O handling (FileIO library) has been expanded to include the following functions:

- SetAttributes()
  Sets attributes.

- GetAttributes
  Reads attributes.

- DevLink
  Allows a file device to be linked. The file device can be used by other FBKs in the FileIO library after linking (e.g. FileOpen, etc.).

- DevUnlink
  Removes a device link (the connection is broken for network drives).

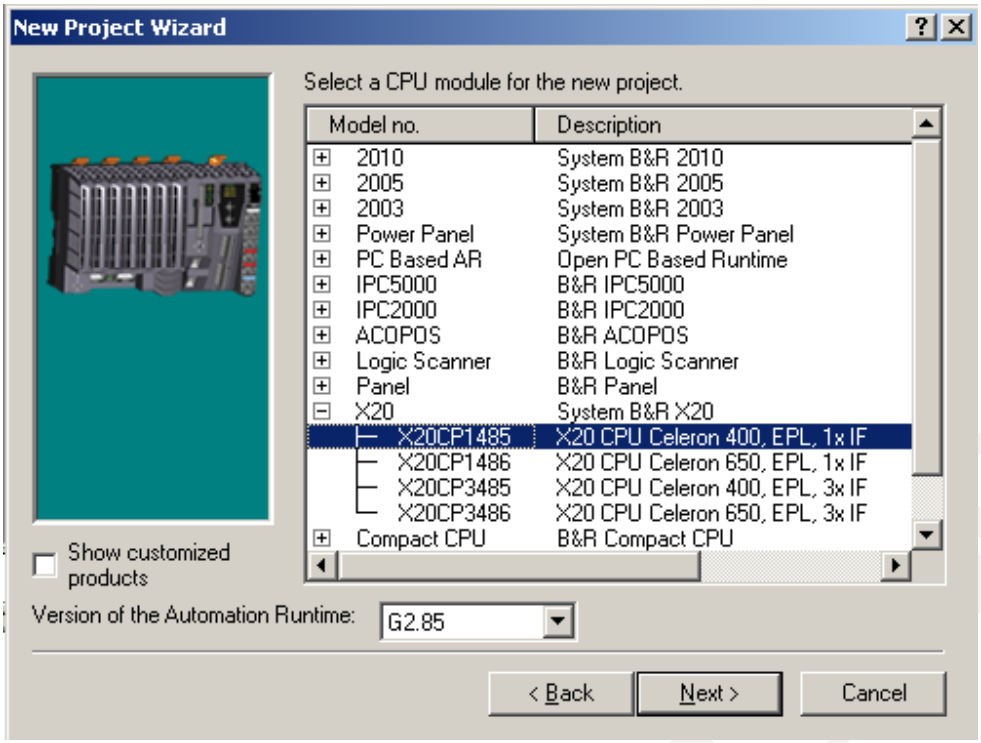
- FileReadEx
  Reads from an open file. Returns the number of actually read bytes.

1.1.14 Redesigned setup and upgrades

The installation process has been simplified:

- AS, PVI and .NET Framework are all installed in one step. It is no longer necessary to restart the setup multiple times.
- Multiple minor AS versions can be installed simultaneously.
- All languages are installed together.
- An installation help file has been added to the autoplay.

1.1.15 X20 CPU support



X20 CPU modules are now supported in Automation Studio.

The following CPUs are currently supported:

- X20CP1495
- X20CP1496
- X20CP3495
- X20CP3496

1.2 Supported hardware

1.2.1 System 2003

1.2.1.1 System 2003 system units

Model number	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server
7CP430.60-1	✓	–	✗	✗	✗	–	✗
7CP470.60-1	✓	–	✗	✗	✗	–	✗
7CP474.60-1	✓	–	✗	✗	✗	–	✗
7CP476.60-1	✓	–	✗	✗	✗	–	✗
7CP570.60-1	–	✓	✓	✓	✓	–	✓
7CP770.60-1	✓	–	✗	✗	✗	–	✗
7CP774.60-1	✓	–	✗	✗	✗	–	✗

Legend:

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✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.1.2 System 2003 I/O modules

Model number	Base backplane	Expansion module rack	EPL	X2X	CANIO	CANIO/ X2X connector	EPL/X2X connector	Added in
7AF101.7	✓	–	✓	✓	✓	–	–	–
7AF104.7	✓	–	✓	✓	✓	–	–	–
7AI261.7	✓	–	✓	✓	✓	–	–	–
7AI294.7	✓	–	✓	✓	✓	–	–	–
7AI351.7	✓	–	✓	✓	✓	–	–	–
7AI351.7i	✓	–	✓	✓	✓	–	–	–
7AI354.7	✓	–	✓	✓	✓	–	–	–
7AI774.7	✓	–	✓	✓	✓	–	–	–
7AI902.70-1	✓	–	✓	✓	✓	–	–	2.5.1.0012 [C2.83]
7AI984.70	✓	–	✓	✓	✗	–	–	2.5.2.8 [A2.86]
7AM351.7	✓	–	✓	✓	✓	–	–	–
7AO352.7	✓	–	✓	✓	✓	–	–	–
7AT324.70	✓	–	✓	✓	✓	–	–	–
7AT324.70-1	✓	–	✓	✓	✓	–	–	–
7AT351.7	✓	–	✓	✓	✓	–	–	–
7AT352.7	✓	–	✓	✓	✓	–	–	–
7AT664.7	✓	–	✓	✓	✓	–	–	–
7CI410.70-1	✓	–	✓	✓	✓	–	–	–
7CM211.7	✓	–	✓	✓	✓	–	–	–
7CM411.70-1	✓	–	✓	✓	✓	–	–	–
7CM471.70-1	✓	–	✓	✗	✗	–	–	–
7DI135.7	✓	–	✓	✓	✓	–	–	–
7DI138.7	✓	–	✓	✓	✓	–	–	–
7DI140.7	✓	–	✓	✓	✓	–	–	–
7DI435.7	✓	–	✓	✓	✓	–	–	–
7DI439.7	✓	–	✓	✓	✓	–	–	–
7DI439.72	✓	–	✓	✓	✓	–	–	–
7DI645.7	✓	–	✓	✓	✓	–	–	–
7DM435.7	✓	–	✓	✓	✓	–	–	–
7DM438.72	✓	–	✓	✓	✓	–	–	–
7DM465.7	✓	–	✓	✓	✓	–	–	–
7DO135.7	✓	–	✓	✓	✓	–	–	–
7DO138.7	✓	–	✓	✓	✓	–	–	–
7DO139.70	✓	–	✓	✓	✓	–	–	–
7DO164.7	✓	–	✓	✓	✓	–	–	–
7DO435.7	✓	–	✓	✓	✓	–	–	–
7DO720.7	✓	–	✓	✓	✓	–	–	–

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7DO721.7	✓	—	✓	✓	✓	—	—	—
7DO722.7	✓	—	✓	✓	✓	—	—	—
7MM424.70-1	✓	—	✓	✓	✓	—	—	—
7MM432.70-1	✓	—	✓	✓	✓	—	—	—
7NC161.7	✓	—	✓	✓	✓	—	—	—

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination

1.2.1.3 System 2003 interface modules

Model number	AR SG3	AR SG4
7IF311.7	✓	—
7IF321.7	✓	—
7IF361.70-1	✓	—
7IF371.70-1	✓	—

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination

1.2.1.4 System 2003 bus controllers

Model number	AR SG3	AR SG4
7EX270.50-1	✓	✓
7EX290.50-1	—	✓
7EX470.50-1	✓	✓
7EX481.50-1	✗ (Not configurable, FBK only)	✓
7EX484.50-1	✗ (Not configurable, FBK only)	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination

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1.2.2 System 2005

1.2.2.1 System 2005 system units

Model number	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server
3CP260.60-1	✓	–	✗	✓	✗	–	✗
3CP340.60-1	–	✓	✓	✓	✓	–	✓
3CP360.60-1	–	✓	✓	✓	✓	–	✓
3CP360.60-2	–	✓	✓	✓	✓	–	✓
3CP380.60-1	–	✓	✓	✓	✓	–	✓
3CP382.60-1	–	✓	✓	✓	✓	–	✓
3IF260.60-1	✓	–	✗	✓	✗	–	✗
3CP152.9	✓	–	✗	✓	✗	–	✗
3CP152.90-2	✓	–	✗	✓	✗	–	✗
3IP151.60-2	✓	–	✗	✓	✗	–	✗
3IP152.60-1	✓	–	✗	✓	✗	–	✗
3IP161.60-1	✓	–	✗	✓	✗	–	✗
3IP350.60-1	✓	–	✗	✓	✗	–	✗
3XP152.60-1	✓	–	✗	✓	✗	–	✗
3XP152.60-2	✓	–	✗	✓	✗	–	✗

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.2.2 System 2005 I/O modules

Model number	Base module rack	Expansion module rack	EPL	X2X	CANIO	CANIO/ X2X connector	EPL/X2X connector
3AI350.6	✓	✓	✓	–	–	–	–
3AI375.6	✓	✓	✓	–	–	–	–
3AI775.6	✓	✓	✓	–	–	–	–
3AI780.6	✓	✓	✓	–	–	–	–
3AI961.6	✓	✓	✓	–	–	–	–
3AM050.6	✓	✓	✓	–	–	–	–
3AM051.6	✓	✓	✓	–	–	–	–
3AM055.6	✓	✓	✓	–	–	–	–
3AM374.6	✓	✓	✓	–	–	–	–
3AO350.6	✓	✓	✓	–	–	–	–
3AO360.60-1	✓	✓	✓	–	–	–	–

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3AO775.6	✓	✓	✓	—	—	—	—
3AT350.6	✓	✓	✓	—	—	—	—
3AT450.6	✓	✓	✓	—	—	—	—
3AT652.6	✓	✓	✓	—	—	—	—
3AT660.6	✓	✓	✓	—	—	—	—
3DI175.6	✓	✓	✓	—	—	—	—
3DI450.60-9	✓	✓	✓	—	—	—	—
3DI475.6	✓	✓	✓	—	—	—	—
3DI476.6	✓	✓	✓	—	—	—	—
3DI477.6	✓	✓	✓	—	—	—	—
3DI486.6	✓	✓	✓	—	—	—	—
3DI575.6	✓	✓	✓	—	—	—	—
3DI695.6	✓	✓	✓	—	—	—	—
3DI875.6	✓	✓	✓	—	—	—	—
3DM455.60-2	✓	✓	✓	—	—	—	—
3DM476.6	✓	✓	✓	—	—	—	—
3DM486.6	✓	✓	✓	—	—	—	—
3DO479.6	✓	✓	✓	—	—	—	—
3DO480.6	✓	✓	✓	—	—	—	—
3DO486.6	✓	✓	✓	—	—	—	—
3DO487.6	✓	✓	✓	—	—	—	—
3DO650.6	✓	✓	✓	—	—	—	—
3DO690.6	✓	✓	✓	—	—	—	—
3DO750.6	✓	✓	✓	—	—	—	—
3DO760.6	✓	✓	✓	—	—	—	—
3NC150.6	✓	✓	✓	—	—	—	—
3NC352.6	✓	✓	✓	—	—	—	—
3UM161.9	✓	✓	✓	—	—	—	—

✓ ... Module supported

✗ ... Module not supported

1.2.2.3 System 2005 bus controllers

Model number	AR SG3	AR SG4
3EX282.6	✗ (Not configurable, FBK only)	✓
3EX350.6	✓	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.2.4 System 2005 interface modules

Model number	AR SG3	AR SG4	Added in
3IF671.9	✓	✓ (3IF060.6)	
3IF622.9	✓	✓ (3IF060.6)	
3IF672.9	✓	✓ (3IF060.6)	
3IF621.9	✓	✓ (3IF060.6)	
3IF681.86	✓	–	
3IF661.9	✓	✓ (3IF060.6)	
3IF648.95	✓	–	
3IF681.95	✓	–	
3IF681.96	✓	–	
3IF613.9	✓	✓ (3IF060.6)	
3IF686.9	✓	–	
3IF722.9	–	✓	
3IF761.9	–	✓	
3IF762.9	–	✓	
3IF762.9-1	–	✓	
3IF766.9	–	✓	2.5.2.2 [D2.85], 3.0.35 [D2.85] SP1
3IF771.9	–	✓	
3IF772.9	–	✓	
3IF779.9	–	✓	
3IF781.9	–	✓	
3IF782.9	–	✓	
3IF786.9	–	✓	
3IF787.9	–	✓	
3IF789.9	–	✓	
3IF791.9	–	✓	
3IF792.9	–	✓	
3IF797.9	–	✗	
3IF797.9-1	–	✓	
3EX450.26-1	✓	✓	
3EX450.66-1	✓	✓	
3EX450.66-2	✓	✓	
3EX450.71-1	✓	✓	
3EX450.72-1	✓	✓	
3EX450.76-1	✓	✓	
3EX450.77-1	✓	✓	

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Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.3 Compact I/O system

1.2.3.1 Compact CPU system units

Model number	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server
7EC020.60-2	–	✓	✗	✓	✓	–	✓
7EC020.61-2	–	✓	✓	✓	✓	–	✓
7EC021.60-1	–	✓	✗	✓	✓	–	✓
80CIS.PS0-2	–	✓	✗	✓	✓	–	✓
80CIS.PS0-3	–	✓	✗	✓	✓	–	✓
80CIS.PS0-4	–	✓	✗	✓	✓	–	✓
80CIS.PS0-5	–	✓	✗	✓	✓	–	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.3.2 Compact I/O system I/O modules

Model number	Base module rack	Expansion module rack	EPL	X2X	CANIO	CANIO/ X2X connector	EPL/X2X connector	Added in
7CX404.50-1	–	–	–	–	✓	–	–	
7CX408.50-1	–	–	–	–	✓	–	–	
7CX414.50-1	–	–	–	–	✓	–	–	
7CX436.50-1	–	–	–	–	✓	–	–	
7CX436.50-K01	–	–	–	–	✓	–	–	
7XX408.50-1	–	–	–	✓	–	✗	–	
7XX408.50-k01	–	–	–	✓	–	✗	–	
7XX410.50-1	–	–	–	✓	–	✗	–	
7XX412.50-1	–	–	–	✓	–	✗	–	
7XX415.50-k02	–	–	–	✓	–	✗	–	

7XX415.50-k03	—	—	—	✓	—	✗	—	
7XX416L.50-K01	—	—	—	✓	—	✗	—	
7XX426.50-1	—	—	—	✓	—	✗	—	
7XX432.50-1	—	—	—	✓	—	✗	—	
7XX436.50-1	—	—	—	✓	—	✗	—	
7XV108.50-11	—	—	—	✓	—	✗	—	
7XV108.50-12	—	—	—	✓	—	✗	—	
7XV108.50-51	—	—	—	✓	—	✗	—	
7XV116.50-01	—	—	—	✓	—	✗	—	
7XV116.50-02	—	—	—	✓	—	✗	—	
7XV116.50-11	—	—	—	✓	—	✗	—	
7XV116.50-12	—	—	—	✓	—	✗	—	
7XV116.50-23	—	—	—	✓	—	✗	—	
7XV116.50-51	—	—	—	✓	—	✗	—	2.5.2.2 [E2.85], 3.0.35 [E2.85] SP3
7XV124.50-01	—	—	—	✓	—	✗	—	
7XV124.50-02	—	—	—	✓	—	✗	—	
7XV124.50-11	—	—	—	✓	—	✗	—	
7XV124.50-12	—	—	—	✓	—	✗	—	
7XV124.50-51	—	—	—	✓	—	✗	—	2.5.2.2 [E2.85], 3.0.35 [E2.85] SP3

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination

1.2.4 Power Panel

1.2.4.1 Power Panel system units

Model number	Supported	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server	Added in
4P0420.00-490	✓	✓	—	—	✓	—	—	—	
4P0420.00-K04	✓	✓	—	—	✓	—	—	—	2.5.1.0014 [E2.83]
4P0420.00-K11	✓	✓	—	—	✓	—	—	—	2.5.1.0025 [O2.83], 2.5.2.0014 [E2.86]
4P3040.00-490	✓	✓	—	—	✓	—	—	—	
4P3040.00-K12	✓	✓	—	—	✓	—	—	—	2.5.1.0014 [E2.83]
4P3040.00-K16	✓	✓	—	—	✓	—	—	—	2.5.1.0014 [E2.83]
4P3040.00-K42	✓	✓	—	—	✓	—	—	—	2.5.1.0013 [D2.83]
4P3040.00-K43	✓	✓	—	—	✓	—	—	—	2.5.1.0013 [D2.83]

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4PP015.0420-01	✓	✓	—	—	✓	—	—	—	
4PP015.0420-36	✓	✓	—	—	✓	—	—	—	
4PP015.0420-K04	✓	✓	—	—	✓	—	—	—	
4PP015.0420-K05	✓	✓	—	—	✓	—	—	—	
4PP015.C420-01	✓	✓	—	—	✓	—	—	—	
4PP015.C420-36	✓	✓	—	—	✓	—	—	—	
4PP015.C420-K01	⧗	✓	—	—	✓	—	—	—	2.5.2.0110 [C2.88]
4PP015.E420-01	✓	✓	—	—	✓	—	—	—	
4PP015.E420-36	✓	✓	—	—	✓	—	—	—	
4PP015.E420-K01	✓	✓	—	—	✓	—	—	—	
4PP015.E420-K02	✓	✓	—	—	✓	—	—	—	2.5.1.0020 [K2.83]
4PP015.E420-K05	⧗	✓	—	—	✓	—	—	—	2.5.2.0110 [C2.88]
4PP035.0300-01	✓	✓	—	—	✓	—	—	—	
4PP035.0300-36	✓	✓	—	—	✓	—	—	—	
4PP035.0300-K06	✓	✓	—	—	✓	—	—	—	
4PP035.0300-K10	✓	✓	—	—	✓	—	—	—	2.5.1.0014 [E2.83]
4PP035.0300-K11	✓	✓	—	—	✓	—	—	—	2.5.1.0014 [E2.83]
4PP035.0300-K12	✓	✓	—	—	✓	—	—	—	2.5.1.0020 [K2.83]
4PP035.E300-01	✓	✓	—	—	✓	—	—	—	
4PP035.E300-36	✓	✓	—	—	✓	—	—	—	
4PP035.E300-K01	✓	✓	—	—	✓	—	—	—	2.5.1.0014 [E2.83]
4PP035.E300-K03	✓	✓	—	—	✓	—	—	—	2.5.1.0013 [D2.83]
4PP035.E300-K04	⧗	✓	—	—	✓	—	—	—	2.5.2.0017 [H2.86]
4PP035.E300-K05	⧗	✓	—	—	✓	—	—	—	2.5.2.0018 [H2.86]
4PP035.E300-K06	⧗	✓	—	—	✓	—	—	—	2.5.2.0018 [H2.86]
4PP120.0571-01	✓	—	✓	—	✓	✓	✓	✓	
4PP120.0571-21	✓	—	✓	—	✓	✓	✓	✓	
4PP120.1043-31	✓	—	✓	—	✓	✓	✓	✓	
4PP120.1043-K08	⧗	—	✓	—	✓	✓	✓	✓	2.5.3.0023 [H2.90]
4PP120.1505-31	✓	—	✓	—	✓	✓	✓	✓	
4PP151.0571-01	✓	—	✓	—	✓	✓	✓	✓	
4PP151.0571-21	✓	—	✓	—	✓	✓	✓	✓	
4PP151.1043-31	✓	—	✓	—	✓	✓	✓	✓	
4PP151.1505-31	✓	—	✓	—	✓	✓	✓	✓	
4PP152.0571-01	✓	—	✓	—	✓	✓	✓	✓	
4PP152.0571-21	✓	—	✓	—	✓	✓	✓	✓	
4PP152.1043-31	✓	—	✓	—	✓	✓	✓	✓	
4PP180.1043-31	✓	—	✓	—	✓	✓	✓	✓	
4PP180.1505-31	✓	—	✓	—	✓	✓	✓	✓	
4PP180.0571-K04	⧗	—	✓	—	✓	✓	✓	✓	2.5.2.0110 [C2.88]
4PP181.1043-31	✓	—	✓	—	✓	✓	✓	✓	
4PP181.1505-31	✓	—	✓	—	✓	✓	✓	✓	

4PP182.1043-31	✓	—	✓	—	✓	✓	✓	✓	
4PP210.0000-95	✓	—	✓	✓	✓	✓	—	✓	
4PP220.0571-45	✓	—	✓	✓	✓	✓	—	✓	
4PP220.0571-65	✓	—	✓	✓	✓	✓	—	✓	
4PP220.0571-85	✓	—	✓	✓	✓	✓	—	✓	
4PP220.0571-A5	✓	—	✓	✓	✓	✓	—	✓	
4PP220.0571-K23	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0020 [K2.83]
4PP220.0571-K24	✓	—	✓	✓	✓	✓	✓	✓	
4PP220.0571-K26	⧗	—	✓	✓	✓	✓	✓	✓	2.5.3.0023 [H2.90]
4PP220.0844-K01	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0020 [K2.83]
4PP220.0844-K02	⧗	—	✓	✓	✓	✓	—	✓	2.5.2.0017 [H2.86]
4PP220.1043-75	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K02	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K03	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K04	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K05	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K06	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K07	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K08	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K09	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K10	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K11	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K12	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K13	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K14	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K15	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0014 [E2.83] 2.5.2.1 [B2.85], 3.0.35 [B2.85]
4PP220.1043-K16	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K17	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K18	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1043-K22	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0020 [K2.83]
4PP220.1043-K23	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0020 [K2.83]
4PP220.1043-K24	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0020 [K2.83]
4PP220.1043-K25	⧗	—	✓	✓	✓	✓	—	✓	2.5.2.0016 [G2.86]
4PP220.1043-K26	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0025 [O2.83], 2.5.2.0014 [E2.86]
4PP220.1043-K27	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0025 [O2.83], 2.5.2.0014 [E2.86]
4PP220.1043-K29	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0023 [H2.90]
4PP220.1043-K30	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0023 [H2.90]
4PP220.1214-K01	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0020 [K2.83]
4PP220.1505-75	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1505-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1505-K02	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1505-K03	✓	—	✓	✓	✓	✓	—	✓	
4PP220.1505-K05	✓	—	✓	✓	✓	✓	—	✓	
4PP220MFA-K01	✓	—	✓	✓	✓	✓	—	✓	

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4PP220MFA-K20	✓	—	✓	✓	✓	✓	—	✓	
4PP250.0571-K01	✓	—	✓	✓	✓	✓	—	✓	
4PP250.0571-K02	✓	—	✓	✓	✓	✓	—	✓	
4PP250.0571-K03	✓	—	✓	✓	✓	✓	—	✓	
4PP250.0571-K04	✓	—	✓	✓	✓	✓	—	✓	
4PP250.0571-K06	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0014 [E2.83], 2.5.2.1 [B2.85], 3.0.35 [B2.85]
4PP250.0571-K08	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0014 [E2.83], 2.5.2.1 [B2.85], 3.0.35 [B2.85]
4PP250.0571-K10	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0013 [D2.83]
4PP250.0571-K11	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0013 [D2.83]
4PP250.0571-K13	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0019 [J2.83]
4PP250.0571-K14	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0019 [J2.83]
4PP250.0571-K15	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0023 [L2.83]
4PP250.0571-K18	⧗	—	✓	✓	✓	✓	—	✓	2.5.2.0017 [H2.86]
4PP250.1043-K01	✓	—	✓	✓	✓	✓	—	✓	
4PP250.1043-K02	✓	—	✓	✓	✓	✓	—	✓	
4PP250.1043-K03	✓	—	✓	✓	✓	✓	—	✓	
4PP250.1043-K04	✓	—	✓	✓	✓	✓	—	✓	2.5.1.0013 [D2.83]
4PP250.1214-K01	✓	—	✓	✓	✓	✓	—	✓	
4PP251.0571-45	✓	—	✓	✓	✓	✓	—	✓	
4PP251.0571-65	✓	—	✓	✓	✓	✓	—	✓	
4PP251.0571-85	✓	—	✓	✓	✓	✓	—	✓	
4PP251.0571-A5	✓	—	✓	✓	✓	✓	—	✓	
4PP251.1043-75	✓	—	✓	✓	✓	✓	—	✓	
4PP251.1043-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP251.1505-75	✓	—	✓	✓	✓	✓	—	✓	
4PP251.1505-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP252.0571-45	✓	—	✓	✓	✓	✓	—	✓	
4PP252.0571-65	✓	—	✓	✓	✓	✓	—	✓	
4PP252.0571-85	✓	—	✓	✓	✓	✓	—	✓	
4PP252.0571-A5	✓	—	✓	✓	✓	✓	—	✓	
4PP252.1043-75	✓	—	✓	✓	✓	✓	—	✓	
4PP252.1043-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP280.0843-K01	✓	—	✓	✓	✓	✓	—	✓	
4PP280.1043-75	✓	—	✓	✓	✓	✓	—	✓	
4PP280.1043-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP280.1043-K01	✓	—	✓	✓	✓	✓	✓	✓	
4PP280.1043-K03	⧗	—	✓	✓	✓	✓	✓	✓	2.5.2.0111[D2.88]
4PP280.1505-75	✓	—	✓	✓	✓	✓	—	✓	
4PP280.1505-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP281.1043-75	✓	—	✓	✓	✓	✓	—	✓	
4PP281.1043-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP281.1505-75	✓	—	✓	✓	✓	✓	—	✓	
4PP281.1505-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP282.1043-75	✓	—	✓	✓	✓	✓	—	✓	

4PP282.1043-B5	✓	—	✓	✓	✓	✓	—	✓	
4PP420.0571-45	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.0571-65	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.0571-A5	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.0573-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.1043-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.1043-B5	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.1505-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP420.1505-B5	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP451.0571-65	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP452.0571-65	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP480.1043-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP480.1505-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP480.1505-K01	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0021 [F2.90]
4PP481.1043-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP481.1043-B5	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP481.1505-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]
4PP482.1043-75	⧗	—	✓	✓	✓	✓	—	✓	2.5.3.0020 [E2.90]

Legend:

✓ ... Module supported

✗ ... Module not supported

— ... Module not possible in this combination

⧗ ... Module not yet tested

1.2.4.2 System 2005 interface modules

Model number	AR SG3	AR SG4	Added in
3IF671.9	✓	✓ (3IF060.6)	
3IF622.9	✓	✓ (3IF060.6)	
3IF672.9	✓	✓ (3IF060.6)	
3IF621.9	✓	✓ (3IF060.6)	
3IF681.86	✓	—	
3IF661.9	✓	✓ (3IF060.6)	
3IF648.95	✓	—	
3IF681.95	✓	—	
3IF681.96	✓	—	
3IF613.9	✓	✓ (3IF060.6)	
3IF686.9	✓	—	
3IF722.9	—	✓	
3IF761.9	—	✓	
3IF762.9	—	✓	
3IF762.9-1	—	✓	
3IF766.9	—	✓	2.5.2.2 [D2.85], 3.0.35 [D2.85] SP1
3IF771.9	—	✓	

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3IF772.9	—	✓	
3IF779.9	—	✓	
3IF781.9	—	✓	
3IF782.9	—	✓	
3IF786.9	—	✓	
3IF787.9	—	✓	
3IF789.9	—	✓	
3IF791.9	—	✓	
3IF792.9	—	✓	
3IF797.9	—	✗	
3IF797.9-1	—	✓	
3EX450.26-1	✓	✓	
3EX450.66-1	✓	✓	
3EX450.66-2	✓	✓	
3EX450.71-1	✓	✓	
3EX450.72-1	✓	✓	
3EX450.76-1	✓	✓	
3EX450.77-1	✓	✓	

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.5 Mobile Panel

1.2.5.1 Mobile Panel system units

Model number	Supported	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server	Added in
4MP181.0843-03	✓	—	✓	—	✓	✓	✓	✓	
4MP181.0843-K05	✓	—	✓	—	✓	✓	✓	✓	
4MP251.0571-12	✓	—	✓	✓	✓	✓	—	✓	
4MP281.0571-12	✓	—	✓	✓	✓	✓	—	✓	
4MP281.0843-13	✓	—	✓	✓	✓	✓	—	✓	
4MP281.0843-K04	⧗	—	✓	✓	✓	✓	—	✓	2.5.2.0016 [G2.86]

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination
⧗ ... Module not yet tested

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1.2.6 Provit

1.2.7 Provit

1.2.7.1 IPC system units

Model number	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server	Added in
1A4000.00	—	✓	—	✓	—	—	—	
1A4600.10	—	✓	—	✓	—	—	✓	
1A4600.10-2	—	✓	✓	✓	—	—	✓	
1A4601.02	—	✓	—	✓	✓	—	✓	
1A4601.02-2	—	✓	✓	✓	✓	—	✓	
1A4601.05	—	✓	—	✓	✓	—	✓	
1A4601.05-2	—	✓	✓	✓	✓	—	✓	

*1) ... Works with AR106 only with an additional SDL transmitter

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination
... Module not yet tested

1.2.7.2 IPC display unit

Model number	Supported	Added in
5D2000.02	✓	
5D2000.03	✓	
5D2000.04	✓	
5D2000.10	✓	
5D2200.01	✓	
5D2200.04	✓	
5D2210.01	✓	
5D2210.02	✓	
5D2219.01	✓	
5D2219.02	✓	
5D2300.01	✓	
5D2300.02	✓	
5D2300.03	✓	
5D2500.01	✓	
5D2500.02	✓	
5D2500.10	✓	

5D2500.22	✓	
5D2500.39	✓	2.5.1.0014 [E2.83]
5D2500.41	✓	2.5.1.0014 [E2.83]
5D2510.01	✓	
5D2510.10	✓	
5D2510.22	✓	
5D2519.01	✓	
5D2519.02	✓	
5D5000.01	✓	
5D5000.03	✓	
5D5000.10	✓	
5D5000.14	✓	
5D5000.18	✓	
5D5001.03	✓	
5D5100.01	✓	
5D5200.01	✓	
5D5200.02	✓	
5D5200.04	✓	
5D5200.27	✓	2.5.1.0014 [E2.83]
5D5201.02	✓	
5D5201.03	✓	
5D5202.01	✓	
5D5202.03	✓	
5D5210.01	✓	
5D5210.02	✓	
5D5211.02	✓	
5D5211.03	✓	
5D5211.06	✓	
5D5211.07	✓	
5D5212.01	✓	
5D5212.02	✓	
5D5212.04	✓	
5D5212.19	✓	2.5.1.0014 [E2.83]
5D5213.01	✓	
5D5500.10	✓	
5D5500.32	✓	
5D5500.58	✓	2.5.1.0014 [E2.83]
5D5500.59	✓	2.5.1.0014 [E2.83]
5D5501.01	✓	
5D5510.10	✓	
5D5600.01	✓	
5D5600.02	✓	
5D5600.03	✓	
5D5601.01	✓	
5D5601.02	✓	
5D5601.03	✓	

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5D5601.05	✓	2.5.1.0014 [E2.83]
5D5601.12	✓	2.5.1.0014 [E2.83]
5D5602.03	✓	

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.7.3 IPC interface modules

Model number	Supported	Added in
5LS166.6	✓	2.5.2.0004 [H2.85]
5LS172.4	✓	
5LS172.6		
5LS172.60	✓	
5LS172.61	✓	
5LS182.6-1	✓	2.5.2.0004 [H2.85]
5LS187.6	✓	
5LS187.61	✓	
5LS189.6	✓	
5LS189.61	✓	
5LS197.6	✓	

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.7.4 IPC input device

Model number	Supported	Added in
5E9000.18	✓	2.5.1.0012 [C2.83]
5E9000.22	✓	2.5.1.0014 [E2.83]
5E9000.24	✓	2.5.1.0014 [E2.83]
5E9000.35	⧗	2.5.2.0016 [G2.86]
5E9600.01-010	✓	
5E9600.01-020	✓	

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Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⌛ ... Module not yet tested

1.2.8 Automation PC

1.2.9 Automation PC

1.2.9.1 APC system units

Model number	Supported	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server	Added in
5PC600.SX01-00	✓	–	✓	✓	✓	✓	–	✓	
5PC600.SX02-00	✓	–	✓	✓	✓ *1)	✓	–	✓	
5PC600.SX02-01	✓	–	✓	✓	✓	✓	–	✓	
5PC600.SX05-00	✓	–	✓	✓	✓ *1)	✓	–	✓	
5PC600.SX05-01	✓	–	✓	✓	✓	✓	–	✓	

*1) ... Works with AR106 only with an additional SDL transmitter

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⌛ ... Module not yet tested

1.2.9.2 Automation Panel

Model number	Supported	Added in
5AP920.1043-01	✓	
5AP920.1214-01	✓	2.5.3.3 [A2.90]
5AP920.1505-01	✓	
5AP920.1505-K31	✓	
5AP920.1706-01	✓	
5AP920.1906-01	✓	
5AP920.2138-01	✓	
5AP951.1043-01	✓	2.5.3.3 [A2.90]
5AP951.1505-01	✓	2.5.3.3 [A2.90]
5AP952.1043-01	✓	2.5.3.3 [A2.90]
5AP980.1043-01	✓	
5AP980.1505-01	✓	
5AP980.1505-K04	✓	
5AP980.1505-K09	⌛	2.5.2.16 [G2.86]
5AP981.1043-01	✓	
5AP981.1505-01	✓	

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5AP982.1043-01	✓	

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
... Module not yet tested

1.2.9.3 APC / PPC interface modules

Model number	Supported	Added in
5AC600.485I-00	✓	2.5.2.0001 [B2.85],
5AC600.CANI-00	✓	2.5.2.0001 [B2.85],
5AC600.CFSI-00	✗	
5AC600.CFSS-00	✓*2)	
5AC600.CDXS-00	✗	
5AC600.DVRS-00	✗	
5AC600.DVDS-00	✗	
5AC600.FDDS-00	✓	
5AC600.HCFS-00	✗	2.5.2.0101 [B2.87],
5AC600.HDDI-00	✗	
5AC600.HDDI-01	✗	
5AC600.HDDI-03	✗	
5AC600.HDDI-05	✗	
5AC600.HDDS-00	✗	
5AC600.HDDS-01	✗	
5AC600.HDDS-02	✗	
5AC800.EXT3-00	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-01	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-02	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-03	✓*3)	2.5.2.0017 [H2.86]
5AC800.EXT3-04	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-05	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-10	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-11	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-12	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-13	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-14	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-15	✓*3)	2.5.2.0020 [J2.86]
5MD900.USB2-01	✗	
5LS166.6	✓	2.5.2.0004 [H2.85]
5LS172.4	✓	
5LS172.6		
5LS172.60	✓	
5LS172.61	✓	

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5LS182.6-1	✓	2.5.2.0004 [H2.85]
5LS187.6	✓	
5LS187.61	✓	
5LS189.6	✓	
5LS189.61	✓	
5LS197.6	✓	
5APCIRAIC-01	✗	

*2) ... Only the USB CF slot supported
*3) ... Only supported for X2X

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.10 Panel PC

1.2.11 Panel PC

1.2.11.1 Panel PC system units

Model number	Supported	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server	Added in
5PC720.1043-00	✓	–	✓	✓	✓	✓	–	✓	
5PC720.1043-01	✓	–	✓	✓	✓	✓	–	✓	
5PC720.1214-00	✓	–	✓	✓	✓	✓	–	✓	
5PC720.1505-00	✓	–	✓	✓	✓	✓	–	✓	
5PC720.1505-01	✓	–	✓	✓	✓	✓	–	✓	
5PC720.1505-02	✓	–	✓	✓	✓	✓	–	✓	
5PC781.1043-00	✓	–	✓	✓	✓	✓	–	✓	
5PC781.1505-00	✓	–	✓	✓	✓	✓	–	✓	
5PC782.1043-00	✓	–	✓	✓	✓	✓	–	✓	

*1) ... Works with AR106 only with an additional SDL transmitter

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.11.2 APC / PPC interface modules

Model number	Supported	Added in
5AC600.485I-00	✓	2.5.2.0001 [B2.85],

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5AC600.CANI-00	✓	2.5.2.0001 [B2.85],
5AC600.CFSI-00	✗	
5AC600.CFSS-00	✓*2)	
5AC600.CDXS-00	✗	
5AC600.DVRS-00	✗	
5AC600.DVDS-00	✗	
5AC600.FDDS-00	✓	
5AC600.HCFS-00	✗	2.5.2.0101 [B2.87],
5AC600.HDDI-00	✗	
5AC600.HDDI-01	✗	
5AC600.HDDI-03	✗	
5AC600.HDDI-05	✗	
5AC600.HDDS-00	✗	
5AC600.HDDS-01	✗	
5AC600.HDDS-02	✗	
5AC800.EXT3-00	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-01	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-02	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-03	✓*3)	2.5.2.0017 [H2.86]
5AC800.EXT3-04	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-05	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-10	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-11	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-12	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-13	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-14	✓*3)	2.5.2.0020 [J2.86]
5AC800.EXT3-15	✓*3)	2.5.2.0020 [J2.86]
5MD900.USB2-01	✗	
5LS166.6	✓	2.5.2.0004 [H2.85]
5LS172.4	✓	
5LS172.6		
5LS172.60	✓	
5LS172.61	✓	
5LS182.6-1	✓	2.5.2.0004 [H2.85]
5LS187.6	✓	
5LS187.61	✓	
5LS189.6	✓	
5LS189.61	✓	
5LS197.6	✓	
5APCIRAIC-01	✗	

*2) ... Only the USB CF slot supported
*3) ... Only supported for X2X

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

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... Module not yet tested

1.2.12 Panelware

1.2.12.1 Panelware system units

Model number	Supported	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server
4C2210.01-510	✓	✓	—	—	—	—	—	—

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination
... Module not yet tested

1.2.12.2 Panelware compact panels

Model number	Supported	AR SG3	AR SG4	Added in
4B1165.00-K04	✓	✓	✓	
4B1230.00-K04	✓	✓	✓	2.5.1.0019 [J2.83]
4B1260.00-390	✓	✓	✓	
4B1260.00-490	✓	✓	✓	
4B1260.00-K07		✓	✓	2.5.2.0110 [C2.88]
4B1270.00-390	✓	✓	✓	
4B1270.00-490	✓	✓	✓	
4B1270.00-K16	✓	✓	✓	
4B1270.00-K19	✓	✓	✓	2.5.1.0013 [D2.83]
4B1270.00-K36	✓	✓	✓	2.5.1.0020 [K2.83]
4B1270.00-K37	✓	✓	✓	2.5.1.0020 [K2.83]
4B1270.00-K38	✓	✓	✓	2.5.1.0020 [K2.83]
4B1270.00-K40	✓	✓	✓	2.5.1.0025 [O2.83], 2.5.2.0014 [E2.86]
4P3040.00-K34	✓	✓	✓	2.5.1.0013 [D2.83]
4P3040.00-K35	✓	✓	✓	2.5.1.0013 [D2.83]
4D1022.00-090	✓	✓	✓	2.5.1.0013 [D2.83]
4D1042.00-090	✓	✓	✓	2.5.1.0013 [D2.83]
4D1044.00-090	✓	✓	✓	2.5.1.0013 [D2.83]
4D1164.00-090	✓	✓	✓	2.5.1.0013 [D2.83]
4D2022.00-090	✓	✓	✓	2.5.1.0013 [D2.83]
4D2024.00-090	✓	✓	✓	2.5.1.0013 [D2.83]
4PW035.E300-01	✓	✓	✓	2.5.1.0025 [O2.83], 2.5.2.0013 [D2.86]

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Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.13 ACOPOS

1.2.13.1 ACOPOS system units

Model number	AR SG3	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server
8AC140.60-2	–	✓	✗	✓	–	–	–
8AC140.61-2	–	✓	✓	✓	✓	–	✓
8AC141.60-2	–	✓	✗	✓	✓	–	✓
8AC141.61-2	–	✓	✓	✓	✓	–	✓
8AC140.61-3	–	✓	✓	✓	✓	–	✓
8AC141.61-3	–	✓	✓	✓	✓	–	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.13.2 ACOPOS bus controllers

Model number	AR SG3	AR SG4
8AC110.60-2	✓	✓
8AC112.60-1	✓	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

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1.2.13.3 ACOPOS encoders

Model number	Supported
8AC120.60-1	✓
8AC121.60-1	✓
8AC123.60-1	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.13.4 ACOPOS I/O modules

Model number	Supported
8AC130.60-1	✓
8AC131.60-1	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.13.5 ACOPOS servo drives

Model number	Supported
8V1010.00-2	✓
8V1010.50-2	✓
8V1016.00-2	✓
8V1016.50-2	✓
8V1022.00-1	✓
8V1022.00-2	✓
8V1045.00-1	✓
8V1045.00-2	✓
8V1090.00-1	✓

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8V1090.00-2	✓
8V1180.00-2	✓
8V128M.00-1	✓
8V128M.00-2	✓
8V1320.00-2	✓
8V1640.00-1	✓
8V1640.00-2	✓

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.14 ACOPOSmulti

1.2.14.1 ACOPOSmulti servo drives

Model number	Supported	Added in
8BVPxxxxxxxx.xxx-x	✓	2.5.3.3 [A2.90]
8BVIxxxxxxDx.xxx-x	✓	2.5.3.3 [A2.90]
8BVIxxxxxxSx.xxx-x	✓	2.5.3.3 [A2.90]

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.14.2 ACOPOSmulti encoders

Model number	Supported	Added in
8BAC0120.000-1	✓	2.5.3.3 [A2.90]
8BAC0121.000-1	✓	2.5.3.3 [A2.90]
8BAC0122.000-1	✓	2.5.3.3 [A2.90]

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

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1.2.14.3 ACOPOSmulti servo motors

Model number	Supported	Added in
8MXXXX.01	✓	2.5.3.3 [A2.90]

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination

1.2.15 X20 System

1.2.15.1 X20 System I/O output modules

Model number	Supported	Base module rack	Expansion module rack	EPL	X2X	CANIO	CANIO/ X2X connector	EPL/X2X connector	Added in
X20AI1744	✓	—	—	—	✓	—	✓	✓	
X20AI2622	✓	—	—	—	✓	—	✓	✓	
X20AI2632	✓	—	—	—	✓	—	✓	✓	
X20AI4622	✓	—	—	—	✓	—	✓	✓	
X20AI4632	✓	—	—	—	✓	—	✓	✓	
X20AO2622	✓	—	—	—	✓	—	✓	✓	
X20AO2632	✓	—	—	—	✓	—	✗	✓	
X20AO4622	✓	—	—	—	✓	—	✓	✓	
X20AO4632	✓	—	—	—	✓	—	✓ 1)	✓	
X20AT2222	✓	—	—	—	✓	—	✓	✓	
X20AT2402	✓	—	—	—	✓	—	✓	✓	
X20AT4222	✓	—	—	—	✓	—	✓	✓	
X20AT6402	✓	—	—	—	✓	—	✓	✓	
X20BC0073	✓	—	—	—	—	✓	—	—	2.5.2.2 [C2.85], 2.5.1.13 [D2.83], 3.0.35 [D2.83]
X20BC0083	✓	—	—	✓	—	—	—	—	2.5.2.1 [B2.85], 3.0.35 [B2.85]
X20BR9300	✓	—	—	—	✓	—	✓	✓	
X20BT9100	✓	—	—	—	✓	—	✓	✓	
X20CM0289	✓	—	—	—	✓	—	✓	✓	2.5.2.8 [A2.86]
X20CM1941	✓	—	—	—	✓	—	✗	✓	
X20CM2900	✓	—	—	—	✓	—	✗	✓	2.5.1.0012 [C2.83]
X20CM8281	⧗	—	—	—	✓	—	✗	✓	2.5.2.0110 [C2.88]
X20CM8323	✓	—	—	—	✓	—	✗	✓	2.5.1.0012 [C2.83]
X20CS1070	✓	—	—	—	✓	—	✗	✓	2.5.2.2 [C2.85], 3.0.35 [C2.85]
X20DC1196	✓	—	—	—	✓	—	✓	✓	

X20DC1198	✓	—	—	—	✓	—	✓	✓	
X20DC1396	✓	—	—	—	✓	—	✓	✓	2.5.1.0017 [H2.83]
X20DC1398	✓	—	—	—	✓	—	✓	✓	
X20DC2190	✓	—	—	—	✓	—	✗	✓	2.5.1.0019 [J2.83]
X20DC2395	✓	—	—	—	✓	—	✓	✓	
X20DC2396	✓	—	—	—	✓	—	✓	✓	2.5.1.0017 [H2.83]
X20DC2398	✓	—	—	—	✓	—	✓	✓	
X20DC4395	✓	—	—	—	✓	—	✓	✓	
X20DC4720	✓	—	—	—	✓	—	✗	✗	2.5.1.0019 [J2.83]
X20DI2371	✓	—	—	—	✓	—	✓	✓	
X20DI2372	✓	—	—	—	✓	—	✓	✓	2.5.2.9 [B2.86]
X20DI2377	✓	—	—	—	✓	—	✓	✓	
X20DI2653	⧗	—	—	—	✓	—	✓	✓	2.5.2.0106[H2.87]
X20DI4371	✓	—	—	—	✓	—	✓	✓	
X20DI4372	✓	—	—	—	✓	—	✓	✓	2.5.2.9 [B2.86]
X20DI4653	⧗	—	—	—	✓	—	✓	✓	2.5.2.0106[H2.87]
X20DI4760	✓	—	—	—	✓	—	✓	✓	2.5.1.0015 [F2.83]
X20DI6371	✓	—	—	—	✓	—	✓	✓	
X20DI6372	✓	—	—	—	✓	—	✓	✓	
X20DI6553	⧗	—	—	—	✓	—	✓	✓	2.5.2.0106[H2.87]
X20DI9371	✓	—	—	—	✓	—	✓	✓	
X20DI9372	✓	—	—	—	✓	—	✓	✓	
X20DM9324	✓	—	—	—	✓	—	✓	✓	2.5.1.0014 [E2.83]
X20DO2321	✓	—	—	—	✓	—	✓	✓	2.5.2.8 [A2.86]
X20DO2322	✓	—	—	—	✓	—	✓	✓	
X20DO2649	✓	—	—	—	✓	—	✓	✓	2.5.1.0015 [F2.83]
X20DO4321	✓	—	—	—	✓	—	✓	✓	2.5.2.8 [A2.86]
X20DO4322	✓	—	—	—	✓	—	✓	✓	
X20DO4331	✓	—	—	—	✓	—	✓	✓	2.5.2.8 [A2.86]
X20DO4332	✓	—	—	—	✓	—	✓	✓	
X20DO4529	✓	—	—	—	✓	—	✓	✓	2.5.1.0014 [E2.83]
X20DO6321	✓	—	—	—	✓	—	✓	✓	
X20DO6322	✓	—	—	—	✓	—	✓	✓	
X20DO6529	✓	—	—	—	✓	—	✓	✓	2.5.2.5 [I2.85]
X20DO8331	✓	—	—	—	✓	—	✓	✓	2.5.2.8 [A2.86]
X20DO8332	✓	—	—	—	✓	—	✓	✓	
X20DO9321	✓	—	—	—	✓	—	✓	✓	
X20DO9322	✓	—	—	—	✓	—	✓	✓	
X20DS1319	✓	—	—	—	✓	—	✓	✓	2.5.2.0104 [F2.87]
X20PS2100	✓	—	—	—	✓	—	✓	✓	
X20PS2110	✓	—	—	—	✓	—	✓	✓	2.5.2.0102 [D2.87]
X20PS3300	✓	—	—	—	✓	—	✓	✓	
X20PS3310	✓	—	—	—	✓	—	✓	✓	2.5.2.0102 [D2.87]
X20PS4951	✓	—	—	—	✓	—	✓	✓	2.5.1.13 [D2.83], 3.0.35 [D2.83]
X20PS9400	✓	—	—	—	✓	—	✓	✓	2.5.1.13 [D2.83], 3.0.35 [D2.83]

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X20PS9500	✓	–	–	–	✓	–	–	–	2.5.1.13 [D2.83], 3.0.35 [D2.83]
X20ZF0000	✓	–	–	–	✓	–	✓	✓	

1)...Functions beginning with hardware rev. D0

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.15.2 X20 interface modules

Model number	AR SG4	Added in
X20IF1063	✓	2.5.2.8 [A2.86]
X20IF1072	✓	2.5.2.4 [H2.85]
X20IF1082	✓	2.5.2.3 [F2.85] 3.0.38 [G2.83]
X20IF1091	✓	2.5.2.9 [B2.86]
X20IF2772	✓	2.5.2.105 [G2.87]
X20IF2792	✓	2.5.2.3 [F2.85] 3.0.38 [G2.83]

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.15.3 System X20 system units

Model number	AR SG4	ARNC0	Visual Components	Terminal mode server	Terminal mode client	VNC server	Added in
X20CP1484	✓	✓	✓	✓	–	✓	2.5.2.101 [B2.87]
X20CP1485	✓	✓	✓	✓	–	✓	2.5.2.3 [F2.85] 3.0.38 [G2.83]
X20CP1486	✓	✓	✓	✓	–	✓	2.5.2.3 [F2.85] 3.0.38 [G2.83]
X20CP3484	✓	✓	✓	✓	–	✓	2.5.2.101 [B2.87]
X20CP3485	✓	✓	✓	✓	–	✓	2.5.2.3 [F2.85] 3.0.38 [G2.83]

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X20CP3486	✓	✓	✓	✓	–	✓	2.5.2.3 [F2.85] 3.0.38 [G2.83]

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination

1.2.16 X67 System

1.2.16.1 X67 System I/O output modules

Model number	Supported	Base backplane	Expansion backplane	EPL	X2X	CANIO	CANIO/ X2X connector	EPL/X2X connector	Added in
X67AI1223	✓	–	–	–	✓	–	✓	✓	
X67AI1323	✓	–	–	–	✓	–	✓	✓	
X67AI2744	✓	–	–	–	✓	–	✓	✓	2.5.2.105 [G2.87]
X67AM1223	✓	–	–	–	✓	–	✓	✓	
X67AM1323	✓	–	–	–	✓	–	✓	✓	
X67AO1223	✓	–	–	–	✓	–	✓	✓	
X67AO1323	✓	–	–	–	✓	–	✓	✓	
X67AT1322	✓	–	–	–	✓	–	✓	✓	
X67AT1402	✓	–	–	–	✓	–	✓	✗	
X67AT1403	✓	–	–	–	✓	–	✓	✓	2.5.2.5 [I2.85]
X67BC7321	✓	–	–	–	✗	–	✗	✗	
X67BC7321-1	✓	–	–	–	✗	–	✗	✗	
X67BC8321	✓	–	–	–	✗	–	✗	✗	2.5.2.1 [B2.85], 3.0.35 [B2.85]
X67BC8321-1	✓	–	–	–	✗	–	✗	✗	2.5.2.1 [B2.85], 3.0.35 [B2.85]
X67DC1198	✓	–	–	–	✓	–	✓	✗	
X67DI1371	✓	–	–	–	✓	–	✓	✓	
X67DI1371.L08	✓	–	–	–	✓	–	✓	✓	
X67DI1371.L12	✓	–	–	–	✓	–	✓	✓	
X67DM1321	✓	–	–	–	✓	–	✓	✓	2.5.2.1 [B2.85], 3.0.35 [B2.85]
X67DM1321.L08	✓	–	–	–	✓	–	✓	✓	
X67DM1321.L12	✓	–	–	–	✓	–	✓	✓	
X67DM9321	✓	–	–	–	✓	–	✓	✓	
X67DM9331.L12	✓	–	–	–	✓	–	✓	✓	
X67DO1332	✓	–	–	–	✓	–	✓	✓	
X67DO9332.L12	⧗	–	–	–	✓	–	✓	✓	2.5.2.0106[H2.87]
X67DV1311.L08	✓	–	–	–	✓	–	✓	✓	
X67DV1311.L12	✓	–	–	–	✓	–	✓	✓	2.5.2.5 [I2.85]

X67IF1121	✓	—	—	—	✓	—	✗	✗	
X67UM1352	✓	—	—	—	✓	—	✓	✗	
X67UM1352-K01	✓	—	—	—	✓	—	✓	✗	
X67MM2436	✓	—	—	—	✓	—	✓	✓	2.5.2.8 [A2.86]

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination
... Module not yet tested

1.2.16.2 X67 System stepper motor modules

Model number	Supported	Added in
X67SM2436	✓	2.5.1.0012 [C2.83]
X67SM2436-K01	✓	
X67SM4320	✓	2.5.1.0016 [G2.83]

Legend:
✓ ... Module supported
✗ ... Module not supported
— ... Module not possible in this combination

1.2.17 X2X System

1.2.17.1 X2X System control elements

Model number	Supported	Added in
0SC104.1	✓	2.5.1.0016 [G2.83]
4E0011.01-K11	✓	2.5.1.0012 [C2.83]
4XP0000.00-K01	✓	
4XP0000.00-K02	✓	
4XP0000.00-K03	✓	
4XP0000.00-K04	✓	
4XP0000.00-K05	✓	
4XP0000.00-K06	✓	

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4XP0000.00-K07	✓	
4XP0000.00-K08	✓	
4XP0000.00-K09	✓	
4XP0000.00-K10	✓	
4XP0000.00-K11	✓	2.5.1.0012 [C2.83]
4XP0000.00-K12	✓	2.5.1.0014 [E2.83]
4XP0000.00-K13	✓	2.5.2.0014 [E2.86]
4XP0000.00-K14	✓	2.5.2.0014 [E2.86]
4XP1640.00-K01	⧗	2.5.2.0017 [H2.86]
4E0011.01-K11	✓	
5E9000.32	✓	2.5.1.0012 [C2.83]

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.2.18 Powerlink

1.2.18.1 Powerlink hub

Model number	Supported	Added in
0AK810.1	⧗	2.5.2.0106[H2.87]

Legend:
✓ ... Module supported
✗ ... Module not supported
– ... Module not possible in this combination
⧗ ... Module not yet tested

1.3 Important notes

1.3.1 Motor temperature model was deactivated (only in V1.181 - V1.183)

When current was applied to the motor, the temperature of the motor temperature model (TEMP_MOTOR_MODELL) hardly changed. This can cause thermal damage to the motor windings. Small motors (rated current < 5A) are especially susceptible when peak current is applied, as are motors without a temperature sensor when the current applied is higher than the rated current.

1.3.2 CHM files can no longer be opened from the network after Windows update

CHM files on a network can no longer be opened after Windows security update KB896358. This works if the security update is uninstalled.

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1.3.3 MFC applications lose GDI objects on computers running Windows XP

If an MFC application (Microsoft Foundation Classes) is exectued on a computer running Microsoft Windows XP Service Pack 2 (SP2), memory leaks may be determined for GDI objects (Graphics Device Interface) when creating or closing lower-level windows. GDI objects from the process can be displayed in the Task Manager to view the memory leak.

Microsoft explains this in the following article: http://support.microsoft.com/default.aspx?scid=kb;en-us;319740

This problem also occurs on Windows Server 2003 computers if the design service is started. By default, the design service is disabled in Windows Server 2003.

1.4 B&R Revision Information (13.02.2007) Version 2.5.2.0020 [J2.86] Automation Software

The current revision information can be downloaded from the B&R Homepage download area (http://www.br-automation.com/download).

1.4.1 Contents

- Requests and problems by ID number
- Requests and problems by version
- Requests and problems by product/component

1.4.2 Requests and problems by ID number

ID	Valuation	known since	planned for	solved since	Description
61475	Problem	V2.3.0.0001	V2.5.2	V2.5.2.3054	Setup if PVI components are open
66165	Problem	V2.3.0.0009	-	V2.4.0.1613 / V1.155	Encoder interface AC122, Resolver: The automatic setting of the encoder resolution (SCALE_ENCOD_INCR) has been removed
68425	Problem	V2.3.0.0009	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Line Coverage incorrect if the task is stopped
76215	Problem	V2.3	V2.4.0.1601	V2.4.0.1601 / V0.224	System crash when updating the NC block monitor
76802	Problem	V2.4.0.0008	V2.4.0.1601	V2.4.0.1601 / V0.220	CNC System: CNC program is blocked with G201
76995	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Support of up to 16 INA devices
77180	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.063	The value of the air gap torque TORQUE_ACT was frozen when the controller was switched off
77330	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.222	CNC System: Path speed interruption at circle-circle transitions (r=const)
77685	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.223	Syntax error at G200 / G201
77710	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.223	Motor parameters not transferred for resolver motors to the drive

78015	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.223	Path speed reduction after G92+rotation
78375	Problem	V2.3.0.0009	V2.5.2.1442 [V2.46]	V2.5.2.1442 [V2.46]	Error 3035 after booting
78437	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.224	Dip in the path speed after G170 + unsync. M-function
78450	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.064	Cam profile automat for virtual axis
78607	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.240	Dip in the path speed when feed override >100%
78932	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.241	Dip in the path speed when using the G170
78992	New function	V2.4.0.0009	V2.4.0.1607	V2.4.0.1607 / V0.290	New NC structure component "controller.mode" for parameter CONTROLLER_MODE
79575	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.066	Overloaded braking resistor
79585	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.064	Limited range for permissible power supply
79590	New function	-	-	V2.4.0.1602 / V1.064	Supply voltage range; Conditionally permissible power supply
79595	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.065	The current controller occasionally malfunctions.
79622	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.063	Encoder Interface AC123, SSI encoder
79627	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.064	Movement start, switch on / switch off controller, holding brake
79637	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.064	Switch on controller, holding brake
79642	New function	-	-	V2.4.0.1602 / V1.065	New homing mode ncDCM
79645	New function	-	-	V2.4.0.1602 / V1.067	Movement stop due to short-circuit braking
79687	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.066	Encoder Interface AC123, SSI multi-turn motor encoder: Disturbance pulse on speed controller actual speed when encoder position overflow occurs
79882	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.066	Encoder interface AC123 and AC130, reference pulse monitoring
79887	Problem	V2.4.0.0009	-	V2.4.0.1602 / V0.543	The current controller occasionally malfunctions.
79892	New function	-	-	V2.4.0.1602 / V0.543	Switch on controller, holding brake
80002	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.230	Movement reversal on the circle when CDC is active
80007	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.230	CNC System: Initialization subprogram
80027	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.067	Encoder interface AC121, Stegmann Hiperface encoder:
80067	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.230	Unwarranted message 8154:"NC block with distance equal to 0.0" at short path sections

80072	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.227	Insert intersection path (G135):
80082	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.226	Select/deselect CDC with transition block (G137):
80087	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.226	Adjust v_jump, a_jump parameters (G105 / G106):
80092	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.226	Unsteadiness in the path speed:
80097	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.224	Updates to the cutter diameter compensation
80102	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.224	CNC monitor update:
80107	New function	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.240	Maximum number of CNC channels is now 8
80125	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	CNC decoder parameter update
80130	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Change of CNC movement parameter
80135	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	CNC System: Updated monitor data structure
80140	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Loading the INIT parameter module:
80145	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Download of ACOPOS parameter data:
80150	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	The dependent libraries "ncda_lib" and "nccnccom" transferred to "ncglobal"
80155	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Full circle with cutter diameter compensation (CDC)
80160	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Straight-circle transitions with cutter diameter compensation
80165	Problem	V2.4.0.0009	-	V2.4.0.0009 / V0.220	SW limit monitor:
80170	New function	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.232	Function expansion G126
80180	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	CNC program cannot be resumed after restart.
80185	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	CNC System: Reverse movement of CNC program not possible with G92+rotation
80190	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Position jump during reverse movement of a CNC program
80195	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	CNC program blocked with M0/M1:
80200	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Error message for G201 together with tangential axis:
80205	New function	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.221	CNC System: Software connection of trigger sources
80210	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.221	Full circle with cutter diameter compensation (CDC)
80215	New function	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.232	Additional information was added to the individual error texts using the block

					number.
80225	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.230	Full circle when radius programming
80322	Problem	V2.4.0.0009	-	V2.4.0.1602 / V0.543	Encoder interface AC120, EnDat encoder: Timeout error due to cable disturbances
80337	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.220	Included drive operating systems
80400	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.221	Included drive operating systems:
80405	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.222	Included drive operating systems:
80410	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.224	Included drive operating systems:
80415	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.225	Included drive operating systems:
80420	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.226	Included drive operating systems:
80425	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.227	Included drive operating systems:
80430	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.228	Included drive operating systems:
80435	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.230	Included drive operating systems:
80437	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.223	Included drive operating systems
80905	Problem	V2.4.0.0009	-	V2.4.0.1602 / V0.543	Braking resistor overload (only in V0.491 - V0.542)
80917	Information	V2.4.0.0009	V2.4.0.1601	V2.4.0.1601 / V0.231	Included drive operating systems
80922	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.233	Incorrect assignment of error and NC action (command)
80927	Information	V2.4.0.1602	V2.4.0.1602	V2.4.0.1602 / V0.232	Included drive operating systems
80952	Information	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.233	Included drive operating systems
81020	New function	-	-	V2.4.0.1602 / V1.068	The following parameters for the motor temperature model and the ACOPOS loads can now be defined:
81140	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.068	Limited range for permissible power supply
81180	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.240	CNC parameter 'limit.elements'
81447	Information	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.234	Included drive operating systems
81452	Information	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.235	Included drive operating systems
81622	Problem	V2.4.0.0009	V2.4.0.1601	V2.4.0.1602 / V0.235	Error when switching on the controller
81692	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.241	Incorrect transfer of ACOPOS parameters
81787	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.068	Encoder interface AC121, Stegmann Hiperface encoder: Absolute position error or commutation error
82202	New function	-	V2.4.0.1602	V2.4.0.1602 / V0.240	Extended value range for "F_override"
82207	New function	-	V2.4.0.1602	V2.4.0.1602 / V0.240	Starting CNC programs at preset block number "Nxxxx"
82217	New function	-	V2.4.0.1602	V2.4.0.1602 / V0.240	Restart function update
82222	New function	-	V2.4.0.1602	V2.4.0.1602 / V0.250	CNC program restart: Saving of decoder synchronous parameters for restart

82285	New function	-	-	V2.4.0.1602 / V1.069	The holding brake is now activated with a delay for short-circuit braking
82310	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.240	NC program cannot be resumed after G170
82385	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.069	Hardware limit switch malfunction when using a cam profile automat
82395	New function	-	-	V2.4.0.1602 / V1.069	Activation of phase failure monitoring
82405	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.069	Phasing in dither mode, invalid commutation angle
82900	Problem	V2.4.0.0009	-	V2.4.0.1602 / V0.544	Target system SG4 (I386), the idle time commands were not processed in the NC manager (only in V0.540-0.543)
83325	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.069	Supply voltage; loading relay oscillates during DC bus voltage and in single-phase mains operation (only in V1.064 - V1.068)
83357	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.240	Error when restarting an NC program
83362	Information	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.240	Included drive operating systems
83377	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.241	G92 with rotation of the coordinate system
83382	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.241	Reverse movement in NC programs with G92
83797	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.241	Incorrect monitor data for the current actual position of an axis
83877	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.241	Error accepting the CDC selection from the Init parameter module
83882	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.241	Error rotating the coordinate system (G92)
84012	New function	V2.4.0.0009	-	V2.4.0.1602 / V1.100	Subsequent network initialization (ACOPOS startup after completing the NC software initialization) now is possible
84157	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.100	Implicit commands are only executed if network initialization is already complete
84317	New function	V2.4.0.0009	-	V2.4.0.1602 / V1.100	New NC action "ncPAR_LIST+ncSERVICE,ncINIT" for initalization of a parameter list.
84402	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.241	System blocked at blocks with G126
84922	New function	V2.4.0.1601	V2.4.0.1606	V2.4.0.1606 / V0.270	NC deployment table for ARNC0
84927	Information	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.241	Included drive operating systems
84947	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.242	Abort of an CNC programm at the end of a path section not possible.
85130	New function	-	-	V2.4.0.1607 / V1.130	The number of data records for the network command trace is now calculated
85407	Information	-	V2.4.0.1602	V2.4.0.1602 / V0.242	Included drive operating systems

86082	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.243	Incorrect CDC calculation at circle/circle transitions with transition angle near 180°
86087	Information	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.243	Included drive operating systems
86092	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.243	CDC: incorrect 0/360° distinction at circle/circle transitions
86097	New function	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.243	CAN drive startup
86457	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.250	Error using $LIN with G126
86462	Problem	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.250	Error changing the parameter "limit.block_buffer".
86467	Problem	-	V2.4.0.1602	V2.4.0.1602 / V0.250	Wrong transition block at G92 + G141
87130	New function	V2.5.0.0004	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Updates in graphic profiling display
87247	New function	-	-	V2.4.0.1602 / V1.102	Handling the Powerlink feature "multiplexed"
87252	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.102	Virtual axis, movement stop
87607	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.102	The cyclic status bits are now processed one task class cycle earlier for Powerlink
87612	Problem	V2.4.0.1601	-	V2.4.0.1602 / V1.102	SG3 platform (M68K), the NC system download could be mistakenly aborted (only in V1.100 - V1.101)
87642	New function	V2.4.0.0009	V2.4.0.1602	V2.4.0.1602 / V0.250	Mirroring allowed in combination with G92
87647	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.250	NC program aborted at G92 + G141
87677	Information	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.250	Included drive operating systems
87812	Problem	V2.4.0.1601	V2.4.0.1602	V2.4.0.1602 / V0.250	Position jump after G92 during reverse movement
87847	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.322	Incorrect target position after backwards positioning before a G170.
87920	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.103	Two-encoder control cannot be activated using "CONTROLLER_MODE=3" (only in V1.021 - V1.102)
88207	New function	-	-	V2.4.0.1602 / V1.103	DIO interface AC130, AC131
88242	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.103	Processing of status bits from ACOPOS
88292	New function	-	-	V2.4.0.1602 / V1.103	Parameters with 5 and 6 bytes data now can be used within a Parameter Sequence
88572	Problem	V2.4.0.0009	-	V2.4.0.1602 / V1.103	Encoder interface AC120. EnDat encoder (only in V1.061-V1.102)
88672	Problem	V2.4.0.1601	-	V2.4.0.1602 / V1.104	Reading the boot status of configured, but inactive ACOPOS modules could prevent data block download (only in V1.100 – 1.104)
88766	New function	V2.4.0.1006	-	- / V1.242	Power stage: X5 connection (motor/choke): Wire break test:

89117	New function	-	V2.4.0.1603	V2.4.0.1603 / V0.260	Behavior of non-programmed axes with G92
89147	Problem	V2.4.0.1602	V2.4.0.1602	V2.4.0.1604 / V1.106	Powerlink, problems when using an ACOPOS with property "multiplexed" as coupling master (only in V1.102 - V1.105)
89152	Problem	V2.4.0.1602	V2.4.0.1602	V2.4.0.1603 / V1.105	SG3 platform (M68K), wrongful timeout errors (only in V1.100 - V1.104)
89272	Information	V2.4.0.1602	V2.4.0.1603	V2.4.0.1603 / V0.260	Included drive operating systems
89685	New function	V2.4.0.0009	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Warning with line coverage and setting breakpoints
90412	Information	V2.4.0.1603	V2.4.0.1606	V2.4.0.1606 / V0.270	Included drive operating systems
90455	Project	V2.4.0.0009	-	V2.5.1.0024 [N2.83]	Support of 5PP120.1505-K02
90577	Information	-	V2.4.0.1604	V2.4.0.1604	Powerlink, starting with ACP10 software V1.106 in dependency on the Powerlink library as minimum version V1.00 is entered
90772	Problem	V2.4.0.0009	-	V2.4.0.1604 / V1.106	Powerlink, error during download of cam profiles or parameter sequences
90852	New function	V2.4.0.1604	V2.4.0.1606	V2.4.0.1606 / V0.270	Function expansion of the tool compensation (G16 and G130/G131)
90917	Problem	V2.4.0.1607	-	V2.4.0.1608 / V1.140	MC_Home: The position factor was not taken into account.
91012	New function	V2.4.0.1604	V2.4.0.1606	V2.4.0.1606 / V0.270	Function expansion of Stop / E-Stop.
91242	New function	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.270	Selection of CNC after transition block
91313	New function	V2.4.1ßeta	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	VNC support for terminal panels
91497	Problem	V2.4.0.0005	V2.4.0.1606	V2.4.0.1606 / V0.271	Contour violation at circular-linear transitions when CDC is active.
91522	Problem	V2.4.0.1606	V2.4.0.1606	V2.4.0.1606 / V0.271	ACOPOS operating system start abort.
91552	Problem	V2.4.0.1606	V2.4.0.1606	V2.4.0.1606 / V0.271	NC operating system download
91562	Problem	V2.4.0.1606	V2.4.0.1606	V2.4.0.1606 / V0.272	Drive start up after change of simulation mode.
91567	New function	V2.4.0.1606	V2.4.0.1606	V2.4.0.1606 / V0.280	ACOPOS startup synchronization between ACP10 and ARNC0
91582	New function	V2.4.0.1606	V2.4.0.1606	V2.4.0.1606 / V0.272	Extended possible combination for S- and T-function.
91662	Information	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.271	Included drive operating systems
91707	New function	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.280	New status "ok" for download of ACOPOS Parameter data
91712	New function	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.280	New NC structure component "controller.speed.t_filter" for parameter SCTRL_TI_FIL
91887	New function	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.280	'External encoder' as coupling master:

91987	Problem	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.273	Positon error when restarting an NC program whith automtic tangential axis.
91992	Problem	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.273	Position of the automatic tangential axis after deactivation (G140)
92027	New function	-	-	V2.4.0.1606 / V1.120	New NC structure component "controller.speed.t_filter" for parameter SCTRL_TI_FIL
92032	New function	-	-	V2.4.0.1606 / V1.120	New status "ok" for download of ACOPOS Parameter data
92037	New function	-	-	V2.4.0.1606 / V1.120	Wait for the network communication during the basic network initialization
92042	New function	-	-	V2.4.0.1606 / V1.120	Target system SG4 (I386), Powerlink, ACOPOS startup, synchronization between ACP10 software and ARNC0 software
92052	Information	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.272	Included drive operating systems
92057	Information	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.273	Included drive operating systems
92062	Information	V2.4.0.1605	V2.4.0.1606	V2.4.0.1606 / V0.280	Included drive operating systems
92100	Problem	V2.4.0.0009	-	V2.4.0.1606 / V1.120	With NC Deployment tables only one Powerlink interface could be used
92172	New function	-	-	V2.4.0.1606 / V1.120	New NC object with type "ncV_AXIS"
92540	Problem	V2.4.0.1604	-	V2.4.0.1606 / V1.120	Supply voltage failure was sometimes not displayed (only in V1.106 - V1.111)
92550	Problem	V2.4.0.0009	V2.4.0.1452 [V2.40]	V2.4.0.1452 [V2.40]	CANdftab() returning status 8833 instead of 14710 during cyclic operation
92615	Problem	V2.4.0.1605	V2.4.0.1611	V2.4.0.1611 / V0.340	CNC program cannot be aborted if the override is <= 0 when the program is started
93495	Problem	V2.4.0.0009	-	V2.4.0.1607 / V1.121	Incorrect limitation of set stator current of the quadrature component on asynchronous motors during generator operation (only in V1.040 - V1.120)
93607	New function	-	-	V2.4.0.1607 / V1.130	New NC structure component "limit.parameter.a_stop"
93612	New function	-	-	V2.4.0.1607 / V1.130	New NC structure component "controller.mode" for parameter CONTROLLER_MODE
93617	New function	-	-	V2.4.0.1607 / V1.130	New NC structure component "controller.uf" for controller mode "U/f Control"
93622	Information	-	V2.4.0.1607	V2.4.0.1607	Starting with ACP10 software V1.130 the number of data records for the network command trace is no longer accepted directly from the NC configuration, but calculated depending on the number of configured ACOPOS modules.
93682	Information	V2.4.0.1606	V2.4.0.1607	V2.4.0.1607 / V0.290	Included drive operating systems
93687	New function	-	V2.4.0.1607	V2.4.0.1607 / V0.290	New NC structure component "controller.uf" for controller mode "U/f

					Control"
93692	New function	V2.4.0.1606	V2.4.0.1607	V2.4.0.1607 / V0.290	New NC structure component "limit.parameter.a_stop"
93902	New function	V2.4.0.1606	V2.4.0.1607	V2.4.0.1607 / V0.291	G90/G91 with G16, G53 up to G59, G92, G159 and Dxx allowed in an NC block.
93927	Problem	V2.4.0.1606	V2.4.0.1607	V2.4.0.1607 / V0.291	NC program freezes. 'Illegal float value' is displayed in the CNC monitor as position, remaining distance and speed.
94062	Information	-	V2.4.0.1607	V2.4.0.1607	Library "acp10_mc": PLCopen function blocks for motion control with ACP10 software
94157	Problem	V2.4.0.1606	V2.4.0.1607	V2.4.0.1607 / V0.291	CNC program aborted at circle-circle transitions if tool radius nearly equal to programmed radius
94162	Information	V2.4.0.1606	V2.4.0.1607	V2.4.0.1607 / V0.291	Included drive operating systems
95737	New function	V2.4.0.1607	V2.4.0.1608	V2.4.0.1608 / V0.300	NC Configuration for Virtual Interface
95968	Problem	V2.4.1.0007	V2.5.3.0024 [I2.90]	V2.5.1.0024 [N2.83]	Downloading vcresman.br causes crash when updating to a new VC firmware version
95975	Problem	V2.4.1.0006	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Directory path > 254 characters causes a page fault
97352	Problem	V2.4.0.0009	V2.4.0.1608	V2.4.0.1609 / V0.312	Change of CAN response timeout
97357	New function	-	V2.4.0.1608	V2.4.0.1608 / V0.300	NC Deployment Tables: Disabling NC object blocks
97362	New function	-	V2.4.0.1608	V2.4.0.1608 / V0.300	ACOPOS Parameter Tables: Disabling parameter records
97465	Problem	V2.4.0.1607	-	V2.4.0.1608 / V1.140	MC_Home: When Execute was set only for one cycle and an error occurred the outputs Error and ErrorID where not set.
97480	Problem	-	-	V2.4.0.1608 / V1.140	Homing of an axis is now also possible when the controller is off, if the mode "Offset" or "Direkt" with "Refimpuls" is used.
97485	Problem	V2.4.0.1607	-	V2.4.0.1608 / V1.140	For virtual axis the controller state is not any more checked, when a move is started.
97495	Problem	-	-	V2.4.0.1608 / V1.140	State "Standstill" will be reached when the initialization is complete.
97500	New function	-	-	V2.4.0.1608 / V1.140	Starting with V1.140 Multiaxis-FBs are also available with CAN-Bus.
97577	Information	V2.4.0.1607	V2.4.0.1608	V2.4.0.1608 / V0.292	Included drive operating systems
97582	Information	V2.4.0.1607	V2.4.0.1608	V2.4.0.1608 / V0.300	Included drive operating systems
97612	Problem	V2.4.0.0009	-	V2.4.0.1608 / V1.140	Encoder interface AC123, SSI encoder (up to V1.062 and from V1.111 to V1.132)
97627	Problem	V2.4.0.0009	-	V2.4.0.1608 / V0.545	Encoder interface AC120, EnDat encoder position synchronization (only in V0.538 - V0.544)

97632	Problem	V2.4.0.0009	-	V2.4.0.1608 / V1.131	Encoder interface AC120, EnDat encoder position synchronization (only in V1.052 – V1.130)
97637	Problem	V2.4.0.0009	-	V2.4.0.1608 / V1.131	Initialization of a parameter list aborted due to an error
97642	New function	V2.4.0.0009	-	V2.4.0.1608 / V1.131	The servo drives 8V1640.03-2 and 8V1640.13-2 are now supported
97647	Problem	V2.4.0.1607	-	V2.4.0.1608 / V1.132	U/f Control
97662	New function	V2.4.0.0009	-	V2.4.0.1608 / V1.140	NC Deployment Tables: Disabling NC object blocks
97667	New function	V2.4.0.0009	-	V2.4.0.1608 / V1.140	ACOPOS Parameter Tables: Disabling parameter records
97672	New function	V2.4.0.0009	-	V2.4.0.1608 / V1.140	The maximum length of the parameter data for cyclic user data to the drive ("ncCYCL_USER_TODRV") was increased from 8 to 18.
97682	Problem	V2.4.0.0009	-	V2.4.0.1608 / V1.140	Sometimes the controller was not switched off if a movement was aborted in simulation mode (only in V1.131 - V1.132)
97687	Problem	V2.4.0.0009	-	V2.4.0.1608 / V1.140	CAN, reconfiguring the cyclic monitor data (only in V1.102 - V1.132)
97692	Problem	V2.4.0.0009	-	V2.4.0.1608 / V1.140	Encoder interface AC120, EnDat encoder
97902	Problem	V2.4.0.1606	-	V2.4.0.1609 / V1.141	Functions could be blocked after a network failure or network initialization (only in V1.100 - V1.140)
98657	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.312	No compensation movement at NC blocks with tool data number or tool orientation:
98730	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.312	Automatic transfer of motor and encoder parameters during ACOPOS startup:
98927	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.312	Position error at the end of a program without first deactivating an automatic tangential axis:
99160	Problem	V2.4.0.1013	V2.4.1.1312 [K2.73]	V2.4.1.1312 [K2.73]	HWGetTemperature() sporadically returning values that are too high
99247	New function	V2.4.0.0009	-	V2.4.0.1609 / V1.141	Encoder interface Ac120, EnDat encoder
99252	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.142	Encoder interface AC123, SSI multiturn encoder
99422	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.312	ACOPOS CAN synchronization
99492	Problem	V2.5.0.1301	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Inserting and removing 2003 screw-in modules on the AF10x in the main rack not supported
100067	Problem	V2.4.0.1606	-	V2.4.0.1609 / V1.142	"move.reference" was contained in the "ACP10VAXIS_typ" data type instead of "move.homing" (only in V1.110 - V1.141)
100072	New function	V2.4.0.0009	-	V2.4.0.1609 / V1.142	NC Manager errors are now entered in the Network Command Trace

100217	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.320	Position latch function
100282	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.142	Powerlink, inconsistent data records in Network Commando Trace
100357	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.320	Position jump when network communication drops out
100547	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.320	G92 + G170, Decoder stopped a movement block too early.
100557	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.320	Error when transferring parameters for controller initialization
100582	Problem	V2.4.0.0009	-	V2.4.0.1609 / V0.546	Error number 6036 "Motor parameters missing or invalid": The additional information was falsely always set to zero
100607	Problem	V2.4.0.0009	-	V2.4.0.1609 / V0.546	Encoder interface AC120, EnDat encoder
100627	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.320	Error when initializing the external encoder
100672	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.320	Path speed too high, if a G170 is moved over in the backwards direction.
100677	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.320	After stopping an NC program, the CNC system sometimes gets stuck.
100702	Information	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.312	Included drive operating systems
100707	Information	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.320	Included drive operating systems
100712	New function	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.320	New NC structure component "network.nc_sys_restart"
100810	Problem	V2.4.0.1608	-	V2.4.0.1609 / V1.150	Digital outputs AC130, AC131 with powerlink network: The digital outputs could not be set, if the digital IO configuration was transferred immediately after the start of the NC operating system.
100820	New function	V2.4.0.0009	-	V2.4.0.1609 / V1.141	The servo drives 8V1010.50-2 und 8V1016.50-2 are now supported
100837	Problem	-	V2.4.0.1609	V2.4.0.1609 / V0.321	Command Acceptance (only in Version 0.320)
100850	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.143	After movement abortion the controller sometimes was not switched off (only in V1.067 - V1.142)
100857	Information	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.321	Included drive operating systems
101157	New function	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Entering parameter sequence records in network command trace can now be activated
101195	New function	V2.4.1.0011	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	New function: Edit Up / Edit Down
101307	New function	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Cam automat: The maximum number of events for a state was increased from 4 to 5.
101317	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Cam automat: Wrong default reaction with FFFF cam profile and negative

					direction of master movement (only in in V1.006-V1.144).
101322	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Cam automat: Position jump with negative direction of master movement (only in V1.006-V1.144).
101510	Problem	V2.4.0.0009	-	V2.4.0.1610 / V1.151	Encoder interface AC120, sine/cosine encoder: Short signal disturbances in the AB line are not detected
101897	Problem	V2.4.0.1609	V2.4.0.1609	V2.4.0.1609 / V0.322	CNC standstill after consecutive NC blocks with M parameters.
102047	New function	-	V2.4.0.1609	V2.4.0.1609 / V0.322	Change to the user status, "controller.ready"
102075	New function	-	-	V2.4.0.1609 / V1.150	New function blocks
102100	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.145	During a power failure in Controller mode "U/f controller", the axis stops even though movement interruption is deactivated (ERRESP_UDC_POWERFAIL is 0) (only in V1.103 - V1.144)
102120	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Encoder interface AC130: In the mode "encoder emulation without reference pulse" the digital outputs DO5 and DO6 could not be set.
102130	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.145	Stopped axis moves during power failure
102347	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Cam automat: Wrong slave position with compensation gear mode ncSL_ABS (only in V1.020-V1.145).
102522	Information	V2.4.0.1608	-	-	External encoder operation
102532	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.322	Cycle time violation TC1 during the initialization of a PV interface
102542	Information	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.322	Included drive operating systems
102547	New function	-	V2.4.0.1609	V2.4.0.1609 / V0.322	EnDat parameters transferred to ACOPOS always work
102552	Problem	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.322	Error processing structure blocks such as $IF, etc.
102907	New function	-	V2.4.0.1609	V2.4.0.1609 / V0.323	Inconsistent referenced status
102945	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.150	Monitoring of the ACOPOS continuous power: The error numbers 9075 and 41075 were mistakenly displayed (only in V1.141 - V1.145)
103052	New function	-	V2.4.0.1612	V2.4.0.1612 / V0.341	Init ACOPOS parameter tables
103062	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.150	From now on, EnDat parameters transferred from PLC to the ACOPOS always work
103067	Information	V2.4.0.0009	V2.4.0.1609	V2.4.0.1609	Starting with ACP10 software V1.150, EnDat parameters transferred from PLC to the ACOPOS always work

103257	Information	V2.4.0.1608	V2.4.0.1609	V2.4.0.1609 / V0.323	Included drive operating systems
103517	New function	-	V2.4.0.1610	V2.4.0.1610 / V0.330	Force function for digital Inputs
103692	Problem	V2.4.0.0009	V2.4.0.1610	V2.4.0.1610 / V0.324	Tool radius from the tool table sometimes was not used (only in V0.270 - 0.323)
103877	Problem	V2.4.0.0009	V2.4.0.1610	V2.4.0.1610 / V0.330	Transfer errors during initialization of digital inputs blocked further commands
103900	Problem	V2.4.0.1609	V2.4.0.1611	V2.4.0.1611 / V0.340	NC program can get held up if the sign for the movement override is changed
104002	New function	-	V2.4.0.1610	V2.4.0.1610 / V0.330	New NC structure component "dig_in.force"
104055	Project	-	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Simplification of setup process
104207	Problem	V2.4.0.0009	V2.4.0.1610	V2.4.0.1610 / V0.330	Wrong INIT states after switching off the simulation mode "ncCNCSYS "
104255	Problem	V2.4.0.1609	-	V2.4.0.1610 / V1.151	Simulation mode, 8V1010.50-2 und 8V1016.50-2 (only in V1.141 - V1.150)
104337	Information	V2.4.0.1609	V2.4.0.1610	V2.4.0.1610 / V0.324	Included drive operating systems
104342	Information	V2.4.0.1609	V2.4.0.1610	V2.4.0.1610 / V0.330	Included drive operating systems
104560	Problem	-	-	V2.4.0.1610 / V1.151	FB-Datatransfer was locked
104565	Problem	-	-	V2.4.0.1610 / V1.151	The input "SlaveOffset" of the FB "MC_CamIn" was only used for the first start.
104915	Problem	V2.4.0.1609	V2.4.0.1611	V2.4.0.1611 / V0.340	Incorrect rotation direction of the automatic tangential axis after G92
105112	Problem	V2.4.0.1610	V2.4.0.1611	V2.4.0.1611 / V0.340	Position error after rotation of coordinate system without shift offset (G92)
105182	Problem	V2.4.0.1610	V2.4.0.1611	V2.4.0.1611 / V0.340	"Divide error" after $TIME or G04
105257	Problem	V2.4.0.1610	V2.4.0.1612	V2.4.0.1612 / V0.341	Global NC subprograms are not terminated correctly
105672	Problem	V2.4.0.1608	-	V2.4.0.1611 / V1.152	Current controller: In the case of change of switching frequency F_SWITCH the current controller parameters (ICTRL_KV und ICTRL_TI) were not adjusted automatically. (only in V1.140 -1.151)
105828	Problem	V2.4.1.0024	V2.5.1.0013 [D2.83]	V2.5.2.0018 [H2.86]	TouchOnLock (status bit 13) reset during page change
106272	Problem	V2.4.0.0009	-	V2.4.0.1611 / V1.152	Encoder interface AC130, AC123, Incremental encoder reference pulse check: The value of the reference pulse width of the encoder 3 could not be set.
106350	Problem	V2.4.0.1611	V2.4.0.1612	V2.4.0.1612 / V0.343	G126 with G141 together in an NC block
106392	New function	V2.4.0.0009	-	V2.4.0.1611 / V1.152	Encoder interface AC130, AC123, Incremental encoder reference pulse check: The parameters ENCOD_REF_CHK_DELTA, ENCOD2_REF_CHK_DELTA und ENCOD3_REF_CHK_DELTA are

					available for reading the reference pulse interval error.
106482	New function	V2.4.0.1610	V2.4.0.1611	V2.4.0.1611 / V0.340	Signal functions G221 and G222
106487	Information	V2.4.0.1610	V2.4.0.1611	V2.4.0.1611 / V0.340	Included drive operating systems
106541	Problem	V2.4.0.1610	-	V2.4.0.1611 / V1.152	Possibility of internal deadlock (only in V1.151)
106777	New function	V2.4.0.0009	-	V2.4.0.1611 / V0.548	Encoder interface AC130, AC123, Incremental encoder reference pulse check: The parameters ENCOD_REF_CHK_DELTA, ENCOD2_REF_CHK_DELTA und ENCOD3_REF_CHK_DELTA are available for reading the reference pulse interval error.
106832	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.142	CAN, time for response timeout after Parameter Request increased
106837	Problem	V2.4.0.0009	-	V2.4.0.1609 / V1.141	Powerlink, cycles for response timeout after Parameter Request within cyclic frames increased
106975	Information	-	V2.4.0.1611	V2.4.0.1611 / V1.152	Function for output "EndOfProfile" was implemented in FB "MC_CamIn"
106985	Problem	-	-	V2.4.0.1611 / V1.152	With a negative start position MC_CamIn coupled too late
106990	Problem	-	-	V2.4.0.1611 / V1.152	Errormessage when phasing with dither mode
106995	Problem	-	-	V2.4.0.1611 / V1.152	MC_Power: When the controller was switched on there was the possibility that previously reported errors were reported again.
107017	Problem	V2.4.0.1106	V2.4.0.1612	V2.4.0.1612 / V0.342	Invalid Job-ID at ARNC0 response
107355	Problem	V2.4.0.1610	-	V2.4.0.1611 / V1.152	At a negative position MC_TouchProbe delivered a big positive value
107492	Information	V2.4.0.1611	V2.4.0.1612	V2.4.0.1612 / V0.341	Included drive operating systems
107877	Problem	V2.4.0.1608	-	V2.4.0.1612 / V1.153	Encoder interface AC130, incremental encoder emulation without reference pulse: An error occurred in the encoder emulation, after 2^25 impulses were produced.
108025	Problem	V2.4.0.1610	-	V2.4.0.1612 / V1.154	ACOPOS Functions Block "CMP" (Comparator): In the comparator modes 1, 4, 9 and 12 the hysteresis function could not be activated.
108147	Information	-	V2.4.0.1612	V2.4.0.1612 / V0.342	Included drive operating systems
108232	Problem	V2.4.0.1606	-	V2.4.0.1612 / V1.154	Sometimes NC actions were processed in the wrong order
108467	New function	V2.4.0.1611	V2.4.0.1612	V2.4.0.1612 / V0.342	Dwell time 3 NC cycles too long.
108472	Problem	V2.4.0.1611	V2.4.0.1612	V2.4.0.1612 / V0.342	Signal function G220 and override.
108477	Problem	V2.4.0.1611	V2.4.0.1612	V2.4.0.1612 / V0.342	

					Signal function G220 and path jolt time > 0.
108717	Problem	V2.4.0.0009	-	V2.4.0.1612 / V1.154	Induction motor: The torque was limited in the field weakness area to strongly
108857	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	The "TcIdleFiller" thread is displayed in an incorrect area during profile recording
108997	Problem	V2.4.0.1610	-	V2.4.0.1613 / V1.155	Encoder interface AC120, EnDat encoder: Sometimes the wrong motor data set was used
109035	Information	-	V2.4.0.1612	V2.4.0.1612 / V1.154	New FB "MC_SetOverride" was implemented
109112	Information	V2.4.0.1611	V2.4.0.1612	V2.4.0.1612 / V0.343	Included drive operating systems
109397	Problem	V2.4.0.0009	-	V2.4.0.1614 / V1.157	Servo drives 8V10xx.00-2: Junction temperature was not monitored sufficiently
109415	Problem	V2.5.0.0015	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Maximum 5,000 link nodes
109417	Problem	V2.4.0.0009	-	V2.4.0.1613 / V1.155	Servo drive 8V1640.13-2: The junction temperature was not monitored sufficiently
109922	Problem	V2.4.0.0009	-	V2.4.0.1614 / V1.156	Encoder interface AC130: At some 8V101x.xx-2 servo drives, the encoder emulation did not work.
110032	New function	-	-	V2.4.0.1614 / V1.157	Multimotor operation: If several motors are attached at a servo drive, then for all motors the temperature models are computed now.
110292	Problem	V2.4.0.0009	-	V2.4.0.1614 / V1.156	Encoder interface AC123, SSI encoder: During parameterising of SSI encoders a wrong actual position could be set up.
110480	New function	V2.5.0.1309 [N2.80]	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	80CIS.PS0-1 not supported by I/O system
110487	Information	V2.4.0.0009	V2.4.0.1608	-	Starting with V1.140 Multiaxis-FBs are also available with CAN-Bus.
110502	Information	V2.4.0.0009	V2.4.0.1613	V2.4.0.1613	Encoder interface AC122, Resolver: In V1.155 the automatic setting of the encoder resolution (SCALE_ENCOD_INCR) has been removed
110642	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	Error message appears without cause for signal functions.
110647	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	CNC system deadlock during G221.
110652	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	CNC system deadlock during G220 / G222.
110657	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	G222 signal output in the wrong position.
110662	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	Incorrect G222 signal output during path positioning.
110667	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	G222 signal is ignored during restart.
110672	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	

					Not an error message if multiple signals of the same type are contained in the same path section.
110677	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.344	After some restart errors, cnt_ncprog remains at 1.
110785	Problem	-	V2.4.0.1615	V2.4.0.1615 / V0.350	CNC halt after program was aborted.
110805	New function	-	-	- / V1.180	Motor holding brake control monitioring: No error message with defective relay
110847	Problem	V2.4.0.1613	V2.4.0.1614	V2.4.0.1614 / V0.345	Position error after G92 and active tool compensation (tool offset or tool length compensation)
111080	Problem	-	-	V2.4.0.1614 / V1.157	FB-Outputs were set for two cycles
111905	Problem	V2.5.0.3608	V2.5.0.3615	V2.5.2.3002	Not possible to preset the data type of "internal" variable objects
112385	Problem	V2.5.0.3012	V2.5.2.3101	V2.5.2.3101	Download with Panel Studio aborted with 4808 or timeout
112590	New function	V2.4.0.0009	V2.5.2.3001	V2.5.2.3001	Backing up / restoring files on CF
112697	Problem	V2.4.0.1614	V2.4.0.1615	V2.4.0.1615 / V0.350	CAN synchronization PP2xx
112702	Problem	V2.4.0.1614	V2.4.0.1615	V2.4.0.1615 / V0.350	CNC monitor not initialized.
112707	Problem	V2.4.0.1614	V2.4.0.1615	V2.4.0.1615 / V0.350	Reverse movement not possible on path sections with G201.
112712	Problem	V2.4.0.1614	V2.4.0.1615	V2.4.0.1615 / V0.350	No reverse movement at G170 or trigger event delay.
112807	New function	V2.4.0.0009	-	V2.4.0.1615 / V1.160	Powerlink, new parameters for network initialization in the NC configuration
112990	Problem	V2.5.0.4112 [Q2.80]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Watchdog error when setting a breakpoint
113070	Problem	-	-	V2.4.0.1615 / V1.160	MC_TouchProbe could block the parameter transfer
113600	Project	V2.5.0.4112 [Q2.80]	V2.5.0.0023 [F2.81]	V2.5.1.4102 [B2.82]	Support for "data execution prevention"
113822	Information	V2.4.0.1611	V2.4.0.1614	V2.4.0.1614 / V0.344	Included drive operating systems
113827	Information	V2.4.0.1611	V2.4.0.1614	V2.4.0.1614 / V0.345	Included drive operating systems
113832	Information	V2.4.0.1611	V2.4.0.1615	V2.4.0.1615 / V0.350	Included drive operating systems
113837	New function	V2.4.0.1615	V2.4.0.1616	V2.4.0.1616 / V0.360	ARNC0 sampling time not dependent on TC1
114012	Problem	V2.4.0.1614	V2.4.0.1616	V2.4.0.1616 / V0.361	Incorrect shift of coordniate system with G92 for linar axes
114242	Problem	V2.4.0.1614	-	V2.4.0.1616 / V1.162	Despite switched off controller it could occur that the error 9012: "Motor temperature sensor: Not connected or destroyed" was falsely displayed. (only in V1.157 - V1.161)
114245	Problem	V2.4.0.0009	-	V2.4.0.1616 / V1.162	Parameter sequence and parameter list: Data address equal to zero now is tested
114402		V2.4.0.1614	V2.4.0.1616	V2.4.0.1616 / V0.361	New G function: G12

	New function				
114407	Problem	V2.4.0.1614	V2.4.0.1616	V2.4.0.1616 / V0.361	Error in edge detection for trigger2 by using the force function.
114447	Problem	V2.4.0.1614	V2.4.0.1616	V2.4.0.1616 / V0.361	Error message in response to correct time signal output
114757	Information	V2.4.0.1611	V2.4.0.1616	V2.4.0.1616 / V0.360	Included drive operating systems
114872	Problem	V2.4.0.0009	-	V2.4.0.1616 / V1.162	Speed controller: No movement stop with disabled speed controller (only in V1.101 - V1.161)
115087	Information	V2.4.0.1611	V2.4.0.1616	V2.4.0.1616 / V0.361	Included drive operating systems
115325	New function	-	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	Service interface expansion
115661	Information	V2.4.0.4182 [C2.71]	V2.5.2.0005 [I2.85]	-	DirInfo() returns status 20799 for long filenames
115712	Information	V2.4.0.1611	V2.4.0.1616	V2.4.0.1616 / V0.362	Included drive operating systems
115776	Information	V2.4.0.4182 [C2.71]	V2.5.2.0005 [I2.85]	-	DirCopy() doesn't copy directories with long path names
115792	New function	-	V2.4.0.1619	- / V0.390	Maximum length for the names of data modules extended to 12 bytes
116165	Problem	V2.5.0.1313 [R2.80]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	EPL manager: New firmware
116280	Problem	V2.5.0.1314 [S2.80]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	EPL manager: New firmware
116495	Problem	V2.5.0.0020	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	No life sign monitoring for terminal mode
116542	New function	V2.5.0.3015	V2.5.2.3101	V2.5.2.3101	Recognizing an error configuration in the node number setting
116607	Information	-	V2.4.0.1616	V2.4.0.1616 / V0.363	Included drive operating systems
116620	New function	V2.5.0.0020	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Status variable return value doesn't work in terminal mode
116688	Problem	V2.5.0.0020	V2.5.1.0010 [B2.83]	V2.5.2.0011 [D2.86]	INA communication disrupted after a page change in terminal mode
116800	Problem	V2.5.0.4114 [S2.80]	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	IRQ problem with ACPI Windows XP
116810	Problem	V2.4.0.4181 [B2.71]	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	Automatically setting daylight savings time
116815	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0002 [E2.85]	AR010 automatically detects IRQ sharing conflict
116880	New function	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	File specification for the LoadHistroyUseFilter method (wildcards not possible)
116902	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.364	Positioning not allowed in the NC program while in the "ncHALT_PRG" state.
116907	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.364	NC action "ncMOVE, ncHALT" not allowed while in the "ncHALT_SST" state.

116912	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.364	The program is not aborted when a positioning movement is held up at M0/M1.
116917	New function	-	V2.4.0.1617	V2.4.0.1617 / V0.364	Addition to the time signal function
117310	Problem	V2.5.0.0021 [T2.80]	V2.5.1	V2.5.1.0019 [J2.83]	Crash when transferring the visualization
117505	Problem	V2.5.0.0020	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Black bitmaps at runtime after project conversion
117790	Project	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	New AsARProf library
117812	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.365	The automatic tangential axis may not reach the target position on the shortest distance.
117835	Problem	V2.5.0.0021 [T2.80]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	VA_GetCalStatus always returns status 65535 for a VC SG3 object
117855	Problem	V2.4.1.0020	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Using the VNC library on an IPC 5000 with an ATI chipset crashes when establishing the VNC connection.
117988	Problem	V2.4.1.0021	V2.4.1.0022	V2.5.1.0019 [J2.83]	Printer buffer overflow alarm output in converted projects
118095	Problem	V2.5.0.0021 [T2.80]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	AsIODPStatus() only supports 42 channels at once
118185	Problem	V2.5.0.3015	V2.5.2.3101	V2.5.2.3101	PanelStudio - No project download possible on C200 / C220 /300 PANELWARE controllers (TIMEOUT after clearing ROM)
118222	Information	-	V2.4.0.1617	V2.4.0.1617 / V0.364	Included drive operating systems
118227	Information	-	V2.4.0.1617	V2.4.0.1617 / V0.365	Included drive operating systems
118255	Problem	V2.5.0.4114 [S2.80]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	real-time behavior can be negatively affected
118290	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	A new language's name is not added to the Resources tab when it's added
118310	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	The connection path of a logical group can only be selected after the configuration is saved
118315	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	Exception if an empty scaling resource is connected to a variable
118325	Problem	V2.5.0.1328 [D2.81]	V2.5.2.0002 [C2.85]	V2.5.1.0010 [A2.83]	ReadyRelay drops out
118360	Problem	V2.4.0.1616	-	V2.4.0.1617 / V1.164	Powerlink, wrong response with writing a a parameter via the acyclic channel
119093	Problem	V2.5.0.0020	V2.5.1	V2.5.1.0019 [J2.83]	Monochrome bitmaps displayed in black after project conversion
119120	Problem	V2.4.0.4187 [V2.71]	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	AR update from AS doesn't work with default settings
119255	New function	-	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	Support for NMI logic on the APC

119265	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.368	The start of an NC block caused the simulation mode "ncCNCSYS" to be switched off.
119267	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.366	Changing the direction of the tool length compensation while changing the main level.
119285	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	Cannot erase memory on C200
119350	Problem	V2.5.0.4115 [T2.80]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	problems after update
119675	Problem	-	V2.4.0.1619	- / V0.371	Status of ncaccess() wrong
119798	Problem	V2.5ßeta	V2.5.2.0002 [C2.85]	V2.5.1.0010 [A2.83]	Firmly set limits on scaled data points are lost during a datapoint refresh
119808	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0005 [E2.82]	V2.5.1.0020 [K2.83]	Terminal: Current page is not written to the actual page number when starting the visualization
119842	New function	-	V2.4.0.1617	V2.4.0.1617 / V0.367	Compensation movement when changing the tool length and axis offset.
119960	New function	-	V2.5.1.4102 [B2.82]	V2.5.1.4103 [C2.82]	Support for watchdog on APC and PPC devices
119985	Problem	V2.4.1.0022	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	IRQs from AT keyboards may cause ACOPOS error 14126
120067	Problem	V2.4.0.1616	V2.4.0.1617	V2.4.0.1617 / V0.367	Axis limit exceeded during circular movement.
120072	Problem	V2.4.0.1016	V2.4.0.1617	V2.4.0.1617 / V0.368	NC program is terminated at the first block with a zero-point offset (G53 - G59, G159).
120102	Problem	-	-	- / V1.166	Target system SG4 (I386), data block transfer was blocked in rare cases
120473	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0005 [E2.82]	V2.5.1.0019 [J2.83]	Terminal restarts shortly after the visualization is started
120492	Problem	-	V2.4.0.1623	- / V0.420	ARNC0 trace buffer size is configurable
120573	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0005 [E2.82]	V2.5.1.0019 [J2.83]	Terminal freezes if the visualization is started
120585	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Size of IOMap.iom files suddenly becomes bigger
120720	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.368	NC Programm will not be terminated.
120758	Problem	V2.5ßeta	V2.5.1.0005 [E2.82]	V2.5.2.0018 [H2.86]	Display flickers on APCs with i815E chipset
120907	Problem	-	V2.4.0.1617	V2.4.0.1617 / V0.368	Error at expanded zero-point offset (G159).
120917	Information	-	V2.4.0.1617	- / V0.366	Included drive operating systems
121135	Project	V2.5.0.0022 [E2.81]	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Turning FTP on/off
121390	Problem	V2.5.1.0002 [B2.82]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	Serial interface no longer works after a warm or cold restart.
121532	Problem	V2.4.0.1616	V2.4.0.1618	- / V0.370	Position jumps when using multiple interfaces simultaneously in one CNC system.

121557	Information	-	V2.4.0.1617	- / V0.367	Included drive operating systems
121570	Problem	V2.5.1.4102 [B2.82]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	Changing the IP address of the Windows interface in the AR010 configurator resets the APC (if AR010 active)
121595	Problem	V2.5.1.4102 [B2.82]	V2.5.1.4104 [D2.82]	V2.5.1.4104 [D2.82]	Problems booting if C drive not write-protected
121767	Information	-	V2.4.0.1617	- / V0.368	Included drive operating systems
122110	Project	V2.4.0.0009	V2.5.1.4303 [C2.82]	V2.5.1.4303 [C2.82]	Creation of an installation set for AR105
122115	Project	V2.4.0.0009	V2.5.1.4403 [C2.82]	V2.5.1.4403 [C2.82]	Creation of an installation set for AR106
122178	Problem	V2.5.1.0003 [C2.82]	V2.5.1.0005 [E2.82]	V2.5.2.0018 [H2.86]	LED update problems with "Controlled from PLC"
122257	Problem	-	V2.4.0.1618	- / V0.370	Stop after a trigger path section (G201).
122427	Information	-	V2.4.0.1618	- / V0.370	Included drive operating systems
122580	New function	V2.5.0.3016	V2.5.2.3101	V2.5.2.3101	Identifying a PLC from its DNS name
122625	Problem	V2.5.0.0023 [F2.81]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	X67SM2436: New firmware
122772	Problem	-	-	- / V1.170	NC Action "ncMESSAGE,ncTEXT": Error despite correct error text data module
122777	New function	-	-	- / V1.170	Acceleration of parameter transfer when using "ACP10_MC"
122845	Information	V2.5.1.4103 [C2.82]	V2.5.1.4104 [D2.82]	V2.5.1.4103 [C2.82]	Powerlink communication fails on DirectX visualizations
122890	Problem	V2.5.1.4103 [C2.82]	V2.5.1.4105 [E2.82]	V2.5.1.4108 [V2.82]	AR010 loader crash if date configured to a year later than 2037
123090	Problem	V2.5.1.0003 [C2.82]	V2.5.1.4104 [D2.82]	V2.5.1.4104 [D2.82]	Computer reboots after a warm or cold restart
123160	Problem	V2.5.1.0003 [C2.82]	-	V2.5.2.0002 [D2.85]	If a new alarm group is inserted, then the colors are not entered in "Appearance" (black).
123247	New function	-	-	- / V1.180	New NC structure component "controller.ff" for controller mode with feed forward control
123325	New function	-	-	- / V1.170	Now every FB has a new output "Busy".
123330	Problem	-	-	- / V1.170	Possibly MC_DigitalCamSwitch could not leave an error state
123340	New function	-	-	- / V1.170	MC_DigitalCamSwitch: The component "Node" of the data type "MC_OUTPUT_REF" was replaced by "Axis".
123345	New function	-	-	- / V1.170	MC_Home: New input "HomingMode"
123350	New function	-	-	- / V1.170	MC_SetOverride: The input "Execute" was changed to "Enable"
123360		-	-	- / V1.170	

	New function				MC_ReadAxisError: Additional in- and outputs
123370	New function	-	-	- / V1.170	"MC_GearIn" und "MC_CanIn": New input "MasterParID"
123375	New function	-	-	- / V1.170	New FB for SG3 and SG4 targets
123380	New function	-	-	- / V1.170	New FBs for SG4 targets
123395	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	Watchdog when starting the visualization application
123400	Problem	-	-	- / V1.170	CAN, no network monitoring after NC action "ncNETWORK,ncINIT+ncRESET"
123547	Problem	-	-	- / V1.171	The loop for reading the parameter BOOT_STATE could be aborted too early
123646	Problem	-	-	- / V1.180	Induction motor, Flux controller, Flux weakening controller: Torque limitation and current fluctuation
123727	New function	-	V2.4.0.1619	- / V0.371	NC object name in NC object information.
123732	Information	-	V2.4.0.1619	- / V0.371	Included drive operating systems
123785	Problem	V2.5.0.0024 [G2.81]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	Cannot transfer a visualization to the AC141
123840	Problem	V2.5.1.0003 [C2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	USB memory stick doesn't work if inserted during operation
123950	Problem	-	V2.4.0.1619	- / V0.390	Position jumps when using G25 or G180 together with G92.
124000	Problem	V2.5.0.3417	V2.5.2.3001	V2.5.2.3001	Remote connection problem if the remote computer doesn't exist
124025	New function	-	V2.5.1.4105 [E2.82]	V2.5.1.4105 [E2.82]	Check of minimum version for MTCX software and BIOS
124110	Problem	V2.5.0.0022 [E2.81]	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Target crashes when transferring nested structures
124265	Problem	V2.5.1.0003 [C2.82]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Visualization doesn't start if a name contains 01 or 02 at the end
124280	Problem	V2.5.0.0024 [G2.81]	V2.5.2.3001	V2.5.2.3001	CF creation: Problem creating CF with a full hard drive
124372	Information	-	V2.4.0.1619	- / V0.380	Included drive operating systems
124377	New function	-	V2.4.0.1619	- / V0.390	New parameter 'mode' for Cam Profiles
124415	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	If the visualization folder in the logical/physical folder is written in upper case, then the visualization can´t be chosen in the VNC dialogue
124440	Problem	V2.5.0.0024 [G2.81]	V2.5.2	V2.5.2.0002 [D2.85]	Crash opening the "Keys" tab
124460	Problem	-	V2.4.0.1619	- / V0.390	Wrong axis positions in the CNC monitor.
124630	Problem	-	V2.4.0.1619	- / V0.372	

					Refresh of monitor for ncAXIS and ncEXTENCOD
124635	Problem	-	V2.4.0.1619	- / V0.390	Problem during the restart of a NC program
124682	Problem	-	V2.4.0.1619	- / V0.390	Full circle together with G180.
124975	Problem	-	V2.4.0.1622	- / V0.393	CNC parameter "halt=ncV_JUMP" does not work properly.
125050	Information	V2.5.0.0025 [H2.81]	V2.5.1.0010 [A2.83]	V2.5.0.0025 [H2.81]	AR010 support removed from 2.5.0.x
125115	Problem	V2.5.1.0003 [C2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Hardware recognition for the 7EX290.50-1 doesn't work
125300	Problem	V2.5.0.3017	V2.5.2.3101	V2.5.2.3001	Communication not possible to mini/midi/multi with station numbers > $1F
125365	New function	-	V2.5.2.3001	V2.5.2.3001	Uploaded event of a task object also returns global variables
125370	Problem	V2.5.1.4403 [C2.82]	V2.5.1.0010 [A2.83]	V2.5.1.4105 [E2.82]	When upgrading, the English version is always installed
125505	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3001	CF creation: Image file cannot be created if the DATA1 partition is 1 MB
125510	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	Crash if the directory for the log file doesn't exist
125545	Problem	V2.5.1.0003 [C2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0007 [V2.85]	Variables defined using stylesheets are discarded when updating control data sources.
125567	Information	-	V2.4.0.1619	- / V0.372	Included drive operating systems
125570	Problem	-	V2.4.0.1620	- / V0.391	CNC program was stopped after G126 with $LIN.
125572	Information	-	V2.4.0.1619	- / V0.390	Included drive operating systems
125605	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Problems with the following X20 modules: X20AI2622, X20AI4622, X20AO2622, X20AO4622, X20AT2222, X20AT4222, X20AT2402, and X20AT6402
125612	New function	-	-	- / V1.181	Target system SG4 (I386), Powerlink, faster transfer of initial ACOPOS parameter tables
125635	Problem	-	-	- / V1.180	If "MC_GearInPos" was called after "MC_GearIn", the input "MasterSyncPosition" was not evaluated.
125640	Problem	-	-	- / V1.180	"MC_BR_BrakeOperation" used invalid commands
125657	New function	-	-	- / V0.550	Motor holding brake control monitioring: No error message with defective relay
125760	Problem	-	V2.4.0.1620	- / V0.391	NC-block-number was not set by SW limit error.
125765	Problem	V2.5.0.0021 [T2.80]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	Not possible to copy text in monitor mode

125770	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	PVI Transfer CD crashes on certain PCs
125815	Problem	V2.4.0.13xx	V2.4.1.1301 [A2.73]	V2.4.1.1302 [B2.73]	Defined starting order for cyclic task classes
125913	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Clock synchronization with one or more terminals
125970	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	CF creation: "Silicon Systems" CF is not displayed in connection with a PCMCIA adapter
126030	Problem	V2.5.0.0026 [I2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	80CIS.PS0-x: New firmware
126120	New function	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	CF creation: Support of 3CP340.60-2
126135	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	CF creation: No check if the CF is too small for the project
126137	Problem	-	V2.4.0.1620	- / V0.392	ARNC0 V0.390 with ACOPOS 8V1xxx.xx-1: Response errors for FFCTRL parameters
126205	New function	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	Host name configuration
126285	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	Title of data type editor displays old project name
126335	New function	-	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Support for 3IF766.9
126340	New function	-	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Support for 3IF766.9
126347	Information	-	V2.4.0.1620	- / V0.391	Included drive operating systems
126357	Information	-	V2.4.0.1620	- / V0.392	Included drive operating systems
126375	Problem	-	-	- / V1.181	The values of the constants "mcSHORTEST_WAY" and "mcCURRENT_DIR" where twisted.
126380	Problem	-	-	- / V1.181	The input "MasterParID" of the FBs "MC_GearIn", "MC_GearInPos" and "MC_CamIn" had no function.
126425	Problem	V2.5.1.0005 [E2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Incorrect restriction of decimal places
126490	Problem	V2.5.1.0006 [F2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	OS download not possible to AR010
126550	Problem	V2.5.1.0007 [G2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	No Keyboard operation in the output window
126617	New function	-	-	- / V1.182	ACOPOS Parameter table: Parameters with more than 6 bytes data are now transferred
126645	Problem	V2.4.0.1393 [F2.72]	V2.4.1.1301 [A2.73]	V2.4.1.1302 [B2.73]	Status 26012 for the CANrtr() function block
126657	Problem	-	V2.4.0.1622	- / V0.410	ACOPOS Parameter table: Parameters with more than 6 bytes data are now transferred
126660	Problem			V2.5.2.0005 [I2.85]	

		V2.5.1.0007 [G2.82]	V2.5.2.0004 [H2.85]		Status 7000 for VA_Saccess after booting the panel as long as touch isn't being used.
126730	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of 4XP0000.00-K11
126735	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of 5E9000.32
126775	Problem	V2.5.1.0007 [G2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	Double-wide modules incorrectly detected
126795	Problem	V2.5.1.0007 [G2.82]	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Current keylevel always showing the previous value
126800	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	ConfigurationBuilder error messages require AS restart
126920	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3002	"ConnectionChange" command: Not possible to switch the connection after it has been selected
126935	Problem	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	New firmware: X20DI2377
126940	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	Text / Category / Group is shown only as a resource, not as fixed text
126960	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Error message when converting a VC SG3 visualization to VC SG4
126995	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Ethernet interface parameter type exported incorrectly
127000	Project	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Address string for 3EX450.xx-x modules changed
127005	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0011 [C2.83]	V2.5.1.0010 [A2.83]	Acknowledge bit not set if acknowledge array too small
127010	New function	-	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Dynamic device configuration for X67IF1121 interfaces
127075	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Error 29003 when calling CfgGetDefaultGateway() without a configured gateway address
127088	Problem	V2.5.1.0008 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0006 [J2.85]	VNC server freezes after certain input on the client. Reopening the client doesn't work.
127093	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	VNC refresh problem
127095	Project	V2.5.1.0009 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	4XP0000.00-K11: LEDs and keys designed as individual channels
127202	Problem	-	-	- / V1.183	Powerlink, basis initialization, faster recognition of ACOPOS modules that are not connected
127230	Problem	-	-	- / V1.184	The ready LED and the error LED of the drive were not correctly controlled in the simulation mode (only in V1.180 - V1.183)
127255	Project	V2.5.1.0009 [V2.82]	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Generate PIL list for each build

127295	New function	-	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	X20AT2402: Updated non-cyclic data point for compensation temperature for accessing the AsIoAcc library
127300	New function	-	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	X20AT6402: Update for non-cyclic data point for accessing compensation temperature with the AsIoAcc library
127305	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DC2395: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)
127310	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DC4395: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)
127315	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DC1198: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)
127330	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DI2377: Additional prescaler frequencies for gate measurement
127365	Project	V2.5.1.0009 [V2.82]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	AR106: Cycle time violation when accessing the USB interface on the Automation Panel
127380	Problem	V2.4.0.0011	V2.5.1.0013 [D2.83]	V2.5.1.0019 [J2.83]	Incorrect version ID for VC SG3 modules (V1.00)
127400	Project	V2.5.1.0009 [V2.82]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Should be able to modify node number and IP for terminal visualization using software
127515	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20BR9300: I/O configuration switch added in order to turn off status / diagnostic data
127520	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20BT9100: I/O configuration switch added in order to turn off status / diagnostic data
127525	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20PS3300: I/O configuration switch added in order to turn off status / diagnostic data
127530	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20PS2100: I/O configuration switch added in order to turn off status / diagnostic data
127535	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO2322: I/O configuration switch added in order to turn off status / diagnostic data
127540	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO4322: I/O configuration switch added in order to turn off status / diagnostic data
127545	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO4332: I/O configuration switch added in order to turn off status / diagnostic data
127550	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO6321: I/O configuration switch added in order to turn off status / diagnostic data

127555	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO6322: I/O configuration switch added in order to turn off status / diagnostic data
127560	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO8332: I/O configuration switch added in order to turn off status / diagnostic data
127565	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO9321: I/O configuration switch added in order to turn off status / diagnostic data
127570	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	X20DO9322: I/O configuration switch added in order to turn off status / diagnostic data
127575	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DO1332: I/O configuration switch added in order to turn off status / diagnostic data
127580	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM1321: I/O configuration switch added in order to turn off status / diagnostic data
127585	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM1321.L08: I/O configuration switch added in order to turn off status / diagnostic data
127590	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM1321.L12: I/O configuration switch added in order to turn off status / diagnostic data
127595	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM9321: I/O configuration switch added in order to turn off status / diagnostic data
127600	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM9331.L12: I/O configuration switch added in order to turn off status / diagnostic data
127605	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DV1311.L08: I/O configuration switch added in order to turn off status / diagnostic data
127610	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DV1311.L12: I/O configuration switch added in order to turn off status / diagnostic data
127661	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [B2.83]	Support of 8AC140.60-2
127695	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of X67SM2436
127745	New function	V2.5.1.0009 [V2.82]	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Online connection only possible with IP address / host name
127775	Information	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	CHM files on the network can no longer be opened after a Windows update
127845	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Incorrect alarm display for system alarms
127870	Problem	V2.5.0.3017	V2.5.2.3004	V2.5.2.3004	Response timeout not specified to PviServices
127930	Problem	V2.5.1.0010 [A2.83]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	X67IF1121 no longer works

127970	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0106 [H2.87]	V2.5.2.0015 [F2.86]	Variable after plLen is overwritten with 0 when calling VA_wcGetActAlarmList
128000	Problem	-	-	- / V1.184	Motor temperature model was deactivated (only in V1.181 - V1.183)
128010	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	The "Persistent" option for alarm text snippets doesn't work.
128025	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of X20CM8323 starting with Rev. A5
128043	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Software key remains frozen when using several layers
128065	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0100 [A2.87]	V2.5.1.0024 [N2.83]	Can't start CAN visualization if all configured CAN panels are not connected
128085	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	Digital I/Os on the X67BC7321-1 bus connector not operated correctly
128132	Problem	-	V2.4.0.1622	- / V0.393	Error while determining the RESTART-INFO.
128135	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Permanent variables deleted when changing CF
128140	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Automation Studio crashes when dynamic PVs have a length of 32 characters
128230	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Logbook error 28740: "Error in key hardware interface"
128255	Project	-	V2.4.1.1301 [A2.73]	V2.4.1.1302 [B2.73]	Support for 0CISCP.01
128260	Problem	-	V2.5.2	V2.5.2.0002 [E2.85]	Display of the channel number as additional criteria for differentiation
128270	Problem	V3.0.24	V2.5.2.3102	V2.5.2.3102	Crash when a tooltip shows the value of a structure variable or function block instance in monitor mode
128340	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Unable to open SG4 editor
128375	Project	V2.5.1.0009 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	Support of 4PP120.1043-K05
128400	Problem	V2.4.0.1432 [V2.39]	V2.4.0.1433 [V2.39]	V2.4.0.1451 [V2.40]	3IF681.86: Cycle time violations if many broadcasts
128517	Problem	-	-	- / V1.184	Encoder interface AC122, AC123: In the case of temorary encoder errors no error message was logged (only in V1.111 - V1.183)
128525	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Valve activation time was changed
128570	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Cycle time violation when using AsIOMMcreate() from the AsIOMMan library
128580	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	Warning 8005 when building projects with the 4PP250.0571-K04
128625	Problem	V2.5.2.3001	V2.5.2.3002	V2.5.2.3002	

					"Call" command: Parameters cannot be specified with spaces
128675	Problem	-	-	- / V1.184	The data type of the input "CamTable" was STRING(10) for SG3-Targets and is now STRING(12)
128680	Problem	-	-	- / V1.184	Periodic axes moved a wrong distance when the internal position value exceeded 2^31.
128685	Problem	-	-	- / V1.184	The value of the input "TriggerDistance" was not multiplied with the PLCopen-unit-factor.
128690	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0014 [E2.86]	The functions VA_GetAlCurPos and VA_NGetAlCurPos return false Values if the alarmcontrol is used in endless mode.
128695	Problem	-	-	- / V1.184	New "Execute" of "MC_Stop" during the deceleration ramp led to a wrong deceleration if the PLCopen-unit-factor was used.
128740	New function	-	V2.5.2.3004	V2.5.2.3004	Retaining settings in the CF creation dialog box
128760	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	External configuration builder doesn't create a BR file
128770	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Onboard AR upgrades for AC14x, EC021, and 80CIS.PS0-x
128805	Problem	V2.4.0.1387 [V2.71]	V2.4.1.1302 [B2.73]	V2.4.1.1302 [B2.73]	EPL manager: New firmware
128903	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Touch buttons sometime stay in a pressed state.
128905	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BR9300: Additional channels for current and voltage data
128910	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20PS3300: Additional channels for current and voltage data
128915	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20PS2100: Additional channels for voltage data
128920	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BT9100: Additional channels for current and voltage data as well as the I/O power diagnose bit
128955	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BR9300: Additional channels for current and voltage data
128960	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BR3300: Additional channels for current and voltage data
128965	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20PS2100: Additional channels for voltage data
128970	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BT9100: Additional channels for current and voltage data as well as the I/O power diagnose bit
129030	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	After confirming an entry, the focus doesn't jump to the next entry if it's in a string input field

129045	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Switching to the "Design" tab when adding an action to a virtual key
129060	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3001	User mode: Canceling the "Choice" command is not possible
129070	Problem	V2.5.2.3001	V2.5.2.3002	V2.5.2.3001	No events triggered with internal variables
129095	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3001	BRErrorLB.ocx: Texts always read in English
129100	Problem	-	-	- / V1.185	"monitor.status.error/warning" were operated only with active communication (only in V1.103 - V1.184)
129215	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DO8332: Update function model 1 delayed switching function
129220	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DO8332: Update function model 1 delayed switching function
129235	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DI2377: Update function model 1 input latch function
129240	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DI2377: Update function model 1 input latch function
129265	Project	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Updated hardware status information
129270	Project	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Updated hardware status information
129410	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Nested textsnippets
129420	Problem	V2.4.1.0026	-	V2.5.2.0100 [A2.87]	Because of a dependency mismatch of Visapi it is not possible to use the screenshot library (VCScrSht)
129425	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	New firmware: X67AT1402
129445	New function	V2.5.2.3001	V2.5.2.3102	V2.5.2.3102	Two-digit COM ports not supported
129500	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	I/O mappings with multiple mappings can no longer be opened
129505	New function	V2.5.1.0009 [V2.82]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	New onboard AR for PP100/MP100
129510	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	Problems booting if DHCP server missing
129515	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	VcScrSht always returns status 1001
129550	Problem	-	V2.5.1.0013 [D2.83]	-	ARNC0 DPR Trace: The wrong NC object was sometimes used for trace points
129555	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	New "ARNC0" function model
129560	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	New "ARNC0" function model
129660		-		V2.5.1.0013 [D2.83]	

	New function		V2.5.1.0013 [D2.83]		7MM432.70-1: Data points, reference check, and digital signals updated
129665	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	7MM432.70-1: Data points, reference check, and digital signals updated
129695	Problem	V2.5.2.3001	V2.5.2.3002	V2.5.2.3001	CF creation: APC (AR106) doesn't boot with a 64 MB Silicon Systems CF
129710	Problem	V2.5.1.0009 [V2.82]	V2.4.0.1433 [V2.39]	V2.4.0.1451 [V2.40]	Library contains dependencies to certain versions of other libraries
129727	Problem	-	V2.4.0.1622	- / V0.400	Position jump at a full circle after a block with G92.
129917	Problem	V2.5.2ßeta	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	3EX282.6, 7EX481.50-1, and 7EX484.50-1 now providing the "ModuleOk" data point
129935	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Connected text changes
129943	Problem	V2.5.2.0004 [G2.85]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	VA_FreeBitmap() memory leak
129945	Problem	V2.4.0.0011	V2.5.2.0100 [A2.87]	V2.5.2.0006 [J2.85]	Page fault in vcinter if task deleted on Power Panel
130040	Project	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	3EX282.6, 7EX481.50-1, and 7EX484.50-1 now providing the "ModuleOk" data point
130057	New function	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X67BC8321-1
130065	Problem	-	V2.4.0.1622	- / V0.393	Error when using eight and more ACOPOS on ETHERNET Powerlink
130115	New function	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20AI2632
130120	New function	V2.5.1.0010 [B2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20AI4632
130125	Problem	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20DM9324
130130	Problem	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20PS4951
130150	Problem	V2.5.1.0011	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Assertion when zooming with <Ctrl> + <+> in the data source editor
130200	Problem	V2.5.1.0011	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Exported SFC task not imported correctly
130247	Problem	-	V2.4.0.1622	- / V0.393	path speed is too high for the tangential axis.
130285	Problem	V2.5.1.0009 [V2.82]	V2.4.1.1306 [F2.73]	V2.4.1.1306 [F2.73]	Runtimes for CAN transmit functions increased
130317	Problem	-	V2.4.0.1622	- / V0.393	Error 9263:"Angle calculation impossible, vector length is 0"
130395	New function	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X67SM2436 starting with Rev. AA
130415	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Modules not recognized during booting

130582	Problem	-	-	- / V1.186	Error after calling the NC action "ncNETWORK,ncINIT"
130595	New function	-	V2.5.2.3004	V2.5.2.3004	Configuring download mode with PVI Transfer
130600	Problem	V2.5.2.3001	-	V2.5.2.3002	PviServices in Windows CE.NET
130710	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Remanent variables on the LS172 are not backed up on the LS when closing or during a Windows restart
130800	Problem	V2.5.1.0009 [V2.82]	-	V2.5.2.0002 [D2.85]	Discarded mappings when renaming pages
130815	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	7CX408.50-1: Error 27409 with the "flat" setting
130845	Problem	V2.4.1.1302 [B2.73]	V2.4.1.1303 [C2.73]	V2.4.1.1303 [C2.73]	New firmware: 3IF787.9
130850	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	Support of X20CM2900
130855	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	Support of X20DO6529
130867	Problem	-	V2.4.0.1622	- / V0.400	Incorrect tangential axis position at G92 transition blocks.
130870	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	After an uninstall, the SG4 Visual Components editor no longer works for remaining AS versions
130883	Problem	V2.5.1.0010 [A2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Message window "Error found in hardware project file" after a USB device was deleted in a converted project.
130892	New function	-	V2.4.0.1622	- / V0.400	Rotating the coordinate system freely in space.
130895	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	INA client no longer works
130900	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [E2.85]	VA_GetBrightness returning false values
130905	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	ModuleOk is false with 9, 10, etc. module on 2005 expansion
130920	Project	-	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5601.12
130925	Problem	V2.5.1.0016 [G2.83]	V2.4.0.1450 [X6.50]	V2.4.0.1450 [X6.50]	Bus errors or page faults caused by fragmented INA frames
130940	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5E9000.22
130950	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5E9000.24
130960	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5601.05
130985	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP035.0300-K10
130990	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5200.27

131005	Project	-	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5212.19
131020	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	New firmware: X67SM2436
131030	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP035.0300-K11
131085	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4B1270.00-K04
131175	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP120.1043-K07
131225	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP035.E300-K01
131280	Problem	-	-	- / V1.187	Wrong status for initialization of a Parameter Sequence
131285	Problem	V2.5.1.0013 [D2.83]	-	V2.5.2.0002 [D2.85]	Confusing note about new Visual Components SG3 version
131350	New function	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Support X20CS1070
131360	Problem	V2.5.1.0009 [V2.82]	V2.4.0.1434 [V2.39]	V2.4.0.1451 [V2.40]	Incorrect framing for Modbus slave
131395	New function	V2.5.2.3001	-	V2.5.2.3002	Reading a structure's data type now possible
131415	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Crash if period under "Computer name" in the remote configuration dialog box
131430	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	VC freeze in drop-down menu without index data point
131455	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Clock runs fast
131480	Problem	V2.4.0.1417	V2.4.0.1450 [X6.50]	V2.4.0.1450 [X6.50]	Key operation no longer possible
131515	New function	V2.5.1.0009 [V2.82]	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	SMTPxsendmail() - server authentication
131525	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [C2.85]	V2.5.2.0002 [D2.85]	Support: 7XV108.50-51, 7XV116.50-51, 7XV124.50-51
131535	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [C2.85]	V2.5.2.0002 [D2.85]	Support X20BC0073
131555	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [C2.85]	V2.5.2.0002 [D2.85]	New firmware: X67SM2436
131700	Problem	V2.5.2.3001	-	V2.5.2.3002	Exception when accessing a structure array with PlcString or BOOL variables on SG3 targets
131705	Problem	V2.5.2.3001	V2.5.2.3102	V2.5.2.3102	PVIException in LnIna2 if the connection to the Bluetooth device is lost.
131720	Problem	V2.5.2.3001	-	V2.5.2.3002	Error 12004 if accessing to variable object before the connected event
131755	New function	V2.5.2.3001	V2.5.2.3004	V2.5.2.3004	Date format in logbook in ISO format
131762		-	-	- / V1.187	

	New function				NC actions for operation of NC objects with type "ncACP10USCOB
131805	Problem	V2.5.0.3017	-	V2.5.2.3002	VariableCollection - Remove method doesn't work.
131815	Problem	V2.5.1.0013 [D2.83]	-	V2.5.2.0002 [D2.85]	Incorrect LED conversion
131825	Project	V2.4.0.0009	-	V2.5.1.0024 [N2.83]	Support of 4PP035.0300-K10
131860	Problem	V2.5.2.3001	V2.5.2.3004	V2.5.2.3004	CF creation: "Not enough available memory" error message although the partition sizes were specified correctly
131945	Problem	V2.4.0.4194 [V2.72]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	Same ident with several MBMopen() instances, using X67IF1121
131950	Problem	-	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Cyclically booting a 3CP382.60-1 when using Powerlink and X2X interfaces
131985	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Compilation crash
131995	Problem	V2.5.0.3017	V2.5.2.3004	V2.5.2.3004	CF creation from CD doesn't work without administrator rights
132050	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	New firmware: X67IF1121
132080	Problem	-	-	- / V1.187	Powerlink, jump in speed with network coupling
132085	Problem	-	V2.5.2	V2.5.2.0002 [E2.85]	Target memory for *cfg.br modules (acp10cfg.br, arnc0cfg.br, nc154cfg.br, nc157cfg.br) automatically changed to "User ROM"
132100	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Support of X20DO2649 and X20DO4529
132102	Problem	-	V2.4.0.1622	- / V0.401	Tangential axis orients itself on a path section.
132125	New function	-	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	Support for 7EC021.60-1
132145	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	New firmware: X20BC0083 and X67BC8321-1
132215	Problem	V2.5.1.0009 [V2.82]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	FrmWrite() returns Status 8078 after a long time
132290	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X67BC8321
132310	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Cycle time violation caused by CANopen master configuration activities
132336	Problem	V2.5.2.0001 [B2.85]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	When using the ERR_fatal() ERRxfatal() function block, outputs on the 2005 backplane don't drop immediately
132405	Problem	-	V2.5.2.0002 [E2.85]	V2.5.2.0002 [E2.85]	Automation Studio crashes in a Trace window if a curve name with more than 80 characters is used in a formula
132410	Problem	V2.4.1.1304 [D2.73]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Cycle time violation when setting the IP address during runtime

132515	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Error 27306 when starting the VC SG3 visualization
132545	Problem	V2.5.1.0011	V2.5.2	V2.5.2.0002 [E2.85]	McModGen.dll: Rebuilding cam profiles not precise enough
132590	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	X67AM1223: Outputs are not displayed in AS
132675	Problem	V2.4.1.1304 [D2.73]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Page fault when starting the profiler
132750	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	vccpopup not inserted with "Build All"
132785	Problem	V2.5.2.3102	V2.5.2.3103	V2.5.2.3103	Error 4824 if an element in an array or a structure variable is registered as an event variable
132880	New function	V2.5.2.3002	V2.5.2.3003	V2.5.2.3003	CF creation: Support of X20CP1485
132980	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	New firmware: X67SM2436
133010	Problem	-	-	- / V1.188	Target system SG4 (I386), Powerlink, transfer of ACOPOS parameters from the hardware tree was aborted (only in V1.181 - V1.187).
133035	Problem	V2.5.1.0014 [E2.83]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	4-digit year output with VA_GetExAlarmList
133120	New function	V2.5.1.0014 [E2.83]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Terminal target node number and IP address configurable via data module
133145	Problem	V2.5.1.0010 [A2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Using LineCoverage can cause cycle time violations
133160	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	Support of X20DI4760
133180	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	EX48x doesn't work if the 16 log. module slots are filled.
133202	New function	-	-	- / V1.188	ACOPOS parameter tables, handling the "VersionFrom" attribute
133207	Problem	-	V2.4.0.1622	- / V0.410	ACOPOS parameter tables, handling the "VersionFrom" attribute
133240	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	New firmware: X20AI4632 and X20AI2632
133342	Problem	-	-	- / V1.190	Target system SG4 (I386),Powerlink, initial ACOPOS parameter tables, the data for type STRxx parameters was sometimes falsely transferred (only in V1.182 - V1.189)
133345	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	String termination missing when outputting a string in VC SG3
133347	New function	-	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	"Allow asymmetric in/out size" option for X2X Link interfaces
133350	Problem	-	-	- / V1.190	Target system AR010, Powerlink, processor blocked for the Windows operating system while establishing communication (only in V1.183 - V1.189)

133367	New function	-	V2.4.0.1627	- / V0.500	Unification of the trace record number calculation (ACP10 - ARNC0).
133370	Problem	-	-	- / V1.190	Deadlock with "MC_BR_InitCyclicRead" / "MC_BR_InitCyclicWrite"
133377	New function	-	V2.4.0.1622	- / V0.402	Automatic tangential axis at straight line path section transition.
133380	Problem	-	-	- / V1.190	The done output from "MC_BR_InitCyclicWrite" was not set
133385	Problem	-	-	- / V1.190	"MC_BR_AutControl": The data type of the "ParLock" input is now USINT
133398	Problem	V2.5.2ßeta	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	No input at runtime possible if using inverted scaling
133405	Problem	-	-	- / V1.190	"MC_MoveAbsolute" and "MC_BR_MoveAbsoluteTriggStop": The mode "mcSHORTEST_WAY" delivers the error 29217 (only in V1.170 - V1.187)
133410	Problem	-	-	- / V1.190	"MC_BR_InitCyclicRead" and "MC_BR_InitCyclicWrite": Calling the same ParID again could lead to a deadlock.
133420	New function	-	-	- / V1.190	New FB "MC_BR_InitModPos" for SG4-Targets
133425	New function	-	-	- / V1.190	New FBs for SG3-Targets
133430	Problem	V3.0.36	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Function blocks from the AsIOAcc library only function for the X20BC0083
133435	Information	-	-	-	Before V1.190, after network failure the axes could no longer be operated with MC FBs.
133495	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Cannot compile AR106 project after inserting a USB device
133515	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Opening the "Select variable" dialog box takes too long
133680	Problem	V2.5.0.0014	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Error 27306 when booting a SG4 target with several Powerlink stations
133700	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CF creation: Original BR files modified if "Strip library info for transfer" option used
133725	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CF creation: BR modules sporadically modified in the original project
133755	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X20DC1196, X20DC1198, X20DC1396, X20DC2396, X20DC1398 and X20DC2398
133790	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	INA connection is broken during communication over a longer period of time
133800	Problem	V2.5.1.4108 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	SRAM data is lost when Windows is shut down while the AR010 is running
133855	Problem	-	-	- / V1.190	Incorrect error message 29207 from MC_GearInPos

133870	New function	-	-	- / V1.190	"MC_DigitalCamSwitch": New parameters can be initialized now when the FB is active.
133885	Problem	V2.5.1.4105 [E2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X20AT2402 and X20AT6402
133895	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	New firmware: X20BC0073
133900	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Increased INA upload and download speed for targets AR102, AR105, AR106 and PPxxx
133915	New function	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Support for X20BR9300 (D0 and higher), X20BT9100 (D0 and higher), X20PS2100 (D0 and higher), X20PS3300 (D0 and higher), X20PS9400, and X20PS9500.
133982	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	EPL Manager: New firmware
134005	New function	V2.5.1.4108 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Synchronization between Windows time and AR010 time can be deactivated using a command line option
134010	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Cycle time violation when downloading a module or in cycle operation
134035	Problem	V2.5.1.0014 [E2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Terminal INA variables not shown after a certain time
134052	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Support of X20CP1485, X20CP1486, X20CP3485 and X20CP3486
134075	New function	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CF creation: Support of X20CP1486, X20CP3485 and X20CP3486
134135	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X67SM2436
134172	Problem	-	V2.4.0.1623	- / V0.420	Limit value violation (axis acceleration) at the path section transition.
134232	Problem	-	V2.4.0.1623	- / V0.420	NC program is not terminated.
134235	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	X67DM1321 outputs set randomly on modules with "old" FPGA versions
134250	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0002 [E2.85]	EPL manager firmware for following modules:
134257	Problem	-	V2.4.0.1623	- / V0.420	NC program blocked with a combination of G170 and G141.
134260	Information	V2.5.1.0015 [F2.83]	V2.5.2.0006 [J2.85]	-	EX48x/EX290: Detecting screw-in module failures
134262	Problem	-	V2.4.0.1623	- / V0.420	Contour error with a combination of G40 and G141.
134302	Problem	-	-	- / V1.191	Some controller parameters were not transferred to the ACOPOS after ACOPOS restart
134335	Problem	V2.5.1.4108 [V2.82]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	PVI communication to the target lost for a few seconds
134342	Problem	-	-	- / V1.191	

					Override values were not transferred to the ACOPOS after ACOPOS restart
134365	New function	-	V2.5.2.3104	V2.5.2.3104	Reducing proceeding events
134366	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Modules from USRRAM incorrectly copied to DRAM
134402	Problem	-	V2.4.0.1623	V2.4.0.1623 / V0.422	Division by zero at G103/G104.
134432	Problem	-	V2.4.0.1623	- / V0.421	Violation of axis acceleration and axis speed limits at circular blocks
134500	New function	-	V2.4.0.1626	- / V0.461	New Speed Profile for a Circular Interpolation.
134525	Problem	V2.5.1.0014 [E2.83]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Using line coverage causing page faults
134527	New function	-	V2.4.0.1623	V2.4.0.1623 / V0.422	Switching from inches to mm.
134550	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	Incorrect line termination in the log file
134560	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CD creation: Error 12070 if PviTransfer started on PCs without a PVI installation
134585	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Status 25000 and 25004 with CANwrite()
134600	Problem	V2.4.0.0009	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Error 9999 when using the functions fd_clr(), fd_set() and fd_isset() on the AR106 and CP570
134647	Information	-	V2.4.0.1623	- / V0.422	Included drive operating systems
134652	Information	-	V2.4.0.1623	- / V0.421	Included drive operating systems
134657	Information	-	V2.4.0.1623	- / V0.420	Included drive operating systems
134660	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Support of 5LS166.6
134662	Information	-	V2.4.0.1622	- / V0.400	Included drive operating systems
134665	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Support of X20IF1061
134667	Information	-	V2.4.0.1622	- / V0.401	Included drive operating systems
134670	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	"VariableList" command: Long variable names truncated
134672	Information	-	V2.4.0.1622	- / V0.402	Included drive operating systems
134677	Information	-	V2.4.0.1622	- / V0.403	Included drive operating systems
134680	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	New firmware: X20BC0083 and X67BC8321-1
134681	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Write protection for "BootFlash" ("B:")
134682	Information	-	V2.4.0.1622	- / V0.410	Included drive operating systems
134735	Problem	V2.4.1.1304 [D2.73]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	Status 25000 and 25004 with CANwrite()
134765	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X67SM2436

134815	Problem	V2.5.1.0015 [F2.83]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Crash if the input focus is set to a locked element
134840	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	PP35: Focus initially set to the second input field
134842	Information	-	-	-	Encoder Interface AC120: With new EnDat encoders, with V0.546 - V0.551 and V1.103 - V1.181 a permanent encoder error is mistakenly shown
134882	Problem	-	V2.4.0.1623	V2.4.0.1623 / V0.423	Standstill after a path section following G60, synchronous M-function or G04
134885	Problem	V2.5.1.0016 [G2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Error 27306 when booting an APC620 target with several ACOPOS stations on Powerlink
134950	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	Error 26456 beginning with a higher number of X20 modules on the X20BC0083 bus coupler
134987	Information	-	V2.4.0.1625	- / V0.441	Included drive operating systems
134990	Problem	V2.5.1.0016 [G2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Incorrect status returned by DirInfo if directory missing
135010	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	"Download / Upload" command: "MT=BRT" option doesn't work from the created CD
135035	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	"CFGenerate" command: Incorrect error number if the partition sizes are too small
135045	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	Default setting for partition sizes too small for CF creation
135050	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CD creation: Absolute paths entered for "CFGenerate"
135117	Problem	-	-	- / V1.192	Access to NC data modules did not function with certain AR versions
135122	Problem	-	V2.4.0.1623	V2.4.0.1623 / V0.424	Position jump during reverse movement of an NC program
135132	Problem	-	-	- / V0.552	Encoder Interface AC120: With new EnDat encoders, a permanent encoder error is mistakenly shown (only in V0.546 - V0.551)
135150	New function	V2.5.1.0016 [G2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Support of X67SM2436-K01
135165	New function	V2.5.1.0016 [G2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Support of X20CM1941
135205	Information	V2.4.1.1304 [D2.73]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	AR version E2.73 and higher require new versions of the ACP10 software or ARNC0 to be used
135210	Information	V2.5.2.0002 [D2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	AR version F2.85 and higher require new versions of the ACP10 software or ARNC0 to be used
135225	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	New CAN firmware
135242	Problem	-	-	- / V0.552	Access to NC data modules did not function with certain AR versions

135247	Problem	-	V2.4.0.1623	- / V0.425	Access to NC data modules did not function with certain AR versions
135252	Information	-	V2.4.0.1623	- / V0.424	Included drive operating systems
135257	Information	-	V2.4.0.1623	- / V0.425	Included drive operating systems
135260	Problem	-	-	- / V1.192	When enabling MC_BR_AutControl a crash of the target system could occure (only in V1.190).
135262	Information	-	-	-	Powerlink, incorrect input data during ACOPOS startup with certain AR versions
135267	Information	-	-	-	ACP10 software before V0.552 and from V1.000 to V1.191 can not be used with certain AR versions
135272	Information	-	-	-	Powerlink, incorrect input data during ACOPOS startup with certain AR versions
135277	Information	-	V2.4.0.1623	-	ARNC0 software before V0.425 can not be used with certain AR versions
135355	Information	-	V2.4.0.1623	- / V0.423	Included drive operating systems
135360	Information	-	V2.4.0.1624	- / V0.430	Included drive operating systems
135370	New function	V2.5.2.0002 [E2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	Support of X20IF1082
135547	Information	-	V2.4.0.1622	- / V0.393	Included drive operating systems
135575	New function	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	New firmware: X20BC0083 and X67BC8321-1
135632	Problem	-	-	- / V1.193	The short-circuit-controlled movement stop was not performed correctly when certain drive errors occurred (only in V1.180 - V1.192)
135635	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	AR010 loader crash when not enough available hard disk or CF space
135647	Information	-	V2.4.0.1623	- / V0.426	Included drive operating systems
135650	Problem	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	A new version of SYS_lib needs to be used in AR version E2.73 and higher
135660	Problem	-	-	- / V1.193	Powerlink, cyclic data from the drive, in some cases 1-byte or 2-byte parameters were not able to be read
135667	New function	-	V2.4.0.1624	- / V0.428	Circle programming with an angle.
135690	Problem	V2.5.1.0016 [G2.83]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Error transferring structures
135720	Problem	V2.5.2.0003 [F2.85]	V2.5.0.7014	V2.5.2.7001	Shortcut to pg.exe not created
135725	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Incorrect checksum in ALHistory
135800	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	A new version of SYS_lib needs to be used in AR version F2.85 and higher
135810		-		V2.5.1.0018 [I2.83]	

	New function		V2.5.1.0018 [I2.83]		Support for the 3IF671.9 and 3IF672.9 modules
135830	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	Incorrect function model in French AS
135870	New function	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	Support of 5LS182.6-1
135875	New function	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	New firmware: X20IF1061
135905	New function	-	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Expansion in library functionality
135940	Problem	V2.5.1.0016 [G2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Not possible to insert "Chinese Simplified" language
135972	Problem	-	V2.4.0.1624	- / V0.428	Violation of the Software Ends
135977	Information	-	V2.4.0.1624	- / V0.427	Included drive operating systems
136072	Problem	-	V2.4.0.1625	- / V0.450	Exit movement of CDC deactivation immediately after G40
136085	New function	V2.5.2.0004 [G2.85]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	New firmware: X20IF1082
136090	New function	V2.5.2.0004 [G2.85]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	New firmware: 5LS182.6-1
136107	Problem	-	V2.4.0.1624	- / V0.428	Wrong contour results from G180=0 with active mirroring
136112	Problem	-	V2.4.0.1624	- / V0.428	Error deactivating CDC with G137
136117	New function	-	V2.4.0.1624	- / V0.428	Warning 10459 when activating CDC
136140	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Watchdog or I/O cycle time violation if Power Panel warm
136155	New function	-	V2.4.0.1624	- / V0.430	Compensation of the mechanical impreciseness of an axis
136240	New function	-	-	- / V1.194	New FB "MC_BR_DownloadCamProfileData"
136245	New function	-	-	- / V1.194	"Direction" mode "mcEXCEED_PERIOD"
136250	Problem	-	-	- / V1.194	"MC_Stop": "Busy" and "Done" could be set at the same time for a cycle
136255	New function	-	-	- / V1.194	New input "Periodic" for "MC_BR_DownloadCamProfileObj"
136260	Problem	-	-	- / V1.194	Output "Value" from "MC_ReadDigitalInput" and "MC_ReadDigitalOutput" remained "TRUE"
136265	Problem	-	-	- / V1.194	Modulo position only corrected by one period in each cycle after initialization
136270	New function	-	-	- / V1.194	Error messages from automatic initialization
136282	Information	-	V2.4.0.1624	V2.4.1.0026 / V0.427	Only for internal tests
136292	Problem	-	V2.4.0.1625	- / V0.441	

					CDC activation with G137 causes erroneous axes movements normal to the main plane
136367	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [H2.85]	V2.5.2.3055	Opening the logger cancels the online connection
136445	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	Data type editors allowing names that are too long
136490	Problem	-	-	- / V1.194	"MC_ReadDigitalInput" and "MC_ReadDigitalOutput": Invalid values for "Slot" or "Channel" caused the system to crash
136595	Project	V2.4.1.1305 [E2.73]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Support of 4PP220.1214-K01
136640	Problem	-	-	- / V1.194	Cyclic data was 0 with short Acp10 manager cycle time
136695	Problem	V2.5.1.0017 [H2.83]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	New firmware: X67SM2436
136705	Problem	-	-	- / V1.194	MC_Home: "mcHOME_DEFAULT" no longer functioned after a homing procedure with a mode not equal to "mcHOME_DEFAULT"
136710	Problem	-	-	- / V1.194	FBs that start continuous movements did not report "Done" or "InVelocity" at high speeds
136735	Problem	V2.5.1.0017 [H2.83]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Page fault or incorrect PV values for structures or arrays with length 3
136738	Problem	V2.5.2ßeta	V2.5.3.0001 [V2.85]	V2.5.2.0007 [V2.85]	TTC font support
136813	Problem	V2.4.0.0011	V2.5.2.0100 [A2.87]	V2.5.2.0018 [H2.86]	"Disable cursor movement on Enter" not working in VC SG3 editor
136930	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	New command line option -w for ar010loader
136945	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Crash when opening the logger in AR versions older than 2.85
136950	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Event display in logger not always updated
137005	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Crash when closing several pages
137045	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Terminal mode doesn't work if the onboard AR and AR are incompatible. (e.g. onboard V2.82 and AR 2.83)
137060	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Toggle button pressed when closing the touchpad
137130	Problem	-	V2.4.0.1625	- / V0.451	In DPR-Trace was the ARNC0 Sampling Time 0 Microseconds
137135	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Page fault in the X2X driver when connecting and disconnecting the X2X cables repeatedly during operation
137150	Problem	V2.5.1.0017 [H2.83]	-	-	I/O mappings sometimes not applied when converting projects from AS 2.4 to

					AS 2.5
137195	New function	V2.5.2.7000	V2.5.2.7001	V2.5.2.7001	Help file for Version Changer in new directory
137225	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Returning from screensaver executes touch action on target page
137235	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Cannot turn off Mobile Panel backlight
137295	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0101 [B2.87]	V2.5.2.0001 [B2.85]	Incorrect display of negative values in the IO monitor
137425	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: 7XV108.50-51, 7XV116.50-51 and 7XV124.50-51
137430	Problem	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20CP1485, X20CP1486, X20CP3485 and X20CP3486
137440	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Support of 3IF771.9-C01
137487	New function	-	V2.4.0.1625	- / V0.440	G103/G104 (Radius Dependent Feed Adjustment)
137492	New function	-	V2.4.0.1625	- / V0.440	G108/G109/G110 Set Path Acceleration/Path Deceleration
137497	New function	-	V2.4.0.1625	- / V0.440	Reduction of path speed at tangential path section transitions depending on the transition angle.
137502	Information	-	V2.4.0.1625	- / V0.440	Included drive operating systems
137597	Problem	-	V2.4.0.1626	- / V0.480	Position error on the tangential axis after rotating the coordinate system.
137635	Problem	V2.5.1.0017 [H2.83]	-	V2.5.2.0007 [V2.85]	Error after project conversion. -> Compiler error 7050
137675	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: 5LS182.6-1
137685	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0013 [D2.86]	Drop-down listbox showing one element only
137700	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20IF1082
137705	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Support of X20DI4760
137746	Problem	V2.5.2.0002 [D2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Possible cycle time violation a large number of entries are made by the Logger in ErrorLog
137775	Information	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Hot plugging a USB device while it's being accessed can cause a page fault.
137790	New function	V2.5.2.0004 [H2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Operating system file automatically part of the operating system created at build time
137885	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	EPL manager: New firmware
137890	New function	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	X20DC2395 update: Period measurement, gate measurement, and bus controller support

137895	New function	-	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	X20DC2395 update: Period measurement, gate measurement, and bus controller support
137900	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20DC2396, X20DC1396, X20DC2398, X20DC1398, X20DC4395 and X20DC2395
137910	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20CM1941
137965	Problem	V2.5.2.0004 [G2.85]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	Incorrect checksum in ALHistory
137970	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	Error 27306 when using DataObj function blocks for data objects in USRRAM
137995	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC4395 update: Period measurement, gate measurement, and bus controller support
138000	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC4395 update: Period measurement, gate measurement, and bus controller support
138065	Problem	-	-	- / V1.195	For EnDat encoders whose serial resolution is smaller than or equal to four times the signal period resolution, the actual position could be incorrectly placed by 1/4 of a signal period. (e.g. ECN113 and EQN1325 with 2048 signal periods)
138072	Problem	-	V2.4.0.1625	- / V0.441	With activated CDC the z-axis and the slave axes do not move.
138090	Problem	V2.5.1.0018 [I2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Projects recompiled
138095	New function	V2.5.1.0018 [I2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Error log output in the console window different than the display in AS
138105	Problem	V2.5.2.0018 [H2.86]	V2.5.2.0020 [J2.86]	-	Faulty display when bypassing active alarms
138171	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	A watchdog error is registered when a cycle time violation is detected.
138180	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC1396 update: 32-bit ABR
138185	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0005 [I2.85]	X20DC1396 update: 32-bit ABR
138195	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC2396 update: 32-bit ABR
138200	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC2396 update: 32-bit ABR
138205	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC1196 update: 32-bit ABR
138210	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC1196 update: 32-bit ABR
138215	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Logger and profiler not recognizing routed connections

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138243	Project	-	-	V2.5.2.0006 [J2.85]	X20 support
138265	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20AI2622, X20AI4622, X20AO2622, and X20AO4622
138270	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20AT2402 and X20AT6402
138275	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20DC1196 and X20DC1198
138280	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X67DC1198 update: Period measurement, gate measurement, and bus controller support
138285	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X67DC1198 update: Period measurement, gate measurement, and bus controller support
138300	Problem	V2.4.1.1306 [F2.73]	V2.4.1.1310 [I2.73]	V2.4.1.1310 [I2.73]	Data consistency of PVs on SG4 targets not guaranteed when using CMS services
138380	Problem	-	V2.4.0.1626	- / V0.483	"cnt_ncprog" remains "1" after stopping a movement
138500	Problem	V2.5.2.0007 [V2.85]	V2.4.1.1320 [S2.73]	V2.4.1.1320 [S2.73]	Cycle time violation when using MEMInfo()
138545	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	X67DC1198 update: Period measurement, gate measurement, and bus controller support
138552	Information	-	V2.4.0.1625	- / V0.450	Included drive operating systems
138555	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Remanent and/or permanent data lost during power failers on targets with power failure detection (APC)
138565	Problem	-	V2.4.0.1625	- / V0.450	Incorrect values of remaining distance for linear axes.
138577	Problem	-	V2.4.0.1625	- / V0.450	CDC deactivation with G137 caused erroneous axes movements normal to the main plane
138620	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	-	VC runtime objects not replaced in the project
138642	Problem	-	-	- / V1.195	The "two encoder control" can now only be activated with the parameters PCTRL_S_ACT_PARID and VCTRL_S_ACT_PARID.
138650	Problem	-	-	- / V1.195	The "SlaveChannel" input of the "MC_BR_InitMasterParIDTransfer" function block had the data type UINT on SG3 targets instead of USINT.
138655	Problem	-	-	- / V1.195	Cyclic data with a length of 4 bytes could be read incompletely (only V1.193 - V1.194)
138660	Problem	-	-	- / V1.195	Jolt time is overwritten in the axis structure with 0.0004s
138665	Problem	-	-	- / V1.195	"MC_CamIn" sometimes did not start the coupling (only V1.184 - V1.194)
138670	Problem	-	-	- / V1.195	

					"MC_CamIn": The output "EndOfProfile" continued to output pulses if the coupling was already interrupted with "MC_CamOut" or "MC_Stop".
138675	Problem	-	-	- / V1.195	"MC_BR_AutControl": If the automat was stopped, then the "Running" output remained set (automat came to a stop).
138680	Problem	-	-	- / V1.195	"MC_BR_AutControl": Error message if parameters were initialized while an automat was running
138685	New function	-	-	- / V1.195	"MC_BR_AutControl": New "Deceleration" input to define the ramp while stopping.
138705	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	String text snippets in the alarm system not always updated in time
138725	Problem	V2.5.1.0018 [I2.83]	V2.4.1.1308 [H2.73]	V2.4.1.1308 [H2.73]	Using "dynamic event variables" via PVI may cause a page fault if the pointer for the dynamic variable is not referenced yet.
138730	Problem	-	-	- / V1.196	Now "MC_Phasing" can also be used with "MC_GearInPos", previously the error 29207 was reported.
138735	Problem	-	-	- / V1.196	FBs respond as "Busy" after initializing an empty Acopos parameter table
138780	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0011 [D2.86]	VA_GetActAlarmList causes page fault when called twice
138847	Problem	-	-	- / V1.196	Target system SG4, Powerlink, Use of additional IP frames for Ethernet communication
138850	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20CM1941
138860	Problem	-	V2.4.0.1625	- / V0.451	New mode of feed rate calculation
138870	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0024 [N2.83]	VC SG3 - Problems with "cursor back" when hiding input fields
138902	Information	-	V2.4.0.1625	- / V0.451	Included drive operating systems
138907	Information	-	V2.4.0.1626	- / V0.452	Included drive operating systems
138970	Problem	-	V2.4.0.1625	- / V0.451	Tangential transitions on linear axes
138985	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Editor crash when deleting a control
139040	Problem	V2.5.2.0004 [G2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0007 [V2.85]	Remanent and/or permanent data lost during power failers on targets with power failure detection (APC)
139070	Problem	V2.5.1.0019 [J2.83]	V2.4.1.1308 [H2.73]	V2.4.1.1308 [H2.73]	SG4 targets don't send an ARP request during booting
139085	New function	-	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support for X20IF1063
139133	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Importing a VC SG3 object no longer works
139137	Problem	-	V2.4.0.1625	- / V0.451	G113 syntax error

139205	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Support of X20CS1020 und X20CS1030
139225	New function	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X67SM2436-K01
139270	Problem	V2.5.2.0005 [I2.85]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Error 9099: "TC idle generator max. cycle time error" when booting
139330	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0024 [N2.83]	VC SG3 - Page fault downloading ddpdcx55.br
139345	Problem	-	-	- / V1.197	Target system SG3, CAN, unjustified timeout errors (only in V1.100 - V1.196)
139353	Problem	V2.5.0.0010	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Entering information in the password control causes a crash
139383	Problem	V2.5.2.0006 [J2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0009 [B2.86]	Cycle time violation after switching languages several times
139407	Problem	-	V2.4.0.1626	- / V0.452	Transition angle of very short path section defined as non-tangential.
139445	Information	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	V2.5.2.0006 [J2.85]	Changed behavior for PV_xlist
139480	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Watchdog error on APC if configured hardware not connected
139512	New function	-	V2.4.0.1626	- / V0.460	G153 - Specifying the positions as absolute coordinates in the machine coordinate system
139525	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0024 [N2.83]	VC SG3 - Focus problems with locking
139592	Information	-	V2.4.0.1626	- / V0.453	Included drive operating systems
139597	New function	-	V2.4.0.1626	- / V0.453	Standard priority for background tasks too low
139602	New function	-	V2.4.0.1626	- / V0.453	Additional module format for ARNC0 error text modules
139606	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Faulty structure transfers
139702	Information	-	V2.4.0.1626	- / V0.460	Included drive operating systems
139737	Problem	-	V2.4.0.1626	- / V0.460	Incorrect conversion of ACOPOS parameters from input texts.
139772	Problem	-	-	- / V1.197	Incorrect conversion of ACOPOS parameters from input texts
139812	New function	-	V2.4.0.1626	- / V0.460	G171 - immediate processing of NC blocks.
139817	New function	-	V2.4.0.1626	- / V0.460	Maximum number of tool data blocks and tool placement numbers has been raised to 500.
139927	Problem	-	V2.4.0.1626	- / V0.470	Feed override was valid also for G0
139932	New function	-	V2.4.0.1626	- / V0.470	Override for G0 (R_override)
139937	Problem	-	V2.4.0.1626	- / V0.470	Restart: the values of the S and T parameters are incorrect after a restart.

139985	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0018 [H2.86]	Some hardware keys don't work.
139992	Information	-	V2.4.0.1626	- / V0.461	Included drive operating systems
140015	Problem	V2.5.1.0016 [G2.83]	V2.5.1.0022 [L2.83]	V2.5.1.0022 [L2.83]	Buffer no longer freed up
140187	Problem	-	V2.4.0.1626	- / V0.461	Polar coordinate motor not possible.
140330	Problem	-	-	- / V1.197	Invalid master axis for "MC_CamTableSelect" crashed the target system
140335	Problem	-	-	- / V1.197	Homing mode "mcHOME_ABOLUTE" with the FB "MC_Home" used counter range correction
140340	New function	-	-	- / V1.197	New homing mode "mcHOME_ABSOLUTE_CORR" for FB "MC_Home"
140345	Problem	-	-	- / V1.197	Error 29490 for "MC_Reset" after network error (V1.194-V1.196 only)
140360	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0104 [F2.87]	V2.5.2.0015 [F2.86]	Visapi library: Cycle time violation if VA_FreeBitmap() tries to free up a 24-bit PNG file.
140377	Problem	-	V2.4.0.1626	- / V0.461	Incorrect behavior when disabling CDC with G39
140450	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0104 [F2.87]	V2.5.2.0015 [F2.86]	Visualization freeze after drawing bitmap several times with the VA_BlitBitmap() function
140498	Problem	V2.5.1.0019 [J2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Crash while refreshing data source
140560	New function	-	V2.4.0.1626	- / V0.461	Inverse Feed Rate, Functions G93, G94.
140575	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Data larger than 16 KB incorrectly copied to USB flash drive
140585	Problem	-	-	- / V1.197	Cyclic data sometimes overwritten or set to 0
140655	Problem	-	-	- / V1.197	"MC_CamIn": The start mode "mcDIRECT" did not work correctly
140865	Problem	V2.5.2.7002	V2.5.2.7003	V2.5.2.7003	Entering -p pg.exe on the command line no longer works.
140870	Problem	-	V2.4.0.1626	- / V0.470	Full circle is traversed two times
140930	Problem	V2.5.1.0020 [K2.83]	V2.5.1.0022 [L2.83]	V2.5.1.0022 [L2.83]	Reading the paper status on USB printers may cause watchdog error
140935	Problem	V2.5.2.0004 [G2.85]	V2.5.2.0008 [A2.86]	-	Automation Studio crashes after loading ARNC0 trace data
140973	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0018 [H2.86]	Terminal mode doesn't work if the server gets its IP address from a DHCP server on the network
141015	Problem	V2.5.2.0006 [J2.85]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	Cycle time violation after switching languages several times
141040				V2.5.2.0008 [A2.86]	Support of X20IF1063

	New function	V2.5.2.0006 [J2.85]	V2.5.2.0008 [A2.86]		
141115	Problem	-	-	- / V1.197	"MC_Power": Previously possible to switch from "Errorstop" to "Disabled" state with a neg. edge on "Enable"
141230	Problem	-	V2.4.0.1626	- / V0.471	Pagefault after Calling a Global Subprogram
141235	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0018 [H2.86]	Keys not working if 2 consecutive blinking LEDs are in the LED matrix
141255	Problem	V2.5.2.0006 [J2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support of X20DO2321, X20DO4321, X20DO4331 and X20DO8331
141325	Problem	-	V2.4.0.1626	- / V0.483	Unjustified error after ncaction(ncAUTOMAT, ncINIT)
141360	Problem	V2.5.2.7000	V2.5.2.0104 [F2.87]	V2.5.2.0018 [H2.86]	Incorrect display of bitmaps on the PP3
141362	Problem	-	V2.4.0.1626	- / V0.470	CDC: Full circle instead of arc transition.
141367	Problem	-	V2.4.0.1626	- / V0.470	CDC: incorrect arc transition after circles programmed with a rotation angle
141372	Problem	-	V2.4.0.1626	- / V0.470	NC-program blocks upon CDC activation with G137
141375	Problem	-	V2.4.0.1626	- / V0.470	Inverse feed rate (G93) by circular interpolation (G2/G3).
141382	Information	-	V2.4.0.1626	- / V0.470	Included drive operating systems
141385	Problem	V2.5.2.7000	-	V2.5.2.0010 [C2.86]	Number of pole pairs incorrect for 8LSA motors
141390	New function	-	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support for 8AC140.61-3
141395	Problem	V2.5.1.0019 [J2.83]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	New firmware: 5LS197.6
141505	Problem	-	-	- / V1.210	MC_BR_InitAutState returning error if automat active
141550	Problem	V2.5.2.0007 [V2.85]	V2.4.1.1316 [O2.73]	V2.4.1.1316 [O2.73]	Page fault after calling MBSlave()
141555	Problem	-	V2.4.0.1626	- / V0.481	Page Fault when restarting an NC program (since ARNC0 V0.400).
141585	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0104 [F2.87]	-	Configured gateway for terminal configuration not evaluated
141601	Problem	-	V2.4.0.1626	- / V0.481	NC program aborted when selecting an automatic tangential axis.
141640	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Watchdog error using both Ethernet interfaces on the APC
141665	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Display problem with multi-line alarm texts in one alarm line
141760	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Up/Down not working correctly for scaled REAL variables
141762	New function	-	V2.4.0.1626	- / V0.480	New ARNC0 behavior after a block with a tool data number.

141767	Problem	-	V2.4.0.1626	- / V0.480	Incorrect tangential axis position in the first movement block after multiple rotations of the coordinate system.
141772	Information	-	V2.4.0.1626	- / V0.480	Included drive operating systems
141775	Problem	-	-	- / V1.210	MC_BR_InitParSequ returning error 29254 if the parameter sequence only has one parameter
141790	New function	-	-	- / V1.210	MC_BR_AutControl: New outputs "ActualStateIndex" and "ActualCamType"
141805	New function	-	-	- / V1.210	New FBs: "MC_BR_InitAxisPar", "MC_BR_SaveAxisPar" and "MC_BR_LoadAxisPar"
141835	Problem	-	V2.4.0.1626	- / V0.480	Pagefault after Calling ncaction(ncCOMP, ncSTART)
141862	Information	-	V2.4.0.1626	- / V0.471	Included drive operating systems
141870	Problem	-	-	- / V1.198	Error 9070, if MOTOR_CURR_STALL = MOTOR_CURR_RATED and TEMP_MOTOR_MODEL_MODE = 2
141970	Problem	V2.5.1.0020 [K2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	VC SG3: Page fault in vcinter if switching to a page with a locked input control
141987	New function	-	V2.4.0.1626	- / V0.480	M-Functions are set after a restart
141990	Problem	V2.4.0.0001	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Brackets mixed up on AlphaPad
141995	New function	-	V2.4.0.1626	- / V0.480	Saved trace file includes informations about the traced values.
142030	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0024 [N2.83]	V2.5.1.0024 [N2.83]	Slow page change on PP35
142090	Information	-	-	-	MC_MoveAbsolute with a periodic axis in motion
142110	Problem	-	-	- / V1.198	Target system SG4 (I386), Powerlink, with AR B2.85 or higher, ACOPOS modules were not recognized on the network after a reset
142297	Information	-	V2.4.0.1626	- / V0.481	Included drive operating systems
142330	Problem	V2.5.2.0007 [V2.85]	V2.5.1.0024 [N2.83]	V2.5.1.0024 [N2.83]	ANSI C editor crash when pasting to file end
142375	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	Logger entries shifted chronologically (time zone problem)
142455	Problem	V2.5.1.0021 [K2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	Visualization hangs during operation
142485	Problem	-	-	- / V1.211	Busy status for FBs if no init parameter module specified
142492	New function	-	-	- / V1.210	Entering NC actions in the Network Command Trace can be activated
142495	Problem	V2.5.2.0100 [A2.87]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	New CAN firmware

142497	New function	-	-	- / V1.210	Global PVs can be used as NC object
142502	New function	-	-	- / V1.210	New NC action "ncGLOBAL,ncSAVE" for saving data into an INIT Parameter module
142507	Problem	-	V2.4.0.1626	- / V0.481	Cutter diameter accounted for at G153.
142530	Problem	V2.5.1.0022 [L2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	Page fault in alarm system if scrolling too fast
142560	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Alarm event not output in historical alarm list
142588	Problem	V2.5.2.3007	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Data points for the entire visualization mixed up at runtime after adding a data point to the visualization
142647	Problem	-	V2.4.0.1626	- / V0.482	Page Fault at ncaction (nc_object, ncZEROPMON, ncSWITCH_ON/ncSWITCH_ON)
142652	Problem	-	V2.4.0.1626	- / V0.482	Incorrect display in the CNC monitor.
142662	Information	-	V2.4.0.1626	- / V0.482	Included drive operating systems
142690	Problem	V2.5.1.0022 [L2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	High system load if system event not handled (USB overcurrent)
142750	New function	V2.5.2.0100 [A2.87]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	Support of X20IF1091
142765	Problem	V2.4.0.1451 [V2.40]	V2.4.0.1452 [V2.40]	V2.4.0.1452 [V2.40]	Bus error when using GetNdNr()
142870	Problem	V2.5.1.0021 [K2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0023 [M2.83]	Page fault when using remanent PVs and cold restart
142887	Problem	-	-	- / V1.210	Target system SG4 (I386), Powerlink: In rare cases, "MC_Stop" could result in blocking parameter transfer(only with ACP10_MC from V1.170 on with AR from V2.80 on)
142950	Problem	V2.5.2.0008 [A2.86]	V2.5.2.7004	V2.5.2.7004	Problem if starting an AS 2.5.2.8 project from the explorer (*.GDM)
142995	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0010 [C2.86]	V2.5.2.0010 [C2.86]	Watchdog error when using the parameter FCCTS = 1 in the mode string of the FRM_xopen() function block in the DVFrame library
143125	Problem	V2.5.2.0008 [A2.86]	-	-	After opening NC Trace, the NC object selection dialog box is hidden by the shortcut menu
143262	Problem	-	V2.4.0.1626	- / V0.483	Reduction in path speed along short NC-blocks
143285	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	Registration dialog boxes in German
143330	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	System configuration re-transferred even without apparent changes
143670	Problem	-	-	- / V1.211	MC_ReadAxisError returning errors without DataObjectName
143680	Problem			V2.5.2.0101 [B2.87]	Alarm triggers page fault in alarm system

		V2.5.2.0008 [A2.86]	V2.5.2.0010 [C2.86]		
143690	New function	-	-	- / V1.211	MC_Stop: Deceleration outside the valid range
143735	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	No firmware update carried out when using the X67DM1321 module on the X20BC0083
143773	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Missing highlighting for linker warning
143795	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	VNC operation not possible
143865	New function	V2.5.2.0009 [B2.86]	V2.5.2.0010 [C2.86]	V2.5.2.0010 [C2.86]	Support for 5LS166.6 in revisions >= B0
143905	Problem	V2.5.1.0023 [M2.83]	-	V2.5.2.0101 [B2.87]	Key action "Alarm system -> Action: Acknowledge" ineffective
143910	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0010 [C2.86]	V2.5.2.0101 [B2.87]	Crash by the key action "Alarm system - Acknowledge"
143985	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0010 [C2.86]	V2.5.1.0024 [N2.83]	Error generating hardware description files
144017	Problem	-	V2.4.0.1626	- / V0.483	Rotation angle of 90 degrees results in a half circle
144022	Problem	-	V2.4.0.1626	- / V0.483	Automatic tangential axis: first and last synch. M-function can not be used as sync1_t or sync2_t
144028	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Page fault if many alarms generated over a long period of time
144130	Problem	V2.5.2.0007 [V2.85]	V2.4.0.1627	- / V0.501	Page Fault while calling a local subroutine.
144135	Problem	-	V2.4.0.1627	- / V0.490	Start of CNC programs and subprograms from text files
144170	Problem	-	-	- / V1.211	FBs transferring 0 instead of the input value
144180	Problem	V2.5.2.0008 [A2.86]	-	-	Insufficient memory for VC applications on targets with only 16 MB DRAM
144185	Problem	-	-	- / V1.211	MC_BR_DownloadCamProfileObj doesn't work (V1.210 only)
144213	Problem	-	V2.5.2.0020 [J2.86]	-	Status 7130 when using VISAPI functions for terminal visualization
144215	Problem	-	-	- / V1.211	MC_BR_AutControl: Clearing "Enable" caused a drive error when the controller was off
144315	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Touchpad flickering when opening using the status data point (bit 3)
144345	Problem	V2.5.3.0001 [V2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	EPL Manager 1: New firmware
144360	New function	V2.5.2.0100 [A2.87]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Support of X20DI2372 and X20DI4372
144363	Problem			V2.5.2.0101 [B2.87]	

		V2.5.1.0023 [M2.83]	V2.5.2.0011 [D2.86]		Error code if the screensaver switches to the active page
144385	Problem	-	V2.4.0.1627	- / V0.503	Unjustified error 8134:"Radius difference between start and end".
144490	Problem	-	-	- / V1.211	Error 29228 from FBKs with a master input
144605	Problem	-	-	- / V1.211	MC_SetOverride: Error if override values very small
144610	Problem	-	-	- / V1.211	Invalid state change with MC_Stop possible
144620	Problem	V2.4.1.0026	V2.4.1.1316 [O2.73]	V2.4.1.1316 [O2.73]	Page fault caused by incorrect RTC values
144650	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Changed status value for the FileCopy() function block in FileIO library V2.00.1 compared with V1.03.8
144695	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0012 [D2.86]	V2.5.2.0012 [D2.86]	Page fault when using CANdftab()
144750	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	X20BC7321does not work
144865	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Modified behavior for focus
144907	New function	-	V2.4.0.1627	- / V0.500	New display mode and data in the CNC monitor, new system variables for tool data and zero point offset.
144940	Problem	-	V2.4.0.1627	- / V0.491	CNC program in form of text file can lie in any directory
144950	Information	-	V2.4.0.1627	- / V0.490	Included drive operating systems
144955	Information	-	V2.4.0.1627	- / V0.491	Included drive operating systems
144993	Problem	V2.5.1.0024 [N2.83]	V2.5.2.0104 [F2.87]	V2.5.2.0018 [H2.86]	Bitmaps no longer displayed on the PP35
145005	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Application using memory during cyclic operation if fill areas defined without data points
145020	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0020 [J2.86]	-	No longer possible to change Numlevel with key action if the Lifesign data point is connected.
145055	Problem	-	-	- / V1.211	MC_GearIn and MC_GearInPos: Lag error or speed jump when starting
145082	Information	-	V2.4.0.1627	- / V0.500	Included drive operating systems
145092	Problem	-	V2.4.0.1627	- / V0.501	Compensation matrix for cartesian axis is not taken in consideration.
145095	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Memory drained when calling the DevLink() or DevUnlink() function
145102	Information	-	V2.4.0.1627	- / V0.501	Included drive operating systems
145190	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	Page fault when using I/O variables in watch or using the I/O monitor
145210	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	Watchdog error when using the CANquwr() function block in the CAN_lib

					library
145215	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	X20CPx14x: New firmware
145223	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	VISAPI function VA_LoadBitmap always returning Status= 7196 (incorrect graphics format)
145258	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0012 [D2.86]	V2.5.2.0015 [F2.86]	VA_CopyMemToScreen and VA_CopyScreenRect not working for rotating displays (ROT=270)
145365	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0013 [D2.86]	V2.5.2.0013 [D2.86]	Completion set right when releasing the edit up/down key
145495	Problem	-	-	- / V1.211	MC_BR_InitParList, MC_BR_DownloadParSequ, and MC_BR_InitParSequ constantly reported busy
145510	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Different values for constants
145640	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0012 [D2.86]	V2.5.2.0012 [D2.86]	Faulty display for TextLengthOverrun with "_" and "|"
145780	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Menu items in the AS trace were disabled
145805	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Problems accessing external FTP servers
145857	Problem	-	V2.4.0.1627	- / V0.503	Position error on the tangential axis when activating the cutter diameter.
145862	Information	-	V2.4.0.1627	- / V0.503	Included drive operating systems
145867	Problem	-	-	- / V0.553	Control of the Motor Holding Brake: During the functional test of the holding brake torque the test torque was incorrect monitored
145877	Problem	-	-	- / V1.211	Control of the Motor Holding Brake: During the functional test of the holding brake torque the test torque was incorrect monitored
145937	Problem	-	V2.4.0.1627	- / V0.503	The tool length and tool offset are wrongly accounted for in CNC systems with less than three path axes.
145950	New function	-	-	- / V1.211	MC_Home: New mode mcHOME_SWITCH_GATE
145952	Problem	-	V2.4.0.1627	- / V0.503	Incorrect cutter diameter.
145990	Problem	-	-	- / V1.211	MC_Power: The axis remained in the "Disabled" state if the controller was not ready
146027	Information	-	V2.4.0.1627	- / V0.510	Included drive operating systems
146032	New function	-	V2.4.0.1627	- / V0.510	Control structure for NC test
146037	Problem	-	V2.4.0.1627	- / V0.510	Error in german user data structure
146060	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0105 [G2.87]	Cycle time violation by VA_GetActAlarmList

146083	New function	-	V2.5.2.0013 [D2.86]	V2.5.2.0013 [D2.86]	Momentary data point remains set when switching pages
146125	Problem	-	-	- / V1.211	MC_BR_InitCyclicRead at the same time as MC_Home, quickstop or drive error can cause incorrect cyclic data
146172	Problem	-	-	- / V1.211	Powerlink, initial ACOPOS parameters, unjustified timeout error (only in V1.181 - V1.210)
146215	Problem	-	-	- / V1.211	MC_BR_MoveVelocityTriggStop constantly reports busy after MC_Stop
146245	Problem	V2.5.1.4120 [K2.83]	V2.5.2.4101 [D2.86]	V2.5.2.4101 [D2.86]	Automation Runtime installation doesn't work
146405	Information	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	New version changer needed
146428	Problem	V2.5.2ßeta	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Incorrect display of date and time in alarm control
146460	Problem	V3.0.44	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	Cannot record variables outside of the 64 KB limit
146535	Problem	-	-	- / V1.242	MC_DigitalCamSwitch using the value "1" as the period for a non-periodic axis
146575	Problem	-	V2.4.0.1627	- / V0.510	Problem with Restart of an NC-program
146585	Problem	-	V2.4.0.1627	- / V0.510	Turning of a circle & its dynamics
146675	Problem	V2.5.2.0012 [D2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Error behavior when entering strings in watch
146690	Problem	-	-	- / V1.213	Deadlock due to axis error during MC_BR_ReadParID or MC_BR_WriteParID
146765	Information	V2.5.2.0007 [V2.85]	V2.5.2.4101 [D2.86]	V2.5.2.4101 [D2.86]	New AR010 setup
146767	Problem	-	V2.4.0.1627	- / V0.512	Non synchronized M-functions between dwell times
146820	Problem	V2.5.2.0001 [B2.85]	-	-	Data can be lost in SRAM when changing the CF during an AR update.
146847	New function	-	-	- / V1.230	New NC structure component "message.record.parameter.record_adr"
146850	Problem	-	-	- / V1.213	Unable to restart a movement after axis error
146892	Problem	-	V2.4.0.1627	- / V0.511	Standstill when changing the active working plane.
146897	Information	-	V2.4.0.1627	- / V0.511	Included drive operating systems
146905	Problem	-	V2.4.0.1627	- / V0.511	Deadlock with function combination G221+G220/G222+G170
147010	Problem	V2.5.1.4120 [K2.83]	V2.5.2.0015 [F2.86]	V2.5.2.4102 [F2.86]	Automation Runtime upgrade doesn't work
147020	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0015 [F2.86]	V2.5.2.4102 [F2.86]	EPL manager: New firmware
147060	Problem	V2.5.2.4101 [D2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	No support of network drives with AR010

147145	Problem	-	-	- / V1.213	Lag error when coupling to moving virtual masters
147330	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Page fault from text snippets without data points
147353	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0020 [J2.86]	-	VNC connection doesn't work on rotated display
147405	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0110 [B2.88]	V2.5.2.0018 [H2.86]	Visualization with VNC slave distorted
147417	New function	-	V2.4.0.1628	- / V0.540	Path distance in CNC Monitor after CNC Init
147445	Problem	-	-	- / V1.213	"MC_TouchProbe" always used the positive edge
147500	Problem	-	-	- / V1.213	Function ncda_cr: The length of the data section was not correctly aligned
147530	Problem	-	-	- / V1.213	MC_GearIn and MC_GearInPos reporting errors with very small gear ratios
147590	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0020 [J2.86]	-	Crash after entering the VNC password
147675	Problem	V2.5.1.0024 [N2.83]	V2.5.1.0025 [O2.83]	V2.5.1.0025 [O2.83]	Can no longer start X67IF1121 communication if buffer overrun
147795	Problem	V2.5.2.0013 [D2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	AR010 not starting sometimes if memory text disabled in BIOS
147852	New function	-	-	- / V1.213	Encoder Interface AC130: The deactivation of inverted signals is supported in the incremental encoder emulation mode.
147965	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0020 [J2.86]	-	Change in BitmapIndexOffset not updated completely
147970	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	VC SG3 / P127 crash or freeze with a high CAN load
148045	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0018 [H2.86]	Listbox elements not displayed correctly if the option data point is appended
148090	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0018 [H2.86]	Faulty behavior if input started with Enter and not changed
148125	Problem	V2.5.2.0014 [E2.86]	V2.5.2.1441 [X8.00]	V2.5.2.1441 [X8.00]	New Memcards not working
148126	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	sock_select() not working on AR106 and CP570
148200	Problem	-	-	- / V1.242	MC_BR_AutControl only transferring the ParLock ParID in some cases
148240	Problem	V2.5.2.0104 [F2.87]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Modules sometimes not recognized during booting (EX282)
148245	New function	-	-	- / V1.214	MC_BR_InitCyclicWrite now for CAN as well
148405	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	SG3: Backlight not switching off if bitmap blinking
148420		-	V2.4.0.1627	- / V0.520	

	New function				Save data to an INIT-Parameter-Module. Target memory User RAM.
148475	Problem	-	-	- / V1.214	MC_Phasing with MC_GearInPos
148572	New function	-	-	- / V1.215	The speed controller set value current filter ISQ_FILTER is supported.
148655	Problem	V2.4.1.1315 [N2.73]	V2.4.1.1319 [R2.73]	V2.4.1.1319 [R2.73]	Profiling data not saved after booting in RUN mode after an error
148752	Problem	-	V2.4.0.1627	- / V0.520	Overlapping signal function in a path section with zero length
148850	Problem	V2.5.2.0014 [E2.86]	V2.5.1.0026 [O2.83]	V2.5.1.0026 [O2.83]	Incorrect calculation of array indices if their checking (CheckBounds) is enabled
148880	Problem	-	-	- / V1.210	Cam profile automat: Defined state index for inactive automats.
148900	Problem	V2.5.2.0015 [F2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Cycle time violation caused by VA_GetActAlarmList if a task is transferred
148940	Problem	-	V2.4.0.1627	- / V0.530	Save data to an INIT-Parameter-Module. Target memory User ROM.
149002	Problem	-	-	- / V1.214	CAN, Number of HPRIO-WRITE-COBs for ACP10USCOB for the library "ACP10_MC"
149125	Problem	-	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	
149195	Problem	V2.4.0.4194 [V2.72]	V2.4.1.1320 [S2.73]	V2.4.1.1320 [S2.73]	High Ethernet network load (broadcasts) leading to cycle time violations
149321	Problem	V2.5.2.0102 [D2.87]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Warning 14889 if standard gateway configuration missing
149355	Information	-	V2.5.2.1441 [X8.00]	V2.5.2.1441 [X8.00]	Support for CPUs below cancelled
149356	Problem	V2.5.3.0011 [C2.90]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	FileDelete() returning error status 20718 on an external FTP server
149452	Information	-	V2.4.0.1627	- / V0.512	Included drive operating systems
149457	Information	-	V2.4.0.1627	- / V0.520	Included drive operating systems
149462	Information	-	V2.4.0.1627	- / V0.530	Included drive operating systems
149495	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	Pressing the left or upper display edge activating buttons on the opposing side
149532	New function	-	-	- / V1.230	New NC structure component "nc_test" for "ncAXIS" and "ncV_AXIS"
149565	Problem	-	-	- / V1.242	MC_BR_InitModPos not always transferring "Period"
149805	Problem	-	-	- / V1.242	Value of the "Deceleration" input not checked for MC_BR_AutControl
149835	Problem	V2.5.2.0104 [F2.87]	-	V2.5.2.0106 [H2.87]	Terminal not working on the X20CP1484
149880	Problem	-	-	- / V1.242	MC_BR_AutControl not ending active movements if "Enable" set to "0" (only in V1.211 - V1.241)

149885	Problem	-	-	- / V1.242	MC_Stop registers CommandAborted if "Enable=0" was set for MC_BR_AutControl
149895	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	New firmware: X20IF1063
149915	Problem	-	-	- / V1.242	Value of the "Deceleration" input not checked for MC_Halt
149930	New function	V2.5.2.0016 [G2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Incorrect task states displayed in service mode
149945	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	Error number 4053 when starting a generated transfer list
149995	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Sporadic Automation Studio crash when transferring projects
150008	Problem	V2.5.2.0015 [F2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0017 [H2.86]	Compiler warning despite correct configuration
150085	Problem	-	-	- / V1.242	MC_Power outputs not correctly operated if the "Enable" input was set to "0" after network communication was lost
150100	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	New firmware: X20IF1091
150110	Problem	-	-	- / V1.242	MC_Power constantly reporting "Busy" when called for a configured, but unconnected ACOPOS unit
150125	Problem	-	-	- / V1.242	MC_Reset generating a change in status from "error stop" to "standstill" although network communication interrupted
150130	Problem	-	-	- / V1.242	MC_ReadAxisError showing an axis error although it was already acknowledged with the MC_Reset FBK
150135	Problem	-	-	- / V1.242	MC_ReadAxisError - Error texts could be mixed
150207	Problem	-	V2.4.0.1628	- / V0.531	External encoder - Homing error
150215	Problem	-	-	- / V1.242	MC_BR_ReadParID and MC_BR_WriteParID, deadlock during the parameter transfer of other FBs
150220	Problem	-	-	- / V1.242	MC_BR_ReadParID and MC_BR_WriteParID can now also be called when an axis error is present
150260	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	New firmware: X20DC2190
150342	New function	-	-	- / V1.230	New NC object with type "ncMULTI_AX_TRACE"
150345	Problem	-	-	- / V1.242	MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, "Done" is output even though no parameter was entered
150347	New function	-	-	- / V1.230	New NC action "ncSERVICE+ncPAR_LIST,ncREAD"
150352	New function	-	-	- / V1.230	New NC action "ncSERVICE+ncACP_PAR,ncUPLOAD"

150357	New function	-	-	- / V1.230	New format "ncFORMAT_T14"
150362	New function	-	-	- / V1.240	New NC structure components "controller.speed.isq_filter1/2/3"
150367	New function	-	-	- / V1.240	Target system SG4 (I386), automatic determination of controller parameters
150372	Problem	-	-	- / V1.241	Incorrect trace status after re-establishing network communication
150377	New function	-	-	- / V1.241	Library ACP10TUN for controller setup, data restoration after error
150450	Problem	-	-	- / V1.242	MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, deadlock during the parameter transfer of other FBs
150455	Problem	-	-	- / V1.242	MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, using a ParID repeatedly no longer causes an error
150465	Problem	-	-	- / V1.242	MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, the use of invalid ParIDs resulted in the transfer of incorrect data
150480	Problem	-	-	- / V1.242	MC_BR_ReadParID and MC_BR_WriteParID, deadlock during network interruption (only in V1.190 - V1.241)
150520	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Drop-down listbox not displayed on the page when changed for the first time
150525	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Variables with the value 0 not displayed on the start page
150530	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Alarm system: Acknowledgement image no longer works.
150535	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	V2.5.2.0018 [H2.86]	Key matrix not working in AS 2.5.2.16 if connected to the panel object
150615	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	Page fault after downloading a change
150630	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Group alarm variable no longer set
150637	Information	-	-	-	ACP10 software from V1.990 on can be used for operation of ACOPOSmulti and ACOPOS 8V1xxx.00-2.
150642	Information	-	-	-	The ACP10_MC library from V1.990 on can be used for operation of ACOPOSmulti and ACOPOS 8V1xxx.00-2.
150655	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Bypass image not set
150747	Problem	-	-	- / V1.242	The versions 1.240 and 1.241 of ACP10MAN would lead to a Pagefault with ACP10_MC.
150825	Problem	-	V2.5.2.0020 [J2.86]	-	Only one visualization starting in Runtime even though it's possible to

					configure several PW35 projects
150992	Information	-	V2.4.0.1628	- / V0.531	Included drive operating systems
151022	Problem	-	-	- / V1.243	Induction motor: Motor holding brake could not be opened
151100	Problem	V2.5.1.0024 [N2.83]	V2.5.2.0019 [I2.86]	V2.5.2.0019 [I2.86]	Toggling outputs on modules used with CANIO
151135	Problem	V2.5.2.0107 [V2.87]	V2.5.2.0020 [J2.86]	-	Faulty update of drop-down length at runtime
151140	Problem	V2.5.2.0015 [F2.86]	V2.5.2.0020 [J2.86]	-	VA_QuitAlarms must be called on the terminal twice with the same parameters for the alarm group to be acknowledged.
151182	New function	-	V2.4.0.1628	- / V0.540	Restart – Current axis positions in the DPR trace
151197	Information	-	V2.4.0.1628	- / V0.540	Included drive operating systems
151272	Problem	-	-	- / V0.554	IGBT junction temperature model: The drives 8V1640.xx-2, 8V1320.00-2 and 8V1180.00-2 could be overloaded thermally.
151277	New function	-	V2.4.0.1628	- / V0.540	New path length variables in CNC block monitor
151282	New function	-	V2.4.0.1628	- / V0.540	New trace data points in the CNC block monitor
151310	Problem	V2.5.2.0018 [H2.86]	V2.5.2.0020 [J2.86]	-	Refresh problem for drop-down control if an element outside the visible drop-down range is selected via the Index data point
151403	Problem	V2.5.2.0107 [V2.87]	V2.5.2.0020 [J2.86]	V2.5.2.0020 [J2.86]	Umlauts (German characters) not displayed in listbox
151425	Problem	V2.5.2.0018 [H2.86]	-	- / V1.991	Powerlink, faulty cyclic read data at high CPU load
151437	Problem	-	-	- / V1.243	Disturbances on the motor holding brake caused the motor holding brake to close without the controller being deactivated. Only the error "6048: Motor holding brake monitor: Position error too large" was registered.
151607	Problem	-	-	- / V1.243	Setup for controller with library ACP10TUN
151745	Problem	V2.5.2.0018 [H2.86]	V2.5.2.0020 [J2.86]	-	Last bit of text appears in plain text when canceling password entry in a string control
151752	Problem	V2.5.2.0018 [H2.86]	-	- / V1.243	Powerlink, faulty cyclic read data at high CPU load
151940	Problem	-	-	- / V1.243	MC_BR_AutControl: Enable=0 in case of an error caused a drive error (only in V1.242)
151995	Problem	-	-	- / V1.243	Cam profile automat: In stand-by mode of the automat error messages could be displayed, even though they were deactivated with AUT_MSG_MODE_BITS=0x0.

152010	Problem	V2.5.2.0016 [G2.86]	-	- / V1.243	Download of a cam profile aborted if a warning occurred
152022	Problem	V2.5.2.0016 [G2.86]	-	- / V1.991	Download of a cam profile aborted if a warning occurred
152353	Problem	V2.5.2.0019 [I2.86]	V2.5.2.0020 [J2.86]	-	Crash when entering an incorrect VNC password
152425	Problem	V2.5.2.0019 [I2.86]	V2.5.2.0020 [J2.86]	-	If the network fails often, the BC could be brought to a state where I/Os were no longer enabled (could only be corrected by turning off/on).(only relevant for EPL V1 operation)

1.4.3 Requests and problems by version

ID	valuation	known since	planned for	solved since	Description
137150	Problem	V2.5.1.0017 [H2.83]	-	-	I/O mappings sometimes not applied when converting projects from AS 2.4 to AS 2.5
146820	Problem	V2.5.2.0001 [B2.85]	-	-	Data can be lost in SRAM when changing the CF during an AR update.
143125	Problem	V2.5.2.0008 [A2.86]	-	-	After opening NC Trace, the NC object selection dialog box is hidden by the shortcut menu
144180	Problem	V2.5.2.0008 [A2.86]	-	-	Insufficient memory for VC applications on targets with only 16 MB DRAM
129550	Problem	-	V2.5.1.0013 [D2.83]	-	ARNC0 DPR Trace: The wrong NC object was sometimes used for trace points
138620	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	-	VC runtime objects not replaced in the project
115776	Information	V2.4.0.4182 [C2.71]	V2.5.2.0005 [I2.85]	-	DirCopy() doesn't copy directories with long path names
115661	Information	V2.4.0.4182 [C2.71]	V2.5.2.0005 [I2.85]	-	DirInfo() returns status 20799 for long filenames
134260	Information	V2.5.1.0015 [F2.83]	V2.5.2.0006 [J2.85]	-	EX48x/EX290: Detecting screw-in module failures
140935	Problem	V2.5.2.0004 [G2.85]	V2.5.2.0008 [A2.86]	-	Automation Studio crashes after loading ARNC0 trace data
150825	Problem	-	V2.5.2.0020 [J2.86]	-	Only one visualization starting in Runtime even though it's possible to configure several PW35 projects
144213	Problem	-		-	

			V2.5.2.0020 [J2.86]		Status 7130 when using VISAPI functions for terminal visualization
147353	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0020 [J2.86]	-	VNC connection doesn't work on rotated display
145020	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0020 [J2.86]	-	No longer possible to change Numlevel with key action if the Lifesign data point is connected.
147965	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0020 [J2.86]	-	Change in BitmapIndexOffset not updated completely
147590	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0020 [J2.86]	-	Crash after entering the VNC password
151140	Problem	V2.5.2.0015 [F2.86]	V2.5.2.0020 [J2.86]	-	VA_QuitAlarms must be called on the terminal twice with the same parameters for the alarm group to be acknowledged.
149945	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	Error number 4053 when starting a generated transfer list
150615	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	Page fault after downloading a change
149495	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	Pressing the left or upper display edge activating buttons on the opposing side
150260	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	New firmware: X20DC2190
150100	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	New firmware: X20IF1091
149895	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	-	New firmware: X20IF1063
138105	Problem	V2.5.2.0018 [H2.86]	V2.5.2.0020 [J2.86]	-	Faulty display when bypassing active alarms
151745	Problem	V2.5.2.0018 [H2.86]	V2.5.2.0020 [J2.86]	-	Last bit of text appears in plain text when canceling password entry in a string control
151310	Problem	V2.5.2.0018 [H2.86]	V2.5.2.0020 [J2.86]	-	Refresh problem for drop-down control if an element outside the visible drop-down range is selected via the Index data point
152353	Problem	V2.5.2.0019 [I2.86]	V2.5.2.0020 [J2.86]	-	Crash when entering an incorrect VNC password
152425	Problem	V2.5.2.0019 [I2.86]	V2.5.2.0020 [J2.86]	-	If the network fails often, the BC could be brought to a state where I/Os were no longer enabled (could only be corrected by turning

					off/on).(only relevant for EPL V1 operation)
151135	Problem	V2.5.2.0107 [V2.87]	V2.5.2.0020 [J2.86]	-	Faulty update of drop-down length at runtime
141585	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0104 [F2.87]	-	Configured gateway for terminal configuration not evaluated
131480	Problem	V2.4.0.1417	V2.4.0.1450 [X6.50]	V2.4.0.1450 [X6.50]	Key operation no longer possible
130925	Problem	V2.5.1.0016 [G2.83]	V2.4.0.1450 [X6.50]	V2.4.0.1450 [X6.50]	Bus errors or page faults caused by fragmented INA frames
128400	Problem	V2.4.0.1432 [V2.39]	V2.4.0.1433 [V2.39]	V2.4.0.1451 [V2.40]	3IF681.86: Cycle time violations if many broadcasts
129710	Problem	V2.5.1.0009 [V2.82]	V2.4.0.1433 [V2.39]	V2.4.0.1451 [V2.40]	Library contains dependencies to certain versions of other libraries
131360	Problem	V2.5.1.0009 [V2.82]	V2.4.0.1434 [V2.39]	V2.4.0.1451 [V2.40]	Incorrect framing for Modbus slave
92550	Problem	V2.4.0.0009	V2.4.0.1452 [V2.40]	V2.4.0.1452 [V2.40]	CANdftab() returning status 8833 instead of 14710 during cyclic operation
142765	Problem	V2.4.0.1451 [V2.40]	V2.4.0.1452 [V2.40]	V2.4.0.1452 [V2.40]	Bus error when using GetNdNr()
128255	Project	-	V2.4.1.1301 [A2.73]	V2.4.1.1302 [B2.73]	Support for 0CISCP.01
126645	Problem	V2.4.0.1393 [F2.72]	V2.4.1.1301 [A2.73]	V2.4.1.1302 [B2.73]	Status 26012 for the CANrtr() function block
125815	Problem	V2.4.0.13xx	V2.4.1.1301 [A2.73]	V2.4.1.1302 [B2.73]	Defined starting order for cyclic task classes
128805	Problem	V2.4.0.1387 [V2.71]	V2.4.1.1302 [B2.73]	V2.4.1.1302 [B2.73]	EPL manager: New firmware
130845	Problem	V2.4.1.1302 [B2.73]	V2.4.1.1303 [C2.73]	V2.4.1.1303 [C2.73]	New firmware: 3IF787.9
134735	Problem	V2.4.1.1304 [D2.73]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	Status 25000 and 25004 with CANwrite()
135205	Information	V2.4.1.1304 [D2.73]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	AR version E2.73 and higher require new versions of the ACP10 software or ARNC0 to be used
135650	Problem	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	A new version of SYS_lib needs to be used in AR version E2.73 and higher
132215	Problem	V2.5.1.0009 [V2.82]	V2.4.1.1305 [E2.73]	V2.4.1.1305 [E2.73]	FrmWrite() returns Status 8078 after a long time
130285	Problem	V2.5.1.0009 [V2.82]	V2.4.1.1306 [F2.73]	V2.4.1.1306 [F2.73]	Runtimes for CAN transmit functions increased
132410	Problem	V2.4.1.1304 [D2.73]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Cycle time violation when setting the IP address

					during runtime
132675	Problem	V2.4.1.1304 [D2.73]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Page fault when starting the profiler
136595	Project	V2.4.1.1305 [E2.73]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Support of 4PP220.1214-K01
134525	Problem	V2.5.1.0014 [E2.83]	V2.4.1.1307 [G2.73]	V2.4.1.1307 [G2.73]	Using line coverage causing page faults
138725	Problem	V2.5.1.0018 [I2.83]	V2.4.1.1308 [H2.73]	V2.4.1.1308 [H2.73]	Using "dynamic event variables" via PVI may cause a page fault if the pointer for the dynamic variable is not referenced yet.
139070	Problem	V2.5.1.0019 [J2.83]	V2.4.1.1308 [H2.73]	V2.4.1.1308 [H2.73]	SG4 targets don't send an ARP request during booting
138300	Problem	V2.4.1.1306 [F2.73]	V2.4.1.1310 [I2.73]	V2.4.1.1310 [I2.73]	Data consistency of PVs on SG4 targets not guaranteed when using CMS services
99160	Problem	V2.4.0.1013	V2.4.1.1312 [K2.73]	V2.4.1.1312 [K2.73]	HWGetTemperature() sporadically returning values that are too high
144620	Problem	V2.4.1.0026	V2.4.1.1316 [O2.73]	V2.4.1.1316 [O2.73]	Page fault caused by incorrect RTC values
141550	Problem	V2.5.2.0007 [V2.85]	V2.4.1.1316 [O2.73]	V2.4.1.1316 [O2.73]	Page fault after calling MBSlave()
148655	Problem	V2.4.1.1315 [N2.73]	V2.4.1.1319 [R2.73]	V2.4.1.1319 [R2.73]	Profiling data not saved after booting in RUN mode after an error
149195	Problem	V2.4.0.4194 [V2.72]	V2.4.1.1320 [S2.73]	V2.4.1.1320 [S2.73]	High Ethernet network load (broadcasts) leading to cycle time violations
138500	Problem	V2.5.2.0007 [V2.85]	V2.4.1.1320 [S2.73]	V2.4.1.1320 [S2.73]	Cycle time violation when using MEMInfo()
125050	Information	V2.5.0.0025 [H2.81]	V2.5.1.0010 [A2.83]	V2.5.0.0025 [H2.81]	AR010 support removed from 2.5.0.x
127010	New function	-	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Dynamic device configuration for X67IF1121 interfaces
127300	New function	-	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	X20AT6402: Update for non-cyclic data point for accessing compensation temperature with the AsIoAcc library
127295	New function	-	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	X20AT2402: Updated non-cyclic data point for compensation temperature for accessing the AsIoAcc library
126030	Problem	V2.5.0.0026 [I2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	80CIS.PS0-x: New firmware
126935	Problem				New firmware: X20DI2377

		V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	
128025	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of X20CM8323 starting with Rev. A5
127695	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of X67SM2436
126735	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of 5E9000.32
126730	New function	V2.5.0.0028 [V2.81]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	Support of 4XP0000.00-K11
116280	Problem	V2.5.0.1314 [S2.80]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	EPL manager: New firmware
127365	Project	V2.5.1.0009 [V2.82]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [A2.83]	AR106: Cycle time violation when accessing the USB interface on the Automation Panel
127610	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DV1311.L12: I/O configuration switch added in order to turn off status / diagnostic data
127605	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DV1311.L08: I/O configuration switch added in order to turn off status / diagnostic data
127600	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM9331.L12: I/O configuration switch added in order to turn off status / diagnostic data
127595	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM9321: I/O configuration switch added in order to turn off status / diagnostic data
127590	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM1321.L12: I/O configuration switch added in order to turn off status / diagnostic data
127585	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM1321.L08: I/O configuration switch added in order to turn off status / diagnostic data
127580	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DM1321: I/O configuration switch added in order to turn off status / diagnostic data
127575	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DO1332: I/O configuration switch added in order to turn off status / diagnostic data
127565	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO9321: I/O configuration switch added in order to turn off status / diagnostic data

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127560	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO8332: I/O configuration switch added in order to turn off status / diagnostic data
127555	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO6322: I/O configuration switch added in order to turn off status / diagnostic data
127550	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO6321: I/O configuration switch added in order to turn off status / diagnostic data
127545	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO4332: I/O configuration switch added in order to turn off status / diagnostic data
127540	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO4322: I/O configuration switch added in order to turn off status / diagnostic data
127535	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DO2322: I/O configuration switch added in order to turn off status / diagnostic data
127530	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20PS2100: I/O configuration switch added in order to turn off status / diagnostic data
127525	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20PS3300: I/O configuration switch added in order to turn off status / diagnostic data
127520	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20BT9100: I/O configuration switch added in order to turn off status / diagnostic data
127515	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20BR9300: I/O configuration switch added in order to turn off status / diagnostic data
127330	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DI2377: Additional prescaler frequencies for gate measurement
127315	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X67DC1198: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)
127310	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DC4395: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)
127305	New function	-			

			V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	X20DC2395: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)
125765	Problem	V2.5.0.0021 [T2.80]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	Not possible to copy text in monitor mode
123785	Problem	V2.5.0.0024 [G2.81]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	Cannot transfer a visualization to the AC141
126490	Problem	V2.5.1.0006 [F2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	OS download not possible to AR010
126800	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [A2.83]	ConfigurationBuilder error messages require AS restart
127005	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0011 [C2.83]	V2.5.1.0010 [A2.83]	Acknowledge bit not set if acknowledge array too small
118325	Problem	V2.5.0.1328 [D2.81]	V2.5.2.0002 [C2.85]	V2.5.1.0010 [A2.83]	ReadyRelay drops out
119798	Problem	V2.5ßeta	V2.5.2.0002 [C2.85]	V2.5.1.0010 [A2.83]	Firmly set limits on scaled data points are lost during a datapoint refresh
127661	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0010 [A2.83]	V2.5.1.0010 [B2.83]	Support of 8AC140.60-2
127570	New function	-	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	X20DO9322: I/O configuration switch added in order to turn off status / diagnostic data
128375	Project	V2.5.1.0009 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	Support of 4PP120.1043-K05
127095	Project	V2.5.1.0009 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	4XP0000.00-K11: LEDs and keys designed as individual channels
128085	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	Digital I/Os on the X67BC7321-1 bus connector not operated correctly
127930	Problem	V2.5.1.0010 [A2.83]	V2.5.1.0010 [B2.83]	V2.5.1.0010 [B2.83]	X67IF1121 no longer works
129660	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	7MM432.70-1: Data points, reference check, and digital signals updated
129555	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	New "ARNC0" function model
129665	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	7MM432.70-1: Data points, reference check, and digital signals updated
129560	New function	-	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	New "ARNC0" function model
89685	New function	V2.4.0.0009	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Warning with line coverage and setting breakpoints

119985	Problem	V2.4.1.0022	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	IRQs from AT keyboards may cause ACOPOS error 14126
122625	Problem	V2.5.0.0023 [F2.81]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	X67SM2436: New firmware
116165	Problem	V2.5.0.1313 [R2.80]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	EPL manager: New firmware
125115	Problem	V2.5.1.0003 [C2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Hardware recognition for the 7EX290.50-1 doesn't work
128140	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Automation Studio crashes when dynamic PVs have a length of 32 characters
128760	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	External configuration builder doesn't create a BR file
129500	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	I/O mappings with multiple mappings can no longer be opened
128135	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Permanent variables deleted when changing CF
129425	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	New firmware: X67AT1402
128570	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Cycle time violation when using AsIOMMcreate() from the AsIOMMan library
130415	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Modules not recognized during booting
130120	New function	V2.5.1.0010 [B2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20AI4632
130130	Problem	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20PS4951
130125	Problem	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20DM9324
130395	New function	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X67SM2436 starting with Rev. AA
130115	New function	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X20AI2632
130057	New function	V2.5.1.0012 [C2.83]	V2.5.1.0013 [D2.83]	V2.5.1.0013 [D2.83]	Support of X67BC8321-1
128580	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	Warning 8005 when building projects with the 4PP250.0571-K04
131005	Project	-	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5212.19
130920	Project	-	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5601.12
130870	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	After an uninstall, the SG4 Visual Components editor no longer works for

					remaining AS versions
130815	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	7CX408.50-1: Error 27409 with the "flat" setting
130710	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Remanent variables on the LS172 are not backed up on the LS when closing or during a Windows restart
130905	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	ModuleOk is false with 9, 10, etc. module on 2005 expansion
130883	Problem	V2.5.1.0010 [A2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Message window "Error found in hardware project file" after a USB device was deleted in a converted project.
131225	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP035.E300-K01
131175	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP120.1043-K07
131085	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4B1270.00-K04
131030	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP035.0300-K11
130990	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5200.27
130985	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 4PP035.0300-K10
130960	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5D5601.05
130950	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5E9000.24
130940	Project	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	Support of 5E9000.22
130895	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0014 [E2.83]	INA client no longer works
130855	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	Support of X20DO6529
130850	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	Support of X20CM2900
132125	New function	-	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	Support for 7EC021.60-1
131945	Problem	V2.4.0.4194 [V2.72]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	Same ident with several MBMopen() instances, using X67IF1121
133240	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	New firmware: X20AI4632 and X20AI2632
133160	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	Support of X20DI4760
132980	Problem				New firmware: X67SM2436

		V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0015 [F2.83]	
132590	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	X67AM1223: Outputs are not displayed in AS
133680	Problem	V2.5.0.0014	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Error 27306 when booting a SG4 target with several Powerlink stations
120585	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Size of IOMap.iom files suddenly becomes bigger
126550	Problem	V2.5.1.0007 [G2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	No Keyboard operation in the output window
133982	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	EPL Manager: New firmware
133180	Problem	V2.5.1.0009 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	EX48x doesn't work if the 16 log. module slots are filled.
133145	Problem	V2.5.1.0010 [A2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Using LineCoverage can cause cycle time violations
130200	Problem	V2.5.1.0011	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Exported SFC task not imported correctly
131985	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Compilation crash
133495	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Cannot compile AR106 project after inserting a USB device
131415	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Crash if period under "Computer name" in the remote configuration dialog box
132310	Problem	V2.5.1.0013 [D2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Cycle time violation caused by CANopen master configuration activities
133515	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Opening the "Select variable" dialog box takes too long
134010	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Cycle time violation when downloading a module or in cycle operation
134765	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X67SM2436
134135	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X67SM2436
133755	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X20DC1196, X20DC1198, X20DC1396, X20DC2396, X20DC1398 and X20DC2398
132290	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X67BC8321
133915	New function	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Support for X20BR9300 (D0 and higher), X20BT9100

					(D0 and higher), X20PS2100 (D0 and higher), X20PS3300 (D0 and higher), X20PS9400, and X20PS9500.
134585	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Status 25000 and 25004 with CANwrite()
134366	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Modules from USRRAM incorrectly copied to DRAM
133885	Problem	V2.5.1.4105 [E2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	New firmware: X20AT2402 and X20AT6402
133800	Problem	V2.5.1.4108 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	SRAM data is lost when Windows is shut down while the AR010 is running
134005	New function	V2.5.1.4108 [V2.82]	V2.5.1.0016 [G2.83]	V2.5.1.0016 [G2.83]	Synchronization between Windows time and AR010 time can be deactivated using a command line option
131455	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Clock runs fast
134235	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	X67DM1321 outputs set randomly on modules with "old" FPGA versions
135165	New function	V2.5.1.0016 [G2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Support of X20CM1941
135150	New function	V2.5.1.0016 [G2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Support of X67SM2436-K01
134885	Problem	V2.5.1.0016 [G2.83]	V2.5.1.0017 [H2.83]	V2.5.1.0017 [H2.83]	Error 27306 when booting an APC620 target with several ACOPOS stations on Powerlink
135810	New function	-	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Support for the 3IF671.9 and 3IF672.9 modules
135905	New function	-	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Expansion in library functionality
116620	New function	V2.5.0.0020	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Status variable return value doesn't work in terminal mode
112990	Problem	V2.5.0.4112 [Q2.80]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Watchdog error when setting a breakpoint
135635	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	AR010 loader crash when not enough available hard disk or CF space
135690	Problem	V2.5.1.0016 [G2.83]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Error transferring structures
136695	Problem	V2.5.1.0017 [H2.83]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	New firmware: X67SM2436
136735	Problem	V2.5.1.0017 [H2.83]	V2.5.1.0018 [I2.83]	V2.5.1.0018 [I2.83]	Page fault or incorrect PV values for structures or arrays with length 3

117988	Problem	V2.4.1.0021	V2.4.1.0022	V2.5.1.0019 [J2.83]	Printer buffer overflow alarm output in converted projects
119093	Problem	V2.5.0.0020	V2.5.1	V2.5.1.0019 [J2.83]	Monochrome bitmaps displayed in black after project conversion
117310	Problem	V2.5.0.0021 [T2.80]	V2.5.1	V2.5.1.0019 [J2.83]	Crash when transferring the visualization
120573	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0005 [E2.82]	V2.5.1.0019 [J2.83]	Terminal freezes if the visualization is started
120473	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0005 [E2.82]	V2.5.1.0019 [J2.83]	Terminal restarts shortly after the visualization is started
127380	Problem	V2.4.0.0011	V2.5.1.0013 [D2.83]	V2.5.1.0019 [J2.83]	Incorrect version ID for VC SG3 modules (V1.00)
133790	Problem	V2.5.1.0008 [V2.82]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	INA connection is broken during communication over a longer period of time
135830	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	Incorrect function model in French AS
133345	Problem	V2.5.1.0014 [E2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	String termination missing when outputting a string in VC SG3
134840	Problem	V2.5.1.0015 [F2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	PP35: Focus initially set to the second input field
136930	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	New command line option -w for ar010loader
137970	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	Error 27306 when using DataObj function blocks for data objects in USRRAM
134335	Problem	V2.5.1.4108 [V2.82]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	PVI communication to the target lost for a few seconds
132336	Problem	V2.5.2.0001 [B2.85]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	When using the ERR_fatal() ERRxfatal() function block, outputs on the 2005 backplane don't drop immediately
137965	Problem	V2.5.2.0004 [G2.85]	V2.5.1.0019 [J2.83]	V2.5.1.0019 [J2.83]	Incorrect checksum in ALHistory
119808	Problem	V2.5.0.0022 [E2.81]	V2.5.1.0005 [E2.82]	V2.5.1.0020 [K2.83]	Terminal: Current page is not written to the actual page number when starting the visualization
117855	Problem	V2.4.1.0020	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Using the VNC library on an IPC 5000 with an ATI chipset crashes when establishing the VNC connection.
139353	Problem	V2.5.0.0010	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Entering information in the password control causes a crash
138555	Problem				

		V2.5.1.0018 [I2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Remanent and/or permanent data lost during power failers on targets with power failure detection (APC)
139133	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Importing a VC SG3 object no longer works
138171	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	A watchdog error is registered when a cycle time violation is detected.
139270	Problem	V2.5.2.0005 [I2.85]	V2.5.1.0020 [K2.83]	V2.5.1.0020 [K2.83]	Error 9099: "TC idle generator max. cycle time error" when booting
140015	Problem	V2.5.1.0016 [G2.83]	V2.5.1.0022 [L2.83]	V2.5.1.0022 [L2.83]	Buffer no longer freed up
140930	Problem	V2.5.1.0020 [K2.83]	V2.5.1.0022 [L2.83]	V2.5.1.0022 [L2.83]	Reading the paper status on USB printers may cause watchdog error
142870	Problem	V2.5.1.0021 [K2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0023 [M2.83]	Page fault when using remanent PVs and cold restart
131825	Project	V2.4.0.0009	-	V2.5.1.0024 [N2.83]	Support of 4PP035.0300-K10
90455	Project	V2.4.0.0009	-	V2.5.1.0024 [N2.83]	Support of 5PP120.1505-K02
139525	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0024 [N2.83]	VC SG3 - Focus problems with locking
139330	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0024 [N2.83]	VC SG3 - Page fault downloading ddpdcx55.br
138870	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0020 [K2.83]	V2.5.1.0024 [N2.83]	VC SG3 - Problems with "cursor back" when hiding input fields
138705	Problem	V2.5.1.0018 [I2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	String text snippets in the alarm system not always updated in time
141970	Problem	V2.5.1.0020 [K2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	VC SG3: Page fault in vcinter if switching to a page with a locked input control
142455	Problem	V2.5.1.0021 [K2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	Visualization hangs during operation
142530	Problem	V2.5.1.0022 [L2.83]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	Page fault in alarm system if scrolling too fast
141015	Problem	V2.5.2.0006 [J2.85]	V2.5.1.0023 [M2.83]	V2.5.1.0024 [N2.83]	Cycle time violation after switching languages several times
142030	Problem	V2.5.1.0019 [J2.83]	V2.5.1.0024 [N2.83]	V2.5.1.0024 [N2.83]	Slow page change on PP35
142330	Problem	V2.5.2.0007 [V2.85]	V2.5.1.0024 [N2.83]	V2.5.1.0024 [N2.83]	ANSI C editor crash when pasting to file end
143985	Problem				

		V2.5.2.0009 [B2.86]	V2.5.2.0010 [C2.86]	V2.5.1.0024 [N2.83]	Error generating hardware description files
128065	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0100 [A2.87]	V2.5.1.0024 [N2.83]	Can't start CAN visualization if all configured CAN panels are not connected
95968	Problem	V2.4.1.0007	V2.5.3.0024 [I2.90]	V2.5.1.0024 [N2.83]	Downloading vcresman.br causes crash when updating to a new VC firmware version
147675	Problem	V2.5.1.0024 [N2.83]	V2.5.1.0025 [O2.83]	V2.5.1.0025 [O2.83]	Can no longer start X67IF1121 communication if buffer overrun
148850	Problem	V2.5.2.0014 [E2.86]	V2.5.1.0026 [O2.83]	V2.5.1.0026 [O2.83]	Incorrect calculation of array indices if their checking (CheckBounds) is enabled
113600	Project	V2.5.0.4112 [Q2.80]	V2.5.0.0023 [F2.81]	V2.5.1.4102 [B2.82]	Support for "data execution prevention"
119255	New function	-	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	Support for NMI logic on the APC
115325	New function	-	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	Service interface expansion
116810	Problem	V2.4.0.4181 [B2.71]	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	Automatically setting daylight savings time
119120	Problem	V2.4.0.4187 [V2.71]	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	AR update from AS doesn't work with default settings
116800	Problem	V2.5.0.4114 [S2.80]	V2.5.1.4102 [B2.82]	V2.5.1.4102 [B2.82]	IRQ problem with ACPI Windows XP
119960	New function	-	V2.5.1.4102 [B2.82]	V2.5.1.4103 [C2.82]	Support for watchdog on APC and PPC devices
118255	Problem	V2.5.0.4114 [S2.80]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	real-time behavior can be negatively affected
119350	Problem	V2.5.0.4115 [T2.80]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	problems after update
121390	Problem	V2.5.1.0002 [B2.82]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	Serial interface no longer works after a warm or cold restart.
121570	Problem	V2.5.1.4102 [B2.82]	V2.5.1.4103 [C2.82]	V2.5.1.4103 [C2.82]	Changing the IP address of the Windows interface in the AR010 configurator resets the APC (if AR010 active)
122845	Information	V2.5.1.4103 [C2.82]	V2.5.1.4104 [D2.82]	V2.5.1.4103 [C2.82]	Powerlink communication fails on DirectX visualizations
123090	Problem	V2.5.1.0003 [C2.82]	V2.5.1.4104 [D2.82]	V2.5.1.4104 [D2.82]	Computer reboots after a warm or cold restart
121595	Problem	V2.5.1.4102 [B2.82]	V2.5.1.4104 [D2.82]	V2.5.1.4104 [D2.82]	Problems booting if C drive not write-protected
125370	Problem	V2.5.1.4403 [C2.82]	V2.5.1.0010 [A2.83]	V2.5.1.4105 [E2.82]	When upgrading, the English version is always

					installed
124025	New function	-	V2.5.1.4105 [E2.82]	V2.5.1.4105 [E2.82]	Check of minimum version for MTCX software and BIOS
122890	Problem	V2.5.1.4103 [C2.82]	V2.5.1.4105 [E2.82]	V2.5.1.4108 [V2.82]	AR010 loader crash if date configured to a year later than 2037
122110	Project	V2.4.0.0009	V2.5.1.4303 [C2.82]	V2.5.1.4303 [C2.82]	Creation of an installation set for AR105
122115	Project	V2.4.0.0009	V2.5.1.4403 [C2.82]	V2.5.1.4403 [C2.82]	Creation of an installation set for AR106
108857	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	The "TcIdleFiller" thread is displayed in an incorrect area during profile recording
128525	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Valve activation time was changed
127000	Project	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Address string for 3EX450.xx-x modules changed
127075	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Error 29003 when calling CfgGetDefaultGateway() without a configured gateway address
117790	Project	-	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	New AsARProf library
87130	New function	V2.5.0.0004	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Updates in graphic profiling display
121135	Project	V2.5.0.0022 [E2.81]	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Turning FTP on/off
127255	Project	V2.5.1.0009 [V2.82]	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Generate PIL list for each build
127745	New function	V2.5.1.0009 [V2.82]	V2.5.2.0001 [A2.85]	V2.5.2.0001 [B2.85]	Online connection only possible with IP address / host name
123395	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	Watchdog when starting the visualization application
123840	Problem	V2.5.1.0003 [C2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	USB memory stick doesn't work if inserted during operation
131020	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	New firmware: X67SM2436
146405	Information	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	New version changer needed
137295	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0101 [B2.87]	V2.5.2.0001 [B2.85]	Incorrect display of negative values in the IO monitor
123160	Problem	V2.5.1.0003 [C2.82]	-	V2.5.2.0002 [D2.85]	If a new alarm group is inserted, then the colors are not entered in "Appearance" (black).
130800	Problem		-		

		V2.5.1.0009 [V2.82]		V2.5.2.0002 [D2.85]	Discarded mappings when renaming pages
131285	Problem	V2.5.1.0013 [D2.83]	-	V2.5.2.0002 [D2.85]	Confusing note about new Visual Components SG3 version
131815	Problem	V2.5.1.0013 [D2.83]	-	V2.5.2.0002 [D2.85]	Incorrect LED conversion
124440	Problem	V2.5.0.0024 [G2.81]	V2.5.2	V2.5.2.0002 [D2.85]	Crash opening the "Keys" tab
76995	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Support of up to 16 INA devices
95975	Problem	V2.4.1.0006	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Directory path > 254 characters causes a page fault
109415	Problem	V2.5.0.0015	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Maximum 5,000 link nodes
124110	Problem	V2.5.0.0022 [E2.81]	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Target crashes when transferring nested structures
99492	Problem	V2.5.0.1301	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Inserting and removing 2003 screw-in modules on the AF10x in the main rack not supported
110480	New function	V2.5.0.1309 [N2.80]	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	80CIS.PS0-1 not supported by I/O system
126995	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [A2.85]	V2.5.2.0002 [D2.85]	Ethernet interface parameter type exported incorrectly
130040	Project	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	3EX282.6, 7EX481.50-1, and 7EX484.50-1 now providing the "ModuleOk" data point
129270	Project	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Updated hardware status information
129235	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DI2377: Update function model 1 input latch function
129215	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DO8332: Update function model 1 delayed switching function
128920	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BT9100: Additional channels for current and voltage data as well as the I/O power diagnose bit
128915	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20PS2100: Additional channels for voltage data
128910	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20PS3300: Additional channels for current and voltage data
128905	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BR9300: Additional channels for current and voltage data

125913	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Clock synchronization with one or more terminals
129265	Project	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Updated hardware status information
129240	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DI2377: Update function model 1 input latch function
129220	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20DO8332: Update function model 1 delayed switching function
128970	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BT9100: Additional channels for current and voltage data as well as the I/O power diagnose bit
128965	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20PS2100: Additional channels for voltage data
128960	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BR3300: Additional channels for current and voltage data
128955	New function	-	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	X20BR9300: Additional channels for current and voltage data
117505	Problem	V2.5.0.0020	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Black bitmaps at runtime after project conversion
124415	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	If the visualization folder in the logical/physical folder is written in upper case, then the visualization can´t be chosen in the VNC dialogue
126425	Problem	V2.5.1.0005 [E2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Incorrect restriction of decimal places
128010	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	The "Persistent" option for alarm text snippets doesn't work.
127845	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Incorrect alarm display for system alarms
128903	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Touch buttons sometime stay in a pressed state.
129030	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	After confirming an entry, the focus doesn't jump to the next entry if it's in a string input field
131350	New function	V2.5.2.0001 [B2.85]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	Support X20CS1070
129917	Problem	V2.5.2ßeta	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	3EX282.6, 7EX481.50-1, and 7EX484.50-1 now providing the "ModuleOk" data point
131555	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [C2.85]	V2.5.2.0002 [D2.85]	New firmware: X67SM2436
131535	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [C2.85]	V2.5.2.0002 [D2.85]	Support X20BC0073

131525	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [C2.85]	V2.5.2.0002 [D2.85]	Support: 7XV108.50-51, 7XV116.50-51, 7XV124.50-51
131950	Problem	-	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Cyclically booting a 3CP382.60-1 when using Powerlink and X2X interfaces
126335	New function	-	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Support for 3IF766.9
126340	New function	-	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Support for 3IF766.9
132145	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	New firmware: X20BC0083 and X67BC8321-1
132050	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	New firmware: X67IF1121
132100	New function	V2.5.2.0001 [B2.85]	V2.5.2.0002 [D2.85]	V2.5.2.0002 [D2.85]	Support of X20DO2649 and X20DO4529
68425	Problem	V2.3.0.0009	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Line Coverage incorrect if the task is stopped
126960	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Error message when converting a VC SG3 visualization to VC SG4
129045	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Switching to the "Design" tab when adding an action to a virtual key
128340	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Unable to open SG4 editor
129935	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Connected text changes
128043	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Software key remains frozen when using several layers
131430	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	VC freeze in drop-down menu without index data point
127775	Information	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	CHM files on the network can no longer be opened after a Windows update
129410	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [D2.85]	Nested textsnippets
132085	Problem	-	V2.5.2	V2.5.2.0002 [E2.85]	Target memory for *cfg.br modules (acp10cfg.br, arnc0cfg.br, nc154cfg.br, nc157cfg.br) automatically changed to "User ROM"
128260	Problem	-	V2.5.2	V2.5.2.0002 [E2.85]	Display of the channel number as additional criteria for differentiation
132545	Problem	V2.5.1.0011	V2.5.2	V2.5.2.0002 [E2.85]	McModGen.dll: Rebuilding cam profiles not precise enough

116815	New function	-	V2.5.2.0001 [A2.85]	V2.5.2.0002 [E2.85]	AR010 automatically detects IRQ sharing conflict
101195	New function	V2.4.1.0011	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	New function: Edit Up / Edit Down
91313	New function	V2.4.1ßeta	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	VNC support for terminal panels
116495	Problem	V2.5.0.0020	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	No life sign monitoring for terminal mode
129515	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	VcScrSht always returns status 1001
127093	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0001 [B2.85]	V2.5.2.0002 [E2.85]	VNC refresh problem
132405	Problem	-	V2.5.2.0002 [E2.85]	V2.5.2.0002 [E2.85]	Automation Studio crashes in a Trace window if a curve name with more than 80 characters is used in a formula
130900	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0002 [E2.85]	VA_GetBrightness returning false values
134250	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0002 [E2.85]	EPL manager firmware for following modules:
104055	Project	-	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Simplification of setup process
133347	New function	-	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	"Allow asymmetric in/out size" option for X2X Link interfaces
129505	New function	V2.5.1.0009 [V2.82]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	New onboard AR for PP100/MP100
128770	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Onboard AR upgrades for AC14x, EC021, and 80CIS.PS0-x
135210	Information	V2.5.2.0002 [D2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	AR version F2.85 and higher require new versions of the ACP10 software or ARNC0 to be used
134680	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	New firmware: X20BC0083 and X67BC8321-1
133895	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	New firmware: X20BC0073
134665	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Support of X20IF1061
134660	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Support of 5LS166.6
134052	New function	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Support of X20CP1485, X20CP1486, X20CP3485 and X20CP3486
134681	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Write protection for "BootFlash" ("B:")
133900	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Increased INA upload and download speed for targets

					AR102, AR105, AR106 and PPxxx
133430	Problem	V3.0.36	V2.5.2.0003 [F2.85]	V2.5.2.0003 [F2.85]	Function blocks from the AsIOAcc library only function for the X20BC0083
135225	Problem	V2.5.2.0002 [E2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	New CAN firmware
135370	New function	V2.5.2.0002 [E2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	Support of X20IF1082
135875	New function	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	New firmware: X20IF1061
135870	New function	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	Support of 5LS182.6-1
135575	New function	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	New firmware: X20BC0083 and X67BC8321-1
135800	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0004 [G2.85]	A new version of SYS_lib needs to be used in AR version F2.85 and higher
126285	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	Title of data type editor displays old project name
126775	Problem	V2.5.1.0007 [G2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	Double-wide modules incorrectly detected
136445	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	Data type editors allowing names that are too long
136090	New function	V2.5.2.0004 [G2.85]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	New firmware: 5LS182.6-1
136085	New function	V2.5.2.0004 [G2.85]	V2.5.2.0004 [H2.85]	V2.5.2.0004 [H2.85]	New firmware: X20IF1082
129510	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	Problems booting if DHCP server missing
134950	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	Error 26456 beginning with a higher number of X20 modules on the X20BC0083 bus coupler
126660	Problem	V2.5.1.0007 [G2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Status 7000 for VA_Saccess after booting the panel as long as touch isn't being used.
128230	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Logbook error 28740: "Error in key hardware interface"
130150	Problem	V2.5.1.0011	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Assertion when zooming with <Ctrl> + <+> in the data source editor
132750	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	vccpopup not inserted with "Build All"
133035	Problem	V2.5.1.0014 [E2.83]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	4-digit year output with VA_GetExAlarmList
134815	Problem	V2.5.1.0015 [F2.83]	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	Crash if the input focus is set to a locked element

133398	Problem	V2.5.2ßeta	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	No input at runtime possible if using inverted scaling
137895	New function	-	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	X20DC2395 update: Period measurement, gate measurement, and bus controller support
124265	Problem	V2.5.1.0003 [C2.82]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Visualization doesn't start if a name contains 01 or 02 at the end
132515	Problem	V2.5.1.0013 [D2.83]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Error 27306 when starting the VC SG3 visualization
137005	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Crash when closing several pages
136140	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Watchdog or I/O cycle time violation if Power Panel warm
137890	New function	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	X20DC2395 update: Period measurement, gate measurement, and bus controller support
137430	Problem	V2.5.2.0004 [G2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20CP1485, X20CP1486, X20CP3485 and X20CP3486
136950	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Event display in logger not always updated
136945	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Crash when opening the logger in AR versions older than 2.85
137045	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Terminal mode doesn't work if the onboard AR and AR are incompatible. (e.g. onboard V2.82 and AR 2.83)
137700	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20IF1082
137425	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: 7XV108.50-51, 7XV116.50-51 and 7XV124.50-51
137910	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20CM1941
137900	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: X20DC2396, X20DC1396, X20DC2398, X20DC1398, X20DC4395 and X20DC2395
137705	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Support of X20DI4760
137675	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	New firmware: 5LS182.6-1
137440	New function	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Support of 3IF771.9-C01

137775	Information	V2.5.2.0004 [H2.85]	V2.5.2.0005 [I2.85]	V2.5.2.0005 [I2.85]	Hot plugging a USB device while it's being accessed can cause a page fault.
138185	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0005 [I2.85]	X20DC1396 update: 32-bit ABR
138243	Project	-	-	V2.5.2.0006 [J2.85]	X20 support
127088	Problem	V2.5.1.0008 [V2.82]	V2.5.2.0002 [E2.85]	V2.5.2.0006 [J2.85]	VNC server freezes after certain input on the client. Reopening the client doesn't work.
138280	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X67DC1198 update: Period measurement, gate measurement, and bus controller support
138205	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC1196 update: 32-bit ABR
138200	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC2396 update: 32-bit ABR
138180	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC1396 update: 32-bit ABR
137995	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC4395 update: Period measurement, gate measurement, and bus controller support
138285	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X67DC1198 update: Period measurement, gate measurement, and bus controller support
138210	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC1196 update: 32-bit ABR
138195	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC2396 update: 32-bit ABR
138000	New function	-	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	X20DC4395 update: Period measurement, gate measurement, and bus controller support
138090	Problem	V2.5.1.0018 [I2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Projects recompiled
138095	New function	V2.5.1.0018 [I2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Error log output in the console window different than the display in AS
137746	Problem	V2.5.2.0002 [D2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Possible cycle time violation a large number of entries are made by the Logger in ErrorLog
137790	New function	V2.5.2.0004 [H2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Operating system file automatically part of the operating system created at build time
135725	Problem	V2.5.2.0004	V2.5.2.0006	V2.5.2.0006	Incorrect checksum in

		[H2.85]	[J2.85]	[J2.85]	ALHistory
138215	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0006 [J2.85]	Logger and profiler not recognizing routed connections
139445	Information	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	V2.5.2.0006 [J2.85]	Changed behavior for PV_xlist
129945	Problem	V2.4.0.0011	V2.5.2.0100 [A2.87]	V2.5.2.0006 [J2.85]	Page fault in vcinter if task deleted on Power Panel
137635	Problem	V2.5.1.0017 [H2.83]	-	V2.5.2.0007 [V2.85]	Error after project conversion. -> Compiler error 7050
125545	Problem	V2.5.1.0003 [C2.82]	V2.5.2.0001 [B2.85]	V2.5.2.0007 [V2.85]	Variables defined using stylesheets are discarded when updating control data sources.
125605	Problem	V2.5.0.0024 [G2.81]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Problems with the following X20 modules: X20AI2622, X20AI4622, X20AO2622, X20AO4622, X20AT2222, X20AT4222, X20AT2402, and X20AT6402
134990	Problem	V2.5.1.0016 [G2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Incorrect status returned by DirInfo if directory missing
137885	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	EPL manager: New firmware
137135	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Page fault in the X2X driver when connecting and disconnecting the X2X cables repeatedly during operation
139205	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Support of X20CS1020 und X20CS1030
138850	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20CM1941
138545	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	X67DC1198 update: Period measurement, gate measurement, and bus controller support
138275	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20DC1196 and X20DC1198
138270	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20AT2402 and X20AT6402
138265	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X20AI2622, X20AI4622, X20AO2622, and X20AO4622
139225	New function	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	New firmware: X67SM2436-K01
139480	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0006 [J2.85]	V2.5.2.0007 [V2.85]	Watchdog error on APC if configured hardware not connected
139040	Problem				

		V2.5.2.0004 [G2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0007 [V2.85]	Remanent and/or permanent data lost during power failers on targets with power failure detection (APC)
136738	Problem	V2.5.2ßeta	V2.5.3.0001 [V2.85]	V2.5.2.0007 [V2.85]	TTC font support
141390	New function	-	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support for 8AC140.61-3
139085	New function	-	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support for X20IF1063
118095	Problem	V2.5.0.0021 [T2.80]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	AsIODPStatus() only supports 42 channels at once
135940	Problem	V2.5.1.0016 [G2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Not possible to insert "Chinese Simplified" language
137235	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Cannot turn off Mobile Panel backlight
140498	Problem	V2.5.1.0019 [J2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Crash while refreshing data source
141255	Problem	V2.5.2.0006 [J2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support of X20DO2321, X20DO4321, X20DO4331 and X20DO8331
141040	New function	V2.5.2.0006 [J2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0008 [A2.86]	Support of X20IF1063
139383	Problem	V2.5.2.0006 [J2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0009 [B2.86]	Cycle time violation after switching languages several times
141395	Problem	V2.5.1.0019 [J2.83]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	New firmware: 5LS197.6
143285	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	Registration dialog boxes in German
142375	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	Logger entries shifted chronologically (time zone problem)
143795	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	VNC operation not possible
142495	Problem	V2.5.2.0100 [A2.87]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	New CAN firmware
142750	New function	V2.5.2.0100 [A2.87]	V2.5.2.0009 [B2.86]	V2.5.2.0009 [B2.86]	Support of X20IF1091
141385	Problem	V2.5.2.7000	-	V2.5.2.0010 [C2.86]	Number of pole pairs incorrect for 8LSA motors
142995	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0010 [C2.86]	V2.5.2.0010 [C2.86]	Watchdog error when using the parameter FCCTS = 1 in the mode string of the FRM_xopen() function block in the DVFrame library
143865	New function				

		V2.5.2.0009 [B2.86]	V2.5.2.0010 [C2.86]	V2.5.2.0010 [C2.86]	Support for 5LS166.6 in revisions >= B0
116688	Problem	V2.5.0.0020	V2.5.1.0010 [B2.83]	V2.5.2.0011 [D2.86]	INA communication disrupted after a page change in terminal mode
138780	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0011 [D2.86]	VA_GetActAlarmList causes page fault when called twice
134035	Problem	V2.5.1.0014 [E2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Terminal INA variables not shown after a certain time
142690	Problem	V2.5.1.0022 [L2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	High system load if system event not handled (USB overcurrent)
143773	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Missing highlighting for linker warning
137225	Problem	V2.5.2.0001 [B2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Returning from screensaver executes touch action on target page
145223	Problem	V2.5.2.0004 [H2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	VISAPI function VA_LoadBitmap always returning Status= 7196 (incorrect graphics format)
141760	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Up/Down not working correctly for scaled REAL variables
141640	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Watchdog error using both Ethernet interfaces on the APC
143735	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	No firmware update carried out when using the X67DM1321 module on the X20BC0083
144315	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Touchpad flickering when opening using the status data point (bit 3)
144750	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	X20BC7321does not work
144360	New function	V2.5.2.0100 [A2.87]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	Support of X20DI2372 and X20DI4372
144345	Problem	V2.5.3.0001 [V2.85]	V2.5.2.0011 [D2.86]	V2.5.2.0011 [D2.86]	EPL Manager 1: New firmware
145640	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0012 [D2.86]	V2.5.2.0012 [D2.86]	Faulty display for TextLengthOverrun with "_" and "|"
144695	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0012 [D2.86]	V2.5.2.0012 [D2.86]	Page fault when using CANdftab()
137685	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0008 [A2.86]	V2.5.2.0013 [D2.86]	Drop-down listbox showing one element only
146083	New function	-	V2.5.2.0013 [D2.86]	V2.5.2.0013 [D2.86]	Momentary data point remains set when switching pages

145365	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0013 [D2.86]	V2.5.2.0013 [D2.86]	Completion set right when releasing the edit up/down key
128690	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0004 [H2.85]	V2.5.2.0014 [E2.86]	The functions VA_GetAlCurPos and VA_NGetAlCurPos return false Values if the alarmcontrol is used in endless mode.
145190	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	Page fault when using I/O variables in watch or using the I/O monitor
143330	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	System configuration re-transferred even without apparent changes
145210	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	Watchdog error when using the CANquwr() function block in the CAN_lib library
145215	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	X20CPx14x: New firmware
146460	Problem	V3.0.44	V2.5.2.0014 [E2.86]	V2.5.2.0014 [E2.86]	Cannot record variables outside of the 64 KB limit
145258	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0012 [D2.86]	V2.5.2.0015 [F2.86]	VA_CopyMemToScreen and VA_CopyScreenRect not working for rotating displays (ROT=270)
134600	Problem	V2.4.0.0009	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Error 9999 when using the functions fd_clr(), fd_set() and fd_isset() on the AR106 and CP570
139606	Problem	V2.5.2.0005 [I2.85]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Faulty structure transfers
144650	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Changed status value for the FileCopy() function block in FileIO library V2.00.1 compared with V1.03.8
145510	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Different values for constants
146675	Problem	V2.5.2.0012 [D2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Error behavior when entering strings in watch
147330	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Page fault from text snippets without data points
148126	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	sock_select() not working on AR106 and CP570
147060	Problem	V2.5.2.4101 [D2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	No support of network drives with AR010
146428	Problem	V2.5.2ßeta	V2.5.2.0015 [F2.86]	V2.5.2.0015 [F2.86]	Incorrect display of date and time in alarm control
140450	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0104 [F2.87]	V2.5.2.0015 [F2.86]	Visualization freeze after drawing bitmap several

					times with the VA_BlitBitmap() function
140360	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0104 [F2.87]	V2.5.2.0015 [F2.86]	Visapi library: Cycle time violation if VA_FreeBitmap() tries to free up a 24-bit PNG file.
127970	Problem	V2.5.1.0009 [V2.82]	V2.5.2.0106 [H2.87]	V2.5.2.0015 [F2.86]	Variable after plLen is overwritten with 0 when calling VA_wcGetActAlarmList
149125	Problem	-	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	
140575	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Data larger than 16 KB incorrectly copied to USB flash drive
145805	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Problems accessing external FTP servers
145780	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Menu items in the AS trace were disabled
147795	Problem	V2.5.2.0013 [D2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	AR010 not starting sometimes if memory text disabled in BIOS
148405	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	SG3: Backlight not switching off if bitmap blinking
147970	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	VC SG3 / P127 crash or freeze with a high CAN load
148900	Problem	V2.5.2.0015 [F2.86]	V2.5.2.0016 [G2.86]	V2.5.2.0016 [G2.86]	Cycle time violation caused by VA_GetActAlarmList if a task is transferred
145095	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Memory drained when calling the DevLink() or DevUnlink() function
149995	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Sporadic Automation Studio crash when transferring projects
149930	New function	V2.5.2.0016 [G2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Incorrect task states displayed in service mode
149321	Problem	V2.5.2.0102 [D2.87]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Warning 14889 if standard gateway configuration missing
148240	Problem	V2.5.2.0104 [F2.87]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	Modules sometimes not recognized during booting (EX282)
149356	Problem	V2.5.3.0011 [C2.90]	V2.5.2.0017 [H2.86]	V2.5.2.0017 [H2.86]	FileDelete() returning error status 20718 on an external FTP server
150008	Problem	V2.5.2.0015 [F2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0017 [H2.86]	Compiler warning despite correct configuration
122178	Problem	V2.5.1.0003 [C2.82]	V2.5.1.0005 [E2.82]	V2.5.2.0018 [H2.86]	LED update problems with "Controlled from PLC"

120758	Problem	V2.5ßeta	V2.5.1.0005 [E2.82]	V2.5.2.0018 [H2.86]	Display flickers on APCs with i815E chipset
105828	Problem	V2.4.1.0024	V2.5.1.0013 [D2.83]	V2.5.2.0018 [H2.86]	TouchOnLock (status bit 13) reset during page change
141235	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0018 [H2.86]	Keys not working if 2 consecutive blinking LEDs are in the LED matrix
139985	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0018 [H2.86]	Some hardware keys don't work.
140973	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0008 [A2.86]	V2.5.2.0018 [H2.86]	Terminal mode doesn't work if the server gets its IP address from a DHCP server on the network
131515	New function	V2.5.1.0009 [V2.82]	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	SMTPxsendmail() - server authentication
148090	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0018 [H2.86]	Faulty behavior if input started with Enter and not changed
148045	Problem	V2.5.2.0014 [E2.86]	V2.5.2.0017 [H2.86]	V2.5.2.0018 [H2.86]	Listbox elements not displayed correctly if the option data point is appended
150655	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Bypass image not set
150630	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Group alarm variable no longer set
150530	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Alarm system: Acknowledgement image no longer works.
150520	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Drop-down listbox not displayed on the page when changed for the first time
150525	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0018 [H2.86]	V2.5.2.0018 [H2.86]	Variables with the value 0 not displayed on the start page
150535	Problem	V2.5.2.0016 [G2.86]	V2.5.2.0020 [J2.86]	V2.5.2.0018 [H2.86]	Key matrix not working in AS 2.5.2.16 if connected to the panel object
136813	Problem	V2.4.0.0011	V2.5.2.0100 [A2.87]	V2.5.2.0018 [H2.86]	"Disable cursor movement on Enter" not working in VC SG3 editor
144993	Problem	V2.5.1.0024 [N2.83]	V2.5.2.0104 [F2.87]	V2.5.2.0018 [H2.86]	Bitmaps no longer displayed on the PP35
141360	Problem	V2.5.2.7000	V2.5.2.0104 [F2.87]	V2.5.2.0018 [H2.86]	Incorrect display of bitmaps on the PP3
147405	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0110 [B2.88]	V2.5.2.0018 [H2.86]	Visualization with VNC slave distorted
151100	Problem	V2.5.1.0024 [N2.83]	V2.5.2.0019 [I2.86]	V2.5.2.0019 [I2.86]	Toggling outputs on modules used with CANIO
151403	Problem				

		V2.5.2.0107 [V2.87]	V2.5.2.0020 [J2.86]	V2.5.2.0020 [J2.86]	Umlauts (German characters) not displayed in listbox
129420	Problem	V2.4.1.0026	-	V2.5.2.0100 [A2.87]	Because of a dependency mismatch of Visapi it is not possible to use the screenshot library (VCScrSht)
143905	Problem	V2.5.1.0023 [M2.83]	-	V2.5.2.0101 [B2.87]	Key action "Alarm system -> Action: Acknowledge" ineffective
141990	Problem	V2.4.0.0001	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Brackets mixed up on AlphaPad
142560	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Alarm event not output in historical alarm list
141665	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Display problem with multi-line alarm texts in one alarm line
138985	Problem	V2.5.2.0010 [C2.86]	V2.5.2.0009 [B2.86]	V2.5.2.0101 [B2.87]	Editor crash when deleting a control
143910	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0010 [C2.86]	V2.5.2.0101 [B2.87]	Crash by the key action "Alarm system - Acknowledge"
143680	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0010 [C2.86]	V2.5.2.0101 [B2.87]	Alarm triggers page fault in alarm system
126795	Problem	V2.5.1.0007 [G2.82]	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Current keylevel always showing the previous value
144363	Problem	V2.5.1.0023 [M2.83]	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Error code if the screensaver switches to the active page
144028	Problem	V2.5.2.0008 [A2.86]	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Page fault if many alarms generated over a long period of time
142588	Problem	V2.5.2.3007	V2.5.2.0011 [D2.86]	V2.5.2.0101 [B2.87]	Data points for the entire visualization mixed up at runtime after adding a data point to the visualization
117835	Problem	V2.5.0.0021 [T2.80]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	VA_GetCalStatus always returns status 65535 for a VC SG3 object
127400	Project	V2.5.1.0009 [V2.82]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Should be able to modify node number and IP for terminal visualization using software
133120	New function	V2.5.1.0014 [E2.83]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Terminal target node number and IP address configurable via data module
137060	Problem	V2.5.1.0017 [H2.83]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Toggle button pressed when closing the touchpad
129943	Problem	V2.5.2.0004	V2.5.2.0104	V2.5.2.0104	VA_FreeBitmap() memory

		[G2.85]	[F2.87]	[F2.87]	leak
145005	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Application using memory during cyclic operation if fill areas defined without data points
144865	Problem	V2.5.2.0009 [B2.86]	V2.5.2.0104 [F2.87]	V2.5.2.0104 [F2.87]	Modified behavior for focus
146060	Problem	V2.5.2.0011 [D2.86]	V2.5.2.0015 [F2.86]	V2.5.2.0105 [G2.87]	Cycle time violation by VA_GetActAlarmList
149835	Problem	V2.5.2.0104 [F2.87]	-	V2.5.2.0106 [H2.87]	Terminal not working on the X20CP1484
149355	Information	-	V2.5.2.1441 [X8.00]	V2.5.2.1441 [X8.00]	Support for CPUs below cancelled
148125	Problem	V2.5.2.0014 [E2.86]	V2.5.2.1441 [X8.00]	V2.5.2.1441 [X8.00]	New Memcards not working
78375	Problem	V2.3.0.0009	V2.5.2.1442 [V2.46]	V2.5.2.1442 [V2.46]	Error 3035 after booting
125365	New function	-	V2.5.2.3001	V2.5.2.3001	Uploaded event of a task object also returns global variables
112590	New function	V2.4.0.0009	V2.5.2.3001	V2.5.2.3001	Backing up / restoring files on CF
124280	Problem	V2.5.0.0024 [G2.81]	V2.5.2.3001	V2.5.2.3001	CF creation: Problem creating CF with a full hard drive
116880	New function	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	File specification for the LoadHistroyUseFilter method (wildcards not possible)
118315	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	Exception if an empty scaling resource is connected to a variable
118310	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	The connection path of a logical group can only be selected after the configuration is saved
118290	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	A new language's name is not added to the Resources tab when it's added
119285	Problem	V2.5.0.3015	V2.5.2.3001	V2.5.2.3001	Cannot erase memory on C200
126940	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	Text / Category / Group is shown only as a resource, not as fixed text
126135	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	CF creation: No check if the CF is too small for the project
125970	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	CF creation: "Silicon Systems" CF is not displayed in connection with a PCMCIA adapter

125770	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	PVI Transfer CD crashes on certain PCs
125510	Problem	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	Crash if the directory for the log file doesn't exist
126205	New function	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	Host name configuration
126120	New function	V2.5.0.3017	V2.5.2.3001	V2.5.2.3001	CF creation: Support of 3CP340.60-2
124000	Problem	V2.5.0.3417	V2.5.2.3001	V2.5.2.3001	Remote connection problem if the remote computer doesn't exist
129095	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3001	BRErrorLB.ocx: Texts always read in English
129060	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3001	User mode: Canceling the "Choice" command is not possible
125505	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3001	CF creation: Image file cannot be created if the DATA1 partition is 1 MB
129070	Problem	V2.5.2.3001	V2.5.2.3002	V2.5.2.3001	No events triggered with internal variables
129695	Problem	V2.5.2.3001	V2.5.2.3002	V2.5.2.3001	CF creation: APC (AR106) doesn't boot with a 64 MB Silicon Systems CF
125300	Problem	V2.5.0.3017	V2.5.2.3101	V2.5.2.3001	Communication not possible to mini/midi/multi with station numbers > $1F
131805	Problem	V2.5.0.3017	-	V2.5.2.3002	VariableCollection - Remove method doesn't work.
131720	Problem	V2.5.2.3001	-	V2.5.2.3002	Error 12004 if accessing to variable object before the connected event
131700	Problem	V2.5.2.3001	-	V2.5.2.3002	Exception when accessing a structure array with PlcString or BOOL variables on SG3 targets
130600	Problem	V2.5.2.3001	-	V2.5.2.3002	PviServices in Windows CE.NET
131395	New function	V2.5.2.3001	-	V2.5.2.3002	Reading a structure's data type now possible
111905	Problem	V2.5.0.3608	V2.5.0.3615	V2.5.2.3002	Not possible to preset the data type of "internal" variable objects
126920	Problem	V2.5.0.3017	V2.5.2.3002	V2.5.2.3002	"ConnectionChange" command: Not possible to switch the connection after it has been selected
128625	Problem	V2.5.2.3001	V2.5.2.3002	V2.5.2.3002	"Call" command: Parameters cannot be specified with spaces

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132880	New function	V2.5.2.3002	V2.5.2.3003	V2.5.2.3003	CF creation: Support of X20CP1485
130595	New function	-	V2.5.2.3004	V2.5.2.3004	Configuring download mode with PVI Transfer
128740	New function	-	V2.5.2.3004	V2.5.2.3004	Retaining settings in the CF creation dialog box
127870	Problem	V2.5.0.3017	V2.5.2.3004	V2.5.2.3004	Response timeout not specified to PviServices
131995	Problem	V2.5.0.3017	V2.5.2.3004	V2.5.2.3004	CF creation from CD doesn't work without administrator rights
131860	Problem	V2.5.2.3001	V2.5.2.3004	V2.5.2.3004	CF creation: "Not enough available memory" error message although the partition sizes were specified correctly
131755	New function	V2.5.2.3001	V2.5.2.3004	V2.5.2.3004	Date format in logbook in ISO format
135050	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CD creation: Absolute paths entered for "CFGenerate"
135045	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	Default setting for partition sizes too small for CF creation
135035	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	"CFGenerate" command: Incorrect error number if the partition sizes are too small
135010	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	"Download / Upload" command: "MT=BRT" option doesn't work from the created CD
134670	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	"VariableList" command: Long variable names truncated
134560	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CD creation: Error 12070 if PviTransfer started on PCs without a PVI installation
134550	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	Incorrect line termination in the log file
133725	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CF creation: BR modules sporadically modified in the original project
133700	Problem	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CF creation: Original BR files modified if "Strip library info for transfer" option used
134075	New function	V2.5.2.3003	V2.5.2.3004	V2.5.2.3004	CF creation: Support of X20CP1486, X20CP3485 and X20CP3486
61475	Problem	V2.3.0.0001	V2.5.2	V2.5.2.3054	Setup if PVI components are open
136367	Problem	V2.5.2.0003 [F2.85]	V2.5.2.0004 [H2.85]	V2.5.2.3055	Opening the logger cancels the online connection

112385	Problem	V2.5.0.3012	V2.5.2.3101	V2.5.2.3101	Download with Panel Studio aborted with 4808 or timeout
118185	Problem	V2.5.0.3015	V2.5.2.3101	V2.5.2.3101	PanelStudio - No project download possible on C200 / C220 /300 PANELWARE controllers (TIMEOUT after clearing ROM)
116542	New function	V2.5.0.3015	V2.5.2.3101	V2.5.2.3101	Recognizing an error configuration in the node number setting
122580	New function	V2.5.0.3016	V2.5.2.3101	V2.5.2.3101	Identifying a PLC from its DNS name
131705	Problem	V2.5.2.3001	V2.5.2.3102	V2.5.2.3102	PVIException in LnIna2 if the connection to the Bluetooth device is lost.
129445	New function	V2.5.2.3001	V2.5.2.3102	V2.5.2.3102	Two-digit COM ports not supported
128270	Problem	V3.0.24	V2.5.2.3102	V2.5.2.3102	Crash when a tooltip shows the value of a structure variable or function block instance in monitor mode
132785	Problem	V2.5.2.3102	V2.5.2.3103	V2.5.2.3103	Error 4824 if an element in an array or a structure variable is registered as an event variable
134365	New function	-	V2.5.2.3104	V2.5.2.3104	Reducing proceeding events
146245	Problem	V2.5.1.4120 [K2.83]	V2.5.2.4101 [D2.86]	V2.5.2.4101 [D2.86]	Automation Runtime installation doesn't work
146765	Information	V2.5.2.0007 [V2.85]	V2.5.2.4101 [D2.86]	V2.5.2.4101 [D2.86]	New AR010 setup
147010	Problem	V2.5.1.4120 [K2.83]	V2.5.2.0015 [F2.86]	V2.5.2.4102 [F2.86]	Automation Runtime upgrade doesn't work
147020	Problem	V2.5.2.0007 [V2.85]	V2.5.2.0015 [F2.86]	V2.5.2.4102 [F2.86]	EPL manager: New firmware
135720	Problem	V2.5.2.0003 [F2.85]	V2.5.0.7014	V2.5.2.7001	Shortcut to pg.exe not created
137195	New function	V2.5.2.7000	V2.5.2.7001	V2.5.2.7001	Help file for Version Changer in new directory
140865	Problem	V2.5.2.7002	V2.5.2.7003	V2.5.2.7003	Entering -p pg.exe on the command line no longer works.
142950	Problem	V2.5.2.0008 [A2.86]	V2.5.2.7004	V2.5.2.7004	Problem if starting an AS 2.5.2.8 project from the explorer (*.GDM)

1.4.4 Requests and problems by product/component

1.4.4.1 1A4000.02 Automation Studio

1.4.4.1.1 Code Generation

ID#131985 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0016 [G2.83]

Compilation crash

If an element of a function block in a C library is named according to a "state" (true, false, others not checked), then Automation Studio crashes during compilation.

ID#128140 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

Automation Studio crashes when dynamic PVs have a length of 32 characters

If a dynamic variable with a length of 32 characters is used as a FBK interface variable, compiling may cause a crash.

1.4.4.1.2 Export / Import

ID#130200 : solved problem, known since V2.5.1.0011, solved since V2.5.1.0016 [G2.83]

Exported SFC task not imported correctly

If an exported SFC task has two branches nested in one another, it won't be imported correctly.

ID#126995 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Ethernet interface parameter type exported incorrectly

The Ethernet interface parameter type is not exported correctly. Because of this, data cannot be read in correctly when converting the project to a 3.0 project.

1.4.4.1.3 Internals

ID#126800 : solved problem, known since V2.5.1.0008 [V2.82], solved since V2.5.1.0010 [A2.83]

ConfigurationBuilder error messages require AS restart

If errors occur while compiling a project's AR configuration (error messages 6900-6999) and then a different project is opened, then the AR configuration data from the older project is used in the newer.

This error can only be corrected by restarting Automation Studio.

1.4.4.1.4 IO Configuration

ID#133495 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0016 [G2.83]

Cannot compile AR106 project after inserting a USB device

If a USB device is inserted in an existing AR106 project, then you may not be able to compile the project anymore.

ID#128760 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

External configuration builder doesn't create a BR file

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On some special projects, using the external configuration builder may not result in a BR file being generated.

1.4.4.1.5 IO Mapping

ID#137295 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0001 [B2.85]

Incorrect display of negative values in the IO monitor

In the IO monitor, negative physical values are shown as 0 after switching the form from hexadecimal to decimal.

ID#133515 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0016 [G2.83]

Opening the "Select variable" dialog box takes too long

If trying to map a BOOL variable with the "Select variable" dialog box, then it takes a long time to open it.

ID#129500 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

I/O mappings with multiple mappings can no longer be opened

I/O mappings that contain multiple mappings to input channels cannot be opened.

ID#120585 : solved problem, known since V2.5.0.0022 [E2.81], solved since V2.5.1.0016 [G2.83]

Size of IOMap.iom files suddenly becomes bigger

If the cursor is moved back and forth between the individual components in the hardware tree , then the IOMap.iom file suddenly becomes bigger and it takes a few minutes until the I/O mapping and the I/O configuration can be displayed.

ID#137150 : known problem since V2.5.1.0017 [H2.83]

I/O mappings sometimes not applied when converting projects from AS 2.4 to AS 2.5

For example, each channel on a 7DO435 can be configured to operate as an input or output.
However, FlexIQ configurations are not taken into consideration by the project converter.
It does still give a warning for each channel if its mapping is not applied:
"Warning: Old I/O Mapping of variable 'o1' could not be applied because no logical name is available".

1.4.4.1.6 Languages

ID#148850 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.1.0026 [O2.83]

Incorrect calculation of array indices if their checking (CheckBounds) is enabled

If array index checking is enabled (CheckBounds), array indices are incorrectly calculated if only the operators +, -, *, /, or SIZEOF are used.
If only one constant is used as the index, or if other operators are used in a constant expression (e.g. with "array_tst[INT(-1) + 180]"), then the index is calculated correctly.

Example:
This calculation does not result in the expected array index:
dint_pv2 = array_tst[180-1]

It reads from index -77 instead of 179.

179 corresponds to $B3 in hex.
-77 corresponds to $FFFFFFB3.

ID#125765 : solved problem, known since V2.5.0.0021 [T2.80], solved since V2.5.1.0010 [A2.83]

Not possible to copy text in monitor mode

Copying is not possible in monitor mode for the Automation Basic, Structured Text, and Instruction List text editors although it works for the ANSI C editor.

1.4.4.1.7 PCC Services

ID#131415 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0016 [G2.83]

Crash if period under "Computer name" in the remote configuration dialog box

If a period is used when entering the remote server name (e.g. "Target.1"), then Automation Studio crashes.

1.4.4.1.8 PCC Services - Online Info

ID#149930 : new function since V2.5.2.0017 [H2.86]

Incorrect task states displayed in service mode

The status "RUN" is displayed in service mode for task classes and tasks.

1.4.4.1.9 PCC Services - Transfer

ID#149995 : solved problem, known since V2.5.2.0011 [D2.86], solved since V2.5.2.0017 [H2.86]

Sporadic Automation Studio crash when transferring projects

ID#127255 : new function since V2.5.2.0001 [B2.85]

Generate PIL list for each build

The Transfer tab of the properties dialog box for the PLC in the current configuration now allows you to specify whether the PVI transfer list (PIL list) should be generated during each build.

1.4.4.1.10 PCC Services - Transfer Operating System

ID#126490 : solved problem, known since V2.5.1.0006 [F2.82], solved since V2.5.1.0010 [A2.83]

OS download not possible to AR010

The function for downloading the operating system to the AR010 is not offered.

1.4.4.1.11 Setup

ID#143285 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0009 [B2.86]

Registration dialog boxes in German

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The setup program for the English Automation Studio version installs the German product registration.

ID#130870 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0014 [E2.83]

After an uninstall, the SG4 Visual Components editor no longer works for remaining AS versions

If an Automation Studio version with the new SG4 Visual Components editor (2.4.1.x, 2.5.0.x, 2.5.1.x) is uninstalled, then the SG4 Visual Components editor in AS versions that are still installed no longer works.
The Version Changer V2.5.0.7012 can be used to get around this.

ID#129505 : new function since V2.5.2.0003 [F2.85]

New onboard AR for PP100/MP100

The onboard AR upgrade for the PP100 and the MP100 is now included on the Automation Software CD.

ID#104055 : new function since V2.5.2.0003 [F2.85]

Simplification of setup process

The installation process has been simplified:

- AS, PVI and .NET Framework are all installed in one step. It is no longer necessary to restart the setup multiple times
- Multiple minor AS versions can be installed simultaneously
- All languages are installed together
- An installation help has been added to the autoplay

ID#146405 : Information valid since V2.5.2.0001 [B2.85]

New version changer needed

AS Version Changer 2.5.2.7002 is needed beginning with Automation Studio 2.5.2.0001. The AS Version Changes is installed by the Automation Studio setup program and stored as ...\BrAutomation\AsTools\VersionChanger\bin_xx\AS_VersionChanger_0xx.exe.

1.4.4.1.12 Tools - Debugger

ID#89685 : new function since V2.5.1.0013 [D2.83]

Warning with line coverage and setting breakpoints

Since cycle time monitoring for the task classes is turned off when activating line coverage or setting breakpoints and the I/O system doesn't work like it does in normal mode, a warning is shown in the form of a message box.
The warning when setting a breakpoing is output in the ANSI C, Automation Basic, Structured Text (ST), Instruction List (IL), and Sequential Function Chart (SFC) languages.
The warning when enabling line coverage is output in the ANSI C, Automation Basic, Structured Text (ST), Instruction List (IL) programming languages.

1.4.4.1.13 Tools - Generate Transfer List

ID#137790 : new function since V2.5.2.0006 [J2.85]

Operating system file automatically part of the operating system created at build time

If the PVI transfer list should also be created for the project (PLC properties dialog box / Generate PVI transfer list), then the operating system file is included automatically.

ID#149945 : known problem since V2.5.2.0016 [G2.86], correction planned for V2.5.2.0020 [J2.86]

Error number 4053 when starting a generated transfer list

The faulty determination of dependencies often causes necessary libraries to be deleted before the respective tasks.

1.4.4.1.14 Tools - Line Coverage

ID#68425 : solved problem, known since V2.3.0.0009, solved since V2.5.2.0002 [D2.85]

Line Coverage incorrect if the task is stopped

If a task in the background is stopped (e.g. by entering a limited number of cycles in Watch), then Line Coverage continues to display the execution of lines of code. The display is corrected only after restarting Line Coverage or switching to a different window.

1.4.4.1.15 Tools - Logger

ID#138215 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0006 [J2.85]

Logger and profiler not recognizing routed connections

If routing takes place from Target1 to Target2 e.g. via EPL, then the logger entries continue to be loaded from Target1 or profiling is started on Target1.

ID#136950 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0005 [I2.85]

Event display in logger not always updated

After disabling the Visible button and then re-enabling it, the event display is not updated.

ID#136945 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0005 [I2.85]

Crash when opening the logger in AR versions older than 2.85

The AS Logger can only be opened in AR version 2.85. Otherwise, AS crashes.

1.4.4.1.16 Tools - Profiler

ID#108857 : new function since V2.5.2.0001 [B2.85]

The "TcIdleFiller" thread is displayed in an incorrect area during profile recording

The profiler recording of Automation Runtime target systems shows the "TcIdleFiller" in the "OS tasks" instead of the "IDLE time".

ID#87130 : new function since V2.5.2.0001 [B2.85]

Updates in graphic profiling display

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The graphic profiling display has added the following features:
- Information about the respective object (start time, end time for one task cycle)
- Go to next starting point of task
- Go to next ending point of task
- Each task switch (for every task) displays whether it was started, ended, or interrupted (graphic icon).

1.4.4.1.17 Tools - Trace

ID#145780 : solved problem, known since V2.5.2.0011 [D2.86], solved since V2.5.2.0016 [G2.86]

Menu items in the AS trace were disabled

The menu items in the Automation Studio trace shortcut menu were disabled when they shouldn't have been.

1.4.4.1.18 Tools - Watch

ID#146675 : solved problem, known since V2.5.2.0012 [D2.86], solved since V2.5.2.0015 [F2.86]

Error behavior when entering strings in watch

Entering a string for a dynamic variable of type String causes the following errors in watch:
1. The contents of the dynamic variable are changed, i.e. the variable subsequently points to a different memory area.
2. The (array) variable referenced by the dynamic variable is correctly overwritten with the entered string, but additional characters are also copied to the target variable.

Entering a string to an array variable of type USINT also causes the following error behavior:
The (array) variable is correctly overwritten with the entered string, but additional characters are also copied to the target variable.

1.4.4.1.19 Workspace

ID#142330 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.1.0024 [N2.83]

ANSI C editor crash when pasting to file end

The paste clipboard operation (CTRL+V or Paste in the shortcut menu) at the end of a file sometimes causes AS to crash.
The hourglass is displayed and the processor load jumps to 100%.

1.4.4.1.20 Workspace - Data Types

ID#126285 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.0004 [H2.85]

Title of data type editor displays old project name

If a "Save project as..." is performed while the data type editor is open and the new project is then opened, then the old project name is still displayed in the data type editor's title.

1.4.4.1.21 Workspace - Declaration

ID#136445 : solved problem, known since V2.5.2.0003 [F2.85], solved since V2.5.2.0004 [H2.85]

Data type editors allowing names that are too long

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In the data type editor, up to 32 characters used to be able to be entered for the data type name. However, in the database the 32nd character is reserved for the terminating 0.
This consequently caused problems when selecting the respective data type to be used in other data types etc. since the terminating 0 is missing.

For this reason, only data type names with 31 characters or less can be entered.

1.4.4.1.22 Workspace - Hardware Configuration

ID#135830 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0019 [J2.83]

Incorrect function model in French AS

If X20 modules are inserted on the X2X bus, then the French AS mistakenly has the option of configuring the "CAN bus controller" as the function model.

ID#130883 : solved problem, known since V2.5.1.0010 [A2.83], solved since V2.5.1.0014 [E2.83]

Message window "Error found in hardware project file" after a USB device was deleted in a converted project.

This message window is shown the next time the project is opened if a USB device is deleted in a converted AS2.4 project.

ID#133347 : new function since V2.5.2.0003 [F2.85]

"Allow asymmetric in/out size" option for X2X Link interfaces

The Advanced tab of the properties dialog box for X2X Link interfaces now contains the "Allow asymmetric in/out size" option. This can be used to allow asymmetrical division of input and output data. This makes it possible to potentially achieve shorter cycle times on X2X lines where the amount of input and output data are widely different. Since some older X2X Link modules do not support this mode, it's optional. If this type of module is connected to the X2X bus, error 30336 is entered in the logbook. The station number of the afflicted module is listed in the information field.

1.4.4.1.23 Device Support

ID#149125 : solved problem, known since unbekannt, solved since V2.5.2.0016 [G2.86]

ID#144750 : solved problem, known since V2.5.2.0010 [C2.86], solved since V2.5.2.0011 [D2.86]

X20BC7321does not work

Caused by an incompatile hardware description file the bus coupler X20BC7321fails.

ID#132590 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0016 [G2.83]

X67AM1223: Outputs are not displayed in AS

If the module X67AM1223 is operated on the Can coupler X67BC7321-1a, outputs are not displayed in the Automation Studio

ID#130815 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0014 [E2.83]

7CX408.50-1: Error 27409 with the "flat" setting

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If the "flat" function model is set for the 7CX408.50-1, then downloading "iomap" is aborted with the error message "Error 27409 while transferring iomap".

ID#128580 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0014 [E2.83]

Warning 8005 when building projects with the 4PP250.0571-K04

ID#125115 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.1.0013 [D2.83]

Hardware recognition for the 7EX290.50-1 doesn't work

ID#138280 : new function since V2.5.2.0006 [J2.85]

X67DC1198 update: Period measurement, gate measurement, and bus controller support

ID#138205 : new function since V2.5.2.0006 [J2.85]

X20DC1196 update: 32-bit ABR

ID#138200 : new function since V2.5.2.0006 [J2.85]

X20DC2396 update: 32-bit ABR

ID#138180 : new function since V2.5.2.0006 [J2.85]

X20DC1396 update: 32-bit ABR

ID#137995 : new function since V2.5.2.0006 [J2.85]

X20DC4395 update: Period measurement, gate measurement, and bus controller support

ID#137890 : new function since V2.5.2.0005 [I2.85]

X20DC2395 update: Period measurement, gate measurement, and bus controller support

ID#131825 : new function since V2.5.1.0024 [N2.83]

Support of 4PP035.0300-K10

ID#131225 : new function since V2.5.1.0014 [E2.83]

Support of 4PP035.E300-K01

ID#131175 : new function since V2.5.1.0014 [E2.83]

Support of 4PP120.1043-K07

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ID#131085 : new function since V2.5.1.0014 [E2.83]

Support of 4B1270.00-K04

ID#131030 : new function since V2.5.1.0014 [E2.83]

Support of 4PP035.0300-K11

ID#131005 : new function since V2.5.1.0014 [E2.83]

Support of 5D5212.19

ID#130990 : new function since V2.5.1.0014 [E2.83]

Support of 5D5200.27

ID#130985 : new function since V2.5.1.0014 [E2.83]

Support of 4PP035.0300-K10

ID#130960 : new function since V2.5.1.0014 [E2.83]

Support of 5D5601.05

ID#130950 : new function since V2.5.1.0014 [E2.83]

Support of 5E9000.24

ID#130940 : new function since V2.5.1.0014 [E2.83]

Support of 5E9000.22

ID#130920 : new function since V2.5.1.0014 [E2.83]

Support of 5D5601.12

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ID#130040 : new function since V2.5.2.0002 [D2.85]

3EX282.6, 7EX481.50-1, and 7EX484.50-1 now providing the "ModuleOk" data point

ID#129660 : new function since V2.5.1.0013 [D2.83]

7MM432.70-1: Data points, reference check, and digital signals updated

ID#129555 : new function since V2.5.1.0013 [D2.83]

New "ARNC0" function model

ID#129270 : new function since V2.5.2.0002 [D2.85]

Updated hardware status information

3CP340.60-1; 3CP340.60-2; 3CP360.60-1; 3CP360.60-2; 3CP380.60-1; 3CP382.60-1:
- Mode switch
- CPU battery status
- Backplane battery status
- CPU temperature
- Heatsink temperature
- Node switch for Ethernet IF

ID#129235 : new function since V2.5.2.0002 [D2.85]

X20DI2377: Update function model 1 input latch function

ID#129215 : new function since V2.5.2.0002 [D2.85]

X20DO8332: Update function model 1 delayed switching function

ID#128920 : new function since V2.5.2.0002 [D2.85]

X20BT9100: Additional channels for current and voltage data as well as the I/O power diagnose bit

ID#128915 : new function since V2.5.2.0002 [D2.85]

X20PS2100: Additional channels for voltage data

ID#128910 : new function since V2.5.2.0002 [D2.85]

X20PS3300: Additional channels for current and voltage data

ID#128905 : new function since V2.5.2.0002 [D2.85]

X20BR9300: Additional channels for current and voltage data

ID#128525 : new function since V2.5.2.0001 [B2.85]

Valve activation time was changed

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The limit for valve activation time was increased from 12,8 to 25,5mS.

ID#128375 : new function since V2.5.1.0010 [B2.83]

Support of 4PP120.1043-K05

ID#127610 : new function since V2.5.1.0010 [A2.83]

X67DV1311.L12: I/O configuration switch added in order to turn off status / diagnostic data

ID#127605 : new function since V2.5.1.0010 [A2.83]

X67DV1311.L08: I/O configuration switch added in order to turn off status / diagnostic data

ID#127600 : new function since V2.5.1.0010 [A2.83]

X67DM9331.L12: I/O configuration switch added in order to turn off status / diagnostic data

ID#127595 : new function since V2.5.1.0010 [A2.83]

X67DM9321: I/O configuration switch added in order to turn off status / diagnostic data

ID#127590 : new function since V2.5.1.0010 [A2.83]

X67DM1321.L12: I/O configuration switch added in order to turn off status / diagnostic data

ID#127585 : new function since V2.5.1.0010 [A2.83]

X67DM1321.L08: I/O configuration switch added in order to turn off status / diagnostic data

ID#127580 : new function since V2.5.1.0010 [A2.83]

X67DM1321: I/O configuration switch added in order to turn off status / diagnostic data

ID#127575 : new function since V2.5.1.0010 [A2.83]

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X67DO1332: I/O configuration switch added in order to turn off status / diagnostic data

ID#127570 : new function since V2.5.1.0010 [B2.83]

X20DO9322: I/O configuration switch added in order to turn off status / diagnostic data

ID#127565 : new function since V2.5.1.0010 [A2.83]

X20DO9321: I/O configuration switch added in order to turn off status / diagnostic data

ID#127560 : new function since V2.5.1.0010 [A2.83]

X20DO8332: I/O configuration switch added in order to turn off status / diagnostic data

ID#127555 : new function since V2.5.1.0010 [A2.83]

X20DO6322: I/O configuration switch added in order to turn off status / diagnostic data

ID#127550 : new function since V2.5.1.0010 [A2.83]

X20DO6321: I/O configuration switch added in order to turn off status / diagnostic data

ID#127545 : new function since V2.5.1.0010 [A2.83]

X20DO4332: I/O configuration switch added in order to turn off status / diagnostic data

ID#127540 : new function since V2.5.1.0010 [A2.83]

X20DO4322: I/O configuration switch added in order to turn off status / diagnostic data

ID#127535 : new function since V2.5.1.0010 [A2.83]

X20DO2322: I/O configuration switch added in order to turn off status / diagnostic data

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ID#127530 : new function since V2.5.1.0010 [A2.83]

X20PS2100: I/O configuration switch added in order to turn off status / diagnostic data

ID#127525 : new function since V2.5.1.0010 [A2.83]

X20PS3300: I/O configuration switch added in order to turn off status / diagnostic data

ID#127520 : new function since V2.5.1.0010 [A2.83]

X20BT9100: I/O configuration switch added in order to turn off status / diagnostic data

ID#127515 : new function since V2.5.1.0010 [A2.83]

X20BR9300: I/O configuration switch added in order to turn off status / diagnostic data

ID#127330 : new function since V2.5.1.0010 [A2.83]

X20DI2377: Additional prescaler frequencies for gate measurement

Additional prescaler frequencies for gate measurement:
- Already present: 48, 3, 0.1875 MHz
- New: 24, 12, 6, 1.5 , 0.75, 0.375 MHz

ID#127315 : new function since V2.5.1.0010 [A2.83]

X67DC1198: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)

ID#127310 : new function since V2.5.1.0010 [A2.83]

X20DC4395: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)

ID#127305 : new function since V2.5.1.0010 [A2.83]

X20DC2395: Change to the limits of the input field for the PWM time basis from 500 µsec (min. value = 24) to 50 µsec (min. value = 2)

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ID#127095 : new function since V2.5.1.0010 [B2.83]

4XP0000.00-K11: LEDs and keys designed as individual channels

The LEDs and keys of the 4XP0000.00-K11 module are now available as individual channels (no longer packed).

ID#90455 : new function since V2.5.1.0024 [N2.83]

Support of 5PP120.1505-K02

Content:

1.4.4.1.24 Workspace - Library Manager

ID#138090 : solved problem, known since V2.5.1.0018 [I2.83], solved since V2.5.2.0006 [J2.85]

Projects recompiled

Correcting an error in how the project database is pre-assigned with standard data types causes the respective projects to be automatically corrected when opened the first time by the new AS version. It must then be recompiled.

1.4.4.1.25 Workspace - Output Windows

ID#126550 : solved problem, known since V2.5.1.0007 [G2.82], solved since V2.5.1.0016 [G2.83]

No Keyboard operation in the output window

In the output window the hot keys Ctrl+Home and Ctrl+End are not supported.

1.4.4.1.26 Workspace - Project Handling

ID#143330 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.0014 [E2.86]

System configuration re-transferred even without apparent changes

For projects that have an Ethernet interface (e.g. IF681) in the hardware configuration, an uninitialized Ethernet parameter may cause the system configuration to accidentally be recompiled and re-transferred even if the user didn't make any changes.
To correct this error, the project must be opened and rebuilt again with AS V2.5.2.101. This may modify the contents of Sysconf again. From this point on, the error will no longer occur.

1.4.4.1.27 Workspace - Properties

ID#127745 : new function since V2.5.2.0001 [B2.85]

Online connection only possible with IP address / host name

An Ethernet connection is also possible without specifying the target address. Either the IP address of the PLC or the configured host name of the PLC (only when using DNS) can be specified.

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1.4.4.2 1A4000.02 Motion Components

1.4.4.2.1 Motion Components

ID#141385 : solved problem, known since V2.5.2.7000, solved since V2.5.2.0010 [C2.86]

Number of pole pairs incorrect for 8LSA motors

The value "2" is entered as the number of pole pairs for all 8LSA motors, which isn't correct for all of them.

ID#132545 : solved problem, known since V2.5.1.0011, solved since V2.5.2.0002 [E2.85]

McModGen.dll: Rebuilding cam profiles not precise enough

If the "BrToAsc" function was used to rebuild an ACOPOS cam profile, then the float values in the text output only have a maximum of 6 decimal places and aren't written in exponential form. Now float values are output in exponential form with up to 10 decimal places.

ID#132405 : solved problem, known since unbekannt, solved since V2.5.2.0002 [E2.85]

Automation Studio crashes in a Trace window if a curve name with more than 80 characters is used in a formula

Automation Studio crashes in a Trace window (NC Trace and Task Trace) or a Test window if a curve name with more than 80 characters is used in a calculation formula.

ID#132085 : solved problem, known since unbekannt, solved since V2.5.2.0002 [E2.85]

Target memory for *cfg.br modules (acp10cfg.br, arnc0cfg.br, nc154cfg.br, nc157cfg.br) automatically changed to "User ROM"

If a project was compiled with "Rebuild all" or the NC software configuration was changed, then the target memory is reset back to "User ROM".

ID#128260 : solved problem, known since unbekannt, solved since V2.5.2.0002 [E2.85]

Display of the channel number as additional criteria for differentiation

The 'Select Hardware' dialog box and the title bar of the Watch, Trace and Test windows will now show the channel number of the NC object as additional criteria for differentiation.

ID#143125 : known problem since V2.5.2.0008 [A2.86]

After opening NC Trace, the NC object selection dialog box is hidden by the shortcut menu

If, after opening NC Trace, the shortcut menu was opened and, at the same time, the NC object selection dialog box was shown, Automation Studio only reacted to keyboard entries.

ID#140935 : known problem since V2.5.2.0004 [G2.85], correction planned for V2.5.2.0008 [A2.86]

Automation Studio crashes after loading ARNC0 trace data

Loading the data for the cyclic ARNC0 trace could cause Automation Studio to crash if an ARNC0 software version >= 0.43.0 is being used.
This error only occurs in AS versions 2.5.2.0004 to 2.5.2.0007.

ID#129550 : known problem since unbekannt, correction planned for V2.5.1.0013 [D2.83]

ARNC0 DPR Trace: The wrong NC object was sometimes used for trace points

If an INIT parameter object was used for multiple NC objects, then none of these NC objects could be clearly identified in the trace options because only the name of the INIT parameter object was available for selection.
In this case, a selected trace point would sometimes use the wrong NC object for the trace.

If, for example, the trace was opened for a CNC INIT parameter object and trace points for an axis INIT parameter object that was used multiple times was selected in the trace options, then the NC object with type "ncCNCSYS" (wrong object) was used instead of the NC objects with type "ncAXIS" for the trace.

Now there is additional information in the trace options for the NC object selection so that the NC objects can be clearly identified.

1.4.4.2.2 NC Software - ACP10 Wichtige Information

ID#150637 : Important Information

ACP10 software from V1.990 on can be used for operation of ACOPOSmulti and ACOPOS 8V1xxx.00-2.

ID#135267 : Important Information

ACP10 software before V0.552 and from V1.000 to V1.191 can not be used with certain AR versions

The ACP10 software versions listed above can not be used with the following AR versions:
- AR for SG4 E2.73 - V2.79
- AR for SG4 starting with F2.85

ID#135262 : Important Information

Powerlink, incorrect input data during ACOPOS startup with certain AR versions

In a cyclically operating ETHERNET Powerlink network, during ACOPOS startup in rare cases incorrect input data could occur for a short amount of time.

An ACOPOS startup (network initialization) is performed in the following cases:
- After turning on the system
- After calling the NC action "ncNETWORK,ncINIT+ncRESET"
- Automatically after a reset or turning the ACOPOS unit on/off

The automatic startup after ACOPOS reset is only performed if the value "Yes" is set for the "Execute automatically after ACOPOS reset" option in the NC configuration under "Network initialization".

This problem affects the following AR versions:
- AR for SG3 before V2.40
- AR for SG4 before B2.73
- AR for SG4 from A2.80 to C2.83

ACOPOS devices should not be operated with ACP10 software on an ETHERNET Powerlink network with these AR versions.

ID#134842 : Important Information

Encoder Interface AC120: With new EnDat encoders, with V0.546 - V0.551 and V1.103 - V1.181 a permanent encoder error is mistakenly shown

With new Heidenhain EnDat encoders, an excessively restrictive time-out in the ACOPOS operating system prevents the encoder initialization from being completed. This problem causes the following errors to be permanently shown:
- 7022: Encoder: Initialisation is active
- 7015: Encoder: Timeout error during parameter transfer
- 7038: Encoder: Position value not synchronous with absolute value
- 7019: Encoder: OEM data not valid
- 7048: Error during the reading of encoder memory
- 6036: Motor parameters missing or invalid

Because of this problem, versions V0.546 - V0.551 and V1.103 - V1.181 should no longer be used with EnDat encoders.

ID#110502 : Important Information

Encoder interface AC122, Resolver: In V1.155 the automatic setting of the encoder resolution (SCALE_ENCOD_INCR) has been removed

Before V1.155, the following automatic setting of the encoder resolution was executed after setting the motor rated speed (MOTOR_SPEED_RATED) or the number of resolver polepairs (ENCOD1_POLEPAIRS):

if (MOTOR_SPEED_RATED * ENCOD1_POLEPAIRS > 3600U/min)
SCALE_ENCOD_INCR = 4096
else
SCALE_ENCOD_INCR = 16384

If from V1.155 on the parameterized encoder resolution does not agree with the former executed automatic setting, the following effects are to be expected:
1) Through the change of the encoder resolution from 4096 to 16384 increments, a lag error occurs at a speed higher than 4000 rev./min.
2) Through the change of the encoder resolution from 16384 to 4096 increments, the control performance will be reduced. Motor and drive become warmer.

ID#103067 : Important Information

Starting with ACP10 software V1.150, EnDat parameters transferred from PLC to the ACOPOS always work

Starting with ACP10 software V1.150, parameters will be transferred from PLC to the ACOPOS as soon as reading motor parameters from EnDat encoders has been completed.
With versions before V1.150, a motor parameter could be already transferred from PLC to the ACOPOS, before reading of the motor parameters of the corresponding EnDat encoder has been completed. In this case the value which was read from the encoder worked and not the value transferred from PLC to the ACOPOS.
Starting with ACP10 software V1.150, always that value works, which is transferred from PLC to the ACOPOS.

ID#94062 : Important Information

Library "acp10_mc": PLCopen function blocks for motion control with ACP10 software

Starting with ACP10 software V1.130 the corresponding version of "acp10_mc" library is installed into the Automation Studio together with ACP10 software.

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Starting with Motion Components V2.4.0.1105, the "acp10_mc" library version can be selected for ACP10 software in "NC properties" and should be imported together with the ACP10 software.

ID#93622 : Important Information

Starting with ACP10 software V1.130 the number of data records for the network command trace is no longer accepted directly from the NC configuration, but calculated depending on the number of configured ACOPOS modules.

ID#90577 : Important Information

Powerlink, starting with ACP10 software V1.106 in dependency on the Powerlink library as minimum version V1.00 is entered

In the ACP10 manager "acp10man" for ETHERNET Powerlink a dependency on the Powerlink library "powerlnk" is entered. Until now, as minimum version V1.080 was defined in this entry, so that correct functionality for all Powerlink functions used by the ACP10 manager could be guaranteed.
Starting with ACP10 software V1.106 as minimum version for the Powerlink library V1.00 (this was the first available version) is entered, because many existing applications are not using "newer" Powerlink functions and therefore can continue to operate with the Powerlink library, which exists in the application.
For certain "newer" Powerlink functions (e.g. operation of the new Powerlink property "multiplexed") the ACP10 manager now writes corresponding messages into the logbook, if these Powerlink functions are not available in the existing Powerlink library.

1.4.4.2.3 NC Software - ACP10 V1.991

ID#152022 : known problem since V2.5.2.0016 [G2.86]

Download of a cam profile aborted if a warning occurred

Previously, if a warning occurred during the transfer of a cam profile's data segment, then the download was falsely aborted with "status.error=ncTRUE". From now on, the download is completed with "status.ok=ncTRUE".

1.4.4.2.4 NC Software - ACP10 V1.243

ID#152010 : known problem since V2.5.2.0016 [G2.86]

Download of a cam profile aborted if a warning occurred

Previously, if a warning occurred during the transfer of a cam profile's data segment, then the download was falsely aborted with "status.error=ncTRUE". From now on, the download is completed with "status.ok=ncTRUE".

ID#151995 : solved problem, solved since V1.243

Cam profile automat: In stand-by mode of the automat error messages could be displayed, even though they were deactivated with AUT_MSG_MODE_BITS=0x0.

ID#151607 : solved problem, solved since V1.243

Setup for controller with library ACP10TUN

Now the following default values are initialized:
- setup.controller.parameter.i_max_percent = 25.0

- setup.controller.parameter.v_max_percent = 50.0
- setup.controller.parameter.ds_max = 2000

Starting the setup function with mode "ncFF_POS_MOVE" and "ncFF_NEG_MOVE" was falsely rejected with the following error:
- 32314: Setup for controller: Mode invalid

After successful completion of the setup function with mode "ncPOSITION" now the following parameter is set and transferred to the drive:
- controller.mode = ncPOSITION
Until now, the value which was saved before the setup function was restored and transferred to the drive. Controller problems could occur, if this value was not
equal to "ncPOSITION".

After successful completion of the setup function with mode "ncFF..." now the following parameters are set:
- controller.position.t_predict = 0.0004;
- controller.position.t_total = 0.0004;
Until now, the values which were saved before the setup function were restored and transferred to the drive. Controller problems could occur after the next call of "ncCONTROLLER,ncINIT" (or "ncGLOBAL,ncINIT"), if these values were not equal to "0.0004".

After successful completion or after abortion of the setup function with mode "ncFF..." now the following parameter are transferred to the drive:
- controller.position.tn
- controller.position.t_predict
- controller.position.t_total
- controller.position.p_max
- controller.position.i_max
- controller.speed.tn
Until now, after the setup function the values of the corresponding parameters on the drive were not equal to the values in the NC structure.

ID#151437 : solved problem, solved since V1.243

Disturbances on the motor holding brake caused the motor holding brake to close without the controller being deactivated. Only the error "6048: Motor holding brake monitor: Position error too large" was registered.

ID#151022 : solved problem, solved since V1.243

Induction motor: Motor holding brake could not be opened

After an induction stop, the motor holding brake could not be opened via command (CMD_BRAKE = ncOFF) when the controller is turned off.

1.4.4.2.5 NC Software - ACP10 V1.242

ID#88766 : new function since V1.242

Power stage: X5 connection (motor/choke): Wire break test:

When switching on the controller, a test is made to determine whether or not current can be applied in all phases (U, V and W) on the X5 connection (motor/inductor).
The wire break test can be deactivated using MOTOR_TEST_MODE.

ID#150747 : solved problem, solved since V1.242

The versions 1.240 and 1.241 of ACP10MAN would lead to a Pagefault with ACP10_MC.

Therefore these versions in ACP10_MC V1.24x are not accepted in the SW Dependency.

1.4.4.2.6 NC Software - ACP10 V1.241

ID#150377 : new function since V1.241

Library ACP10TUN for controller setup, data restoration after error

If an error occurs during a setup operation, then the original data will now be restored in the NC structure and the respective parameters transferred to the ACOPOS.

ID#150372 : solved problem, solved since V1.241

Incorrect trace status after re-establishing network communication

If cyclic network communication with the ACOPOS failed during an active cyclic parameter trace on the ACOPOS, then an incorrect trace status was displayed after re-establishing network communication. Furthermore, the following error also occurred the next time "ncTRACE,ncSTART" was called:
- 32049: Trace is already active at trace start

These problems could be avoided by setting "trace.status=ncOFF"

1.4.4.2.7 NC Software - ACP10 V1.240

ID#150367 : new function since V1.240

Target system SG4 (I386), automatic determination of controller parameters

-New NC structure component "setup.controller"
- New NC actions "ncSETUP+ncCONTROLLER,ncSTART" and "ncSETUP,ncSTOP"

ID#150362 : new function since V1.240

New NC structure components "controller.speed.isq_filter1/2/3"

1.4.4.2.8 NC Software - ACP10 V1.230

ID#150357 : new function since V1.230

New format "ncFORMAT_T14"

New format "ncFORMAT_T14" (Text, 14 Bytes) with data type "ACP10PRT14_typ" for following NC actions:
- "ncSERVICE+ncPAR_LIST,ncREAD"
- "ncSERVICE+ncPAR_LIST,ncINIT"
- "ncSERVICE+ncPAR_SEQU,ncDOWNLOAD"

ID#150352 : new function since V1.230

New NC action "ncSERVICE+ncACP_PAR,ncUPLOAD"

ID#150347 : new function since V1.230

New NC action "ncSERVICE+ncPAR_LIST,ncREAD"

ID#150342 : new function since V1.230

New NC object with type "ncMULTI_AX_TRACE"

ID#149532 : new function since V1.230

New NC structure component "nc_test" for "ncAXIS" and "ncV_AXIS"

With this component it is possible, to switch on and off the following functions for an NC object also during run-time (without CPU restart):
- Open the NC Test with the same NC object as the application and do not block NC actions of the application
- No move abortion when closing the NC Test

ID#146847 : new function since V1.230

New NC structure component "message.record.parameter.record_adr"

Now it is possible to determine the text for another message record as that in "message.record" by writing its address into "message.record.parameter.record_adr".

1.4.4.2.9 NC Software - ACP10 V1.215

ID#148572 : new function since V1.215

The speed controller set value current filter ISQ_FILTER is supported.

1.4.4.2.10 NC Software - ACP10 V1.214

ID#149002 : solved problem, solved since V1.214

CAN, Number of HPRIO-WRITE-COBs for ACP10USCOB for the library "ACP10_MC"

If the library "ACP10_MC" exists on the PLC, then now for each CAN interface the number of HPRIO-WRITE-COBs for ACP10USCOB is calculated by addition of the following two values:
1) 1HPRIO-WRITE-COB per 8 ACOPOS modules, which are configured for this CAN interface
2) That value, which is defined in the NC Configuration for this CAN interface in "Number of HPRIO-WRITE-COBs for ACP10USCOB"

Until now, for this number only the first value was used.

Note:
This change is necessary, so that the FB "MC_BR_InitCyclicWrite" of the LIBRARY "ACP10_MC" can be used also for CAN (see ACP10_MC: # 148245).

1.4.4.2.11 NC Software - ACP10 V1.213

ID#147852 : new function since V1.213

Encoder Interface AC130: The deactivation of inverted signals is supported in the incremental encoder emulation mode.

ID#147500 : solved problem, solved since V1.213

Function ncda_cr: The length of the data section was not correctly aligned

Before V0.480 of NCGLOBAL the length of the data section falsely was aligned to a value "(n*4)+2". From V0.480 on, the length is correctly aligned to a value "n*4" (LONG alignement).

If e.g. before V0.480 with ncda_cr() an ACOPOS cam profile with 64 polynomials was created, the data section had a length of 2318 instead of 2316 bytes. The Download of this cam profile to the ACOPOS caused then the following error:

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- 5304: Format error in cam profile data, Info: 8

1.4.4.2.12 NC Software - ACP10 V1.211

ID#146172 : solved problem, solved since V1.211

Powerlink, initial ACOPOS parameters, unjustified timeout error (only in V1.181 - V1.210)

Initial ACOPOS parameters are parameters that are defined for an ACOPOS module in the hardware configuration or for an NC object of that ACOPOS module in an NC deployment table. These ACOPOS parameters are automatically transferred to the ACOPOS in the function for ACOPOS startup. This transfer was sometimes incorrectly aborted with the following error if the CPU load was too high:
- 32011: Drive not responding to Write Request (is the drive in the network?)

For SG3, this problem can only occur with V1.210.
For SG4, this problem can only occur with V1.181 - V1.210.

ID#145877 : solved problem, solved since V1.211

Control of the Motor Holding Brake: During the functional test of the holding brake torque the test torque was incorrect monitored

The actual test torque was monitored absolutely to the set test torque (limit 0.05Nm).
Now the actual test torque is monitored relatively to the set test torque (limit 5%).

1.4.4.2.13 NC Software - ACP10 V1.210

ID#142502 : new function since V1.210

New NC action "ncGLOBAL,ncSAVE" for saving data into an INIT Parameter module

ID#142497 : new function since V1.210

Global PVs can be used as NC object

If the selection "Use global PV as NC object" is set to "Yes" in the NC configuration, then a global PV is used for an NC object under the following circumstances:
- The PV has exactly the same name, which is defined for this NC object in the "NC Object Name" column of the NC Deployment table
- The PV has the corresponding data type ("ACP10AXIS_typ" or "ACP10VAXIS_typ")

After transferring a task, in which such a global PV is defined, an additional CPU restart is absolutely neccesary, so that the global PV will be used by the NC manager.

ID#142492 : new function since V1.210

Entering NC actions in the Network Command Trace can be activated

If the selection "Network command trace, Enter ncaction() calls" is set to "Yes" in the NC configuration, then the following parameters are entered in the network command trace when the function ncaction() is called:
- NC_ACTION, if ncaction() was called by an application programm or the NC test
- NC_ACTION_PLCopen_MC, if ncaction() was called by the PLCopen MC Library
- NC_ACTION_STATUS_NOT_OK, if the status of ncaction() was not equal to "ncOK"

ID#148880 : solved problem, solved since V1.210

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Cam profile automat: Defined state index for inactive automats.

The index of the current state (AUT_ACT_ST_INDEX) is set to 255 for an inactive automat.

1.4.4.2.14 NC Software - ACP10 V1.198

ID#142110 : solved problem, solved since V1.198

Target system SG4 (I386), Powerlink, with AR B2.85 or higher, ACOPOS modules were not recognized on the network after a reset

With AR version B2.85 or higher, after ACOPOS reset (SW reset, Power OFF/ON) the following problems occurred:
- The status "network.init_allowed" was not set to "ncTRUE"
- The automatic startup ACOPOS reset was not performed

The automatic startup after ACOPOS reset is only performed if the value "Yes" is set for the "Execute automatically after ACOPOS reset" option in the NC configuration under "Network initialization".

ID#141870 : solved problem, solved since V1.198

Error 9070, if MOTOR_CURR_STALL = MOTOR_CURR_RATED and TEMP_MOTOR_MODEL_MODE = 2

With the following configuration the error 9070 was falsely indicated:
MOTOR_CURR_STABLE = MOTOR_CURR_RATED and
TEMP_MOTOR_MODEL_MODE = 2

1.4.4.2.15 NC Software - ACP10 V1.197

ID#139772 : solved problem, solved since V1.197

Incorrect conversion of ACOPOS parameters from input texts

In ACOPOS parameter tables and with the "service.data_text" component, values for ACOPOS parameters can be defined in hexadecimal as input text. For ACOPOS parameters of data type "DINT", input texts in the range "0x80000000" to "0xFFFFFFFF" were converted so far all to the value "0x7FFFFFFF" by mistake.

ID#139345 : solved problem, solved since V1.197

Target system SG3, CAN, unjustified timeout errors (only in V1.100 - V1.196)

During very high CPU load, the data transmission to/from ACOPOS was sometimes falsely aborted with one of the following errors:
- 32061: Timeout sending a Read Request telegram (network error ?)
- 32062: Timeout sending a Write Request Telegram (network error ?)

This problem concerned the following data transmissions:
- Download of a cam profile
- Download of an ACOPOS parameter table
- Download of a parameter sequence
- Upload of trace data

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1.4.4.2.16 NC Software - ACP10 V1.196

ID#138847 : solved problem, solved since V1.196

Target system SG4, Powerlink, Use of additional IP frames for Ethernet communication

IP frames for Ethernet communication are sent as "unicast" in the following AR versions:
- AR for SG4 A2.85 - C2.85
- AR for SG4 starting with I2.85

For this reason, ACOPOS synchronisation errors could occur with the AR versions listed above, if additional IP frames for Ethernet communication were sent on a Powerlink network.

1.4.4.2.17 NC Software - ACP10 V1.195

ID#138642 : solved problem, solved since V1.195

The "two encoder control" can now only be activated with the parameters PCTRL_S_ACT_PARID and VCTRL_S_ACT_PARID.

Activation via "CONTROLLER_MODE=3" is now rejected with the following error:
- 1002: Parameter outside the valid range

ID#138065 : solved problem, solved since V1.195

For EnDat encoders whose serial resolution is smaller than or equal to four times the signal period resolution, the actual position could be incorrectly placed by 1/4 of a signal period. (e.g. ECN113 and EQN1325 with 2048 signal periods)

1.4.4.2.18 NC Software - ACP10 V1.193

ID#135632 : solved problem, solved since V1.193

The short-circuit-controlled movement stop was not performed correctly when certain drive errors occurred (only in V1.180 - V1.192)

Encoder error:
Short-circuit-controlled movement stop not activated. As a result, the motor does not have active braking.

Temperature error (e.g. IGBT junction, motor, heat sink):
Short-circuit-controlled movement stop is terminated too soon. As a result, the motor only has limited braking.

Lag error:
The short-circuit-controlled movement stop is not activated after the speed-controlled movement stop. As a result, the motor only has limited braking when the axis limit values are set too high for acceleration.

1.4.4.2.19 NC Software - ACP10 V1.192

ID#135117 : solved problem, solved since V1.192

Access to NC data modules did not function with certain AR versions

Management for BR modules has been changed in the following AR versions:
- AR for SG4 E2.73 - V2.79
- AR for SG4 starting with F2.85

For this reason, access to the following NC data modules did not function with the AR versions

listed above:
- NC Deployment tables
- NC INIT Parameter modules
- NC Error Text tables

1.4.4.2.20 NC Software - ACP10 V1.191

ID#134342 : solved problem, solved since V1.191

Override values were not transferred to the ACOPOS after ACOPOS restart

The override values "move.basis.override.v" and "move.basis.override.a" should be transferred to the ACOPOS after each change.
These values should be transferred after an ACOPOS startup (network initialization) if they differ from the default value "10000".
Until now, this was only done during the first ACOPOS startup. After restarting the ACOPOS, these values falsely were not re-transferred, if they differ from the default value "10000".

ID#134302 : solved problem, solved since V1.191

Some controller parameters were not transferred to the ACOPOS after ACOPOS restart

After calling the NC actions "ncCONTROLLER, ncINIT" or "ncGLOBAL, ncINIT", the following parameters are only transferred to the ACOPOS if the value of the corresponding variable in the NC structure has changed or differs from the default value (see also the Online Help):
- Parameter "SCTRL_TI_FIL" for variable "controller.speed.t_filter" from V1.120 on
- Parameter "CONTROLLER_MODE" for variable "controller.mode" from V1.130 on
In the past, these parameters falsely were not re-transferred to the ACOPOS if, after successfully executing one of the NC actions mentioned above, an ACOPOS startup (network initialization) was executed and the NC actions mentioned above were called up again.

1.4.4.2.21 NC Software - ACP10 V1.190

ID#133350 : solved problem, solved since V1.190

Target system AR010, Powerlink, processor blocked for the Windows operating system while establishing communication (only in V1.183 - V1.189)

At the beginning of the basis initialization (function for start up of all ACOPOS modules connected to the network), an attempt is made to establish communication to all ACOPOS modules that have been configured. In V1.183 - 1.189 during this attempt to establish communication, the processor for the Windows operating system was blocked from the low-priority NC-IDLE task on the PLC. This lasted approximately 11 seconds, if just one of the configured ACOPOS modules was not connected to the Powerlink network.
From V1.190 on, the NC-IDLE task on the PLC the processor for the Windows operating system is no longer blocked during this function.

ID#133342 : solved problem, solved since V1.190

Target system SG4 (I386),Powerlink, initial ACOPOS parameter tables, the data for type STRxx parameters was sometimes falsely transferred (only in V1.182 - V1.189)

Initial ACOPOS parameter tables are tables that are defined for an NC object in an NC deployment table. The parameters contained in these ACOPOS parameter tables are transferred to the ACOPOS during the ACOPOS startup function.
If a type STRxx parameter was present in an initial ACOPOS parameter table, then the data of the second-to-last data segment was incorrectly contained in the last data segment (WR_BLOCK_LAST_SEGM).
This was the reason why the strings were not correctly transferred in the following cases:

- ParID 40 (MOTOR_ORDERTEXT, type STR32) for strings that are 30 bytes and longer
- ParID 41 (MOTOR_SERIALNUMBER, type STR16) for strings that are 12 bytes and longer

1.4.4.2.22 NC Software - ACP10 V1.188

ID#133202 : new function since V1.188

ACOPOS parameter tables, handling the "VersionFrom" attribute

Some ACOPOS parameters can only be used starting with a specific version of the ACOPOS operating system. For such parameters, this minimum version is entered in the module created from an ACOPOS parameter table with the attribute "VersionFrom" when using AS versions V2.5.2.0002 and higher during the Build procedure.
The "VersionFrom" attribute is now evaluated by the ACP10 software on the PLC when processing ACOPOS parameter tables. The parameter is not transferred to the ACOPOS if the ACOPOS operating system version there is older than the minimum version defined with "VersionFrom".
Transferring such a parameter (e.g. 849 "MOTOR_TAU_THERM") with older versions of the ACP10 software will cause the response error "1: Invalid parameter ID" and transfer of the ACOPOS parameter table is aborted. This problem can be avoided by disabling this parameter in the ACOPOS parameter table.

ID#133010 : solved problem, solved since V1.188

Target system SG4 (I386), Powerlink, transfer of ACOPOS parameters from the hardware tree was aborted (only in V1.181 - V1.187).

Among other things, the parameters defined for an ACOPOS via the hardware tree are transferred to the ACOPOS in the startup function.
Since January 12, 2006, parameter 849 "MOTOR_TAU_THERM" is also defined. If this parameter is contained in the hardware tree for AS versions earlier than V2.5.2.0002, then the transfer of the ACOPOS parameters for ACP10-SW V1.181 - V1.187 is falsely aborted after this parameter has been detected. In this case, ACP10 software V1.188 or later must be used.

1.4.4.2.23 NC Software - ACP10 V1.187

ID#131762 : new function since V1.187

NC actions for operation of NC objects with type "ncACP10USCOB

If in the "Number of HPRIO-WRITE-COBs for ACP10USCOB" in the NC configuration a value greater than zero is defined, NC objects with type "ncACP10USCOB" can be operated with the following actions:
- "ncREAD_COB,ncDEFINE": Define Read CAN object with CAN_defineCOB()
- "ncWRITE_COB,ncSEND": Send Write CAN object with CAN_sendCOB()

ID#132080 : solved problem, solved since V1.187

Powerlink, jump in speed with network coupling

With loss of a cyclic Powerlink frame a speed jump occurred. Extrapolating the position caused a wrong initialization for one powerlink cycle.

ID#131280 : solved problem, solved since V1.187

Wrong status for initialization of a Parameter Sequence

During the initialization of a parameter sequence after calling the NC action "ncPAR_SEQU+ncSERVICE,ncINIT" wrongly "status.init = ncTRUE" was set, despite the last parameter caused an error.

1.4.4.2.24 NC Software - ACP10 V1.186

ID#130582 : solved problem, solved since V1.186

Error after calling the NC action "ncNETWORK,ncINIT"

If an error occurs during network initialization after calling the NC action "ncNETWORK,ncINIT{+ncRESET}", then the appropriate error set remains falsely stored. This leads then to the fact that with each following call of this NC action the network initialization is not started at all, but an abort with displaying of this error record takes place immediately.

1.4.4.2.25 NC Software - ACP10 V1.185

ID#129100 : solved problem, solved since V1.185

"monitor.status.error/warning" were operated only with active communication (only in V1.103 - V1.184)

If cyclic network communication to the ACOPOS was not active, then the following status components were not operated:
- monitor.status.error
- monitor.status.warning

1.4.4.2.26 NC Software - ACP10 V1.184

ID#128517 : solved problem, solved since V1.184

Encoder interface AC122, AC123: In the case of temorary encoder errors no error message was logged (only in V1.111 - V1.183)

In the case of temorary encoder errors (<800usec) the motor was stopped by short circuit halt or eddy current halt. However no error message was logged.

ID#128000 : solved problem, solved since V1.184

Motor temperature model was deactivated (only in V1.181 - V1.183)

When current was applied to the motor, the temperature of the motor temperature model (TEMP_MOTOR_MODELL) hardly changed. This can cause thermal damage to the motor windings. Small motors (rated current < 5A) are especially susceptible when peak current is applied, as are motors without a temperature sensor when the current applied is higher than the rated current.

ID#127230 : solved problem, solved since V1.184

The ready LED and the error LED of the drive were not correctly controlled in the simulation mode (only in V1.180 - V1.183)

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1.4.4.2.27 NC Software - ACP10 V1.183

ID#127202 : solved problem, solved since V1.183

Powerlink, basis initialization, faster recognition of ACOPOS modules that are not connected

During the basis initialization (function for start up of all ACOPOS modules connected to the network), an attempt is made to connect to all of the ACOPOS modules that have been configured. The system is now considerably faster at recognizing, if an ACOPOS is not connected to the network. This can speed up the basis initialization (the more configured ACOPOS modules that are not connected to the network, the more noticeable the acceleration).

1.4.4.2.28 NC Software - ACP10 V1.182

ID#126617 : new function since V1.182

ACOPOS Parameter table: Parameters with more than 6 bytes data are now transferred

Up to now, if Parameters with data lenth greater than 6 bytes were contained in an ACOPOS Parameter table (e.g. the parameter MOTOR_ORDER_TEXT), then the transfer of this table was aborted with following error:
- 32157: Length of parameter data too large for ACOPOS parameter in XML data

1.4.4.2.29 NC Software - ACP10 V1.181

ID#125612 : new function since V1.181

Target system SG4 (I386), Powerlink, faster transfer of initial ACOPOS parameter tables

Initial ACOPOS parameter tables are tables that are defined for an NC object in an NC deployment table. During the basis initialization (function for startup of all ACOPOS modules connected to the network), the parameters contained in these ACOPOS parameter tables are now transferred parallel to all ACOPOS modules (previously, sequentially ACOPOS for ACOPOS).
This accelerates the basis initialization (the more ACOPOS modules that are used, the more noticeable the acceleration).

1.4.4.2.30 NC Software - ACP10 V1.180

ID#123247 : new function since V1.180

New NC structure component "controller.ff" for controller mode with feed forward control

ID#110805 : new function since V1.180

Motor holding brake control monitioring: No error message with defective relay

If after the command "controller switch off" due to an brake control error the brake output status does not get low, the controller remains active. In this case now the error number 6047 is logged.

ID#123646 : solved problem, solved since V1.180

Induction motor, Flux controller, Flux weakening controller: Torque limitation and current fluctuation

The torque was limited in speeds over the rated speed (MOTOR_SPEED_RATED) to strongly. In addition it could happen that over the rated speed (MOTOR_SPEED_RATED) the direct current (ICTRL_ISD_ACT) fluctuated strongly.

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Avoidance of compatibility problems:
If at least one of the following parameters were changed, then a compatibility problem is to expect after an firmware exchange: FCTRL_KV and/or FWEAK_I (=ParID 261). The internal parameter FWEAK_I was deleted. To avoid compatibility problems remove changes of the flux controller (FCTRL_KV and FCTRL_TN). The changed automatic configuration of the flux weakening controller should lead to a better controller behavior.

1.4.4.2.31 NC Software - ACP10 V1.171

ID#123547 : solved problem, solved since V1.171

The loop for reading the parameter BOOT_STATE could be aborted too early

After transfer of the parameters SW_RESET or CMD_BOOT_STATE the NC manager sends in a loop so long a Read Request for the parameter BOOT_STATE to the ACOPOS, until the ACOPOS answers with Read Response or a timeout is reached.
If the NC manager before the next Read Request after an unsuccessful read attempt (Read Request without Response) were interrupted so long that the timeout was reached, then the loop with an timeout error was aborted too early, without a further Read Request was sent.

1.4.4.2.32 NC Software - ACP10 V1.170

ID#122777 : new function since V1.170

Acceleration of parameter transfer when using "ACP10_MC"

When using the PLCopen-MC-Library "ACP10_MC", a function for accelerating the parameter transfer is only activated if an AR version 2.80 or later is being used on the PLC and an integer ratio is set between the SystemTick and the Powerlink cycle time.
The following information is added to the logbook after this function has been successfully activated:
- Acp10NetCyc_SIOS: Install OK
- NetCyc: PL_Cycle/SysTick OK

ID#123400 : solved problem, solved since V1.170

CAN, no network monitoring after NC action "ncNETWORK,ncINIT+ncRESET"

If after successful completion of the ACOPOS startup the NC action "ncNETWORK,ncINIT+ncRESET" was called, then in the subsequent ACOPOS startup the parameter "NETWORK_LIVE_CTRL" was not transferred to the ACOPOS and therefore the network monitoring not activated.

ID#122772 : solved problem, solved since V1.170

NC Action "ncMESSAGE,ncTEXT": Error despite correct error text data module

The following message was mistakenly output if not all of the bytes after the actual module name were set to zero in "message.text.parameter.data_modul":
- Module not existing (or wrong type)

1.4.4.2.33 NC Software - ACP10 V1.166

ID#120102 : solved problem, solved since V1.166

Target system SG4 (I386), data block transfer was blocked in rare cases

In rare cases, the data block transfer could be blocked after calling one of the following NC actions if "Taskclass for NC Manager task" in the NC configuration was set greater than or equal to "Idle taskclass" in the CPU configuration:
- ncACP_PAR+ncSERVICE, ncDOWNLOAD
- ncCAM_PROF+ncSERVICE ncDOWNLOAD
- ncPAR_SEQU+ncSERVICE, ncDOWNLOAD {+ncINIT}

If this problem occurs, the following values in the status data of the data block operation, that were set after calling the NC action, remain unchanged:
- status.data_len = 0
- status.ok = ncFALSE
- status.error = ncFALSE

1.4.4.2.34 NC Software - ACP10 V1.164

ID#118360 : solved problem, solved since V1.164

Powerlink, wrong response with writing a a parameter via the acyclic channel

With writing a parameter via the acyclic channel (e.g. with transfer of ACOPOS Parameter tables, Parameter Sequences or Cam Profiles), an old response frame was sent back.
This could only occur if previously cyclic user data (CYCL_USER_FRDRV) with zero length were requested from the drive.

1.4.4.2.35 NC Software - ACP10 V1.162

ID#114872 : solved problem, solved since V1.162

Speed controller: No movement stop with disabled speed controller (only in V1.101 - V1.161)

If the speed controller were switched off at the speed controller enable input (SCTRL_ENABLE_PARID), then in case of an error no automatic movement stop was started.

ID#114242 : solved problem, solved since V1.162

Despite switched off controller it could occur that the error 9012: "Motor temperature sensor: Not connected or destroyed" was falsely displayed. (only in V1.157 - V1.161)

ID#114245 : solved problem, solved since V1.162

Parameter sequence and parameter list: Data address equal to zero now is tested

For parameter records with format "ncFORMAT_ADR" in a parameter sequence or a parameter list, now a corresponding error is indicated if the data address is equal to zero.
Previously, before the processing of a parameter record was not tested whether the data address is equal to zero and in this case an address error (page fault) could occur.

1.4.4.2.36 NC Software - ACP10 V1.160

ID#112807 : new function since V1.160

Powerlink, new parameters for network initialization in the NC configuration

In the NC configuration the structure "Network Initialization (ACOPOS startup)" was expanded with following two parameters:

1) Warning for non-ascending node numbers (only for Powerlink): Yes/No
After changing the default setting "Yes" to "No", the following warnings are suppressed:
- 64002: Delay before SW Reset (network with ascending node numbers ?)

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- 64003: Delay before NC System Start (network with ascending node numbers ?)
For example, this setting can be used, if network wiring with ascending nodenumbers is not unconditionally necessary.

2) Indicate network errors before first NC action (only for Powerlink): Yes/No
After changing the default setting "Yes" to "No", monitoring of network communication is activated first then if for this ACOPOS an NC action is called, with which parameters will be transferred to the ACOPOS. Until this point in time no network errors are indicated in this case.
For example, this setting can be used if the ACOPOS startup should be carried out for each ACOPOS individually with the NC action "ncNETZWORK,ncINIT+ncRESET" without considering the wiring sequence in the network.

1.4.4.2.37 NC Software - ACP10 V1.157

ID#109397 : solved problem, solved since V1.157

Servo drives 8V10xx.00-2: Junction temperature was not monitored sufficiently

Under the following conditions the junction temperatures of the transistors U+, V+ and W+ of the servo drives 8V10xx.00-2 were not monitored.

- The motor did not move.
- The motor was in a special position.
- The current of the servo drive was larger than the rated current (ACOPOS_CURR_RATED).

Usually this scenario arises only with blocked rotor.

ID#110032 : new function since V1.157

Multimotor operation: If several motors are attached at a servo drive, then for all motors the temperature models are computed now.

1.4.4.2.38 NC Software - ACP10 V1.156

ID#110292 : solved problem, solved since V1.156

Encoder interface AC123, SSI encoder: During parameterising of SSI encoders a wrong actual position could be set up.

The bugfix described with ID#99252 did not work for all SSI encoders.

ID#109922 : solved problem, solved since V1.156

Encoder interface AC130: At some 8V101x.xx-2 servo drives, the encoder emulation did not work.

The outputs A, B and R were not set by the encoder emulation.

1.4.4.2.39 NC Software - ACP10 V1.155

ID#109417 : solved problem, solved since V1.155

Servo drive 8V1640.13-2: The junction temperature was not monitored sufficiently

ID#108997 : solved problem, solved since V1.155

Encoder interface AC120, EnDat encoder: Sometimes the wrong motor data set was used

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In use of at least two EnDat encoders with motor data set, an incorrect motor data set could be initialized. The motor data set of the encoder that was read last, was always used per default for the controller.

ID#66165 : solved problem, solved since V1.155

Encoder interface AC122, Resolver: The automatic setting of the encoder resolution (SCALE_ENCOD_INCR) has been removed

Until now, the following automatic setting of the encoder resolution was executed after setting the motor rated speed (MOTOR_SPEED_RATED) or the number of resolver polepairs (ENCOD1_POLEPAIRS):

if (MOTOR_SPEED_RATED * ENCOD1_POLEPAIRS > 3600U/min)
SCALE_ENCOD_INCR = 4096
else
SCALE_ENCOD_INCR = 16384

If now the parameterized encoder resolution does not agree with the former executed automatic setting, the following effects are to be expected:
1) Through the change of the encoder resolution from 4096 to 16384 increments, a lag error occurs at a speed higher than 4000 rev./min.
2) Through the change of the encoder resolution from 16384 to 4096 increments, the control performance will be reduced. Motor and drive become warmer.

1.4.4.2.40 NC Software - ACP10 V1.154

ID#108717 : solved problem, solved since V1.154

Induction motor: The torque was limited in the field weakness area to strongly

ID#108232 : solved problem, solved since V1.154

Sometimes NC actions were processed in the wrong order

If for an ACOPOS both NC object types (ncAXIS and ncV_AXIS) in an application were used, then in rare cases the treatment of an NC action for the one NC object type was earlier executed although the NC action for the other NC object type in the application had been earlier called.

ID#108025 : solved problem, solved since V1.154

ACOPOS Functions Block "CMP" (Comparator): In the comparator modes 1, 4, 9 and 12 the hysteresis function could not be activated.

1.4.4.2.41 NC Software - ACP10 V1.153

ID#107877 : solved problem, solved since V1.153

Encoder interface AC130, incremental encoder emulation without reference pulse: An error occurred in the encoder emulation, after 2^25 impulses were produced.

By an internal overflow the position was incremented with the maximum counting rate in the inverse direction and the error number 39016 "Incremental encoder emulation: Frequency too high" was logged.

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1.4.4.2.42 NC Software - ACP10 V1.152

ID#106272 : solved problem, solved since V1.152

Encoder interface AC130, AC123, Incremental encoder reference pulse check: The value of the reference pulse width of the encoder 3 could not be set.

ID#105672 : solved problem, solved since V1.152

Current controller: In the case of change of switching frequency F_SWITCH the current controller parameters (ICTRL_KV und ICTRL_TI) were not adjusted automatically. (only in V1.140 -1.151)

By the fact it could occur that the error of the current controllers and all overlaid controllers was increased. In some cases the current controller could become unstable.
It could occur that at least one of the following errors was indicated.
6019, 9300, 4007, 9000, 9010, 9030, 9040, 9070, 9050, 9060, 9075, 41001, 41011, 41031, 41041, 41070, 41051, 41061 or 41075

ID#106392 : new function since V1.152

Encoder interface AC130, AC123, Incremental encoder reference pulse check: The parameters ENCOD_REF_CHK_DELTA, ENCOD2_REF_CHK_DELTA und ENCOD3_REF_CHK_DELTA are available for reading the reference pulse interval error.

1.4.4.2.43 NC Software - ACP10 V1.151

ID#104255 : solved problem, solved since V1.151

Simulation mode, 8V1010.50-2 und 8V1016.50-2 (only in V1.141 - V1.150)

The following errors were mistakenly diplayed in the simulation mode with the servo drives 8V1010.50-2 and 8V1016.50-2.
- 9040: Bleeder temperature model: Overtemperature
- 41041: Bleeder temperature model: Overtemperature

ID#101510 : solved problem, solved since V1.151

Encoder interface AC120, sine/cosine encoder: Short signal disturbances in the AB line are not detected

If the signal amplitude exceeds the border 1.44Vss for incremental signals longer than 400µs , the following error is now indicated:
- 7031: Encoder: Incremental signal amplitude too large (disturbance)

IMPORTANT: This correction only affects AC120 modules starting with Rev. K0.

1.4.4.2.44 NC Software - ACP10 V1.150

ID#103062 : solved problem, solved since V1.150

From now on, EnDat parameters transferred from PLC to the ACOPOS always work

From now on, parameters will be transferred from PLC to the ACOPOS as soon as reading motor parameters from EnDat encoders has been completed.
Until now, a motor parameter could be already transferred from PLC to the ACOPOS, before reading of the motor parameters of the corresponding EnDat encoder has been completed. In this case the value which was read from the encoder worked and not the value transferred from PLC to the ACOPOS.
From now on, always that value works, which is transferred from PLC to the ACOPOS.

ID#102945 : solved problem, solved since V1.150

Monitoring of the ACOPOS continuous power: The error numbers 9075 and 41075 were mistakenly displayed (only in V1.141 - V1.145)

The following errors were mistakenly diplayed with servo drives 8V1010.50-2 and 8V1016.50-2.
- 9075: ACOPOS continuous power: Overload
- 41075: ACOPOS continuous power: Overload

ID#102347 : solved problem, solved since V1.150

Cam automat: Wrong slave position with compensation gear mode ncSL_ABS (only in V1.020-V1.145).

The slave position with a ncSL_ABS-compensation was wrong, if the change was released by an event ncAT_ONCE while a compensation curve was active.

ID#102120 : solved problem, solved since V1.150

Encoder interface AC130: In the mode "encoder emulation without reference pulse" the digital outputs DO5 and DO6 could not be set.

ID#101322 : solved problem, solved since V1.150

Cam automat: Position jump with negative direction of master movement (only in V1.006-V1.144).

During negative direction of master movement a position jump could occur with an ncAT_ONCE-event, if no "ncST_END+ncNEGATIVE" event was configured in the automat state.

ID#101317 : solved problem, solved since V1.150

Cam automat: Wrong default reaction with FFFF cam profile and negative direction of master movement (only in in V1.006-V1.144).

If an "ncST_END+ncNEGATIVE" event was not configured in a automat state, then the left edge of a FFFF curve (predefined linear curve) was not limited "horizontally". Therefore the slave movement at master reversal was not locked.

ID#100810 : solved problem, solved since V1.150

Digital outputs AC130, AC131 with powerlink network: The digital outputs could not be set, if the digital IO configuration was transferred immediately after the start of the NC operating system.

ID#101307 : new function since V1.150

Cam automat: The maximum number of events for a state was increased from 4 to 5.

ID#101157 : new function since V1.150

Entering parameter sequence records in network command trace can now be activated

If the selection "Network command trace, enter parameter sequence record " is set to "Yes" in the NC configuration, then the individual parameter records are entered in the network command trace when transferring parameter sequences to the ACOPOS device.

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Starting with Automation Studio V2.4.0.1106 these entries are displayed in the Network Command Trace with type "Parameter Sequence Record", with older Automation Studio versions with type "Broadcast".

1.4.4.2.45 NC Software - ACP10 V1.145

ID#102130 : solved problem, solved since V1.145

Stopped axis moves during power failure

If external load torque was applied to a stopped axis during a power failure, then it was possible that the axis moved while the holding brake was activated.

The error correction only functions for servo drives with active phase failure monitoring. For this, all contacts on connector X3 (L1, L2 and L3) must be connected to the power mains.
The following ACOPOS servo drives do not have phase failure monitoring:
8V1022.00-2 from Rev.:A0 up to and including Rev.:F0
8V1045.00-2 from Rev.:A0 up to and including Rev.:F0
8V1090.00-2 from Rev.:A0 up to and including Rev.:F0

ID#102100 : solved problem, solved since V1.145

During a power failure in Controller mode "U/f controller", the axis stops even though movement interruption is deactivated (ERRESP_UDC_POWERFAIL is 0) (only in V1.103 - V1.144)

1.4.4.2.46 NC Software - ACP10 V1.143

ID#100850 : solved problem, solved since V1.143

After movement abortion the controller sometimes was not switched off (only in V1.067 - V1.142)

In a few cases, the controller was not switched off after a movement was was aborted due to an error (green and orange LEDs are lit and the status was "Controller on").

1.4.4.2.47 NC Software - ACP10 V1.142

ID#106832 : solved problem, solved since V1.142

CAN, time for response timeout after Parameter Request increased

The time for response timeout after Parameter Request telegrams was increased from 10ms to 60ms. With versions starting from V1.142 therefore the following errors occur 50ms later:
- 32010: Drive not responding to Read Request (is the drive in the network ?)
- 32011: Drive not responding to Write Request (is the drive in the network ?)

ID#100282 : solved problem, solved since V1.142

Powerlink, inconsistent data records in Network Commando Trace

The function, which the NC Manager idle time task used to write data records into the Network Commando Trace, could be interrupted by the respective function in the cyclic NC Manager task. This could cause inconsistent data records in Network Commando Trace.
In the NC Manager idle time task, the parameter data contained in acyclic Powerlink frames (e.g. for data block download) are entered into the Network Commando Trace and the parameter data contained in the cyclic Powerlink frames are entered in the cyclic NC Manager task. The problem occurred most often if both types of parameter transfer were used in an application at the same time (both the type using cyclic and the type using acyclic Powerlink frames).

ID#100067 : solved problem, solved since V1.142

"move.reference" was contained in the "ACP10VAXIS_typ" data type instead of "move.homing" (only in V1.110 - V1.141)

Due to reasons of compatibility with the corresponding component in the "ACP10AXIS_typ" data type, the "move.reference" component in the "ACP10VAXIS_typ" data type was corrected to "move.homing".
This change causes a compiler error if this component is used in an application program. In this case, "move.reference" must also be changed in the application program to "move.homing".

ID#99252 : solved problem, solved since V1.142

Encoder interface AC123, SSI multiturn encoder

During parameterising the AC123 interface of a SSI multiturn encoder a wrong actual position could be set up.

ID#100072 : new function since V1.142

NC Manager errors are now entered in the Network Command Trace

Starting with Automation Studio V2.4.0.1106 these entries are displayed in the Network Command Trace with type "NC Manager Info", with older Automation Studio versions with type "Broadcast".

1.4.4.2.48 NC Software - ACP10 V1.141

ID#106837 : solved problem, solved since V1.141

Powerlink, cycles for response timeout after Parameter Request within cyclic frames increased

The number of cycles or response timeout after Parameter Request within cyclic frames was increased by 3, because some CPUs (above all SG3) with Powerlink have a so bad performance that the task class cycle time must be set to an higher value than "pl_cycle*7". The value 1 for the number of cycles for this Response Timeout, computed in this case, was sometimes too small. This could lead then to the following errors:
- 32010: Drive not responding to Read Request (is the drive in the network ?)
- 32011: Drive not responding to Write Request (is the drive in the network ?)

ID#97902 : solved problem, solved since V1.141

Functions could be blocked after a network failure or network initialization (only in V1.100 - V1.140)

After detecting a network failure or after calling the NC action for network initialization, the command interfaces in the NC manager are re-initialized. An error in the respective INIT function caused the following functions for future calls to blocked (return status "ncACTIVE" after calling the corresponding NC action), if they were being processed during the execution of this INIT function:
- Basis movements
- Data block download

ID#100820 : new function since V1.141

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The servo drives 8V1010.50-2 und 8V1016.50-2 are now supported

If the servo drive 8V1010.50-2 und 8V1016.50-2 is used with older versions, then the following error is displayed after switching on the controller:
- 6033: "Serial EEPROM: Critical date is not valid"

ID#99247 : new function since V1.141

Encoder interface Ac120, EnDat encoder

EnDat encoder with not EnDat compliant zero shift are supported.

1.4.4.2.49 NC Software - ACP10 V1.140

ID#97692 : solved problem, solved since V1.140

Encoder interface AC120, EnDat encoder

Now, all encoder errors which occur during the boot procedure in the ACOPOS operating system are deleted because according to the encoder manufacturer, errors may be incorrectly displayed by switching the encoder on/off.

ID#97687 : solved problem, solved since V1.140

CAN, reconfiguring the cyclic monitor data (only in V1.102 - V1.132)

Reconfiguring the cyclic monitor data for CAN with the parameters CYCL_MON_REQU1 and CYCL_MON_REQU2 only worked correctly if a "ncV_AXIS" type NC object was configured.

ID#97682 : solved problem, solved since V1.140

Sometimes the controller was not switched off if a movement was aborted in simulation mode (only in V1.131 - V1.132)

ID#97612 : solved problem, solved since V1.140

Encoder interface AC123, SSI encoder (up to V1.062 and from V1.111 to V1.132)

Incremental encoder error messages could be displayed if one of the following configurations were performed immediately after setting the parameter ENCOD_TYPE, ENCOD2_TYPE, ENCOD3_TYPE to "ncSSI" for the corresponding encoder interface:
- Homing the encoder
- Define the actual encoder position on FB inputs
- Define the actual encoder position for vector controller or position controller

ID#97672 : new function since V1.140

The maximum length of the parameter data for cyclic user data to the drive ("ncCYCL_USER_TODRV") was increased from 8 to 18.

ID#97667 : new function since V1.140

ACOPOS Parameter Tables: Disabling parameter records

Parameter records in an ACOPOS parameter table can now be disabled using the XML data "Disabled='TRUE'".
In the editor for ACOPOS parameter tables disabling parameters is possible starting with

V2.4.0.1106.

ID#97662 : new function since V1.140

NC Deployment Tables: Disabling NC object blocks

NC object blocks in a NC deployment table can now be disabled using the XML data "Disabled='TRUE'".
With Automation Studio V2.x this data can only be entered in the editor for NC deployment tables in the "Additional Data" column.

1.4.4.2.50 NC Software - ACP10 V1.132

ID#97647 : solved problem, solved since V1.132

U/f Control

A position jump of up to 90 degrees electrically could occur if an emergency stop triggered by an internal error occured while a controller was switched on and in standstill.

1.4.4.2.51 NC Software - ACP10 V1.131

ID#97637 : solved problem, solved since V1.131

Initialization of a parameter list aborted due to an error

Now, parameter transfer is immediately aborted after calling the NC action "ncSERVICE+ncPAR_LIST,ncINIT", if a response error occurs for a parameter.
Previously, if this occurred the rest of the parameters in the parameter list would have been transferred anyways. This could cause problems if one of the remaining parameters was a command parameter with a condition dependent on the successful initialization of the preceding parameter.

ID#97632 : solved problem, solved since V1.131

Encoder interface AC120, EnDat encoder position synchronization (only in V1.052 – V1.130)

Values which only occurred occasionally and were larger than 1/4 of a sine period were not tolerated if there were deviations between the incremental position and the serial EnDat positions. Position jumps 1/4 of a sine period could occur. The following warning was entered:
-39001 "Encoder: Position correction active"

ID#97642 : new function since V1.131

The servo drives 8V1640.03-2 and 8V1640.13-2 are now supported

If the servo drive 8V1640.03-2 or 8V1640.13-2 is used with older versions, then the following error is displayed after switching on the controller:
- 6033: "Serial EEPROM: Critical date is not valid"

1.4.4.2.52 NC Software - ACP10 V1.130

ID#93617 : new function since V1.130

New NC structure component "controller.uf" for controller mode "U/f Control"

ID#93612 : new function since V1.130

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New NC structure component "controller.mode" for parameter CONTROLLER_MODE

Up to now, the parameter CONTROLLER_MODE could only be transferred to an ACOPOS via service interface. Therefore due to compatibility reasons, after call of NC action "ncCONTROLLER,ncINIT" this parameter is only transferred to the ACOPOS, if the value of "controller.mode" was changed.

ID#93607 : new function since V1.130

New NC structure component "limit.parameter.a_stop"

ID#85130 : new function since V1.130

The number of data records for the network command trace is now calculated

The number of data records for the network commando trace is no longer accepted directly from the NC configuration.
This number is now calculated by multiplying the value of the new NC configuration parameter "Number of data records per ACOPOS for Network Command Trace" with the number of configured ACOPOS modules.

1.4.4.2.53 NC Software - ACP10 V1.121

ID#93495 : solved problem, solved since V1.121

Incorrect limitation of set stator current of the quadrature component on asynchronous motors during generator operation (only in V1.040 - V1.120)

The set stator current of the quadrature component (Parameter ICTRL_ISQ_REF) was incorrectly limited on asynchronous motors during generator operation. This could cause the following errors:
- Jump in ICTRL_ISQ_REF when speed is increasing
- 4007: Lag error stop limit exceeded

1.4.4.2.54 NC Software - ACP10 V1.120

ID#92540 : solved problem, solved since V1.120

Supply voltage failure was sometimes not displayed (only in V1.106 - V1.111)

The following error was mistakenly not displayed if the supply voltage failed during the "controller ON, standstill" state:
- 7215: DC link circuit: At least one phase of the power line failed

ID#92100 : solved problem, solved since V1.120

With NC Deployment tables only one Powerlink interface could be used

Each NC object, which was defined for Powerlink network in a NC Deployment table, was assigned to the first Powerlink interface. Therefore diverse errors occurred when operating such NC objects in an application program or in Automation Studio, which where defined for another Powerlink interface than the first one.

ID#92172 : new function since V1.120

New NC object with type "ncV_AXIS"

ID#92042 : new function since V1.120

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Target system SG4 (I386), Powerlink, ACOPOS startup, synchronization between ACP10 software and ARNC0 software

If the same Powerlink interface is used to operate ACOPOS modules simultaneously from the ACP10 software and the ARNC0 software, then within the basis initialization the network initialization (ACOPOS startup) is executed synchronized between the ACP10 software and the ARNC0 software.
This now makes it possible to alternately connect ACOPOS modules for ACP10 software and ARNC0 software within one Powerlink line.
Up to now, using a common Powerlink interface could lead to errors, whereby an unsynchronized ACOPOS reset command triggered by one of the NC software programs interrupted the network communication of the other NC software program.

ID#92037 : new function since V1.120

Wait for the network communication during the basic network initialization

If "Wait for ACOPOS" is selected in "Network Initialization (ACOPOS startup), Execute at NC software initialization" in the NC configuration, then the basic network initialization for all ACOPOS devices within the NC software initialization is started as soon as the network communication is active with at least one ACOPOS.

ID#92032 : new function since V1.120

New status "ok" for download of ACOPOS Parameter data

If processing of NC action "ncACP_PAR,ncSERVICE+ncDOWNLOAD" has been successfully completed, from now on additionally "status.ok=ncTRUE" is set after successful completion of operation, because ACOPOS Parameter data without any parameter to be transferred do not cause an error and after successful completion of operation "status.daten_len=0" is displayed as well as "status.error=ncFALSE".

ID#92027 : new function since V1.120

New NC structure component "controller.speed.t_filter" for parameter SCTRL_TI_FIL

Up to now, the parameter SCTRL_TI_FIL could only be transferred to an ACOPOS via service interface. Therefore due to compatibility reasons, after call of NC action "ncCONTROLLER,ncINIT" this parameter is only transferred to the ACOPOS, if the value of "controller.speed.t_filter" was changed.

1.4.4.2.55 NC Software - ACP10 V1.106

ID#90772 : solved problem, solved since V1.106

Powerlink, error during download of cam profiles or parameter sequences

During download of cam profiles or parameter sequences with more than 240 bytes data at transfer of the last data segment (parameter WR_BLOCK_LAST_SEGM) the following error could wrongly occure:
- 41: Value of parameter higher than maximum value

ID#89147 : solved problem, solved since V1.106

Powerlink, problems when using an ACOPOS with property "multiplexed" as coupling master (only in V1.102 - V1.105)

The Parameter MA_CYCLE_TIME was only transferred to those ACOPOS modules, for which the Powerlink property "multiplexed" was set. This could lead to problems if an ACOPOS with property "multiplexed" was used as master for coupling functions.

1.4.4.2.56 NC Software - ACP10 V1.105

ID#89152 : solved problem, solved since V1.105

SG3 platform (M68K), wrongful timeout errors (only in V1.100 - V1.104)

Inconsistency when reading the system tick could lead to wrongful timeout errors when transferring parameters to/from ACOPOS. Up to now this problem has only occurred when transferring NC operating system directly from Automation Studuio to the ACOPOS modules.

ACP10 software V1.100 - V1.104 should no longer be used for SG3 platform.

1.4.4.2.57 NC Software - ACP10 V1.104

ID#88672 : solved problem, solved since V1.104

Reading the boot status of configured, but inactive ACOPOS modules could prevent data block download (only in V1.100 – 1.104)

A function for reading the boot status was activated every 250 NC task cycles for all configured ACOPOS modules, on which the network initialization was not fully completed. While this function was being processed in the NC-IDLE task, all other NC IDLE task functions were blocked (e.g. data block download). If one of these ACOPOS modules was not connected to the network at all, then this process lasted the entire timeout time of the corresponding communication channel:
- CAN: Read channel1, timeout time 20 msec
- Powerlink: Acyclic channel1, timeout time at least 210 msec

The problem could be avoided by removing or disabling all those ACOPOS modules in the configuration which were not connected to the network.

For CAN from now on, reading of the boot status is executed directly in the cyclic NC task and thereforeNC idle task functions are no longer influenced.

For Powerlink from now on, reading of the boot status for one of these ACOPOS modules is only activated, if that ACOPOS is recognized as being connected to the network. A status function from the Powerlink library is used to detect this.

1.4.4.2.58 NC Software - ACP10 V1.103

ID#88572 : solved problem, solved since V1.103

Encoder interface AC120. EnDat encoder (only in V1.061-V1.102)

During the transfer of the serial absolute position, a CRC error could wrongly lead to the following error:
- 39001: Encoder: Position correction active

ID#88242 : solved problem, solved since V1.103

Processing of status bits from ACOPOS

Processing of some status bits is only allowed a specific number of cycles after receiving the corresponding command response from the ACOPOS. This concerns to the status bits belonging to the following status data:

- Movement "In Position"
- "Parameter sequence initialized"
From now on, these status bits are only then processed if the receipt of the new cyclic status bits from the ACOPOS has been detected. Up to now, status inconsistencies could occur in rare cases, if the telegram with the cyclic status bits from the ACOPOS failed in exactly the task class cycle, in which the processing of these status bits was enabled again.

ID#87920 : solved problem, solved since V1.103

Two-encoder control cannot be activated using "CONTROLLER_MODE=3" (only in V1.021 - V1.102)

If two-encoder control was activated by setting the CONTROLLER_MODE parameter to the value "3", the actual value of Encoder1 was used instead of the actual value of Encoder2.

ID#88292 : new function since V1.103

Parameters with 5 and 6 bytes data now can be used within a Parameter Sequence

Up to now only parameters with at most 4 bytes data could be used wihtin a Parameter Sequence.

ID#88207 : new function since V1.103

DIO interface AC130, AC131

From now on, reading the event counters is allowed.

1.4.4.2.59 NC Software - ACP10 V1.102

ID#87612 : solved problem, solved since V1.102

SG3 platform (M68K), the NC system download could be mistakenly aborted (only in V1.100 - V1.101)

If "Network initialization (ACOPOS startup), Execute automatically after ACOPOS reset" was set to "Yes" in the NC configuration, then the direct NC system download (without saving to the PLC) could be mistakenly aborted.

ID#87607 : solved problem, solved since V1.102

The cyclic status bits are now processed one task class cycle earlier for Powerlink

Until now, the cyclic status bits from the drive were processed for Powerlink one task class cycle after being received. Therefore, status indicators (e.g. "Controller ON" or "In Position") derived from the cyclic status bits are now provided in the application program one task class cycle earlier.

ID#87252 : solved problem, solved since V1.102

Virtual axis, movement stop

Previously, a movement could be mistakenly started during a movement stop with CMD_MOVEMENT_STOP_VAX1.

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ID#87247 : new function since V1.102

Handling the Powerlink feature "multiplexed"

1.4.4.2.60 NC Software - ACP10 V1.100

ID#84157 : solved problem, solved since V1.100

Implicit commands are only executed if network initialization is already complete

The following implicit commands are now only executed if network initialization has already completed:
- Write override
- Write time for network monitor (only for CAN)
- Read error block
- Read homing status

Previously, if network initialization was not yet complete, the following error would have been displayed for the implicit commands after opening the motion test:
- 32011: No response of drive for Write Request (exists drive in network ?)

ID#84317 : new function since V1.100

New NC action "ncPAR_LIST+ncSERVICE,ncINIT" for initalization of a parameter list.

ID#84012 : new function since V1.100

Subsequent network initialization (ACOPOS startup after completing the NC software initialization) now is possible

If selected by the user, subsequent network initialization is started automatically, after a configured ACOPOS device is detected on the network, for which the network initialization was not yet fully completed.
The network initialization can be started in an application program with the NC action "ncNETWORK,ncINIT".
New status "network.nc_sys_restart". This status can be acknowledged with the new NC action "ncNETWORK+ncNC_SYS_RESTART,ncACKNOWLEDGE".

1.4.4.2.61 NC Software - ACP10 V1.069

ID#83325 : solved problem, solved since V1.069

Supply voltage; loading relay oscillates during DC bus voltage and in single-phase mains operation (only in V1.064 - V1.068)

If a servo drive with active phase failure monitoring was not supplied with a three-phase mains supply (e.g.: DC bus voltage and single-phase mains operation), then the loading relay was cycled on and off with charged DC bus voltage. The oscillation of the loading relay was able to be prevented by disabling the phase failure monitor (PHASE_MON_IGNORE = 1).

ID#82405 : solved problem, solved since V1.069

Phasing in dither mode, invalid commutation angle

An invalid commutation angle (MOTOR_COMMUT_OFFSET = "NAN") was detected for motor encoders with a low number of increments per revolution (SCALE_ENCODx_INCR parameter) and low rotor phasing current (PHASING_CURR parameter) or blocked rotor.
The following errors are displayed when the controller is switched on:
- 4005 "controller cannot be turned on: Drive in error state"
- 9050 "ACOPOS peak current: Overload"
- 9060 "ACOPOS continuous current: Overload"

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- 9070 "Motor temperature model: Over-temperature"

ID#82385 : solved problem, solved since V1.069

Hardware limit switch malfunction when using a cam profile automat

Only the edges of one hardware limit switch signal are evaluated depending on the direction of movement, i.e. the edge of the positive hardware limit switch only stopped movement if the automat speed was positive and the edge of the negative hardware limit switch only stopped movement if the automat speed was negative.
When using an encoder position as master axis, this could cause a malfunction when a hardware limit is reached at low speeds.
The value of the hardware limit switch is now checked cyclically depending on the direction of movement.

ID#82395 : new function since V1.069

Activation of phase failure monitoring

The phase failure monitoring has been activated for the following servo drives:
- 8V1022.00-2 starting with Rev.H0
- 8V1045.00-2 starting with Rev.I0
- 8V1090.00-2 starting with Rev.I0
The following errors are sent when a phase failure occurs:
7215 "DC link circuit: At least one phase of the power line failed"
7210 "DC link circuit: Voltage unstable"

ID#82285 : new function since V1.069

The holding brake is now activated with a delay for short-circuit braking

To ease the load on the holding brake, it is now activated once the braking procedure is complete.

1.4.4.2.62 NC Software - ACP10 V1.068

ID#81787 : solved problem, solved since V1.068

Encoder interface AC121, Stegmann Hiperface encoder: Absolute position error or commutation error

If the Hiperface encoder position was decremented during the boot phase, the absolute encoder position could be incorrectly determined. The also affects the rotor commutation of motor encoders with synchronous motors and causes unstable control with the following error:
- 4007 "lag error, abort limit exceeded"

ID#81140 : solved problem, solved since V1.068

Limited range for permissible power supply

It was possible to operate the servo drives with supply voltages under 3x400VAC or with a DC bus voltage under 565.7 VDC. In this case, external DC bus power supplies do not function.

The permissible range for the mains supply was reduced and standardized for all servo drives:
- 8V1022.00-2 - 8V1090.00-2 from 3x380-3x480VAC to 3x400-3x480VAC
- 8V1180.00-2 - 8V128M.00-2 from 3x380-3x480VAC to 3x400-3x480VAC

If the servo drives are supplied with supply voltages that lead to a DC bus voltage lower than 509.1VDC = sqrt(2)*0.9*400VAC, then the following error message is given:
-7218 "DC link circuit: Voltage too low -> Nominal voltage detection not possible"

ID#81020 : new function since V1.068

The following parameters for the motor temperature model and the ACOPOS loads can now be defined:

The following parameters can be defined:
- LOAD_CONT_CURR (ACOPOS continuous current: Load [%])
- LOAD_PEAK_CURR (ACOPOS peak current: Load [%])
- TEMP_BLEEDER (braking resistor temperature model: Temperature [°C])

The following parameter has been redefined:
- LOAD_MOTOR_MODEL (motor temperature model: Load [%])

1.4.4.2.63 NC Software - ACP10 V1.067

ID#80027 : solved problem, solved since V1.067

Encoder interface AC121, Stegmann Hiperface encoder:

The following encoder errors could be displayed when using Hiperface encoders even though the encoder is functioning properly:
-7038 "Encoder: Position value not synchronous with absolute value"
-7015 "Encoder: Timeout error during transfer parameter"
- 7044 "Encoder: Parity"

ID#79645 : new function since V1.067

Movement stop due to short-circuit braking

The following errors indicate that movement was stopped due to the controller being switched off.
- 6019 "Hardware: Over-current in the IGBTs"
- 9300 "Current controller: Over-current IGBT (current not measurable)"
-7200 "DC link circuit: Overvoltage signaled by hardware"
This causes the motor to spin out. When encoder errors occur, a stop of movement is executed with calculated encoder position.
Now, movement is stopped with controlled short-circuit when the errors mentioned above occur. There are cases where the short-circuit braking is interrupted (e.g.: defective power transistor, etc.).

1.4.4.2.64 NC Software - ACP10 V1.066

ID#79882 : solved problem, solved since V1.066

Encoder interface AC123 and AC130, reference pulse monitoring

An error message was only entered after the permissible range was exceeded two times.

ID#79687 : solved problem, solved since V1.066

Encoder Interface AC123, SSI multi-turn motor encoder: Disturbance pulse on speed controller actual speed when encoder position overflow occurs

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When the encoder position is exceeded, an extremely high value could be determined for 200us on the speed controller actual speed. An undefined acceleration with lag error interruption could occur if the speed controller filter was also used. This only occurred when used as motor encoder.

ID#79575 : solved problem, solved since V1.066

Overloaded braking resistor

The braking resistor was sometimes overloaded during the braking operation with the following configuration:
- ARNC0-SW with CAN network and target systems AR010, AC140 and PP2xx

1.4.4.2.65 NC Software - ACP10 V1.065

ID#79595 : solved problem, solved since V1.065

The current controller occasionally malfunctions.

In rare cases, motor current could not be applied despite the controller being switched on (green and orange LEDs lit and controller status "On"). When this occurs, the error 4007 "Lag error stop limit exceeded" was displayed when a movement was started.

ID#79642 : new function since V1.065

New homing mode ncDCM

Incremental encoders with distance-coded reference marks can now be referenced using the "ncDCM" mode or "ncDCM+ncCORRECTION".

1.4.4.2.66 NC Software - ACP10 V1.064

ID#79637 : solved problem, solved since V1.064

Switch on controller, holding brake

After the "switch on controller" command, the controller could not be switched off using the "switch off controller" command or lag error emergency stop, until the mechanical holding break was released. Only the position controller was disabled. This error state could not be ended using successive "switch off controller" commands either.

ID#79627 : solved problem, solved since V1.064

Movement start, switch on / switch off controller, holding brake

After the "switch on controller" command, another movement could be started until the mechanical holding brake is engaged. This unauthorized movement start (without error response) was not executed. Depending on the duration of the movement and the controller configuration, a position jump could occur the next time the controller was switched on or during the next movement start.

ID#79585 : solved problem, solved since V1.064

Limited range for permissible power supply

It was possible to operate the servo drives with supply voltages under 3x380VAC or with a DC bus voltage under 537.4 VDC. In this case, internal or external DC bus power supplies did not

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function.
If devices from the group 8V1022.00-x - 8V1090.00-x are coupled with devices from the group 8V1180.00-x - 8V128M.00-x via the DC bus, then it was possible that the loading relay closed for a short time if the DC bus was charged and the mains supply was not connected after starting the ACOPOS operating system. If the supply was reconnected in this situation, the loading current increased which could damage the line contactor, the supply line fuse or the rectifier in the servo drive.
In single-phase operation with devices from the group 8V1022.00-x - 8V1090.00-x, the DC bus was overloaded if the power was reconnected via the line filter. As a result, nominal voltage detection does not function. The servo drive group 8V1022.00-2 - 8V1090.00-2 had a different voltage range for nominal voltage detection than the servo drive group 8V1180.00-2 - 8V128M.00-2

The permissible range for the mains supply has now been reduced and standardized for all servo drives:
- 8V1022.00-2 - 8V1090.00-2 from 3x208-3x480VAC to 3x380-3x480VAC
- 8V1180.00-2 - 8V128M.00-2 from 3x360.6-3x480VAC to 3x380-3x480VAC

Nominal voltage detection is only active in this voltage range. Nominal voltage detection is not active in single-phase operation.

If the servo drives are supplied with supply voltages that lead to a DC bus voltage lower than 483.66VDC = sqrt(2)*0.9*380VAC, then the following error message is given:
-7218 "DC link circuit: Voltage too low -> Nominal voltage detection not possible"

ID#78450 : solved problem, solved since V1.064

Cam profile automat for virtual axis

The speed of the virtual axis was not calculated in the cam profile automat if the parameter SGEN_SW_END_IGNORE_VAX1 was set to the value "3".

ID#79590 : new function since V1.064

Supply voltage range; Conditionally permissible power supply

The servo drive can be operated with DC bus voltages in the range of 24 - 678 VDC (equal to one three-phase supply voltage range of 3x17 - 3x480VAC) (e.g.: at 3x220VAC -> UDC_NOMINAL = sqrt(2)*220VAC = 311.12VDC) by writing the UDC_NOMINAL parameter.

DANGER:
With supply voltages under 3x380V, the functionality of the DC bus power supply and phase failure monitoring is no longer guaranteed. Under certain conditions, this can cause the servo drive to FAIL or to be DAMAGED.

1.4.4.2.67 NC Software - ACP10 V1.063

ID#79622 : solved problem, solved since V1.063

Encoder Interface AC123, SSI encoder

Incremental encoder error messages could be displayed if one of the following configurations were performed immediately after setting the parameter ENCOD_TYPE, ENCOD2_TYPE, ENCOD3_TYPE to "ncSSI" for the corresponding encoder interface:
- Homing the encoder
- Define the actual encoder position on FB inputs
- Define the actual encoder position for vector controller or position controller

ID#77180 : solved problem, solved since V1.063

The value of the air gap torque TORQUE_ACT was frozen when the controller was switched off

1.4.4.2.68 NC Software - ACP10 V0.554

ID#151272 : solved problem, solved since V0.554

IGBT junction temperature model: The drives 8V1640.xx-2, 8V1320.00-2 and 8V1180.00-2 could be overloaded thermally.

1.4.4.2.69 NC Software - ACP10 V0.553

ID#145867 : solved problem, solved since V0.553

Control of the Motor Holding Brake: During the functional test of the holding brake torque the test torque was incorrect monitored

The actual test torque was monitored absolutely to the set test torque (limit 0.05Nm).
Now the actual test torque is monitored relatively to the set test torque (limit 5%).

1.4.4.2.70 NC Software - ACP10 V0.552

ID#135242 : solved problem, solved since V0.552

Access to NC data modules did not function with certain AR versions

Management for BR modules has been changed in the following AR versions:
- AR for SG4 E2.73 - V2.79
- AR for SG4 starting with F2.85

For this reason, access to the following NC data modules did not function with the AR versions listed above:
- NC INIT Parameter modules
- NC Error Text tables

ID#135132 : solved problem, solved since V0.552

Encoder Interface AC120: With new EnDat encoders, a permanent encoder error is mistakenly shown (only in V0.546 - V0.551)

With new Heidenhain EnDat encoders, an excessively restrictive time-out in the ACOPOS operating system prevents the encoder initialization from being completed. This problem causes the following errors to be permanently shown:
- 7022: Encoder: Initialisation is active
- 7015: Encoder: Timeout error during parameter transfer
- 7038: Encoder: Position value not synchronous with absolute value
- 7019: Encoder: OEM data not valid
- 7048: Error during the reading of encoder memory
- 6036: Motor parameters missing or invalid

Because of this problem, versions 0.546 - 0.551 should no longer be used with EnDat encoders.

1.4.4.2.71 NC Software - ACP10 V0.550

ID#125657 : new function since V0.550

Motor holding brake control monitioring: No error message with defective relay

If after the command "controller switch off" due to an brake control error the brake output status does not get low, the controller remains active. In this case now the error number 6047 is

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logged.

1.4.4.2.72 NC Software - ACP10 V0.548

ID#106777 : new function since V0.548

Encoder interface AC130, AC123, Incremental encoder reference pulse check: The parameters ENCOD_REF_CHK_DELTA, ENCOD2_REF_CHK_DELTA und ENCOD3_REF_CHK_DELTA are available for reading the reference pulse interval error.

1.4.4.2.73 NC Software - ACP10 V0.546

ID#100607 : solved problem, solved since V0.546

Encoder interface AC120, EnDat encoder

Now, all encoder errors which occur during the boot procedure in the ACOPOS operating system are deleted because according to the encoder manufacturer, errors may be incorrectly displayed by switching the encoder on/off.

ID#100582 : solved problem, solved since V0.546

Error number 6036 "Motor parameters missing or invalid": The additional information was falsely always set to zero

1.4.4.2.74 NC Software - ACP10 V0.545

ID#97627 : solved problem, solved since V0.545

Encoder interface AC120, EnDat encoder position synchronization (only in V0.538 - V0.544)

Values which only occurred occasionally and were larger than 1/4 of a sine period were not tolerated if there were deviations between the incremental position and the serial EnDat positions. Position jumps 1/4 of a sine period could occur. The following warning was entered:
- 39001 "Encoder: Position correction active"

1.4.4.2.75 NC Software - ACP10 V0.544

ID#82900 : solved problem, solved since V0.544

Target system SG4 (I386), the idle time commands were not processed in the NC manager (only in V0.540-0.543)

In the NC Manager, the idle time commands were not processed. This had the following effects:
- Motion functions test, Trace and Watch could not be opened.
- The data block operations were not carried out.
- The error text identification was not carried out.
- The Trace functions were not carried out.

1.4.4.2.76 NC Software - ACP10 V0.543

ID#80905 : solved problem, solved since V0.543

Braking resistor overload (only in V0.491 - V0.542)

The braking resistor was sometimes overloaded during the braking operation with the following configuration:
- ARNC0-SW with CAN network and target systems AR010, AC140 and PP2xx

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ID#80322 : solved problem, solved since V0.543

Encoder interface AC120, EnDat encoder: Timeout error due to cable disturbances

Once an interruption occurred on the EnDat encoder cables, the error 7015 "Encoder: Timeout error during parameter transfer" could be displayed continuously and not be acknowledged.

ID#79887 : solved problem, solved since V0.543

The current controller occasionally malfunctions.

In rare cases, motor current could not be applied despite the controller being switched on (green and orange LEDs lit and controller status "On"). When this occurs, the error 4007 "Lag error stop limit exceeded" was displayed when a movement was started.

ID#79892 : new function since V0.543

Switch on controller, holding brake

After the "switch on controller" command, the controller could not be switched off using the "switch off controller" command or lag error emergency stop, until the mechanical holding break was released. Only the position controller was disabled. This error state could not be ended using successive "switch off controller" commands either.

1.4.4.2.77 NC Software - ACP10_MC Wichtige Information

ID#150642 : Important Information

The ACP10_MC library from V1.990 on can be used for operation of ACOPOSmulti and ACOPOS 8V1xxx.00-2.

ID#142090 : Important Information

MC_MoveAbsolute with a periodic axis in motion

Starting with V1.210, MC_MoveAbsolute and MC_BR_MoveAbsoluteTriggStop can also be used with a periodic axis in motion.
Before V1.210, error 29223 "Cannot start the movement while the periodic axis is in motion" is reported.

ID#133435 : Important Information

Before V1.190, after network failure the axes could no longer be operated with MC FBs.

ID#110487 : Important Information

Starting with V1.140 Multiaxis-FBs are also available with CAN-Bus.

1.4.4.2.78 NC Software - ACP10_MC V1.991

ID#151425 : known problem since V2.5.2.0018 [H2.86]

Powerlink, faulty cyclic read data at high CPU load

If there was a high load on the CPU and a ratio smaller than 8 between the NC Manager cycle time and the Powerlink cycle time, in rare cases the cyclic read data were faulty.

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1.4.4.2.79 NC Software - ACP10_MC V1.243

ID#151940 : solved problem, solved since V1.243

MC_BR_AutControl: Enable=0 in case of an error caused a drive error (only in V1.242)

If the "Enable" input on the MC_BR_AutControl FB was set to "0" while it was in an error state and if an active cam profile automat was not first terminated using the the FB input "Stop" or by resetting the "Enable" input, then the value "0" was transferred to the parameter AXLIM_A2_POS. This caused the drive to report an error.

ID#151752 : known problem since V2.5.2.0018 [H2.86]

Powerlink, faulty cyclic read data at high CPU load

If there was a high load on the CPU and a ratio smaller than 8 between the NC Manager cycle time and the Powerlink cycle time, in rare cases the cyclic read data were faulty.

1.4.4.2.80 NC Software - ACP10_MC V1.242

ID#150480 : solved problem, solved since V1.242

MC_BR_ReadParID and MC_BR_WriteParID, deadlock during network interruption (only in V1.190 - V1.241)

A deadlock could occur if the network connection was interrupted while one of the function blocks "MC_BR_ReadParID" or "MC_BR_WriteParID" was "Busy." Other function blocks subsequently reported the status "Busy", when called. This problem could only be corrected by restarting the control system.

ID#150465 : solved problem, solved since V1.242

MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, the use of invalid ParIDs resulted in the transfer of incorrect data

The use of an invalid ParIDs for "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" (e.g. Write-only, Read-only, SPT ParID from a function block not yet created) caused one of the following errors:
- 1017: Invalid parameter ID for cyclic read access
- 1018: Invalid parameter ID for cyclic write access

Calling "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" again with a valid ParID then caused the respective parameter value to be transferred to/from the ACOPOS at the wrong location in the cyclic frame.

ID#150455 : solved problem, solved since V1.242

MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, using a ParID repeatedly no longer causes an error

Repeatedly calling "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" using the same ParID previously caused the error 29258 or 29259. Now, this situation no longer causes an error to be displayed or a new data point to be transferred to/from the ACOPOS in the cycle frame. If the address of the user data ("DataAddress") is changed, then the new address is used as data target/source.

ID#150450 : solved problem, solved since V1.242

MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, deadlock during the parameter transfer of other FBs

A deadlock could occur when calling one of the FBs "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" during the parameter transfer of another FB. Other function blocks subsequently reported the status "Busy", when called. This problem could only be corrected by restarting the control system.

ID#150345 : solved problem, solved since V1.242

MC_BR_InitCyclicRead and MC_BR_InitCyclicWrite, "Done" is output even though no parameter was entered

If multiple instances of the FBs "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" were called within a cycle using "Execute = 1", then "Done" was occasionally output even though no parameter was entered in the cycle data to/from the drive.

ID#150220 : solved problem, solved since V1.242

MC_BR_ReadParID and MC_BR_WriteParID can now also be called when an axis error is present

ID#150215 : solved problem, solved since V1.242

MC_BR_ReadParID and MC_BR_WriteParID, deadlock during the parameter transfer of other FBs

A deadlock could occur when calling one of the FBs "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" during the parameter transfer of another FB. Other function blocks subsequently reported the status "Busy", when called. This problem could only be corrected by restarting the control system.

ID#150135 : solved problem, solved since V1.242

MC_ReadAxisError - Error texts could be mixed

If two or more axis error were acknowledged with the MC_ReadAxisError FBK, the error texts could have been mixed.

ID#150130 : solved problem, solved since V1.242

MC_ReadAxisError showing an axis error although it was already acknowledged with the MC_Reset FBK

If an axis error was acknowledged with the MC_Reset FBK, the MC_ReadAxisError FBK continued to show the error number on the "AxisErrorID" output.

ID#150125 : solved problem, solved since V1.242

MC_Reset generating a change in status from "error stop" to "standstill" although network communication interrupted

The PLCopen state switches to "error stop" if the ACOPOS unit's network connection is interrupted. This status should remain until everything is OK with the network again and the MC_Reset FB is called.
If the MC_Reset FB was called while the network connection was still interrupted, then the FBK incorrectly switched the state to "Standstill".

ID#150110 : solved problem, solved since V1.242

MC_Power constantly reporting "Busy" when called for a configured, but unconnected ACOPOS unit

If the "Enable" input of the MC_Power FBK was set to "1" for a configured, but unconnected ACOPOS unit, the FBK constantly returns "Busy".
Now error 29490 is returned in this case after the timeout has expired. The axis state switches to "Errorstop".

ID#150085 : solved problem, solved since V1.242

MC_Power outputs not correctly operated if the "Enable" input was set to "0" after network communication was lost

If the "Enable" input of the MC_Power FBK was set to "0" after network communication to an ACOPOS unit was lost, then the "Status" and "Error" outputs were operated alternately.

ID#149915 : solved problem, solved since V1.242

Value of the "Deceleration" input not checked for MC_Halt

If the value if "0.0" or greater than one of the configured delay limit values, an axis error was reported after setting the "Execute" input, and the movement remained active.
The value is now checked; if it's "0.0" or greater than one of the delay limit values, then that limit value is always used to stop the movement.

ID#149885 : solved problem, solved since V1.242

MC_Stop registers CommandAborted if "Enable=0" was set for MC_BR_AutControl

In the event that the "Execute" input for "MC_Stop" was set to 1 at the same time that the "Enable" input for "MC_BR_AutControl" was set to 0, then "MC_Stop" falsely registered "CommandAborted", even though the stop ramp for "MC_Stop" was run to the end.
In this case, "MC_Stop" no longer registers "CommandAborted", because it cannot be interrupted by "MC_BR_AutControl."

ID#149880 : solved problem, solved since V1.242

MC_BR_AutControl not ending active movements if "Enable" set to "0" (only in V1.211 - V1.241)

If the "Enable" input of the "MC_BR_AutControl" FBK was set to "0" during active cam profile coupling, then this movement was not aborted.

ID#149805 : solved problem, solved since V1.242

Value of the "Deceleration" input not checked for MC_BR_AutControl

If the value if "0.0" or greater than one of the configured delay limit values, an axis error was reported after setting the "Stop" input, and the automat movement remained active.
The value is now checked; if it's "0.0" or greater than one of the delay limit values, then that limit value is always used to stop the movement.

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ID#149565 : solved problem, solved since V1.242

MC_BR_InitModPos not always transferring "Period"

This FBK didn't transfer the value of the "Period" input to the drive if an axis period wasn't defined in the mapping table.
An oriented stop didn't work correctly with the "MC_MoveAbsolute" FBK because of this.
The software limits were also not ignored when using a periodic axis.

ID#148200 : solved problem, solved since V1.242

MC_BR_AutControl only transferring the ParLock ParID in some cases

If the inputs "ParLock" and "InitAutData" were set in the same TC cycle, then only the ParLock ParID was transferred. The automat parameters were not initialized.

ID#146535 : solved problem, solved since V1.242

MC_DigitalCamSwitch using the value "1" as the period for a non-periodic axis

This causes the outputs to switch incorrectly as well as accelerated switching after the last switch-off position (output had 12V).
Now the value "2147483646" is specified as the interval for a non-periodic axis, or the user sets the new input "Period" to the value of the desired interval in the structure of type "MC_CAMSWITCH_REF".

1.4.4.2.81 NC Software - ACP10_MC V1.214

ID#148245 : new function since V1.214

MC_BR_InitCyclicWrite now for CAN as well

The "MC_BR_InitCyclicWrite" FB can now also be used for the CAN bus.

ID#148475 : solved problem, solved since V1.214

MC_Phasing with MC_GearInPos

"MC_Phasing" didn't work with an active "MC_GearInPos" and returned error 29217 "Invalid input parameter".
Axis error 1017 "Invalid parameter ID for cyclic read access" was also returned.

1.4.4.2.82 NC Software - ACP10_MC V1.213

ID#147530 : solved problem, solved since V1.213

MC_GearIn and MC_GearInPos reporting errors with very small gear ratios

If the gear ratios for "MC_GearIn" and "MC_GearInPos" are very small (e.g. 1:1), it could have caused error 5102 "Too many cam profile changes per cycle (master period too short)".

ID#147445 : solved problem, solved since V1.213

"MC_TouchProbe" always used the positive edge

The position was always latched with the positive trigger edge even if the negative edge was selected.

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ID#147145 : solved problem, solved since V1.213

Lag error when coupling to moving virtual masters

Start of "MC_GearIn" or "MC_GearInPos" with a moving virtual master axis could cause a lag error.

ID#146850 : solved problem, solved since V1.213

Unable to restart a movement after axis error

If an axis error occurred during a movement FBK that didn't stop the axis (e.g. parameter error), the FBK constantly returns "Busy".
An additional positive edge on the "Execute"-input had no effect. The FB only escaped this state once the axis was stopped.

Affected FBs:
MC_MoveAbsolute
MC_MoveAdditive
MC_MoveVelocity
MC_BR_MoveAbsoluteTriggStop
MC_BR_MoveAdditiveTriggStop
MC_BR_MoveVelocityTriggStop
MC_Halt
MC_GearIn
MC_GearInPos
MC_GearOut
MC_CamIn
MC_CamOut

ID#146690 : solved problem, solved since V1.213

Deadlock due to axis error during MC_BR_ReadParID or MC_BR_WriteParID

If an axis error occurred during the execution of "MC_BR_ReadParID" or "MC_BR_WriteParID", it could have deadlocked the FBs for this axis. Subsequent FBs were not able to perform any actions on the axis and always returned "Busy".

1.4.4.2.83 NC Software - ACP10_MC V1.211

ID#145950 : new function since V1.211

MC_Home: New mode mcHOME_SWITCH_GATE

The mode, "mcHOME_SWITCH_GATE" makes it possible to use a switch with 2 edges.

ID#143690 : new function since V1.211

MC_Stop: Deceleration outside the valid range

Braking takes place using the limit value if the "Deceleration" is 0 or greater than the limit value for a real axis.
If the "Deceleration" is 0 for a virtual axis, the base parameter is used for braking.
In earlier versions, an error was output and the axis did not brake.

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ID#146215 : solved problem, solved since V1.211

MC_BR_MoveVelocityTriggStop constantly reports busy after MC_Stop

If the function block "MC_BR_MoveVelocityTriggStop" was started in negative direction after "MC_Stop" and a remaining distance was specified so small that the axis had to reverse, then the axis was decelerated to a speed of 0 when a trigger event occurred and the function block constantly reported "Busy".

ID#146125 : solved problem, solved since V1.211

MC_BR_InitCyclicRead at the same time as MC_Home, quickstop or drive error can cause incorrect cyclic data

Incorrect cyclic data could occur on the "DataAdress" of the "MC_BR_InitCyclicRead" if "MC_Home" was called, a quickstop was triggered or a drive error occurred in the same task cycle before a "MC_BR_InitCyclicRead" call.

ID#145990 : solved problem, solved since V1.211

MC_Power: The axis remained in the "Disabled" state if the controller was not ready

If "MC_Power" is enabled and the controller is not ready the axis now changes to the "Errorstop" state. This behavior corresponds to the PLCopen state diagram.

ID#145495 : solved problem, solved since V1.211

MC_BR_InitParList, MC_BR_DownloadParSequ, and MC_BR_InitParSequ constantly reported busy

The "MC_BR_InitParList", "MC_BR_DownloadParSequ", and "MC_BR_InitParSequ" FBs constantly reported busy if one of the following events occurred shortly beforehand on the same axis:
- Activation of a MC FB.
- Error on the drive => reading of parameter "ERROR_REC" by the NC-Manager
- Completion of homing movement => reading of parameters "HOMING_TR_S_REL" and "HOMING_OFFSET" by the NC-Manager
- A override change => writing of parameter "OVERRIDE" by the NC-Manager

ID#145055 : solved problem, solved since V1.211

MC_GearIn and MC_GearInPos: Lag error or speed jump when starting

If a ParID is used as a master for "MC_GearIn" and "MC_GearInPos" and it was "in motion", coupling the slave could have caused a speed jump or lag error. Now the speed specified at the "MasterParIDMaxVelocity" input is used to calculate the entry movement to couple gently.

ID#144610 : solved problem, solved since V1.211

Invalid state change with MC_Stop possible

Clearing "Execute" on the "MC_Stop" function block caused the state to change to "Standstill", even if the axis was in a state, which could not normally be changed by this event (e.g. error stop). The state is now only changed to "Standstill" under these circumstances (clearing "Execute" on the "MC_Stop" function block) if the axis is in the "Stopping" state.

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ID#144605 : solved problem, solved since V1.211

MC_SetOverride: Error if override values very small

A value of 0.0001 (1%) is recognized as 0; for the acceleration override this results in error 29217: "Invalid input parameter".
A value of 0.0002 (2%) is recognized as 1. Larger values are processed correctly.

ID#144490 : solved problem, solved since V1.211

Error 29228 from FBKs with a master input

For various master and slave axis types (real, virtual axis), calling the FB for the fourth time caused the following error message for drive-spanning couplings:
29228 "No further master position can be read from the network by this drive"
Affected FBs:
MC_CamIn
MC_GearInPos
MC_DigitalCamSwitch
MC_BR_MasterParIDTransfer
MC_BR_InitAutPar
MC_BR_AutControl

ID#144215 : solved problem, solved since V1.211

MC_BR_AutControl: Clearing "Enable" caused a drive error when the controller was off

If the "Enable" input of "MC_BR_AutControl" was set to FALSE while the controller was already switched-off (e.g.: because of "MC_Power" or lag error), an attempt was still made to stop movement. This caused error 5005 "Start of movement not possible: Position controller inactive."

ID#144185 : solved problem, known since V1.210, solved since V1.211

MC_BR_DownloadCamProfileObj doesn't work (V1.210 only)

Calling the FB returns error 32181 "Data address zero (user data for parameter list operation)". The cam profile was not transferred.

ID#144170 : solved problem, solved since V1.211

FBs transferring 0 instead of the input value

If a FB is called immediately after the controller is booted, it's possible that it transferred 0 to the drive instead of the values on its inputs.
Affected input data included position, distance, speed, and acceleration values.

ID#143670 : solved problem, solved since V1.211

MC_ReadAxisError returning errors without DataObjectName

If a "DataAddress" is specified for "MC_ReadAxisError" to find out an error text, but a "DataObjectName" is not specified, it should be obtained from the init parameter module. Instead, error 29260 "No data object name specified" is returned.
Now, the "DataObjectName" from the init parameter module is used when this happens.

ID#142485 : solved problem, solved since V1.211

Busy status for FBs if no init parameter module specified

If an init parameter module was not specified in the mapping table, the FBs constantly returned busy.
In this case now, error 29490 "Internal initialization error (Global-Init)" is returned.

1.4.4.2.84 NC Software - ACP10_MC V1.210

ID#141805 : new function since V1.210

New FBs: "MC_BR_InitAxisPar", "MC_BR_SaveAxisPar" and "MC_BR_LoadAxisPar"

ID#141790 : new function since V1.210

MC_BR_AutControl: New outputs "ActualStateIndex" and "ActualCamType"

ID#142887 : solved problem, solved since V1.210

Target system SG4 (I386), Powerlink: In rare cases, "MC_Stop" could result in blocking parameter transfer(only with ACP10_MC from V1.170 on with AR from V2.80 on)

Under the following conditions, the transfer of parameters to and from an ACOPOS was blocked:
- The real axis of an ACOPOS was not yet referenced.
- The "MC_stop" FB was activated for the real axis of this ACOPOS.
- An MC FB was also activated for the virtual axis of this ACOPOS in the exact same task cycle.
- Both of the activations mentioned above occurred in the "Task class for NC manager task" defined in the NC configuration
- The Activation for the virtual axis occurred in this task cycle before the activation for the real axis.

ID#141775 : solved problem, solved since V1.210

MC_BR_InitParSequ returning error 29254 if the parameter sequence only has one parameter

If the Powerlink cycle time was the same as the task cycle time and only one parameter was contained in the sequence, error 29254 "Error initializing parameter sequence" was reported.

ID#141505 : solved problem, solved since V1.210

MC_BR_InitAutState returning error if automat active

If MC_BR_InitAutState was used when the automat was active, the system returned error 5302 "Parameter write not allowed: Cam automat active."

1.4.4.2.85 NC Software - ACP10_MC V1.197

ID#140340 : new function since V1.197

New homing mode "mcHOME_ABSOLUTE_CORR" for FB "MC_Home"

The offset specified at the "Position" input is added to the encoder absolute value and counter range correction is carried out.

ID#141115 : solved problem, solved since V1.197

"MC_Power": Previously possible to switch from "Errorstop" to "Disabled" state with a neg. edge on "Enable"

If an error caused the controller to turn off and the axis was in the "Errorstop" state because of it, the axis could be put into the "Disabled" state with a negative edge on the "Enable" input of the "MC_Power" FBK.
The axis now remains in the "Errorstop" state.

ID#140655 : solved problem, solved since V1.197

"MC_CamIn": The start mode "mcDIRECT" did not work correctly

When a cam coupling was startet with the FB "MC_CamIn" with start mode "mcDIRECT", the coupling was started at a wrong master position or the following error was reported:
- 5318: Relative distance of master axis higher than cam profile period

ID#140585 : solved problem, solved since V1.197

Cyclic data sometimes overwritten or set to 0

If more than 24 bytes of cyclic data is read by the drive, it was possible for values to be set to 0 or overwritten.

ID#140345 : solved problem, solved since V1.197

Error 29490 for "MC_Reset" after network error (V1.194-V1.196 only)

If attempting to change the axis from the "ErrorStop" state to the "Disabled" state using "MC_Reset" after a network error, then the FB returns error 29490.

ID#140335 : solved problem, solved since V1.197

Homing mode "mcHOME_ABOLUTE" with the FB "MC_Home" used counter range correction

Now, only the offset specified at the "Position" input is added to the read encoder absolute value.

ID#140330 : solved problem, solved since V1.197

Invalid master axis for "MC_CamTableSelect" crashed the target system

The "Master" input is no longer evaluated; no master is necessary for the FB function.

1.4.4.2.86 NC Software - ACP10_MC V1.196

ID#138735 : solved problem, solved since V1.196

FBs respond as "Busy" after initializing an empty Acopos parameter table

After initializing an empty Acopos parameter table with "MC_BR_InitParTabObj", other FBs were no longer able to execute any operations and responded as "Busy".

ID#138730 : solved problem, solved since V1.196

Now "MC_Phasing" can also be used with "MC_GearInPos", previously the error 29207 was

reported.

1.4.4.2.87 NC Software - ACP10_MC V1.195

ID#138685 : new function since V1.195

"MC_BR_AutControl": New "Deceleration" input to define the ramp while stopping.

ID#138680 : solved problem, solved since V1.195

"MC_BR_AutControl": Error message if parameters were initialized while an automat was running

An attempt is no longer made to transfer the parameter AUT_MA_ID if the parameters are initialized while an automat is running.

ID#138675 : solved problem, solved since V1.195

"MC_BR_AutControl": If the automat was stopped, then the "Running" output remained set (automat came to a stop).

ID#138670 : solved problem, solved since V1.195

"MC_CamIn": The output "EndOfProfile" continued to output pulses if the coupling was already interrupted with "MC_CamOut" or "MC_Stop".

ID#138665 : solved problem, solved since V1.195

"MC_CamIn" sometimes did not start the coupling (only V1.184 - V1.194)

If the "Execute" input was set for only one cycle at the StartMode "mcRELATIVE", then the coupling was not started.

ID#138660 : solved problem, solved since V1.195

Jolt time is overwritten in the axis structure with 0.0004s

If the jolt time was 0.0 in the Init parameter module, then it was initialized with 0.0, but 0.0004s was written to the axis structure.

ID#138655 : solved problem, solved since V1.195

Cyclic data with a length of 4 bytes could be read incompletely (only V1.193 - V1.194)

If more than 16 bytes of cycle data were used, then sometimes only 2 bytes of a 4-byte parameter were read.

Affected FB ouputs:

- "Torque" from MC_ReadActualTorque
- "Done" and "RecordedPosition" from MC_TouchProbe
- "EndOfProfile" from MC_CamIn
- "Value" from MC_ReadDigitalInput
- "Value" from MC_ReadDigitalOutput
- User variables connected to MC_BR_InitCyclicRead via "DataAddress"

ID#138650 : solved problem, solved since V1.195

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The "SlaveChannel" input of the "MC_BR_InitMasterParIDTransfer" function block had the data type UINT on SG3 targets instead of USINT.

1.4.4.2.88 NC Software - ACP10_MC V1.194

ID#136270 : new function since V1.194

Error messages from automatic initialization

If an error occurs during the automatic initialization, it will be indicated by a corresponding error number for the "ErrorID" output of the FB being called.

ID#136255 : new function since V1.194

New input "Periodic" for "MC_BR_DownloadCamProfileObj"

New input "Periodic" to use the cam profile with "MC_CamIn".

ID#136245 : new function since V1.194

"Direction" mode "mcEXCEED_PERIOD"

New "Direction" mode "mcEXCEED_PERIOD" has been implemented for "MC_MoveAbsolute" and "MC_BR_MoveAbsoluteTriggStop".

ID#136240 : new function since V1.194

New FB "MC_BR_DownloadCamProfileData"

ID#136710 : solved problem, solved since V1.194

FBs that start continuous movements did not report "Done" or "InVelocity" at high speeds

Affected FBs: "MC_MoveVelocity", "MC_GearOut" and "MC_CamOut"
The outputs "InVelocity" and "Done" were not set when running at high speeds (approx. 6 000 000).

ID#136705 : solved problem, solved since V1.194

MC_Home: "mcHOME_DEFAULT" no longer functioned after a homing procedure with a mode not equal to "mcHOME_DEFAULT"

If a homing procedure with any mode other than "mcHOME_DEFAULT" was performed before a homing procedure with "mcHOME_DEFAULT", then the parameters from the previous homing procedure were used instead of those from the INIT parameter module.

ID#136640 : solved problem, solved since V1.194

Cyclic data was 0 with short Acp10 manager cycle time

This problem could occur with a small ratio between the defined Acp10man cycle time (default TC1) and Powerlink cycle time and more than 3 axes.
(e.g. 400µs Acp10man cycle time, 400µs Powerlink cycle time, 4 axes)

Error image

The following FB outputs were always zero:

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- "Torque" from MC_ReadActualTorque
- "Done" and "RecordedPosition" from MC_TouchProbe
- "InSync" and "EndOfProfile" from MC_CamIn
- "Done" from MC_Phasing
- "InGear" from MC_GearIn
- "StartSync" and "InSync" from MC_GearInPos
- "Running" from MC_BR_AutControl
- "Value" from MC_ReadDigitalInput
- "Value" from MC_ReadDigitalOutput
- User variables connected to MC_BR_InitCyclicRead via "DataAddress" were always set to zero.

ID#136490 : solved problem, solved since V1.194

"MC_ReadDigitalInput" and "MC_ReadDigitalOutput": Invalid values for "Slot" or "Channel" caused the system to crash

2-4 are permissible values for "Input.Slot" and "Output.Slot". 1-8 are permitted for "Input.Channel" and 1-10 for "Output.Channel".
Entries outside of this range caused the target system to crash.

ID#136265 : solved problem, solved since V1.194

Modulo position only corrected by one period in each cycle after initialization

If the position value read after a warm restart or homing procedure is greater than a period (absolute encoder), it could take several cycles to calculate the module position. The "Position" output of the "MC_ReadPosition" FB changed by one period every cycle until the output position was less than one period. Now the modulo position is calculated within one cycle.

ID#136260 : solved problem, solved since V1.194

Output "Value" from "MC_ReadDigitalInput" and "MC_ReadDigitalOutput" remained "TRUE"

The "Value" output remained TRUE even when the "Enable" input was set to FALSE or an error occurred.

ID#136250 : solved problem, solved since V1.194

"MC_Stop": "Busy" and "Done" could be set at the same time for a cycle

If Execute was set to FALSE before the "Done" FB responded, then the "Busy" and "Done" output were simultaneously set for one cycle.

1.4.4.2.89 NC Software - ACP10_MC V1.193

ID#135660 : solved problem, solved since V1.193

Powerlink, cyclic data from the drive, in some cases 1-byte or 2-byte parameters were not able to be read

Due to an error in the configuration of the drive's cyclic data, 1-byte or 2-byte parameters were sometimes not able to be read and the FB outputs or user variables derived from this were always set to zero.

The following FB outputs were always set to zero when this problem occurred:
- "InSync" from MC_CamIn

- "Done" from MC_Phasing
- "InGear" from MC_GearIn
- "StartSync" and "InSync" from MC_GearInPos
- "Running" from MC_BR_AutControl
- "Value" from MC_ReadDigitalInput
- "Value" from MC_ReadDigitalOutput

If this problem occurred, then user variables connected to MC_BR_InitCyclicRead via "DataAddress" (for which 1-byte or 2-byte parameters were configured) were set to zero.

1.4.4.2.90 NC Software - ACP10_MC V1.192

ID#135260 : solved problem, solved since V1.192

When enabling MC_BR_AutControl a crash of the target system could occure (only in V1.190).

1.4.4.2.91 NC Software - ACP10_MC V1.190

ID#133870 : new function since V1.190

"MC_DigitalCamSwitch": New parameters can be initialized now when the FB is active.

With the new inputs "InitSwitches" and "InitTrackOptions" it is possible now to initialize new parameters while the FB is active

ID#133425 : new function since V1.190

New FBs for SG3-Targets

"MC_001_ReadActualVelocity"
"MC_002_ReadActualTorque"
"MC_003_GearInPos"
"MC_004BR_BrakeOperation"
"MC_005BR_MoveAbsoluteTriggSto"
"MC_006BR_MoveAdditiveTriggSto"
"MC_007BR_MoveVelocityTriggSto"
"MC_008BR_ReadParID"
"MC_009BR_WriteParID"
"MC_010BR_InitCyclicRead"
"MC_011BR_InitCyclicWrite"
"MC_012BR_InitParList"
"MC_013BR_InitParTabObj"
"MC_014BR_DownloadCamProfileOb"
"MC_015BR_DownloadParSequ"
"MC_016BR_InitParSequ"
"MC_017BR_InitAutPar"
"MC_018BR_InitAutState"
"MC_019BR_InitAutEvent"
"MC_020BR_AutControl"
"MC_021_ReadDigitalInput"
"MC_022_ReadDigitalOutput"
"MC_023_WriteDigitalOutput"
"MC_024BR_InitMasterParIDTrans"
"MC_025BR_InitModPos"

ID#133420 : new function since V1.190

New FB "MC_BR_InitModPos" for SG4-Targets

ID#133855 : solved problem, solved since V1.190

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Incorrect error message 29207 from MC_GearInPos

MC_GearInPos reported the error 29207 if the master and slave axes were on different drives and a parameter transfer to the master axis was active.
The FB now waits until this parameter transfer is complete and no longer reports this error.

ID#133410 : solved problem, solved since V1.190

"MC_BR_InitCyclicRead" and "MC_BR_InitCyclicWrite": Calling the same ParID again could lead to a deadlock.

A deadlock could occur if "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite" was called a second time for the same ParID. The deadlock could only be fixed by restarting.

ID#133405 : solved problem, solved since V1.190

"MC_MoveAbsolute" and "MC_BR_MoveAbsoluteTriggStop": The mode "mcSHORTEST_WAY" delivers the error 29217 (only in V1.170 - V1.187)

The "mcSHORTEST_WAY" mode on the "Direction" input was rejected by "MC_MoveAbsolute" and "MC_BR_MoveAbsoluteTriggStop" with error 29217.

ID#133385 : solved problem, solved since V1.190

"MC_BR_AutControl": The data type of the "ParLock" input is now USINT

The data type for the "ParLock" input in the "MC_BR_AutControl" function block was changed from BOOL to USINT. Parlock can now also be set to 2.

ID#133380 : solved problem, solved since V1.190

The done output from "MC_BR_InitCyclicWrite" was not set

If the "Execute" input was only set for one cycle, then the "Done" output was not set.

ID#133370 : solved problem, solved since V1.190

Deadlock with "MC_BR_InitCyclicRead" / "MC_BR_InitCyclicWrite"

A deadlock could occur if another FB was called in the same cycle as "MC_BR_InitCyclicRead" or "MC_BR_InitCyclicWrite". The deadlock could only be fixed by restarting.

1.4.4.2.92 NC Software - ACP10_MC V1.184

ID#128695 : solved problem, solved since V1.184

New "Execute" of "MC_Stop" during the deceleration ramp led to a wrong deceleration if the PLCopen-unit-factor was used.

If an FB-instance received another positive edge on the "Execute"-input during the deceleration ramp, the PLCopen-unit-factor was not taken into account.
This resulted in a flattening of the deceleration ramp and thus in a longer braking distance.

ID#128685 : solved problem, solved since V1.184

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The value of the input "TriggerDistance" was not multiplied with the PLCopen-unit-factor.

The input "TriggerDistance" of the FBs "MC_BR_MoveAbsoluteTriggStop", "MC_BR_MoveAdditiveTriggStop" and "MC_BR_MoveVelocityTriggStop" was not multiplied with the PLCopen-unit-factor. If this factor was used a wrong rest distance was moved.

ID#128680 : solved problem, solved since V1.184

Periodic axes moved a wrong distance when the internal position value exceeded 2^31.

On periodic axes the FBs "MC_MoveAdditive" and "MC_BR_MoveAdditiveTriggStop" moved a wrong distance when the internal position exceeded 2^31.

ID#128675 : solved problem, solved since V1.184

The data type of the input "CamTable" was STRING(10) for SG3-Targets and is now STRING(12)

1.4.4.2.93 NC Software - ACP10_MC V1.181

ID#126380 : solved problem, solved since V1.181

The input "MasterParID" of the FBs "MC_GearIn", "MC_GearInPos" and "MC_CamIn" had no function.

ID#126375 : solved problem, solved since V1.181

The values of the constants "mcSHORTEST_WAY" and "mcCURRENT_DIR" where twisted.

That could have resulted in unexpected behavior of the FB "MC_MoveAbsolute".

1.4.4.2.94 NC Software - ACP10_MC V1.180

ID#125640 : solved problem, solved since V1.180

"MC_BR_BrakeOperation" used invalid commands

For opening the brake the input "BrakeCommand" of the FB "MC_BR_BrakeOperation" wrongly had to be set to 2, for closing to 1.
Now it works as described, 1 for opening and 0 for closing the brake.

ID#125635 : solved problem, solved since V1.180

If "MC_GearInPos" was called after "MC_GearIn", the input "MasterSyncPosition" was not evaluated.

1.4.4.2.95 NC Software - ACP10_MC V1.170

ID#123380 : new function since V1.170

New FBs for SG4 targets

"MC_GearInPos"
"MC_ReadActualVelocity"
"MC_ReadActualTorque"
"MC_ReadDigitalInput"

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"MC_ReadDigitalOutput"
"MC_WriteDigitalOutput"
"MC_BR_BrakeOperation"
"MC_BR_MoveAbsoluteTriggStop"
"MC_BR_MoveAdditiveTriggStop"
"MC_BR_MoveVelocityTriggStop"
"MC_BR_ReadParID"
"MC_BR_WriteParID
"MC_BR_InitCyclicRead"
"MC_BR_InitCyclicWrite"
"MC_BR_DownloadCamProfileObj"
"MC_BR_DownloadParSequ"
"MC_BR_InitParSequ"
"MC_BR_InitParList"
"MC_BR_InitParTabObj"
"MC_BR_InitMasterParIDTransfer"
"MC_BR_InitAutPar"
"MC_BR_InitAutState"
"MC_BR_InitAutEvent"
"MC_BR_AutControl"

ID#123375 : new function since V1.170

New FB for SG3 and SG4 targets

"MC_Halt"

ID#123370 : new function since V1.170

"MC_GearIn" und "MC_CamIn": New input "MasterParID"

Every ParID of the master axis can be used as master not just the set position.

ID#123360 : new function since V1.170

MC_ReadAxisError: Additional in- and outputs

New inputs "DataAddress", "DataLength" and "DataObjectName" for error text evaluation
New outputs "AxisErrorID", which now provides the ACP10 error number and "AxisErrorCount" that shows the number of queued errors .

ID#123350 : new function since V1.170

MC_SetOverride: The input "Execute" was changed to "Enable"

The bahavior of the FB changed accordingly !

ID#123345 : new function since V1.170

MC_Home: New input "HomingMode"

ID#123340 : new function since V1.170

MC_DigitalCamSwitch: The component "Node" of the data type "MC_OUTPUT_REF" was replaced by "Axis".

ID#123325 : new function since V1.170

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Now every FB has a new output "Busy".

ID#123330 : solved problem, solved since V1.170

Possibly MC_DigitalCamSwitch could not leave an error state

Resetting "Enable" before "InOperation" was set resulted in a state where a new "Enable" led to an error. This state could have only be left by a Warm- / Coldstart.

1.4.4.2.96 NC Software - ACP10_MC V1.160

ID#113070 : solved problem, solved since V1.160

MC_TouchProbe could block the parameter transfer

If the Execute-input of MC_TouchProbe was only set to TRUE for one cycle (or a few cycles), the paramter transfer was blocked for the whole axis. The FB did not report an error in this case.

1.4.4.2.97 NC Software - ACP10_MC V1.157

ID#111080 : solved problem, solved since V1.157

FB-Outputs were set for two cycles

The following FB-Outputs were set for two cycles when the FB-Input "Execute" was reset before these FB-Outputs were set.

"Done" or "CommandAborted":
- MC_Home
- MC_MoveAbsolute
- MC_MoveAdditive

"Done":
- MC_CamOut
- MC_GearOut
- MC_Phasing

"InVelocity" or "CommandAborted":
- MC_MoveVelocity

"InSync" or "CommandAborted":
- MC_CamIn

"InGear" or "CommandAborted":
- MC_GearIn

Now these outputs are only set for one cycle. The FBs can be called with Execute = TRUE again.
Thus, under certain conditions, an FB-cycle can be saved in the application program.

1.4.4.2.98 NC Software - ACP10_MC V1.154

ID#109035 : Information valid since V1.154

New FB "MC_SetOverride" was implemented

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1.4.4.2.99 NC Software - ACP10_MC V1.152

ID#107355 : solved problem, solved since V1.152

At a negative position MC_TouchProbe delivered a big positive value

ID#106995 : solved problem, solved since V1.152

MC_Power: When the controller was switched on there was the possibility that previously reported errors were reported again.

Previously reported errors are now cleared when the controller is switched on.

ID#106990 : solved problem, solved since V1.152

Errormessage when phasing with dither mode

When pashing with dither mode an error message from MC_Power could occur.

ID#106985 : solved problem, solved since V1.152

With a negative start position MC_CamIn coupled too late

With a negative master start position and start mode mcRELATIVE, a positive start position was calculated.

ID#106541 : solved problem, solved since V1.152

Possibility of internal deadlock (only in V1.151)

It could have occured, that the internal locking for an axis was not released again. Thus no other FB for this axis could be called, no error was reported.

ID#106975 : Information valid since V1.152

Function for output "EndOfProfile" was implemented in FB "MC_CamIn"

1.4.4.2.100 NC Software - ACP10_MC V1.151

ID#104565 : solved problem, solved since V1.151

The input "SlaveOffset" of the FB "MC_CamIn" was only used for the first start.

MC_CamIn: The "SlaveOffset" was only taken into account the first time started, at every following start the slave was coupled at the position it was currently standing.

ID#104560 : solved problem, solved since V1.151

FB-Datatransfer was locked

When several FBs for the same axis where called in fast succession, the data of the first FBs could be overwritten.
Now each FB waits until the active one has finished transferring its data.

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1.4.4.2.101 NC Software - ACP10_MC V1.150

ID#102075 : new function since V1.150

New function blocks

- MC_TouchProbe
- MC_AbortTrigger
- MC_DigitalCamSwitch

1.4.4.2.102 NC Software - ACP10_MC V1.140

ID#97495 : solved problem, solved since V1.140

State "Standstill" will be reached when the initialization is complete.

Before that the FB "MC_ReadStatus" reports "Done"=TRUE, but no status output is set.

ID#97485 : solved problem, solved since V1.140

For virtual axis the controller state is not any more checked, when a move is started.

ID#97480 : solved problem, solved since V1.140

Homing of an axis is now also possible when the controller is off, if the mode "Offset" or "Direkt" with "Refimpuls" is used.

ID#97465 : solved problem, solved since V1.140

MC_Home: When Execute was set only for one cycle and an error occurred the outputs Error and ErrorID where not set.

ID#90917 : solved problem, solved since V1.140

MC_Home: The position factor was not taken into account.

With a position factor >1 and a home position <> 0 the homing was done wrong.

ID#97500 : new function since V1.140

Starting with V1.140 Multiaxis-FBs are also available with CAN-Bus.

1.4.4.2.103 NC Software - ARNC0 Wichtige Information

ID#135277 : Important Information

ARNC0 software before V0.425 can not be used with certain AR versions

ARNC0 software before V0.425 can not be used with the following AR versions:
- AR for SG4 E2.73 - V2.79
- AR for SG4 starting with F2.85

ID#135272 : Important Information

Powerlink, incorrect input data during ACOPOS startup with certain AR versions

In a cyclically operating ETHERNET Powerlink network, during ACOPOS startup in rare cases incorrect input data could occur for a short amount of time.

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An ACOPOS startup is performed in the following cases:
- After turning on the system
- Automatically after a reset or turning the ACOPOS unit on/off

This problem affects the following AR versions:
- AR for SG3 before V2.40
- AR for SG4 before B2.73
- AR for SG4 from A2.80 to C2.83

ACOPOS devices should not be operated with ARNC0 software on an ETHERNET Powerlink network with these AR versions.

ID#102522 : Important Information

External encoder operation

An external encoder is operated correctly only on slot 3 of the ACOPOS.

1.4.4.2.104 NC Software - ARNC0 V0.540

ID#151282 : new function since V0.540

New trace data points in the CNC block monitor

These variables in the CNC block monitor can now be traced: path length until end of current NC-block, path length of current NC-block, path length of next NC-block in the direction of motion.

ID#151277 : new function since V0.540

New path length variables in CNC block monitor

The CNC block monitor additionally displays the path length of the current NC-block and the path length of the next NC-block in the direction of motion.

ID#151182 : new function since V0.540

Restart – Current axis positions in the DPR trace

The current axis positions are now recorded in the DPR trace when restarting an NC program. In previous versions, the positions were stored when starting the programming.

ID#147417 : new function since V0.540

Path distance in CNC Monitor after CNC Init

The ncaction(..., ncLIMITS, ncINIT) resets all variables in the CNC monitor except the set positions. It also resets the path length variables in the CNC block monitor.

ID#151197 : Information valid since V0.540

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.242

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1.4.4.2.105 NC Software - ARNC0 V0.531

ID#150992 : Information valid since V0.531

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.242

ID#150207 : solved problem, solved since V0.531

External encoder - Homing error

The mode without reference pulse is always used no matter which homing mode has been defined (with or without pulse). An error message is not given.

1.4.4.2.106 NC Software - ARNC0 V0.530

ID#149462 : Information valid since V0.530

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.213

ID#148940 : solved problem, solved since V0.530

Save data to an INIT-Parameter-Module. Target memory User ROM.

The INIT-Parameters contained in the NC-object user data are saved to the given INIT-Parameter-Module in User ROM using the NC-action "ncGLOBAL,ncSAVE" .

1.4.4.2.107 NC Software - ARNC0 V0.520

ID#148420 : new function since V0.520

Save data to an INIT-Parameter-Module. Target memory User RAM.

The INIT-Parameters contained in the NC-object user data are saved to the given INIT-Parameter-Module using the NC-action "ncGLOBAL,ncSAVE" .

ID#149457 : Information valid since V0.520

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.213

ID#148752 : solved problem, solved since V0.520

Overlapping signal function in a path section with zero length

When an overlapping signal function is programmed in a path section with zero length, the error 8155 "Distance is equal to 0.0, signal will be ignored" results, although there is enough distance for the signal ahead of this path section.

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1.4.4.2.108 NC Software - ARNC0 V0.512

ID#149452 : Information valid since V0.512

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#146767 : solved problem, solved since V0.512

Non synchronized M-functions between dwell times

If non synchronized M-functions are programmed between two dwell times, then the M-functions are output after the second dwell time has passed.

1.4.4.2.109 NC Software - ARNC0 V0.511

ID#146897 : Information valid since V0.511

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#146905 : solved problem, solved since V0.511

Deadlock with function combination G221+G220/G222+G170

The CNC blocks at the G221, when G221 is programmed together with a synchronized M-function and the NC-block containing a G220 or G222 has zero length and is followed by a G170.

ID#146892 : solved problem, solved since V0.511

Standstill when changing the active working plane.

Movement is not stopped when changing the working plane if tool length compensation is not active (tool length = 0) or the programmed plane is already selected.

1.4.4.2.110 NC Software - ARNC0 V0.510

ID#146032 : new function since V0.510

Control structure for NC test

The behaviour of NC test functions for the NC objects ncAXIS and ncCNCSYS can be selected by the new component nc_test.
nc_test.Open_UseApplNcObj:
1 = Test function with application object
0 = Test function with standalone test object
nc_test.Close_NoMoveAbort:
1 = No move abort when the test function is closed.
0 = Abort all active movements when the test function is closed.
The global initialization is done with the attribute NcManCtrl of the NC Object ncMANAGER in the NC mappin table.

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ID#146027 : Information valid since V0.510

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#146585 : solved problem, solved since V0.510

Turning of a circle & its dynamics

In case of too low axis acceleration limits (lower than limits of CNC object), the path-speed on the circles (G2, G3) could be reduced more than necessary.

ID#146575 : solved problem, solved since V0.510

Problem with Restart of an NC-program

NC-program creation time was not saved correctly in case of "move.ncprogram.start_mode == ncFILE" or "move.ncprogram.start_mode == ncFILE_XL". Error 7151 could occur sometimes.

ID#146037 : solved problem, known since V0.500, solved since V0.510

Error in german user data structure

The german user data structure for the NC Object ncCNCSYS contained the member monitor.typ_ncblock instead of monitor.typ_ncsatz.

1.4.4.2.111 NC Software - ARNC0 V0.503

ID#145857 : solved problem, solved since V0.503

Position error on the tangential axis when activating the cutter diameter.

If cutter diameter compensation is activated with the following conditions, the automatic tangential axis in the path section that immediately follows the activation will be aligned incorrectly. As a result, the tangential axis will be aligned to the end position of the block during movement as in a block with G00.
- Automatic tangential axis is active
- Linear interpolation block (G01)
- Indirect activation with transition block (G137)
- The transition angle of the subsequent path section transition is greater than 180° (outside corner)

ID#145862 : Information valid since V0.503

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#145952 : solved problem, solved since V0.503

Incorrect cutter diameter.

The radius from the previous NC program is used when activating CDC if a cutter diameter has

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not been defined in an NC program (tool data number or $RAD).

ID#145937 : solved problem, solved since V0.503

The tool length and tool offset are wrongly accounted for in CNC systems with less than three path axes.

In a CNC System with two cartesian axes, the tool length correction and the tool offset of the non-existent third cartesian axis are calculated in the first linear axis.
In a CNC system with one cartesian axis, the compensations for both of the non-existent cartesian axes are incorporated in the first two linear axes.

ID#144385 : solved problem, solved since V0.503

Unjustified error 8134:"Radius difference between start and end".

The error occurs under the following coditions: There are only two cartesian axes and the ZX-plane has been selected.

1.4.4.2.112 NC Software - ARNC0 V0.501

ID#145102 : Information valid since V0.501

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#145092 : solved problem, solved since V0.501

Compensation matrix for cartesian axis is not taken in consideration.

It could happen, that the the compensation matrix ("p_cnc_obj.axis.compensation.matrix_el[]") is not taken in consideration.

ID#144130 : solved problem, known since V0.471, solved since V0.501

Page Fault while calling a local subroutine.

A page fault occours if in a line with the call of a local subroutine are additional syntax elements.

1.4.4.2.113 NC Software - ARNC0 V0.500

ID#144907 : new function since V0.500

New display mode and data in the CNC monitor, new system variables for tool data and zero point offset.

New display mode for position in the CNC monitor:
- Machine coordinates
- Consideration of the coordinate system transformation, tool data offset and tool length
- Consideration of the coordinate system transformation
- Consideration of tool data offset and tool length

CNC monitor shows number of the active tool data record and index of absolute zero point offset.

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New system variables: Active tool data record, tool location number and index of absolute zero point offset can be read in the NC program.

ID#133367 : new function since V0.500

Unification of the trace record number calculation (ACP10 - ARNC0).

ID#145082 : Information valid since V0.500

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

1.4.4.2.114 NC Software - ARNC0 V0.491

ID#144955 : Information valid since V0.491

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#144940 : solved problem, solved since V0.491

CNC program in form of text file can lie in any directory

Till version V0.490 the text files had to lie in directory "C:\CNC_Prg". Now can the directory be chosen using the "CPU-properties-File Devices".

1.4.4.2.115 NC Software - ARNC0 V0.490

ID#144950 : Information valid since V0.490

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#144135 : solved problem, solved since V0.490

Start of CNC programs and subprograms from text files

CNC programs can be used in form of text files without the previous conversion. Parameter "move.ncprogram.start_mode" defines the start mode of a CNC program.

1.4.4.2.116 NC Software - ARNC0 V0.483

ID#144022 : solved problem, solved since V0.483

Automatic tangential axis: first and last synch. M-function can not be used as sync1_t or sync2_t

Use of the first or last synch. M-function for sync1_t or sync2_t, generates the error 8244 "G141 M-function sync1_t or sync2_t not in the admissible range".

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ID#144017 : solved problem, solved since V0.483

Rotation angle of 90 degrees results in a half circle

If a circular arc is programmed via a rotation angle immediately after a circular arc, it can happen that a wrong arc is traversed or the error 8134: "Radius difference between start and end" occurs.

ID#143262 : solved problem, solved since V0.483

Reduction in path speed along short NC-blocks

An undesired reduction in path speed along short NC-blocks can occur with the parameter setting "cnc_obj->limit.blocktransition=ncAUTO".

ID#141325 : solved problem, known since V0.451, solved since V0.483

Unjustified error after ncaction(ncAUTOMAT, ncINIT)

When initializing the Cam Profile Automat with correct data, the error 5157: "Cam Profile Automat INIT - Invalid parameter in the basis state" occurs. This bug exists since version V0.430.

ID#138380 : solved problem, known since V0.426, solved since V0.483

"cnt_ncprog" remains "1" after stopping a movement

If immediately after starting an NC-program a "ncMOVE, ncHALT" followed by a "ncMOVE, ncSTOP" is given, the CNC-System blocks.

1.4.4.2.117 NC Software - ARNC0 V0.482

ID#142662 : Information valid since V0.482

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#142652 : solved problem, solved since V0.482

Incorrect display in the CNC monitor.

Incorrect positions could be displayed in the CNC monitor during standstill.

ID#142647 : solved problem, solved since V0.482

Page Fault at ncaction (nc_object, ncZEROPMON, ncSWITCH_ON/ncSWITCH_ON)

A Page Fault could occur if one of the two actions were called before an NC program was started.

1.4.4.2.118 NC Software - ARNC0 V0.481

ID#142297 : Information valid since V0.481

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Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#142507 : solved problem, solved since V0.481

Cutter diameter accounted for at G153.

The cutter diameter was taken into consideration at G153 (position entry in the machine coordinates) if cutter diameter compensation was active. The corresponding point on the equidistant segments was moved to instead of the programmed point.

ID#141601 : solved problem, known since V0.460, solved since V0.481

NC program aborted when selecting an automatic tangential axis.

The NC program was aborted with error 8244 if one of the two parameters "limit.s_sync1_t" or "limit.s_sync2_t" was set to the value ncOFF when selecting the automatic tangential axis (G141).
An M-function for lifting the tool is not output if "limit.s_sync1_t" has the value ncOFF. An M-function is also not output for lowering the tool if "limit.s_sync2_t" = ncOFF. In both cases, a warning is generated when activating the tangential axis.

ID#141555 : solved problem, solved since V0.481

Page Fault when restarting an NC program (since ARNC0 V0.400).

A Page Fault could occur when restarting an NC program.

1.4.4.2.119 NC Software - ARNC0 V0.480

ID#141995 : new function since V0.480

Saved trace file includes informations about the traced values.

Saved trace file format has been changed from MathCad to MathLab, which includes also the header with the information about the traced data points. Header carries an information if the traced data point is CNC or Axis (including its index)parameter, data point name, trace date and time, X and Y units.

ID#141987 : new function since V0.480

M-Functions are set after a restart

It is now possible to define groups of M-Functions. After a restart the last programmed M-Function of every group is set.

ID#141762 : new function since V0.480

New ARNC0 behavior after a block with a tool data number.

After a block with a tool data number, the tool length and the tool offset are only traversed with absolute programming (G90) and with programmed axes. The compensation movements are not executed with relative programming (G91) or non-programmed axes (see ARNC0 documentation).

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Monitor display: The setting "monitor.status.nullpver = ncON" causes the position of the tool bit in the programmed coordinate system to be displayed in the CNC monitor. The position of the new tool bit is displayed immediately after a block with a new tool data number.
The setting "monitor.status.nullpver = ncOFF" causes the position (tool clamping point) in the machine coordinate system to be displayed.

ID#141772 : Information valid since V0.480

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#141835 : solved problem, solved since V0.480

Pagefault after Calling ncaction(ncCOMP, ncSTART)

Pagefault was caused by calling ncaction(ncCOMP, ncSTART) with the parameter"move.compensation.parameter.mode = ncOFF".

ID#141767 : solved problem, solved since V0.480

Incorrect tangential axis position in the first movement block after multiple rotations of the coordinate system.

The position of the tangential axis in the first movement block could be incorrect if the coordinate system is rotated several times consecutively without moving an axis in the meantime.

ID#137597 : solved problem, solved since V0.480

Position error on the tangential axis after rotating the coordinate system.

The tangential axis is aligned to the wrong angle in the transition block if a subprogram is called before G92 or G192 with a rotation of the coordinate system .

1.4.4.2.120 NC Software - ARNC0 V0.471

ID#141862 : Information valid since V0.471

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#141230 : solved problem, known since V0.451, solved since V0.471

Pagefault after Calling a Global Subprogram

Pagefault was caused by calling a global subprogram (presented as a BR-module on PLC) from a main program started from file.

1.4.4.2.121 NC Software - ARNC0 V0.470

ID#139932 : new function since V0.470

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Override for G0 (R_override)

For G0 function new "rapid" override "move.R_override" is used instead of the "move.F_override". The allowed value range spans 0 to 10000 (0.00 - 100.00% of the axes limits). If greater value would be inserted by the user, value will be limited to 10000 by ARNC0.

ID#141382 : Information valid since V0.470

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#141375 : solved problem, solved since V0.470

Inverse feed rate (G93) by circular interpolation (G2/G3).

Inverse Feed Rate (G93) by circular interpolation (G2/G3) functioned correctly only if the rotation angle was defined.

ID#141372 : solved problem, solved since V0.470

NC-program blocks upon CDC activation with G137

Upon CDC activation with G137 in the range of 180 to 360 degrees, the NC-program sometimes blocks.

ID#141367 : solved problem, solved since V0.470

CDC: incorrect arc transition after circles programmed with a rotation angle

If the CDC inserts an arc transition after a circle programmed with a rotation angle, then the arc transition has the same rotation angle as the programmed circle. This error exists since version V0.428.

ID#141362 : solved problem, solved since V0.470

CDC: Full circle instead of arc transition.

If the CDC inserts an arc transition <= 90 degrees after a programmed full circle, then instead of the arc transition a full circle is traversed.

ID#140870 : solved problem, solved since V0.470

Full circle is traversed two times

With active CDC it can happen, that a full circle is traversed two times. This error can occur since Version V0.428

ID#139937 : solved problem, solved since V0.470

Restart: the values of the S and T parameters are incorrect after a restart.

ID#139927 : solved problem, solved since V0.470

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Feed override was valid also for G0

Parameter "move.F_override" was incorrectly taken into consideration also by G0.

1.4.4.2.122 NC Software - ARNC0 V0.461

ID#140560 : new function since V0.461

Inverse Feed Rate, Functions G93, G94.

Function G93 switches the inverse feed rate on. Parameter F defines the inverse of the time (in minutes) needed to complete the NC-block. Function G94 switches the inverse feed rate off.

ID#134500 : new function since V0.461

New Speed Profile for a Circular Interpolation.

A dynamics on an arc/circle/helix has been changed. A movement with G02/G03 can be faster in general. All axes limits, as well as CNC limits are respected.

ID#139992 : Information valid since V0.461

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#140377 : solved problem, solved since V0.461

Incorrect behavior when disabling CDC with G39

If a cutter diameter that is too large was detected right before deactivating CDC with active G39, then a point located far from the contour was traversed to while deactivating CDC.

ID#140187 : solved problem, known since V0.400, solved since V0.461

Polar coordinate motor not possible.

In case of polar coordinate motor the decoder initialization have been cancelled with the error 10103 ("PKM - No compensationparameters for Cartesian axis").

1.4.4.2.123 NC Software - ARNC0 V0.460

ID#139817 : new function since V0.460

Maximum number of tool data blocks and tool placement numbers has been raised to 500.

ID#139812 : new function since V0.460

G171 - immediate processing of NC blocks.

G171 forces immediate processing of the blocks which previously were buffered.

ID#139512 : new function since V0.460

G153 - Specifying the positions as absolute coordinates in the machine coordinate system

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In rapid feed blocks and interpolation blocks, all coordinate specifications are interpreted as absolute coordinates in the machine coordinate system independent of any transformations or compensation (G54 – G59, G92, G159, G192, tool offset and tool length).

ID#139702 : Information valid since V0.460

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#139737 : solved problem, solved since V0.460

Incorrect conversion of ACOPOS parameters from input texts.

In ACOPOS parameter tables and with the "service.data_text" component, values for ACOPOS parameters can be defined in hexadecimal as input text. For ACOPOS parameters of data type "DINT", input texts in the range "0x80000000" to "0xFFFFFFFF" were previously converted to the value "0x7FFFFFFF" by mistake.

1.4.4.2.124 NC Software - ARNC0 V0.453

ID#139602 : new function since V0.453

Additional module format for ARNC0 error text modules

Until now, ARNC0 error text modules were managed as standard data modules. Starting now, an additional
module format, that enables management of error texts according to version in AutomationStudio, will be
supported for error text modules. See also A&P#138900.

ID#139597 : new function since V0.453

Standard priority for background tasks too low

Until now, the standard priority of ARNC0 background tasks was set quite low. This sometimes caused the
processing of CNC programs to be interrupted, particularly on target platforms with low processing power
or high load. From now on, the standard priority of the background tasks will be increased so that the CNC
background tasks have a higher priority than the tasks for online communication and visualization. The
previous state (low priority of the background tasks) can be restored by setting the attribute
'ARNC0SystemConfig="1,10,1"' for an NC object with the type 'ncMANAGER' in an NC deployment
table.

ID#139592 : Information valid since V0.453

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

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1.4.4.2.125 NC Software - ARNC0 V0.452

ID#138907 : Information valid since V0.452

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#139407 : solved problem, known since 0.451, solved since V0.452

Transition angle of very short path section defined as non-tangential.

The transition angle of very short path sections was defined as non-tangential (alpha > s_jump_t) if v_path_mode == 1.

1.4.4.2.126 NC Software - ARNC0 V0.451

ID#138902 : Information valid since V0.451

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.196

ID#139137 : solved problem, solved since V0.451

G113 syntax error

In G113, the unit factor k must be absolute in the NC program instead of being specified as a percentage (since ARNC0 V0.440).

ID#138970 : solved problem, solved since V0.451

Tangential transitions on linear axes

New mode of CNC axis (cnc_obj.axis.axis[i].type == 17) has been introduced. If there is a transition between NC-blocks, realized exclusively by axes of such type, then this transition should be considered as tangential.

ID#138860 : solved problem, solved since V0.451

New mode of feed rate calculation

With the parameter cnc_obj.decoder.parameter.v_path_mode == 1 all axes types (except ncTANGENT) are taken into consideration by the feed rate calculation.

ID#137130 : solved problem, solved since V0.451

In DPR-Trace was the ARNC0 Sampling Time 0 Microseconds

In DPR-Trace was the ARNC0 Sampling Time 0 Microseconds and wrong values by ARNC0MAN-ID and ARNC0SSY-ID.

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1.4.4.2.127 NC Software - ARNC0 V0.450

ID#138552 : Information valid since V0.450

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.194

ID#138577 : solved problem, solved since V0.450

CDC deactivation with G137 caused erroneous axes movements normal to the main plane

The programmed Z-movement was already done in the transition block instead of in the programmed
NC-block after G40. (in ARNC0 V0.441 only)

ID#138565 : solved problem, solved since V0.450

Incorrect values of remaining distance for linear axes.

In CNC system with only linear axes the monitor of remaining distance (monitor.s_ncsatz and monitor.s_ncblock) were not valid.

ID#136072 : solved problem, solved since V0.450

Exit movement of CDC deactivation immediately after G40

In combination with the new mode and G137, the deactivation movement is executed immediately after G40.
Activate this behavior by making the following entry in the data structure:
German: "cnc_object.decoder.parameter.wrk.abwahl" = ncAUTO
English: "cnc_object.decoder.parameter.cdc.exit" = ncAUTO
This makes it possible to deactivate CDC immediately before the program is ended.

1.4.4.2.128 NC Software - ARNC0 V0.441

ID#134987 : Information valid since V0.441

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.194

ID#138072 : solved problem, solved since V0.441

With activated CDC the z-axis and the slave axes do not move.

The CDC is active and only the z-axis is programmed in an NC-block. When the z-axis is programmed again in the next NC-block as part of a move in the main plane then it does not move. This error also affects both the linear and tangential slave axes.

ID#136292 : solved problem, solved since V0.441

CDC activation with G137 causes erroneous axes movements normal to the main plane

The programmed Z-movement is already done in the transition block instead of in the programmed NC-block. This error affects both the linear and tangential slave axes too.

1.4.4.2.129 NC Software - ARNC0 V0.440

ID#137497 : new function since V0.440

Reduction of path speed at tangential path section transitions depending on the transition angle.

G113 makes it possible to reduce the path speed at tangential path section transitions depending on the transition angle.

ID#137492 : new function since V0.440

G108/G109/G110 Set Path Acceleration/Path Deceleration

With the command G108, G109 and G110 the acceleration or deceleration can be programmed as absolut or relative value.

ID#137487 : new function since V0.440

G103/G104 (Radius Dependent Feed Adjustment)

Radius dependent feed adjustment can be programmed proportional to the radius or reciprocal proportional to the radius of the path section.

ID#137502 : Information valid since V0.440

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.194

1.4.4.2.130 NC Software - ARNC0 V0.430

ID#136155 : new function since V0.430

Compensation of the mechanical impreciseness of an axis

Compensation of the mechanical impreciseness of the axis (backlash, spindle slope and combination) has been added. Call from an application:
ncaction(nc_obj,ncCOMP,ncSTART), ncaction(nc_obj,ncCOMP,ncSTOP).

ID#135360 : Information valid since V0.430

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.193

1.4.4.2.131 NC Software - ARNC0 V0.428

ID#136107 : solved problem, known since V0.426, solved since V0.428

Wrong contour results from G180=0 with active mirroring

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Only the rotational direction of the circle is reflected, but not the centerpoint coordinates.

ID#136117 : new function since V0.428

Warning 10459 when activating CDC

The warning 10459 is output if the first movement block after CDC activation does not contain a movement in the active plane.

ID#135667 : new function since V0.428

Circle programming with an angle.

The angle of the circle is specified with H. It is possible to program full circles and circles with more than one full revolution.

ID#136112 : solved problem, solved since V0.428

Error deactivating CDC with G137

If the movement block does not contain a path in the active plane immediately before or after CDC deactivation (G40), then an additional movement normal to the active plane is executed in the inserted exit block (G137).

ID#135972 : solved problem, solved since V0.428

Violation of the Software Ends

Starting with version V0.400 the errors 8141 "Position on the Circle > positive SW End" and 8142 "Position on the Circle < negative SW End" could be erroneously reported.

1.4.4.2.132 NC Software - ARNC0 V0.427

ID#136282 : Information valid since V0.427

Only for internal tests

ID#135977 : Information valid since V0.427

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.193

1.4.4.2.133 NC Software - ARNC0 V0.426

ID#135647 : Information valid since V0.426

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.193

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1.4.4.2.134 NC Software - ARNC0 V0.425

ID#135257 : Information valid since V0.425

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.552
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.192

ID#135247 : solved problem, solved since V0.425

Access to NC data modules did not function with certain AR versions

Management for BR modules has been changed in the following AR versions:
- AR for SG4 E2.73 - V2.79
- AR for SG4 starting with F2.85

For this reason, access to the following NC data modules did not function with the AR versions listed above:
- NC Deployment tables
- NC INIT Parameter modules

1.4.4.2.135 NC Software - ARNC0 V0.424

ID#135122 : solved problem, solved since V0.424

Position jump during reverse movement of an NC program

During reverse movement of an NC program, a position jump occurred on all axes when entering a path section.

ID#135252 : Information valid since V0.424

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.550
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.190

1.4.4.2.136 NC Software - ARNC0 V0.423

ID#134882 : solved problem, solved since V0.423

Standstill after a path section following G60, synchronous M-function or G04

Movement was always stopped at the end of a path section after an accuracy hold G60, after a synchronous M-function or after a dwell time G04 (since ARNC0 V0.421).

ID#135355 : Information valid since V0.423

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.550
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.190

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1.4.4.2.137 NC Software - ARNC0 V0.422

ID#134402 : solved problem, solved since V0.422

Division by zero at G103/G104.

A division by zero is performed if the center point is not completely specified using center point programming for blocks with G103/G104.

ID#134527 : new function since V0.422

Switching from inches to mm.

G70/G71 can be used to select the unit for the NC program (inch or mm).

ID#134647 : Information valid since V0.422

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.550
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.190

1.4.4.2.138 NC Software - ARNC0 V0.421

ID#134652 : Information valid since V0.421

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.550
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.190

ID#134432 : solved problem, known since ARNC0 V0.402 bis V0.420, solved since V0.421

Violation of axis acceleration and axis speed limits at circular blocks

At circular blocks the limits of axis acceleration and axis speed limits can be exceeded. The limits of path speed and path acceleration are taken in consideration in a coorect way. (ARNC0 V0.402 - V0.420)

1.4.4.2.139 NC Software - ARNC0 V0.420

ID#134232 : solved problem, solved since V0.420

NC program is not terminated.

In some cases, the path speed on very short path sections is reduced to the value 0 and the program stops being processed. The NC program remains active, but can be cancelled.

ID#134657 : Information valid since V0.420

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.550
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.190

ID#134262 : solved problem, solved since V0.420

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Contour error with a combination of G40 and G141.

Arcs are replaced by straight sections if G40 and G141 follow each other one right after another.

ID#134257 : solved problem, solved since V0.420

NC program blocked with a combination of G170 and G141.

In some cases, the NC program might stop being processed if G170 and G141 follow each other one right after another.

ID#134172 : solved problem, solved since V0.420

Limit value violation (axis acceleration) at the path section transition.

The axis acceleration on very short path sections could exceed the defined limit values at the path section transition (path section runtime shorter than the axis jolt filter time).
On very short path sections where the programmed offset is not reached, the maximum path speed is now reduced to the entrance speed in the next path section. This prevents accelerating and braking on the path.
If the path section runtime is shorter than the axis jolt filter time, then multiple path section transitions might be present in the filter, which can cause the axis limit values (acceleration) to be exceeded at the path section transition. The permissible speed jump on the axes is now reduced at these path section transitions.
Activating can be done by setting the variable as it's written bellow:
German: "cnc_object.grenzwert.satzuebergang" = 1
Englisch: "cnc_object.limit.blocktransition" = 1

ID#120492 : solved problem, solved since V0.420

ARNC0 trace buffer size is configurable

The trace size can be changed in the NC configuration "Size of data buffer for cyclic ARNC0 trace" for ARNC0. For the trace data uploading of the different size than the default value of 20kB (0x5000), version 2.5.2.0004 of Automation Studio is required. When the trace data size is changed and Automation Studio is not capable to upload the data, a warning is output to the logbook.

1.4.4.2.140 NC Software - ARNC0 V0.410

ID#134682 : Information valid since V0.410

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.550
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.190

ID#133207 : solved problem, solved since V0.410

ACOPOS parameter tables, handling the "VersionFrom" attribute

Some ACOPOS parameters can only be used starting with a specific version of the ACOPOS operating system. For such parameters, this minimum version is entered in the module created from an ACOPOS parameter table with the attribute "VersionFrom" when using AS versions V2.5.2.0002 and higher during the Build procedure.
The "VersionFrom" attribute is now evaluated by the ARNC0 software on the PLC when

processing ACOPOS parameter tables. The parameter is not transferred to the ACOPOS if the ACOPOS operating system version there is older than the minimum version defined with "VersionFrom".
Transferring such a parameter (e.g. 849 "MOTOR_TAU_THERM") with older versions of the ARNC0 software will cause the response error "1: Invalid parameter ID" and transfer of the ACOPOS parameter table is aborted. This problem can be avoided by disabling this parameter in the ACOPOS parameter table.

ID#126657 : solved problem, solved since V0.410

ACOPOS Parameter table: Parameters with more than 6 bytes data are now transferred

Up to now, if Parameters with data lenth greater than 6 bytes were contained in an ACOPOS Parameter table (e.g. the parameter MOTOR_ORDER_TEXT), then the transfer of this table was aborted with following error:
- 14180:"Error transfering ACOPOS-Parameter "
- Info: "Length of parameter data too large for ACOPOS parameter in XML data"

1.4.4.2.141 NC Software - ARNC0 V0.403

ID#134677 : Information valid since V0.403

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

1.4.4.2.142 NC Software - ARNC0 V0.402

ID#133377 : new function since V0.402

Automatic tangential axis at straight line path section transition.

With the new constant ncS_SPR_T the behaviour at straight line path section transitions (alpha equal or less than s_sprung_t) can be influenced.

ID#134672 : Information valid since V0.402

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

1.4.4.2.143 NC Software - ARNC0 V0.401

ID#134667 : Information valid since V0.401

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

ID#132102 : solved problem, solved since V0.401

Tangential axis orients itself on a path section.

If the angle difference at a non-tangential path section transition is less than the parameter s_jump_t and the actual speed jump of the tangential axis is less than the parameter v_jump_t, then the tangential axis now jumps to its new orientation at the start of the path section.

1.4.4.2.144 NC Software - ARNC0 V0.400

ID#129727 : solved problem, solved since V0.400

Position jump at a full circle after a block with G92.

A position jump occurs if a full circle without coordinate specification is programmed after a block with G92.

ID#130892 : new function since V0.400

Rotating the coordinate system freely in space.

Programmed zero point offset G92: The coordinate system can be shifted and rotated in space as needed.
Span correction: The coordinate system can be shifted and rotated again in addition to G92.
Correction to the Cartesian coordinate system: A matrix can be defined for correcting any angles that are not exactly 90° in the machine coordinate system.

ID#134662 : Information valid since V0.400

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

ID#130867 : solved problem, solved since V0.400

Incorrect tangential axis position at G92 transition blocks.

If the coordinate system is rotated and shifted when a tangential axis is switched on and if blocks without a traverse path (e.g.: M-Functions) follow immediately after the shift, then the tangential axis could be set to an incorrect angle in the transition block.

1.4.4.2.145 NC Software - ARNC0 V0.393

ID#135547 : Information valid since V0.393

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

ID#130317 : solved problem, solved since V0.393

Error 9263:"Angle calculation impossible, vector length is 0"

When an NC-programm contained very short path sections (e.g. 0.0001 CNC-units), then with activated CDC the error 9263:"Angle calculation impossible, vector length is 0" was reported.

ID#130247 : solved problem, solved since V0.393

path speed is too high for the tangential axis.

At tangential path section transitions the path speed was too high for the tangential axis, if the limit speed of the second path section was higher than the limit speed of the first path section.

ID#130065 : solved problem, solved since V0.393

Error when using eight and more ACOPOS on ETHERNET Powerlink

When using eight and more ACOPOS on an ETHERNET Powerlink line, error 14126: "No cyclic positions from drive" was output accidentially.

ID#128132 : solved problem, solved since V0.393

Error while determining the RESTART-INFO.

Determining the RESTART-INFO delivers a wrong name of the NC init program (from ARNC0 V0.380).

ID#124975 : solved problem, solved since V0.393

CNC parameter "halt=ncV_JUMP" does not work properly.

When the CNC parameter "cnc_obj->limit.halt" was set to "ncV_JUMP", than the axes stopped at every non-tangential path section transition.

1.4.4.2.146 NC Software - ARNC0 V0.392

ID#126357 : Information valid since V0.392

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

ID#126137 : solved problem, solved since V0.392

ARNC0 V0.390 with ACOPOS 8V1xxx.xx-1: Response errors for FFCTRL parameters

With ARNC0 software V0.390 after calling the NC actions "ncGLOBAL,ncINIT" or "ncCONTROLLER,ncINIT" all FFCTRL parameters are always transferred to the ACOPOS. For ACOPOS 8V1xxx.xx-1 this causes the following response error for each FFCTRL parameter:
- 1: Invalid parameter ID
Apart from these response errors has this no further effects.

1.4.4.2.147 NC Software - ARNC0 V0.391

ID#126347 : Information valid since V0.391

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

ID#125760 : solved problem, solved since V0.391

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NC-block-number was not set by SW limit error.

The errors 8137/8138 were set instead of errors 8258/8259.

ID#125570 : solved problem, solved since V0.391

CNC program was stopped after G126 with $LIN.

A CNC program was interrupted at the end of a path section after a linearized rounding edges function (G126 + $LIN), depending on the set movement parameters.

1.4.4.2.148 NC Software - ARNC0 V0.390

ID#124460 : solved problem, solved since V0.390

Wrong axis positions in the CNC monitor.

When an NC-program was started after homing, the last CNC positions were displayed for one ARNC0-cycle, instead of the current axes positions.

ID#124377 : new function since V0.390

New parameter 'mode' for Cam Profiles

mode == ncSTANDARD: default. The slave axis behaves in the usual manner. I.e. it follows the master axis as closely as the slave's software end values and acceleration and speed limit values permit it to do.
mode == ncGANTRY: the slave axis follows the master axis without regard to its own software end values and acceleration and speed limit values.

ID#115792 : new function since V0.390

Maximum length for the names of data modules extended to 12 bytes

The maximum length of the data module names is now 12 bytes (was 10).

ID#125572 : Information valid since V0.390

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

ID#124682 : solved problem, solved since V0.390

Full circle together with G180.

If a full circle was programmed together with G180, the full circle was not traversed. The NC program was interrupted and could not be continued at this point.

ID#124635 : solved problem, solved since V0.390

Problem during the restart of a NC program

The CNC program cannot be continued at the restart point (since ARNC0 V0.370).

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ID#123950 : solved problem, solved since V0.390

Position jumps when using G25 or G180 together with G92.

Position jumps occurred on the CNC axes if G25 (tangential arc transitions) or G180 (tangential line-circle programming) was used in a coordinate system rotated with G92.

1.4.4.2.149 NC Software - ARNC0 V0.380

ID#124372 : Information valid since V0.380

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.180

1.4.4.2.150 NC Software - ARNC0 V0.372

ID#124630 : solved problem, solved since V0.372

Refresh of monitor for ncAXIS and ncEXTENCOD

The monitor structure nc_obj->monitor of the NC objects ncAXIS and ncEXTENCOD is refreshed in every cycle of the ARNC0 Manager. Until now, the data was refreshed in every second cycle.

ID#125567 : Information valid since V0.372

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.170

1.4.4.2.151 NC Software - ARNC0 V0.371

ID#123727 : new function since V0.371

NC object name in NC object information.

The NC Object Name from a deployment table is copied to the NC Object Information structure: nc_obj->nc_obj_inf.nc_obj_name

ID#123732 : Information valid since V0.371

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.170

ID#119675 : solved problem, solved since V0.371

Status of ncaccess() wrong

If an NC INIT parameter module was defined in a NC mapping table which was not present on the target, function ncaccess() output ncOK, which was wrong.

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1.4.4.2.152 NC Software - ARNC0 V0.370

ID#122427 : Information valid since V0.370

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.164

ID#122257 : solved problem, solved since V0.370

Stop after a trigger path section (G201).

No other NC programs can be started if a stop is executed immediately after a trigger path section (G201).

ID#121532 : solved problem, solved since V0.370

Position jumps when using multiple interfaces simultaneously in one CNC system.

Position jumps could occur on the Cartesian axes when a stop or accuracy hold is executed if the axes in a CNC system are distributed on multiple interfaces (e.g. Powerlink IF and virtual IF) (since ARNC0 V0.130).

1.4.4.2.153 NC Software - ARNC0 V0.368

ID#120907 : solved problem, solved since V0.368

Error at expanded zero-point offset (G159).

In blocks with G159 (zero-point offset), incorrect values are sometimes used for the zero-point offset due to an error during the index calculation (since ARNC0 V0.260).

ID#120720 : solved problem, solved since V0.368

NC Programm will not be terminated.

In NC programs with very large values for the programmed coordinates, the ends of path sections may sometimes not be detected and therefore the NC program will not be terminated.

ID#120072 : solved problem, solved since V0.368

NC program is terminated at the first block with a zero-point offset (G53 - G59, G159).

Occasionally, blocks may no longer be processed after a block with a zero-point offset (G53 - G59, G159). The program is terminated at this block.

ID#119265 : solved problem, solved since V0.368

The start of an NC block caused the simulation mode "ncCNCSYS" to be switched off.

ID#121767 : Information valid since V0.368

Included drive operating systems

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For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.164

1.4.4.2.154 NC Software - ARNC0 V0.367

ID#120067 : solved problem, solved since V0.367

Axis limit exceeded during circular movement.

The acceleration limits for the circle axes were sometimes exceeded in circular blocks.

ID#119842 : new function since V0.367

Compensation movement when changing the tool length and axis offset.

The entire compensation movement is processed at once if multiple NC blocks occur consecutively, causing a change in the tool length or axis offset (G16, G17, G18, G19, G53 to G59, G158 or tool data number).
This occurs either in the subsequent movement block (if linear block) or immediately before the next movement block (if circular block).

ID#121557 : Information valid since V0.367

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.164

1.4.4.2.155 NC Software - ARNC0 V0.366

ID#119267 : solved problem, solved since V0.366

Changing the direction of the tool length compensation while changing the main level.

The direction of the tool length compensation is automatically changed to the new main level when the main level is changed with G17/G18/G19. Note: The level switching does not affect the direction of the tool length compensation if G16 was used to define the direction of the tool length compensation in the direction of an axis (e.g. G16 Q+).

ID#120917 : Information valid since V0.366

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.164

1.4.4.2.156 NC Software - ARNC0 V0.365

ID#117812 : solved problem, solved since V0.365

The automatic tangential axis may not reach the target position on the shortest distance.

In NC blocks with G00 it can happen, that the automatic tangetial axis may not reach the target position on the shortest distance.

ID#118227 : Information valid since V0.365

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Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.163

1.4.4.2.157 NC Software - ARNC0 V0.364

ID#116912 : solved problem, solved since V0.364

The program is not aborted when a positioning movement is held up at M0/M1.

A positioning movement held up at M0/M1 in the NC program can now be aborted using the NC action "ncMOVE, ncHALT".

ID#116907 : solved problem, solved since V0.364

NC action "ncMOVE, ncHALT" not allowed while in the "ncHALT_SST" state.

It is now also possible to apply the NC action "ncMOVE, ncHALT" while in the "ncHALT_SST"" state (halt via single step operating mode).

ID#116902 : solved problem, solved since V0.364

Positioning not allowed in the NC program while in the "ncHALT_PRG" state.

It is now also possible to start a positioning movement in the NC program while in the "ncHALT_PRG" state (halt via M0/M1).

ID#116917 : new function since V0.364

Addition to the time signal function

The override to be used for calculating the runtime can be specified using an optional parameter for the G function G221.

ID#118222 : Information valid since V0.364

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.163

1.4.4.2.158 NC Software - ARNC0 V0.363

ID#116607 : Information valid since V0.363

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.163

1.4.4.2.159 NC Software - ARNC0 V0.362

ID#115712 : Information valid since V0.362

Included drive operating systems

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For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.162

1.4.4.2.160 NC Software - ARNC0 V0.361

ID#114447 : solved problem, solved since V0.361

Error message in response to correct time signal output

When the path section was programmed with the signal function G220 immediately after a G221, the error 7178:"Signal time longer than path section runtime", occurred even though the time signal was output correctly.

ID#114407 : solved problem, solved since V0.361

Error in edge detection for trigger2 by using the force function.

When forcing Trigger2, positive edges were detected as negative edges.

ID#114012 : solved problem, solved since V0.361

Incorrect shift of coordniate system with G92 for linar axes

The calculation for shifting the coordinate system with G92 was made incorrectly for linear axes (ARNC0 versions 0.345 to 0.360).

ID#114402 : new function since V0.361

New G function: G12

G12 makes it possible to influence the override on the transition arc inserted by the CDC.

ID#115087 : Information valid since V0.361

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.157

1.4.4.2.161 NC Software - ARNC0 V0.360

ID#113837 : new function since V0.360

ARNC0 sampling time not dependent on TC1

Starting with AutomationRuntime V2.80, it is possible to set the ARNC0 sampling time independently from the cycle time of TC 1 when using ETHERNET Powerlink. However, the ARNC0 sampling time must still be a multiple of the ETHERNET Powerlink cycle time and the ACOPOS position controller cycle (400µs).

ID#114757 : Information valid since V0.360

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.157

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1.4.4.2.162 NC Software - ARNC0 V0.350

ID#112712 : solved problem, solved since V0.350

No reverse movement at G170 or trigger event delay.

If a G170 or a trigger event delay ($IF <axis><edge>.EV) was moved in the reverse direction, the CNC system could come to a halt, depending on the course of the contour. This error was present starting with version V0.320.

ID#112707 : solved problem, solved since V0.350

Reverse movement not possible on path sections with G201.

The CNC system came to a halt if reverse movement was made on a path section with G201.

ID#112702 : solved problem, solved since V0.350

CNC monitor not initialized.

The previous values were still displayed in the CNC monitor after starting an NC program. This caused problems if a program halt already occurred at the beginning of an NC program (e.g. M0/M1, G170 or override at zero). The fields are initialized as follows:
NC block monitor: The s_ncblock field is zero.
CNC monitor: The fields s_ncblock[], v_path, pos_ncprog, block_ncprog, t_ncprog, s_ncprog and v_ncprog all contain zero. The fields name_ncprog and nr_ncprog contain the name and program number of the current NC program.

ID#112697 : solved problem, solved since V0.350

CAN synchronization PP2xx

On PP2xx, large jitter in the system timing could cause generated set positions to be transferred to the ACOPOS at the wrong time (too early). The error 104007:"Lag error stop limit exceeded" or 105024:"Cyclic set value mode aborted: Set positions missing" could be triggered if large interruptions occur.

ID#110785 : solved problem, solved since V0.350

CNC halt after program was aborted.

The CNC system came to a halt if an NC program was aborted in the next PLC cycle after startup. "move.status.cnt_ncprog" remained at 1. The error state could only exited by resetting the controller.

ID#113832 : Information valid since V0.350

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.157

1.4.4.2.163 NC Software - ARNC0 V0.345

ID#110847 : solved problem, solved since V0.345

Position error after G92 and active tool compensation (tool offset or tool length compensation)

Starting with ARNC0 0.260: The target position was not calculated correctly in the automatically created transition block after G92 and during active tool offset or tool length compensation.
Up to ARNC0 0.250: The target position was not calculated correctly in the relatively programmed transition blocks after G92 and during active tool offset or tool length compensation.

ID#113827 : Information valid since V0.345

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.157

1.4.4.2.164 NC Software - ARNC0 V0.344

ID#110677 : solved problem, solved since V0.344

After some restart errors, cnt_ncprog remains at 1.

During restart, if the NC program does not match the saved restart information, an appropriate error message appeared, but the system was not restarted, and the restart was not aborted.

ID#110672 : solved problem, solved since V0.344

Not an error message if multiple signals of the same type are contained in the same path section.

In certain situations, time or path entries require multiple G220 or G222 signals be output in a single path section. However, since only one signal of each type can be output at a time, an error message appears. The previously entered signal is retained.

ID#110667 : solved problem, solved since V0.344

G222 signal is ignored during restart.

Reset occurred in a path section with G222, but the G222 signal was not output.

ID#110662 : solved problem, solved since V0.344

Incorrect G222 signal output during path positioning.

The G222 signal was only output one time during positioning within the path section. When the path section was entered backwards, the G222 signal was immediately output forwards, and the change in direction occurred between the correct signal position and the end of the path section.

ID#110657 : solved problem, solved since V0.344

G222 signal output in the wrong position.

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The length of a path section was not a whole number, and the G222 signal was output from the wrong position.

ID#110652 : solved problem, solved since V0.344

CNC system deadlock during G220 / G222.

Multiple path sections with G220 or G222 followed directly after one another and no G221 with synchronous M function was found, causing the CNC system to halt.

ID#110647 : solved problem, solved since V0.344

CNC system deadlock during G221.

A G221 with synchronous M function was run in an NC program, and the NC program finished before a path section was completed with G220 or G222, causing the CNC system to halt at G221.

ID#110642 : solved problem, solved since V0.344

Error message appears without cause for signal functions.

One of the following error messages appeared during the G220 and G222 signal functions, which overlap different path sections, although sufficient runtime and path distance were available: 7177:"Remaining path distance for signal is too long", 7178:"Signal time longer than path section runtime", or 8228: "Path command with undefined length or runtime."

ID#113822 : Information valid since V0.344

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.156

1.4.4.2.165 NC Software - ARNC0 V0.343

ID#106350 : solved problem, solved since V0.343

G126 with G141 together in an NC block

If G126 and G141 were together used, it could occur that the NC programm did not terminate.

ID#109112 : Information valid since V0.343

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.154

1.4.4.2.166 NC Software - ARNC0 V0.342

ID#108477 : solved problem, solved since V0.342

Signal function G220 and path jolt time > 0.

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The signal function G220, which overlaps different path sections, registers error 7163:"Time is longer than section run time " if a path jolt time was set > 0. This error mostly occurred in NC programs with short path sections.

ID#108472 : solved problem, solved since V0.342

Signal function G220 and override.

The override was not correctly calculated during the signal function G220, which overlaps different path sections.

ID#107017 : solved problem, solved since V0.342

Invalid Job-ID at ARNC0 response

It was possible that error 40137:"Internal Error - Invalid Job ID in ARNC0 response" occured after the completion of a CNC program and after the controller of an axis used in the CNC channel was switched off.

ID#108467 : new function since V0.342

Dwell time 3 NC cycles too long.

The delay was 3 NC cycles longer than the programmed dwell time.

ID#108147 : Information valid since V0.342

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.152

1.4.4.2.167 NC Software - ARNC0 V0.341

ID#105257 : solved problem, solved since V0.341

Global NC subprograms are not terminated correctly

A global NC subprogram could not be correctly terminated if it was not completed with M02, M29 or M30 or if more than three axes were used. In this case, the CNC system would freeze.

ID#103052 : new function since V0.341

Init ACOPOS parameter tables

The transfer of parameters from an Init Acopos parameter table (from NC mapping table) to the drive is now also performed when parameters for this drive are present in the NC configuration.

ID#107492 : Information valid since V0.341

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.548
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.152

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1.4.4.2.168 NC Software - ARNC0 V0.340

ID#105182 : solved problem, solved since V0.340

"Divide error" after $TIME or G04

If a dwell time ($TIME bzw. G04) was used in a NC programm when the CNC cycle time was < 1 ms, the system error 25300:"Divide error" (division by 0) occured.

ID#105112 : solved problem, solved since V0.340

Position error after rotation of coordinate system without shift offset (G92)

If the first block of a NC programm contained G92 with rotation but without offset, an additional offset (depending on previous NC programs), was included to the coordinate system.

ID#104915 : solved problem, solved since V0.340

Incorrect rotation direction of the automatic tangential axis after G92

After a block with G92, the automatic tangential axis may not be aligned to the new position via the shortest distance.

ID#103900 : solved problem, solved since V0.340

NC program can get held up if the sign for the movement override is changed

An NC program could get held up if a positive movement override and than a negative movement override was set several times in the NC program.

ID#92615 : solved problem, solved since V0.340

CNC program cannot be aborted if the override is <= 0 when the program is started

If the override was negative or zero at the start of an NC program, then the NC program could no longer be aborted.

ID#106482 : new function since V0.340

Signal functions G221 and G222

The signal function G220, together with G221, outputs a signal to the PLC at a specific time before the target is reached. The signal function G222 outputs a signal to the PLC at a specific remaining path distance before the target is reached. Both signal functions overlap different path sections.

ID#106487 : Information valid since V0.340

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.547

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For ACOPOS 8V1xxx.00-2: ACP10SYS V1.151

1.4.4.2.169 NC Software - ARNC0 V0.330

ID#104207 : solved problem, solved since V0.330

Wrong INIT states after switching off the simulation mode "ncCNCSYS "

If one of the following NC actions
- ncCONTROLLER,ncINIT
- ncDIG_IN,ncINIT
- ncENCODER_IF,ncINIT
- ncLIMITS,ncINIT
- ncGLOBAL,ncINIT

was called in the simulation mode "ncCNCSYS" or "ncCNCSYS+ncDRIVE", the corresponding INIT states ("controller.init", "dig_in.init", "encoder_if.init", "limit.init" or "global.init") should be set to "ncFALSE" after switching off the simulation mode "ncCNCSYS ". Up to now the values of this INIT states could falsely remain on "ncTRUE".

ID#103877 : solved problem, solved since V0.330

Transfer errors during initialization of digital inputs blocked further commands

If an error occurs when transferring a parameter to the ACOPOS during initializing of digital inputs, error 14170:"Error initialize digital Inputs" was indicated.
Up to now, in this case the execution of nearly all further commands was blocked. This problem could be eliminated only with a restart of the PLC-CPU.

ID#104002 : new function since V0.330

New NC structure component "dig_in.force"

ID#103517 : new function since V0.330

Force function for digital Inputs

Digital inputs can now be set with an application using the NC action "ncDIG_IN,ncFORCE".

ID#104342 : Information valid since V0.330

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.547
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.151

1.4.4.2.170 NC Software - ARNC0 V0.324

ID#103692 : solved problem, solved since V0.324

Tool radius from the tool table sometimes was not used (only in V0.270 - 0.323)

If for a tool in the tool table a length or an offset not equal to zero were defined, then the tool radius defined in the tool table was not used.

ID#104337 : Information valid since V0.324

Included drive operating systems

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For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.150

1.4.4.2.171 NC Software - ARNC0 V0.323

ID#102907 : new function since V0.323

Inconsistent referenced status

An inconsistency between the user status "move.homing.status.ok" and the corresponding status on the drive could occur after a change in the simulation mode (ncDRIVE) of an axis (ncSIMULATION, ncSWITCH_ON/ncSWITCH_OFF).

ID#103257 : Information valid since V0.323

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.150

1.4.4.2.172 NC Software - ARNC0 V0.322

ID#102552 : solved problem, solved since V0.322

Error processing structure blocks such as $IF, etc.

If parts of structure blocks were skipped over (e.g. the section from $ELSE to $ENDIF), $ functions contained in the structure block such as $TIME, $RAD etc. were evaluated instead of being ignored.

ID#102532 : solved problem, solved since V0.322

Cycle time violation TC1 during the initialization of a PV interface

A cycle time violation could occur in TC 1 during a PV interface initialization.

ID#101897 : solved problem, solved since V0.322

CNC standstill after consecutive NC blocks with M parameters.

Writing more than 10 NC blocks with M parameters immediately following each other causes a CNC standstill. This error also occurred if more than 10 NC blocks immediately followed each other, which just contained non-synchronous M functions, S or T functions.

ID#87847 : solved problem, solved since V0.322

Incorrect target position after backwards positioning before a G170.

An incorrect target position was calculated on the path during backwards positioning if a stop was executed after the last path section before a G170 using a halt command. Backwards positioning first started when the decoder was resumed using the SYNC command. After error correction, the positioning now starts immediately and reaches the correct target.

ID#102547 : new function since V0.322

EnDat parameters transferred to ACOPOS always work

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From now on, parameters will be transferred from ARNC0 to the ACOPOS as soon as reading motor parameters from EnDat encoders has been completed.
Until now, a motor parameter could be already transferred the ACOPOS, before reading of the motor parameters of the corresponding EnDat encoder has been completed. In this case the value which was read from the encoder worked and not the value transferred from PLC to the ACOPOS.
From now on, always that value works, which is transferred from PLC to the ACOPOS.

ID#102047 : new function since V0.322

Change to the user status, "controller.ready"

The user status, "controller.ready" is always set to ncTRUE for drives in the simulation mode ncCNCSYS or ncCNCSYS+ncDRIVE as well as drives on a virtual interface.

ID#102542 : Information valid since V0.322

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.150

1.4.4.2.173 NC Software - ARNC0 V0.321

ID#100837 : solved problem, solved since V0.321

Command Acceptance (only in Version 0.320)

If a drive that has been successfully initialized ("network.init==ncTRUE"), it is possible that service commands (ncSERVICE,ncSET/ncREAD) are not accepted and error 1220 "Command not accepted network not ready" is given. The same could also occur when downloading ACOPOS parameter table (via service interface) (ncACP_PAR+ncSERVICE, ncDOWNLOAD).

ID#100857 : Information valid since V0.321

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.144

1.4.4.2.174 NC Software - ARNC0 V0.320

ID#100677 : solved problem, solved since V0.320

After stopping an NC program, the CNC system sometimes gets stuck.

If an NC program is stopped shortly before a G170, it is possible that the axes stopped but the number of active NC programs gets stuck at 1. Then no other NC programs can be started.

ID#100672 : solved problem, solved since V0.320

Path speed too high, if a G170 is moved over in the backwards direction.

If v_jump > 0 was configured and a short path section and a G170 follow after a contour corner, then braking does not occur before this contour corner when moving backwards.

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ID#100627 : solved problem, solved since V0.320

Error when initializing the external encoder

When initializing an external encoder with the NC action "ncENCODER_IF, ncINIT", the count direction was not transferred to the drive correctly. The count direction of the motor encoder was transferred, which is incorrect.

ID#100557 : solved problem, solved since V0.320

Error when transferring parameters for controller initialization

During controller initialization (ncCONTROLLER,ncINIT or ncGLOBAL,ncINIT), the parameters PARID_SCTRL_TI_FIL (#283 - Speed Filter) and PARID_CONTROLLER_MODE (#328 – Controller Mode) were not transferred under the following circumstances:
1. ncSIMULATION,ncON (ncCNCSYS mode)
2. ncGLOBAL,ncINIT => Parameters not transferred to drive (because of simulation mode "ncCNCSYS")
3. ncSIMULATION,ncOFF
4. ncGLOBAL,ncINIT => The two parameters are not transferred to the drive!

ID#100547 : solved problem, solved since V0.320

G92 + G170, Decoder stopped a movement block too early.

If a G170 block immediately followed G92 with a transition block without traverse path, then the decoder stopped a movement block too early. (Starting with ARNC0 0.310, transition blocks without traverse paths are automatically inserted after G92, G54-59 and G159.)

ID#100357 : solved problem, solved since V0.320

Position jump when network communication drops out

If communication dropped out during cam profile coupling on a slave axis, then a jump in speed could occur. In this case, the internal deceleration ramp uses the speed resulting from this jump, which is incorrect (the data is no longer transferred to the drive because of the communication failure).

ID#100217 : solved problem, solved since V0.320

Position latch function

A position latch function activated with the NC action "ncLATCH1(2), ncSW_ON" was not completely deactivated with the NC action "ncLATCH1(2), ncSW_OFF". Then it was not possible to activate the other respective position latch function.

ID#100712 : new function since V0.320

New NC structure component "network.nc_sys_restart"

ID#100707 : Information valid since V0.320

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.140

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1.4.4.2.175 NC Software - ARNC0 V0.312

ID#99422 : solved problem, solved since V0.312

ACOPOS CAN synchronization

If systematic deviations occurred between the system time and CAN time (different timers), ACOPOS sometimes reported the error 106002:"Sync Controller: Error tolerance of system time difference exceeded". Starting now, only the timer from the corresponding CAN interface is used for CAN synchronization.

ID#98927 : solved problem, solved since V0.312

Position error at the end of a program without first deactivating an automatic tangential axis:

If an NC program with active automatic tangential axis (G141) is ended without first deactivating the tangential axis (G140) and if the last NC block is a rapid feed block (G00), the tangential axis in this block will travel to the position it had before the activation (G141).

ID#98730 : solved problem, solved since V0.312

Automatic transfer of motor and encoder parameters during ACOPOS startup:

In the past, encoder parameters for ACOPOS (AC122, AC123) were not automatically transferred to the drive via ETHERNET Powerlink upon drive startup. This problem occurred for CAN starting in version V0.240.

ID#98657 : solved problem, solved since V0.312

No compensation movement at NC blocks with tool data number or tool orientation:

The tool compensation (tool offset or tool length) is not taken into consideration if a block without programmed traverse path (e.g.: only M-functions or only G91) immediately follows an NC block with a tool data number (Dxx) or G16. This error only occurs during relative programming.
(since V0.270)

ID#97352 : solved problem, solved since V0.312

Change of CAN response timeout

During the start up of an ACOPOS with AC140 the error 14112:"Timeout for parameter ID" could be output. The extended CAN response timeout only works in ARNC0 V0.292, but not in V0.300 - V0.311.

ID#100702 : Information valid since V0.312

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.131

1.4.4.2.176 NC Software - ARNC0 V0.300

ID#97362 : new function since V0.300

ACOPOS Parameter Tables: Disabling parameter records

Parameter records in an ACOPOS parameter table can now be disabled using the XML data "Disabled='TRUE'".
In the editor for ACOPOS parameter tables disabling parameters is possible starting with V2.4.0.1106.

ID#97357 : new function since V0.300

NC Deployment Tables: Disabling NC object blocks

NC object blocks in a NC deployment table can now be disabled using the XML data "Disabled='TRUE'".
With Automation Studio V2.x this data can only be entered in the editor for NC deployment tables in the "Additional Data" column.

ID#95737 : new function since V0.300

NC Configuration for Virtual Interface

The data structure of the NC configuration for the virtual interface was extended with "pv_name".

ID#97582 : Information valid since V0.300

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.546
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.131

1.4.4.2.177 NC Software - ARNC0 V0.292

ID#97577 : Information valid since V0.292

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.130

1.4.4.2.178 NC Software - ARNC0 V0.291

ID#94157 : solved problem, solved since V0.291

CNC program aborted at circle-circle transitions if tool radius nearly equal to programmed radius

If the tool radius used was equal to the programmed radius of circle segments, the CNC program could have been aborted at circle-circle transitions with error 9221:"Excentric Circles".

ID#93927 : solved problem, solved since V0.291

NC program freezes. 'Illegal float value' is displayed in the CNC monitor as position, remaining distance and speed.

If circle programming in the NC program is inaccurate, NaN or -NaN could occur as result of an internal angle calculation. This would then also cause the target position of the NC block to be NaN or -NaN.

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ID#93902 : new function since V0.291

G90/G91 with G16, G53 up to G59, G92, G159 and Dxx allowed in an NC block.

ID#94162 : Information valid since V0.291

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.130

1.4.4.2.179 NC Software - ARNC0 V0.290

ID#93692 : new function since V0.290

New NC structure component "limit.parameter.a_stop"

ID#93687 : new function since V0.290

New NC structure component "controller.uf" for controller mode "U/f Control"

ID#78992 : new function since V0.290

New NC structure component "controller.mode" for parameter CONTROLLER_MODE

Up to now, the parameter CONTROLLER_MODE could only be transferred to an ACOPOS via service interface. Therefore due to compatibility reasons, after call of NC action "ncCONTROLLER,ncINIT" this parameter is only transferred to the ACOPOS, if the value of "controller.mode" was changed.

ID#93682 : Information valid since V0.290

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.130

1.4.4.2.180 NC Software - ARNC0 V0.280

ID#91887 : new function since V0.280

'External encoder' as coupling master:

Starting now, 'ncEXTENCOD' NC objects can be used as master for cam profile couplings. The slave is not compensated for a master position jump (e.g. after referencing the external encoder).

ID#91712 : new function since V0.280

New NC structure component "controller.speed.t_filter" for parameter SCTRL_TI_FIL

Up to now, the parameter SCTRL_TI_FIL could be transferred to an ACOPOS via service interface only. Therefore due to compatibility reasons, after call of NC action "ncCONTROLLER,ncINIT" this parameter is transferred only, if the value of "controller.speed.t_filter" was changed.

ID#91707 : new function since V0.280

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New status "ok" for download of ACOPOS Parameter data

If processing of NC action "ncACP_PAR,ncSERVICE+ncDOWNLOAD" has been successfully completed, from now on additionally "status.ok=ncTRUE" is set after successful completion of operation, because ACOPOS Parameter data without any parameter to be transferred do not cause an error and after successful completion of operation "status.daten_len=0" is displayed as well as "status.error=ncFALSE".

ID#91567 : new function since V0.280

ACOPOS startup synchronization between ACP10 and ARNC0

If the same ETHERNET Powerlink interface is used to operate ACOPOS modules simultaneously from the ACP10 software and the ARNC0 software, then within the basis initialization the network initialization (ACOPOS startup) is executed synchronized between the ACP10 software (from V1.120 on) and the ARNC0 software. This now makes it possible to alternately connect ACOPOS modules for ACP10 software and ARNC0 software within one Powerlink line. Up to now, using a common Powerlink interface could lead to errors, whereby an unsynchronized ACOPOS reset command triggered by one of the NC software programs interrupted the network communication of the other NC software program.

ID#92062 : Information valid since V0.280

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.120

1.4.4.2.181 NC Software - ARNC0 V0.273

ID#91992 : solved problem, solved since V0.273

Position of the automatic tangential axis after deactivation (G140)

When deactivating the automatic tangential axis (G140), the axis was moved to the position, which it had upon activation (G141). This could cause large traverse paths for 'non periodic' tangential axes.

ID#91987 : solved problem, solved since V0.273

Positon error when restarting an NC program whith automtic tangential axis.

Error 5152:"Position out of 'In-Position-Tolerance' at START/RESTART of CNC move" could occur while restarting an NC program with an automatic tangential axis. Requirements:
Activation of the automatic tangential axis before the first movement block in the NC program
Another NC program must be executed between the abort and the restart.

ID#92057 : Information valid since V0.273

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.106

1.4.4.2.182 NC Software - ARNC0 V0.272

ID#91562 : solved problem, solved since V0.272

Drive start up after change of simulation mode.

If the start up of an ACOPOS was interrupted by switching on the ncCNCSYS simulation mode, the start up could not be completed after switching off the simualtion mode.

ID#91582 : new function since V0.272

Extended possible combination for S- and T-function.

S and T functions are allowed in NC blocks with G16, G53-G59, G92, G159 or tool data number.

ID#92052 : Information valid since V0.272

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.106

1.4.4.2.183 NC Software - ARNC0 V0.271

ID#91552 : solved problem, solved since V0.271

NC operating system download

If a drive had no NC operating system, the startup of this drive was aborted and an NC operating system download could not be executed.

ID#91522 : solved problem, solved since V0.271

ACOPOS operating system start abort.

In certain ACOPOS firmware versions (Boot loader), the operating system start was aborted with the error 100018: "The Data segment at data block read is not yet the last".

ID#91497 : solved problem, solved since V0.271

Contour violation at circular-linear transitions when CDC is active.

A contour violation sometimes occurs at circular-linear transitions with 360° or 0° when the CDC is active.

ID#91662 : Information valid since V0.271

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.106

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1.4.4.2.184 NC Software - ARNC0 V0.270

ID#91242 : new function since V0.270

Selection of CNC after transition block

It is possible to select the CDC (G41, G42) after a transition block (G16, G53-G59, G92, G159, Dxx).

ID#91012 : new function since V0.270

Function expansion of Stop / E-Stop.

Using two new parameters in the user data structure ARNC0CNC_typ cnc_obj.move.stop and cnc_obj.move.e_stop, the behaviour of stopping and emergency stopping of NC programms can be defined.

ID#90852 : new function since V0.270

Function expansion of the tool compensation (G16 and G130/G131)

Orientation of the tool length correction can be selected using G16.
The tool length correction and the tool offset are taken into consideration in the machine coordinate system (G130) or in the programmed coordinate system (G131).

ID#84922 : new function since V0.270

NC deployment table for ARNC0

An NC deployment table can be evaluated for ARNC0. Version 2.4.0 with upgrade 1105 or higher is required to support this function. ATTENTION: If the Upgrade was not installed, the new data structure element cnc_obj.axes.axis[..].nc_object_name must be set to an empty string ("")!

ID#90412 : Information valid since V0.270

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.106

1.4.4.2.185 NC Software - ARNC0 V0.260

ID#89117 : new function since V0.260

Behavior of non-programmed axes with G92

The behavior of non-programmed axes in the transition block after G92 has been changed. See "ARNC0: CNC Programming Instructions, G-Functions, G92".

ID#89272 : Information valid since V0.260

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.105

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1.4.4.2.186 NC Software - ARNC0 V0.250

ID#87812 : solved problem, solved since V0.250

Position jump after G92 during reverse movement

If another block with G92 immediately follows a transition block (G92) during reverse movement, then a position jump occurs.

ID#87647 : solved problem, solved since V0.250

NC program aborted at G92 + G141

If the automatic tangential axis (G141) was used together with the coordinate system shift (G92), the NC program was aborted with error 10368:"G141 Automatic tangential axis cannot be programmed" (starting with V0.240).

ID#86467 : solved problem, solved since V0.250

Wrong transition block at G92 + G141

Wrong position of the automatic tangential axis in the transition block (G92).

ID#86462 : solved problem, solved since V0.250

Error changing the parameter "limit.block_buffer".

If the value of the "limit.block_buffer" parameter was changed, then the next following NC program started remained inactive (not started) (starting with V0.208).

ID#86457 : solved problem, solved since V0.250

Error using $LIN with G126

If G126 with $LIN was activated between two straight lines, $LIN first takes effect starting at the second rounding path section. If G126 with active $LIN was deactivated in a straight line, $LIN is only effective until the second-to-last rounding path section. As a result, both cases resulted in an axis jump and path speed jump which further caused a violation of the axis and path acceleration limits.

ID#87642 : new function since V0.250

Mirroring allowed in combination with G92

The coordinate system can be shifted using G92 during active mirroring (G21, G22, G23). However, a change in angle is not allowed during active mirroring.

ID#82222 : new function since V0.250

CNC program restart: Saving of decoder synchronous parameters for restart

Decoder synchronous parameters (R, P, EX parameter and cutter diameter at $RAD_IDX) can be saved during the processing of an NC program.
When a restart is executed, the saved parameters are used up to the restart point. This guarantees that the desired restart point is reached even if the parameters from the application have been changed.

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ID#87677 : Information valid since V0.250

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.102

1.4.4.2.187 NC Software - ARNC0 V0.243

ID#86092 : solved problem, solved since V0.243

CDC: incorrect 0/360° distinction at circle/circle transitions

At circle-circle transitions with interior contact and opposite direction of rotation, the distinction between the transition angles 0° and 360° was made incorrectly.

ID#86082 : solved problem, solved since V0.243

Incorrect CDC calculation at circle/circle transitions with transition angle near 180°

At a transition angle equal to 180°, the circle intersections were calculated correctly, but the wrong intersection was selected.

ID#86097 : new function since V0.243

CAN drive startup

During drive startup on the CAN bus, a delay for checking the boot status (2 or 3 seconds) was added after Phase 20: "BsLoader start after SW reset" and Phase 50:"ACOPOS operating system start".

ID#86087 : Information valid since V0.243

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.069

1.4.4.2.188 NC Software - ARNC0 V0.242

ID#84947 : solved problem, solved since V0.242

Abort of an CNC programm at the end of a path section not possible.

Abort of an CNC programm at the end of a path section not possible.

ID#85407 : Information valid since V0.242

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.069

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1.4.4.2.189 NC Software - ARNC0 V0.241

ID#84402 : solved problem, solved since V0.241

System blocked at blocks with G126

At blocks with G126, the ARNC0 system can become blocked when there are low values for speed or acceleration.

ID#83882 : solved problem, solved since V0.241

Error rotating the coordinate system (G92)

A position jump occurs in the transition block if a block only with commentary follows immediately after G92.

ID#83877 : solved problem, solved since V0.241

Error accepting the CDC selection from the Init parameter module

If "CDC selection = ncBLOCK" (G137) is set in the Init parameter module, the decoder initialization is aborted with the error 10105:"Incorrect Parameter ". CDC selection "ncDIRECT" and "ncINDIRECT" both function.

ID#83797 : solved problem, solved since V0.241

Incorrect monitor data for the current actual position of an axis

When using an external encoder, sometimes the actual position of an axis was displayed incorrectly in the monitor data. This problem only occurred on axes connected with ETHERNET Powerlink.

ID#83382 : solved problem, solved since V0.241

Reverse movement in NC programs with G92

In the first movement block (transition block) after G92, sometimes the axis positions jump during the reverse movement.

ID#83377 : solved problem, solved since V0.241

G92 with rotation of the coordinate system

If all axes used in the system are not programmed after G92 in the first movement block (transition block), sometimes the target position of the transition block is calculated incorrectly.

ID#81692 : solved problem, solved since V0.241

Incorrect transfer of ACOPOS parameters

Parameter values, which were only valid in ACP10sys - versions 1.xxx, were not correctly transferred to the ACOPOS with the NC action "ncSERVICE, ncSET+ncDATA_TEXT". Instead of sending an error message, the last value transferred was used for the new parameter. Starting now, when a parameter ID is defined which is not contained in the ACOPOS operating system version being used, error 14187 (CAN) or 15187 (Powerlink) is output: "Invalid parameter ID for the ACOPOS operating system version being used".

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ID#78932 : solved problem, solved since V0.241

Dip in the path speed when using the G170

If a G170 was used in a CNC program, the path speed was reduced at the corresponding transitions, even though the decoder was synchronized in time. This problem only occurred when the deceleration distance before the G170 was longer than the path section before the G170.

ID#84927 : Information valid since V0.241

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.069

1.4.4.2.190 NC Software - ARNC0 V0.240

ID#83357 : solved problem, solved since V0.240

Error when restarting an NC program

If the axes were positioned to the restart point using a positioning command, the saved restart information was sometimes overwritten.

ID#82310 : solved problem, solved since V0.240

NC program cannot be resumed after G170

If an NC program was interrupted with movement HALT when the axes arrived at a G170, the NC program could no longer be resumed.

ID#81180 : solved problem, solved since V0.240

CNC parameter 'limit.elements'

As of now, the CNC parameter 'limit.elements' is being evaluated again. It was not being evaluated after version V0.132.

ID#78607 : solved problem, solved since V0.240

Dip in the path speed when feed override >100%

If a feed override "F_override" >100% was used, the path speed was reduced to the programmed feed at the transition between two NC blocks. The new operating mode G112 makes it possible to prevent the path speed from reducing at block transitions.

ID#82217 : new function since V0.240

Restart function update

- Restart of CNC programs started with offset
- Restart point at preset path position or at preset block number
- Restart point can lie anywhere before or after the stop point

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ID#82207 : new function since V0.240

Starting CNC programs at preset block number "Nxxxx"

The start position for a NC program can be defined in bytes as file offset or as block number.

ID#82202 : new function since V0.240

Extended value range for "F_override"

The value range for "F_override" has been extended and is now 0 to 42,949,672.95%. The data type of the corresponding structure components was increased from UINT to UDINT. This makes it possible to implement a 'fast mode' for CNC systems. However, the maximum possible feed rate is limited by the preset axis limit value.

ID#80107 : new function since V0.240

Maximum number of CNC channels is now 8

AutomationStudio 2.4.0 with Upgrade V2.4.0.1103 or higher is required.

ID#83362 : Information valid since V0.240

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.068

1.4.4.2.191 NC Software - ARNC0 V0.235

ID#81622 : solved problem, solved since V0.235

Error when switching on the controller

Sometimes the controller was switched off by the ARNC0 without an error message immediately after being switched on. This was a very rare error.

ID#81452 : Information valid since V0.235

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

1.4.4.2.192 NC Software - ARNC0 V0.234

ID#81447 : Information valid since V0.234

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

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1.4.4.2.193 NC Software - ARNC0 V0.233

ID#80922 : solved problem, solved since V0.233

Incorrect assignment of error and NC action (command)

A JobID for the NC action "ncCONTROLLER, ncSWITCH_ON"" was acknowledged immediately after the command was accepted. If an error then occurred on the drive (e.g. due to activation of the quickstop input), the reported errors were entered with this JobID. Because this JobID was already acknowledged, it was possible that it was already occupied by another command. As a result, the reported errors would be transferred to the wrong command. If positioning was active, the "move.basis.status.in_pos" would not be set to "ncWAHR" after the movement was successfully completed.

ID#80952 : Information valid since V0.233

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

1.4.4.2.194 NC Software - ARNC0 V0.232

ID#80215 : new function since V0.232

Additional information was added to the individual error texts using the block number.

ID#80170 : new function since V0.232

Function expansion G126

- $LIN is used so that the rounding radius is traversed at constant path speed.
- The entrance speed to the rounding radius can be increased using $VE <factor>.
This functions can cause the axis acceleration limits to be exceeded.

ID#80927 : Information valid since V0.232

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

1.4.4.2.195 NC Software - ARNC0 V0.231

ID#80917 : Information valid since V0.231

Included drive operating systems

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.543
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

1.4.4.2.196 NC Software - ARNC0 V0.230

ID#80225 : solved problem, solved since V0.230

Full circle when radius programming

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When a very small arc was programmed using radius programming (dx and dy smaller than 0.001 CNC units), a full circle was traversed instead of the arc.

ID#80067 : solved problem, solved since V0.230

Unwarranted message 8154:"NC block with distance equal to 0.0" at short path sections

If several path sections with the length 0.001 CNC units were traversed consecutively, the message 8154:"NC block with distance equal to 0.0" was output.

ID#80002 : solved problem, solved since V0.230

Movement reversal on the circle when CDC is active

When there was a full circle made up of several circle segments, a straight line was inserted as segment counter to the circular direction.

ID#80007 : new function since V0.230

CNC System: Initialization subprogram

Starting now, the name of a CNC program which is called each time the program starts, can be specified in the CNC data structure "cnc_object.bewegung.ncprogramm.init_prg" (German) or "cnc_object.move.ncprogram.init_prg" (English). When a CNC program is started using the NC action "ncPROGRAM, ncSTART" the CNC program specified in the data structure is first executed as global subprogram.

ID#80435 : Information valid since V0.230

Included drive operating systems:

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

1.4.4.2.197 NC Software - ARNC0 V0.228

ID#80430 : Information valid since V0.228

Included drive operating systems:

Für ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
Für ACOPOS 8V1xxx.00-2: ACP10SYS V1.066

1.4.4.2.198 NC Software - ARNC0 V0.227

ID#80072 : solved problem, solved since V0.227

Insert intersection path (G135):

If circles lying within another were programmed inaccurately, sometimes intersection paths could not be
created. The program was aborted by error 9221:"Excentric Circles".

ID#80425 : Information valid since V0.227

Included drive operating systems:

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For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.199 NC Software - ARNC0 V0.226

ID#80092 : solved problem, solved since V0.226

Unsteadiness in the path speed:

If Cartesian axes were programmed together with linear axes in a block, unsteadiness could occur in the
path speed at a path section transition (spikes with the length of a scanning cycle).

ID#80087 : solved problem, solved since V0.226

Adjust v_jump, a_jump parameters (G105 / G106):

In certain circumstances, the parameters v_jump and a_jump, programmed with G105/G106, were
assigned to the wrong axis.

ID#80082 : solved problem, solved since V0.226

Select/deselect CDC with transition block (G137):

If the CDC is selected and deselected in one block, the CNC program is not always completed. The error
could also occur when a change is made to the selected side right after being selected.

ID#80420 : Information valid since V0.226

Included drive operating systems:

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.200 NC Software - ARNC0 V0.225

ID#80415 : Information valid since V0.225

Included drive operating systems:

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.201 NC Software - ARNC0 V0.224

ID#78437 : solved problem, solved since V0.224

Dip in the path speed after G170 + unsync. M-function

If a combination of G170 and an unsynchronized M-function was used in a CNC program, undesired path
speed reductions could occur at tangential transitions in the subsequent path sections.

ID#76215 : solved problem, solved since V0.224

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System crash when updating the NC block monitor

If an NC program which calls global NC subprograms was moved backwards with a turned-on NC block
monitor, the CNC crashed upon entry into the global NC subprogram (page fault).

ID#80102 : new function since V0.224

CNC monitor update:

The name of the active NC program or global NC subprogram is displayed in the CNC monitor.

ID#80097 : new function since V0.224

Updates to the cutter diameter compensation

The following new functions have been added to the mode "Activate/Deactivate CDC Indirectly with Entry
or Exit Block" (G137):
- Deactivate CDC with exit block
- Activate CDC in the circular block
- Deactivate CDC in the circular block
- Change editing side in the circular block
- Change editing side with transition block

ID#80410 : Information valid since V0.224

Included drive operating systems:

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.202 NC Software - ARNC0 V0.223

ID#78015 : solved problem, solved since V0.223

Path speed reduction after G92+rotation

After a block with G92+rotation and the parameter v_jump = 0, a stop was always made at tangential path section transitions.

ID#77710 : solved problem, solved since V0.223

Motor parameters not transferred for resolver motors to the drive

The motor parameters from resolver motors were no longer transferred automatically from the NC configuration object to the drive (starting with V0.220).

ID#77685 : solved problem, solved since V0.223

Syntax error at G200 / G201

If G200/G201 <axis><edge> was followed immediately by 'End of Line', error 10200:"Unknown or missing letter in the NC program" was output (starting with V0.205).

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ID#80437 : Information valid since V0.223

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.203 NC Software - ARNC0 V0.222

ID#77330 : solved problem, solved since V0.222

CNC System: Path speed interruption at circle-circle transitions (r=const)

An undesired reduction in path speed can occur at tangential transitions between circle segments with the same radius.

ID#80405 : Information valid since V0.222

Included drive operating systems:

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.204 NC Software - ARNC0 V0.221

ID#80210 : solved problem, solved since V0.221

Full circle with cutter diameter compensation (CDC)

If a full circle was traversed with active CDC, a position jump could occur on the circle axes at the end of
the circle (starting with V0.220).

ID#80205 : new function since V0.221

CNC System: Software connection of trigger sources

Any axis within the ARNC0 can be defined as trigger source for a CNC axis. To do this, the reference to the
axis object with the desired (HW) trigger inputs must be specified in the data structure
"cnc_object.achse.achse[].trg_quelle.nc_object" (German) or
"cnc_object.axis.axis[].trg_source.nc_object" (English). The defined trigger source is transferred using the
NC action "ncAXIS, ncINIT".

ID#80400 : Information valid since V0.221

Included drive operating systems:

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.2.205 NC Software - ARNC0 V0.220

ID#80200 : solved problem, solved since V0.220

Error message for G201 together with tangential axis:

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If G201 was used together with the tangential axis, error 10106:"Event not allowed at current module state
" occurred on an axis.

ID#80195 : solved problem, solved since V0.220

CNC program blocked with M0/M1:

The processing of a CNC program was blocked if a synchronous M-function and M0 or M1 occurred
together in an NC block (starting with V0.202).

ID#80190 : solved problem, solved since V0.220

Position jump during reverse movement of a CNC program

During reverse movement of a CNC program, a position jump could occur on all axes when entering a path
section.

ID#80185 : solved problem, solved since V0.220

CNC System: Reverse movement of CNC program not possible with G92+rotation

CNC programs in which the coordinate system rotates, could not be moved backwards (starting with
V0.208).

ID#80180 : solved problem, solved since V0.220

CNC program cannot be resumed after restart.

The CNC program was unable to be resumed following a CNC program restart (starting with V0.208).

ID#80165 : solved problem, solved since V0.220

SW limit monitor:

A rounding error sometimes caused the values for the SW limits to differ from the default values in the axis
structures. The values could deviate in the positive direction by a maximum of the unit factor of the
corresponding axis ("cnc_object.axis.axis[].unitfactor").

ID#80160 : solved problem, solved since V0.220

Straight-circle transitions with cutter diameter compensation

At straight segments which are almost perpendicular, sometimes the intersection between straight segment
and circle were not calculated correctly. The CNC program was aborted with Error 8134 or 8136:"Radius
difference between start and end ".

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ID#80155 : solved problem, solved since V0.220

Full circle with cutter diameter compensation (CDC)

If the path section transition in a full circle is not exactly tangential, sometimes the full circle is not traversed
when CDC is active.

ID#76802 : solved problem, solved since V0.220

CNC System: CNC program is blocked with G201

The processing of a CNC program was blocked using G201 (starting with 0.208).

ID#80150 : new function since V0.220

The dependent libraries "ncda_lib" and "nccnccom" transferred to "ncglobal"

The functions from the libraries "ncda_lib" and "nccnccom" were transferred to "ncglobal" (starting with
V0.300).
NOTE: These libraries must first be removed from the current project using the Library Manager before
updating to ARNC0 0.220.

ID#80145 : new function since V0.220

Download of ACOPOS parameter data:

New NC actions "ncSERVICE+ncACP_PAR, ncDOWNLOAD" for transferring the parameters contained in
the ACOPOS parameter data (XML data with the format used for ACOPOS parameter tables) to the
ACOPOS.

ID#80140 : new function since V0.220

Loading the INIT parameter module:

Update to the data structure in the NC objects ncAXIS and ncCNCSYS (German/English):
"global.init_par". The data from the specified INIT parameter module can be loaded to the corresponding
user data structure of the NC object using the new NC action "ncGLOBAL, ncLOAD" or
"ncGLOBAL, ncLOAD+ncINIT". If the option "+ncINIT" is set, the NC action "ncGLOBAL, ncINIT" is then
automatically executed.

ID#80135 : new function since V0.220

CNC System: Updated monitor data structure

In the CNC monitor data structure "cnc_object.monitor", the currently processed NC block number (N....)
"satz_ncprog" (German) or "block_ncprog" (English) are displayed.

ID#80130 : new function since V0.220

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Change of CNC movement parameter

The maximum size of an NC block was increased from 36 to 52:
German: "cnc_object.bewegung.ncsatz[52]"
English: "cnc_object.move.ncblock[52]"

ID#80125 : new function since V0.220

CNC decoder parameter update

Update to CNC data structure with initialization variables for CNC special functions:
German:: "cnc_object.decoder.parameter.wrk"
- "kreisersatz" (für G37)
- "konturverletzung" (für G39)
- "schnittpunktsatz" (für G134)
English: "cnc_object.decoder.parameter.cdc"
- "circ_replace" (für G37)
- "contour_violation" (für G39)
- "intersection_path" (für G134)
The element entries are transferred by calling the NC action "ncDECODER, ncINIT".

ID#80337 : Information valid since V0.220

Included drive operating systems

For ACOPOS 8V1xxx.00-1: ACP10SYS V0.541
For ACOPOS 8V1xxx.00-2: ACP10SYS V1.062

1.4.4.3 1A4000.02 Visual Components

1.4.4.3.1 HW/SW Config

ID#131285 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.2.0002 [D2.85]

Confusing note about new Visual Components SG3 version

The following message appears when opening an SG3 project:
"A new version of Visual Components has been installed.
Do you want to upgrade?"

It does not say that it is an upgrade of the SG3 version of Visual Components.

ID#124415 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.0002 [D2.85]

If the visualization folder in the logical/physical folder is written in upper case, then the visualization can´t be chosen in the VNC dialogue

ID#91313 : new function since V2.5.2.0002 [E2.85]

VNC support for terminal panels

VNC connections are also possible on terminal panels.

1.4.4.3.2 Libraries

ID#145258 : solved problem, known since V2.5.2.0010 [C2.86], solved since V2.5.2.0015 [F2.86]

VA_CopyMemToScreen and VA_CopyScreenRect not working for rotating displays (ROT=270)

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ID#145223 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0011 [D2.86]

VISAPI function VA_LoadBitmap always returning Status= 7196 (incorrect graphics format)

An expansion in file I/O causes the VA_LoadBitmap function to always return status 9196 (incorrect graphics format). The PNG file cannot be loaded correctly.

ID#140450 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0015 [F2.86]

Visualization freeze after drawing bitmap several times with the VA_BlitBitmap() function

If the following functions (VA_LoadBitmap,VA_BlitBitmap, and VA_FreeBitmap) are used to write images to the display cyclically, then a short time later the display freezes and input/output operations can no longer be utilized.

ID#140360 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0015 [F2.86]

Visapi library: Cycle time violation if VA_FreeBitmap() tries to free up a 24-bit PNG file.

ID#138780 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0011 [D2.86]

VA_GetActAlarmList causes page fault when called twice

If the VISAPI function VA_GetActAlarmList is called a second time, the target crashes with a page fault.

ID#133035 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.2.0005 [I2.85]

4-digit year output with VA_GetExAlarmList

If the VA_GetExAlarmList function is used with VC SG4, then the year is output with four digits. The help documentation and VC SG3 use the correct 2-digit version.

ID#129943 : solved problem, known since V2.5.2.0004 [G2.85], solved since V2.5.2.0104 [F2.87]

VA_FreeBitmap() memory leak

The VA_Free Bitmap() function doesn't free up all of the memory reserved for the PNG file.

ID#129515 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [E2.85]

VcScrSht always returns status 1001

VcScrSht always returns Status 1001 if the touch screen hasn't been operated yet before the function has been called.

ID#129420 : solved problem, known since V2.4.1.0026, solved since V2.5.2.0100 [A2.87]

Because of a dependency mismatch of Visapi it is not possible to use the screenshot library (VCScrSht)

ID#128690 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0014 [E2.86]

The functions VA_GetAlCurPos and VA_NGetAlCurPos return false Values if the alarmcontrol is used in endless mode.

ID#126660 : solved problem, known since V2.5.1.0007 [G2.82], solved since V2.5.2.0005 [I2.85]

Status 7000 for VA_Saccess after booting the panel as long as touch isn't being used.

After booting the panel, the VA_Saccess function always returns status 7000. The status only goes to 0 the first time the touch screen is pressed. Only then are the subsequent VISAPI functions executed.

ID#117835 : solved problem, known since V2.5.0.0021 [T2.80], solved since V2.5.2.0104 [F2.87]

VA_GetCalStatus always returns status 65535 for a VC SG3 object

1.4.4.3.3 SG3-SG4 Converter

ID#137635 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0007 [V2.85]

Error after project conversion. -> Compiler error 7050

On some pages, a "Build All" after a project conversion results in compiler error 7050: "The input order has an incorrect format".

ID#131815 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.2.0002 [D2.85]

Incorrect LED conversion

If a VC object with hardware keys is converted, then the LEDs (actions) configured for the keys are assigned to incorrect keys after the conversion (or not converted at all).

ID#126960 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.0002 [D2.85]

Error message when converting a VC SG3 visualization to VC SG4

The error message that appears when converting when a font isn't installed on the computer is not expressive.

ID#117988 : solved problem, known since V2.4.1.0021, solved since V2.5.1.0019 [J2.83]

Printer buffer overflow alarm output in converted projects

If a converted project is downloaded to the runtime system, the printer buffer overflow alarm is output. This alarm corresponds to the actual "Battery Discharged" alarm. When converting from VC SG3 to VC SG4, the "Internal Error" that is no longer supported in VC SG4 is converted as well. This causes the following alarms to be shifted, resulting in the faulty error output described here. To solve this problem for projects that have already been converted, the alarm texts can be switched around so that the "Internal Error" is placed at the back.

1.4.4.3.4 SG3 Common

ID#127380 : solved problem, known since V2.4.0.0011, solved since V2.5.1.0019 [J2.83]

Incorrect version ID for VC SG3 modules (V1.00)

The VC SG3 system modules incorrectly didn't have the expected version ID of V1.4x. Instead, they were shown as V1.00 in AS.

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1.4.4.3.5 SG3 Editor

ID#139133 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.1.0020 [K2.83]

Importing a VC SG3 object no longer works

If an exported VC SG3 object is reported, then all files from the directory containing the export (.txt) file are copied, even if they are not part of the export data. This can result in large amounts of data being copied. The reason for this is a change in the export format for VC SG3 objects. The import is now aborted when the export format is invalid. If an error message appears in the output window that states that an EXPORTDIR or EXPORTFILE key could not be localized, then the export file format is invalid. In this case, the VC SG3 object should be re-exported to update the export format.

ID#138620 : known problem since V2.5.1.0019 [J2.83], correction planned for V2.5.1.0020 [K2.83]

VC runtime objects not replaced in the project

When opening an existing project with VC objects, not all VC objects are updated before the transfer takes place, e.g. the aplib.br module is not updated to the current version.

1.4.4.3.6 SG3 Runtime

ID#148405 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.0016 [G2.86]

SG3: Backlight not switching off if bitmap blinking

The backlight does not switch off after the configured time if a bitmap is continuously flashing (hide/show).

ID#147970 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.0016 [G2.86]

VC SG3 / P127 crash or freeze with a high CAN load

ID#144993 : solved problem, known since V2.5.1.0024 [N2.83], solved since V2.5.2.0018 [H2.86]

Bitmaps no longer displayed on the PP35

Bitmaps on a PP35 are no longer displayed after a page change.

ID#142030 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.1.0024 [N2.83]

Slow page change on PP35

A blank page is displayed for about a half second when switching between two display pages.

ID#141970 : solved problem, known since V2.5.1.0020 [K2.83], solved since V2.5.1.0024 [N2.83]

VC SG3: Page fault in vcinter if switching to a page with a locked input control

In VC SG3, if switching to a page with a single input control (e.g. string input) that's locked, the panel crashes with a page fault in vcinter.br.

ID#141360 : solved problem, known since V2.5.2.7000, solved since V2.5.2.0018 [H2.86]

Incorrect display of bitmaps on the PP3

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Some bitmaps are displayed totally incorrectly so that the subject can no longer be discerned.

ID#139525 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.1.0024 [N2.83]

VC SG3 - Focus problems with locking

If a page contains several input fields that are locked using a locking variable, then the focus can only be seen if the first field is unlocked.
If the other input fields are unlocked, the focus still can't be seen until the first input field is unlocked as well.

ID#139353 : solved problem, known since V2.5.0.0010, solved since V2.5.1.0020 [K2.83]

Entering information in the password control causes a crash

If something is entered in a password control (regardless of whether it's a valid or invalid password), then the panel crashes with a page fault.

ID#139330 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.1.0024 [N2.83]

VC SG3 - Page fault downloading ddpdcx55.br

If the project is transferred to the target via an online connection, then a page fault occurs when the ddpdcx55.br module is downloaded. A CF can be created with the PVI Transfer tool as a workaround.

ID#138870 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.1.0024 [N2.83]

VC SG3 - Problems with "cursor back" when hiding input fields

If a page contains several input fields that are hidden using a status variable, then the focus is set to the first input field in the input order when using the "cursor back" key action if an input field should be skipped (input field invisible).
If the first input field is hidden, then the cursor disappears and only returns when switched back to the first input field.

ID#136813 : solved problem, known since V2.4.0.0011, solved since V2.5.2.0018 [H2.86]

"Disable cursor movement on Enter" not working in VC SG3 editor

This option is not taken into account.

ID#136140 : solved problem, known since V2.5.2.0003 [F2.85], solved since V2.5.2.0005 [I2.85]

Watchdog or I/O cycle time violation if Power Panel warm

On some Power Panel devices, it's possible that the I/O bus is blocked because of timing problems when starting the VC SG3 visualization.
This results in an I/O cycle time violation (27306) or a watchdog error (9206), and the panel starts in service mode.
This problem could only be reproduced in this regard with the X2X bus.

ID#134840 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0019 [J2.83]

PP35: Focus initially set to the second input field

When switching to a page with numeric input on a PP35 (VC SG3), the focus is set to the second element (according to the TAB order), not the first.

ID#134815 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.2.0005 [I2.85]

Crash if the input focus is set to a locked element

If the focus is set to a locked input field, the target crashes with a bus error.

ID#133345 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0019 [J2.83]

String termination missing when outputting a string in VC SG3

If a string that is displayed in a string output control is replaced by one that's shorter, then only overwriting takes place.
Any excessive characters from the old string remain displayed.

ID#132515 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.2.0005 [I2.85]

Error 27306 when starting the VC SG3 visualization

On some Power Panel devices, it's possible that the I/O bus is blocked because of timing problems when starting the VC SG3 visualization.
This results in an I/O cycle time violation (27306), and the panel starts in service mode.
This problem could only be reproduced in this regard with the X2X bus.

ID#129945 : solved problem, known since V2.4.0.0011, solved since V2.5.2.0006 [J2.85]

Page fault in vcinter if task deleted on Power Panel

The task contains a string array variable that is being used for listbox display on the current page.
If this task is deleted in monitor mode, then the panel crashes with a page fault in vcinter.

ID#128065 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0024 [N2.83]

Can't start CAN visualization if all configured CAN panels are not connected

The CAN visualization doesn't start if the CAN panels are connected to different IF cards.

ID#117855 : solved problem, known since V2.4.1.0020, solved since V2.5.1.0020 [K2.83]

Using the VNC library on an IPC 5000 with an ATI chipset crashes when establishing the VNC connection.

1.4.4.3.7 SG4 - Common

ID#137225 : solved problem, known since V2.5.2.0001 [B2.85], solved since V2.5.2.0011 [D2.86]

Returning from screensaver executes touch action on target page

When returning from the screensaver, e.g. a button will be pushed.
This only occurs if pressing the screensaver page in the area where the button is.
The button then carries out the configured action.

ID#138243 : new function since V2.5.2.0006 [J2.85]

X20 support

Support for CPUs in the X20 family (x86 Celeron-based).

ID#101195 : new function since V2.5.2.0002 [E2.85]

New function: Edit Up / Edit Down

A description of new functions can be found in the AS online help (Visual Components SG4).

ID#150825 : known problem since unbekannt, correction planned for V2.5.2.0020 [J2.86]

Only one visualization starting in Runtime even though it's possible to configure several PW35 projects

For all other PW35 projects, the following entry is generated in the logbook: "25004: AR-RTK: Object already exists".

1.4.4.3.8 SG4 Compiler

ID#150008 : solved problem, known since V2.5.2.0015 [F2.86], solved since V2.5.2.0017 [H2.86]

Compiler warning despite correct configuration

If a PS2 keyboard is inserted as slave hardware for a local visualization (possible with APC/PPC and IPC möglich), then the user receives two warning regarding VNC during compilation.

ID#143773 : solved problem, known since V2.5.1.0023 [M2.83], solved since V2.5.2.0011 [D2.86]

Missing highlighting for linker warning

In the German Automation Studio, VC linker warnings are not highlighted using an appropriate color.

ID#142588 : solved problem, known since V2.5.2.3007, solved since V2.5.2.0101 [B2.87]

Data points for the entire visualization mixed up at runtime after adding a data point to the visualization

If a new data point is added to the visualization, a build may result in data points becoming mixed up in the entire visualization at runtime. A build all must be carried out to get around this problem.

ID#136738 : solved problem, known since V2.5.2ßeta, solved since V2.5.2.0007 [V2.85]

TTC font support

TTC (TrueType Collection) available in Windows are not supported by the VC runtime system. For this reason, the VC compiler generates several TTF files from these TTC files. They are then transferred to the target system. High demands are placed on memory if several fonts are used from one TTC file. Each of the generated TTF files roughly corresponds to the size of the TTC file that it was created from. Fonts that are installed with a TTC file should therefore be viewed as separate fonts. The approximate memory usage can be calculated as follows:

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Memory demands = (number of fonts used from the TTC)*(size of the TTC file).
Ex.:
A TTC file of 5 MB supplies 4 fonts (Font_1, Font_2, Font_3, Font_4).
Font_2 and Font_3 are used in the VC object. Approximate memory usage on the runtime system can be calculated as 2 * 5 MB = 10 MB. Around 20 MB are needed for a secure B&R system (3 partitions) on the CompactFlash card.

ID#132750 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.2.0005 [I2.85]

vccpopup not inserted with "Build All"

The BR module "vccpopup" is not inserted during a "Build All". The project's temporary directory must be deleted first.

ID#124265 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.2.0005 [I2.85]

Visualization doesn't start if a name contains 01 or 02 at the end

If a visualization is called visu01 (or similar), then compilation takes place normally without errors, but the visualization doesn't start.
The number in the name must be removed for the visualization to function properly.

ID#123785 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.1.0010 [A2.83]

Cannot transfer a visualization to the AC141

Transferring a visualization to the AC141 results in the error "vcresman cannot be opened".

1.4.4.3.9 SG4 Editor - Common

ID#138985 : solved problem, known since V2.5.2.0010 [C2.86], solved since V2.5.2.0101 [B2.87]

Editor crash when deleting a control

This crash only occurs if the corresponding page has not yet been loaded (e.g. opened with a double-click).
The corresponding control must therefore be deleted in the visualization tree.

ID#137005 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0005 [I2.85]

Crash when closing several pages

A crash occurs if several maximized pages in a VC project are closed with the "x" button very quickly.

ID#135940 : solved problem, known since V2.5.1.0016 [G2.83], solved since V2.5.2.0008 [A2.86]

Not possible to insert "Chinese Simplified" language

Since "Chinese Traditional" and "Chinese Simplified" use the same country code, inserting "Chinese Simplified" is not possible ("Chinese Traditional" is inserted).

ID#130800 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Discarded mappings when renaming pages

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If Page2 is renamed and Page1 is named Page2, it will be discarded when the project is opened.

ID#130150 : solved problem, known since V2.5.1.0011, solved since V2.5.2.0005 [I2.85]

Assertion when zooming with <Ctrl> + <+> in the data source editor

When zooming in (<Ctrl> + <+>) in the data source editor, an assertion (message window output) is triggered if the respective node was not expanded beforehand.

ID#129045 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Switching to the "Design" tab when adding an action to a virtual key

If a local action is added to a globally used virtual key, the view switches from the "Keys" tab to the "Design" tab.

ID#128340 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Unable to open SG4 editor

If a visualization didn't possess any hardware mapping the last time it was opened, and then it's compiled while closed (regardless of whether hardware has been connected at this point or not), the SG4 editor cannot be opened anymore until Automation Studio is restarted.

ID#125545 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.2.0007 [V2.85]

Variables defined using stylesheets are discarded when updating control data sources.

ID#119093 : solved problem, known since V2.5.0.0020, solved since V2.5.1.0019 [J2.83]

Monochrome bitmaps displayed in black after project conversion

After converting a Visual Components project from SG3 to SG4, monochrome bitmaps are displayed in black until a change in the palette colors is saved.

ID#117505 : solved problem, known since V2.5.0.0020, solved since V2.5.2.0002 [D2.85]

Black bitmaps at runtime after project conversion

If the project is converted to a grayscale display with 16 colors configured, then the bitmaps may be displayed in black at runtime.
To correct this, the palette must be saved while keeping changes to a minimum. Then the palette can be configured as it was originally.

1.4.4.3.10 SG4 Editor - Controls

ID#141990 : solved problem, known since V2.4.0.0001, solved since V2.5.2.0101 [B2.87]

Brackets mixed up on AlphaPad

The AlphaPad has "{" and "[" as well as "}" and "]" backwards when looking at the layout bitmap compared with the actual key assignment.

1.4.4.3.11 SG4 Editor - Help

ID#127970 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0015 [F2.86]

Variable after plLen is overwritten with 0 when calling VA_wcGetActAlarmList

This problem only occurs if the variable connected to pILen is of type UINT (as described in the help).
If the data type is changed to UDINT, then the following memory location will not be overwritten.

1.4.4.3.12 SG4 Editor - PageDesigner

ID#124440 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.0002 [D2.85]

Crash opening the "Keys" tab

A crash occurs when the keys view should load a page that contains several layers.

1.4.4.3.13 SG4 Editor - Resources

ID#140498 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.2.0008 [A2.86]

Crash while refreshing data source

If the project contains a structure that has the same name as a task, a crash occurs when refreshing the data points.
The same problem occurs when converting SG3 to SG4.

ID#129935 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Connected text changes

Adding a text to a text group makes it possible to change the displayed texts to the controls on the new element.
This occurs if the respective side has not yet been opened.

ID#123160 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.2.0002 [D2.85]

If a new alarm group is inserted, then the colors are not entered in "Appearance" (black).

ID#119798 : solved problem, known since V2.5ßeta, solved since V2.5.1.0010 [A2.83]

Firmly set limits on scaled data points are lost during a datapoint refresh

If limits are specified for scaled data points in the data source, they are reset to <None> when the datapoints are refreshed.

ID#147965 : known problem since V2.5.2.0014 [E2.86], correction planned for V2.5.2.0020 [J2.86]

Change in BitmapIndexOffset not updated completely

If a new element is inserted in a bitmap group and the index of the existing bitmaps changes as a result, this change is not followed through on unopened pages.

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1.4.4.3.14 SG4 Runtime - Alarmsystem

ID#150655 : solved problem, known since V2.5.2.0016 [G2.86], solved since V2.5.2.0018 [H2.86]

Bypass image not set

The bypass image is not written when an alarm is bypassed. However, the display in the alarm list is correct.

ID#150630 : solved problem, known since V2.5.2.0016 [G2.86], solved since V2.5.2.0018 [H2.86]

Group alarm variable no longer set

If an alarm is configured with "Trigger GroupAlarm=True", then the respective group alarm text is displayed when Alarm=Active, but the group alarm variable connected to the alarm group is not set.

ID#150530 : solved problem, known since V2.5.2.0016 [G2.86], solved since V2.5.2.0018 [H2.86]

Alarm system: Acknowledgement image no longer works.

ID#148900 : solved problem, known since V2.5.2.0015 [F2.86], solved since V2.5.2.0016 [G2.86]

Cycle time violation caused by VA_GetActAlarmList if a task is transferred

If an alarm text that contains text snippets is read while overloading with the VA_GetActAlarmList function, a cycle time violation occurs.

ID#146428 : solved problem, known since V2.5.2ßeta, solved since V2.5.2.0015 [F2.86]

Incorrect display of date and time in alarm control

An incorrect date/time was displayed in the alarm control and when reading alarm lists with VISAPI.

ID#146060 : solved problem, known since V2.5.2.0011 [D2.86], solved since V2.5.2.0105 [G2.87]

Cycle time violation by VA_GetActAlarmList

A cycle time violation occurs if the alarm list is modified while the VA_GetActAlarmList function is being called.

ID#144028 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.0101 [B2.87]

Page fault if many alarms generated over a long period of time

A page fault occurs if several alarms occur over a long period of time.

ID#143910 : solved problem, known since V2.5.1.0023 [M2.83], solved since V2.5.2.0101 [B2.87]

Crash by the key action "Alarm system - Acknowledge"

The "Alarm system - Acknowledge" key action causes a crash in only a few projects (invalid OP code).

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ID#143905 : solved problem, known since V2.5.1.0023 [M2.83], solved since V2.5.2.0101 [B2.87]

Key action "Alarm system -> Action: Acknowledge" ineffective

None of the outstanding alarms are acknowledged by the collective acknowledgement command.

ID#143680 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.0101 [B2.87]

Alarm triggers page fault in alarm system

In unusual configurations, a page fault occurs if exactly one alarm should be displayed in an alarm control.

ID#142560 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0101 [B2.87]

Alarm event not output in historical alarm list

If the event is output in the alarm history with text, text+bitmap, or just a bitmap, then it is always output with index 0 regardless of the event (triggered, reset, acknowledge).

ID#142530 : solved problem, known since V2.5.1.0022 [L2.83], solved since V2.5.1.0024 [N2.83]

Page fault in alarm system if scrolling too fast

A page fault occurs in the VC alarm system if the alarm list is scrolled too quickly (using button with focus-dependent key action).

ID#141665 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0101 [B2.87]

Display problem with multi-line alarm texts in one alarm line

Using spacing causes a display problem if displaying several multi-line alarms in an alarm line. When an error occurs, nothing is displayed in the alarm line.

ID#138705 : solved problem, known since V2.5.1.0018 [I2.83], solved since V2.5.1.0024 [N2.83]

String text snippets in the alarm system not always updated in time

When using string text snippets in the alarm system, it's possible that the strings written by the application are not always updated in time, and when an error occurs, empty strings are used.

ID#128010 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

The "Persistent" option for alarm text snippets doesn't work.

The "Persistent" option for text snippets in alarms has no effect.

ID#127845 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Incorrect alarm display for system alarms

If a system alarm is reset, it is not listed in the history.
If a system alarm is triggered and confirmed, the next time it occurs, it will also be marked as confirmed.

ID#127005 : solved problem, known since V2.5.1.0008 [V2.82], solved since V2.5.1.0010 [A2.83]

Acknowledge bit not set if acknowledge array too small

If the acknowledge array is smaller than the number of alarms in the alarm group, the acknowledge bit is set or not depending on the position of the alarm in the project files.
This can occur if alarms are cut out and repasted.
The last alarms in the group are (correctly) not set in the acknowledge array due to its being too small.

ID#151140 : known problem since V2.5.2.0015 [F2.86], correction planned for V2.5.2.0020 [J2.86]

VA_QuitAlarms must be called on the terminal twice with the same parameters for the alarm group to be acknowledged.

ID#138105 : known problem since V2.5.2.0018 [H2.86], correction planned for V2.5.2.0020 [J2.86]

Faulty display when bypassing active alarms

If an active alarm is bypassed from the visualization device, the alarm is reset in the controller, and the bypass lifted, then the alarm is not displayed correctly in the configuration and history.

1.4.4.3.15 SG4 Runtime - Common

ID#151403 : solved problem, known since V2.5.2.0107 [V2.87], solved since V2.5.2.0020 [J2.86]

Umlauts (German characters) not displayed in listbox

Umlauts are shown correctly in text output and drop-down listboxes, but checkmarks are shown in their place in listboxes.

ID#147405 : solved problem, known since V2.5.2.0011 [D2.86], solved since V2.5.2.0018 [H2.86]

Visualization with VNC slave distorted

The visualization display with a VNC slave can be distorted beyond recognition both in the VNC display as well as locally.

ID#147330 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.0015 [F2.86]

Page fault from text snippets without data points

A page fault occurs when using a text snippet without a data point.

ID#145005 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0104 [F2.87]

Application using memory during cyclic operation if fill areas defined without data points

If fill areas are not defined for bitmaps and a color data point is not appended, then memory constantly declines while the application is running.

ID#144363 : solved problem, known since V2.5.1.0023 [M2.83], solved since V2.5.2.0101 [B2.87]

Error code if the screensaver switches to the active page

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A "VC: Function returning error code" message is entered in the logbook if the screensaver wants to switch to the active page.

ID#142455 : solved problem, known since V2.5.1.0021 [K2.83], solved since V2.5.1.0024 [N2.83]

Visualization hangs during operation

Operating the touch screen too quickly may cause the visualization to hang.
The task continues to run normally, but touch no longer works. Values in VC are also no longer updated (e.g. time remains the same).

ID#141015 : solved problem, known since V2.5.2.0006 [J2.85], solved since V2.5.1.0024 [N2.83]

Cycle time violation after switching languages several times

ID#139383 : solved problem, known since V2.5.2.0006 [J2.85], solved since V2.5.2.0009 [B2.86]

Cycle time violation after switching languages several times

ID#137965 : solved problem, known since V2.5.2.0004 [G2.85], solved since V2.5.1.0019 [J2.83]

Incorrect checksum in ALHistory

Performing several warm restarts causes an incorrect checksum in the ALHistory module.

ID#137060 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0104 [F2.87]

Toggle button pressed when closing the touchpad

If a "confirmed" button located directly underneath a touchpad's ESC key, then it will be triggered when closing the touchpad.

ID#135725 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0006 [J2.85]

Incorrect checksum in ALHistory

Performing several warm restarts causes an incorrect checksum in the ALHistory module.

ID#130900 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [E2.85]

VA_GetBrightness returning false values

Values outside of the valid range are returned as well.

ID#128903 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Touch buttons sometime stay in a pressed state.

Touch buttons may remain in a pressed state.

ID#128043 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

Software key remains frozen when using several layers

In rare cases, a software key may remain in a pressed state.

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ID#126795 : solved problem, known since V2.5.1.0007 [G2.82], solved since V2.5.2.0101 [B2.87]

Current keylevel always showing the previous value

After switching the key level, "Current keylevel" continues to show the old value.

ID#126425 : solved problem, known since V2.5.1.0005 [E2.82], solved since V2.5.2.0002 [D2.85]

Incorrect restriction of decimal places

During input, decimal place restrictions do not work correctly if a comma is the first character entered.
If the unit is switched, then the limits for input are only corrected for hardware keys after a page change.
On a touchpad, the problem doesn' occur after switching units.

ID#120758 : solved problem, known since V2.5ßeta, solved since V2.5.2.0018 [H2.86]

Display flickers on APCs with i815E chipset

If Visual Components is running on an APC or PPC with an i815E chipset, then the screen content is sporadically redrawn. This causes the screen to flicker.

ID#117310 : solved problem, known since V2.5.0.0021 [T2.80], solved since V2.5.1.0019 [J2.83]

Crash when transferring the visualization

The target crashes at the end of the transfer, and no trace of the connection can be found. Once the target is restarted, everything works file, but remanent data is lost.

ID#95968 : solved problem, known since V2.4.1.0007, solved since V2.5.1.0024 [N2.83]

Downloading vcresman.br causes crash when updating to a new VC firmware version

If the firmware for the Visual Components modules is being updated and downloading starts, then the procedure is interrupted when the vcresman.br module is downloaded. Right now, the entire memory must be deleted in order for the modules to be transferred to the target successfully.

ID#150615 : known problem since V2.5.2.0016 [G2.86], correction planned for V2.5.2.0020 [J2.86]

Page fault after downloading a change

If a download takes place after assigning a variable in the VC project, a page fault may occur.
#

ID#149495 : known problem since V2.5.2.0016 [G2.86], correction planned for V2.5.2.0020 [J2.86]

Pressing the left or upper display edge activating buttons on the opposing side

If a touch display is pressed on the leftmost or topmost row of pixels, the controls on the opposing side (rightmost or bottommost row) are activated.

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1.4.4.3.16 SG4 Runtime - Controls

ID#150520 : solved problem, known since V2.5.2.0016 [G2.86], solved since V2.5.2.0018 [H2.86]

Drop-down listbox not displayed on the page when changed for the first time

If a string array is connected to a drop-down listbox and the MaxIndex property is enabled at the same time, then the drop-down listbox is not displayed on the page during the first switch.

ID#150525 : solved problem, known since V2.5.2.0016 [G2.86], solved since V2.5.2.0018 [H2.86]

Variables with the value 0 not displayed on the start page

If a variable has the value 0 (initialized by the system or a program) and the value doesn't change, then a "-" is displayed in the numeric field on the start page instead of value.
If the page is changed or the value of the variable is modified (by the application or user input), then the value of the variable is displayed.

ID#148090 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.0018 [H2.86]

Faulty behavior if input started with Enter and not changed

Numeric input (operation with keys) is started with the Enter key.
If the value isn't changed, however, and Enter is pressed again, the value would be limited to -32768.
Pressing Enter again writes this value.

ID#148045 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.0018 [H2.86]

Listbox elements not displayed correctly if the option data point is appended

After a page change, hide/show switching of elements with the option data point doesn't work correctly.
The corresponding elements are not displayed if this error occurs.
The elements are shown correctly again after changing pages once more.

ID#145640 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0012 [D2.86]

Faulty display for TextLengthOverrun with "_" and "|"

The characters "_" (underscore) and "|" (logical OR) mistakenly cause a color change for a TextLengthOverrun.

ID#145365 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0013 [D2.86]

Completion set right when releasing the edit up/down key

ID#144865 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0104 [F2.87]

Modified behavior for focus

If the number pad is opened for one of two input fields and the corresponding control is then made invisible and locked with the status data point, the focus remains on the invisible control instead of jumping automatically to the next input field.

ID#137685 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0013 [D2.86]

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Drop-down listbox showing one element only

If a string array (multiple strings) is appended to a drop-down listbox and a Min/Max data point is also defined in the properties, then only one element of the string array is displayed at runtime. The others are not displayed although the Max data point would certainly have allowed more.

ID#131430 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

VC freeze in drop-down menu without index data point

VC runtime freezes if a drop-down menu is configured with "MultipleStrings" but no index data point is connected to it.

ID#129410 : solved problem, known since V2.5.2.0001 [B2.85], solved since V2.5.2.0002 [D2.85]

Nested textsnippets

Textsnippets containing other textsnippets have to be in the same textgroup,
else datapoint changes can't be detected and the snippets are showing incorrect (old) values.
If you want't to use such snippets in seperate textgroups all of them have to be used on the page to
work correctly. (e.g. use it in a text control)

ID#129030 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0002 [D2.85]

After confirming an entry, the focus doesn't jump to the next entry if it's in a string input field

If a project is configured so that the the focus jumps ahead after confirming input with Enter, then this doesn't work if entering information for a string control.

ID#105828 : solved problem, known since V2.4.1.0024, solved since V2.5.2.0018 [H2.86]

TouchOnLock (status bit 13) reset during page change

TouchOnLock (status bit 13) resets during a page change.
However, this should normally be reserved for the user.

ID#151745 : known problem since V2.5.2.0018 [H2.86], correction planned for V2.5.2.0020 [J2.86]

Last bit of text appears in plain text when canceling password entry in a string control

If the entry is completed correctly, the text is correctly given the PasswordChar.
If the subsequent input is canceled, then the text is no longer masked out.

ID#151310 : known problem since V2.5.2.0018 [H2.86], correction planned for V2.5.2.0020 [J2.86]

Refresh problem for drop-down control if an element outside the visible drop-down range is selected via the Index data point

ID#151135 : known problem since V2.5.2.0107 [V2.87], correction planned for V2.5.2.0020 [J2.86]

Faulty update of drop-down length at runtime

If the number of entries is changed using data points while the control is in edit mode, then it will not be updated.

The number is displayed correctly only after an element is selected or the page is changed.

ID#145020 : known problem since V2.5.2.0009 [B2.86], correction planned for V2.5.2.0020 [J2.86]

No longer possible to change Numlevel with key action if the Lifesign data point is connected.

However, it's still possible to change directly using a connected variable.

1.4.4.3.17 SG4 Runtime - Keyhandling

ID#150535 : solved problem, known since V2.5.2.0016 [G2.86], solved since V2.5.2.0018 [H2.86]

Key matrix not working in AS 2.5.2.16 if connected to the panel object

A key matrix connected directly to the panel object under Runtime / Matrix / Key matrix in an SG4 visualization application doesn't show the pressed key at runtime.

ID#141235 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0018 [H2.86]

Keys not working if 2 consecutive blinking LEDs are in the LED matrix

If an error occurs, the keys no longer work.
Error number 28740 is entered in the logbook.

ID#139985 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0018 [H2.86]

Some hardware keys don't work.

On all devices with keys, each 2-10 hardware key doesn't work.
The affected keys are not in the key matrix and the connected key action is not performed.
However, the respective keys work as soon as a neighboring key is pressed at the same time.

ID#128230 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0005 [I2.85]

Logbook error 28740: "Error in key hardware interface"

After long operation, the key matrix may be lost due to a timeout (FTP connection to internal flash memory, extended high CPU load, etc.).

ID#122178 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.2.0018 [H2.86]

LED update problems with "Controlled from PLC"

If LEDs are set to be "Controlled by PLC", then they are switched on with a strong delay (if all DPs are set at once).

ID#146083 : new function since V2.5.2.0013 [D2.86]

Momentary data point remains set when switching pages

A hardware key is configured with a "momentary" data point.
If this is pressed while the page is changed, then the value remains the "momentary" set value instead of the new value until the key is released.

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1.4.4.3.18 SG4 Runtime - Scaling

ID#141760 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0011 [D2.86]

Up/Down not working correctly for scaled REAL variables

If a REAL variable is scaled (e.g. 0-1 = 0-100%), it's not possible to increment/decrement by a value of 0.1.
It always rounds up or down to the nearest whole-number value.
It's still possible to enter the value using the touchpad.

ID#133398 : solved problem, known since V2.5.2ßeta, solved since V2.5.2.0005 [I2.85]

No input at runtime possible if using inverted scaling

If scaling is used to reverse a value (e.g. 5 to -5), then the control can't take input at runtime.
If the value is set by the controller, the calculation is correct.

1.4.4.3.19 SG4 Runtime – TerminalMode

ID#149835 : solved problem, known since V2.5.2.0104 [F2.87], solved since V2.5.2.0106 [H2.87]

Terminal not working on the X20CP1484

ID#144315 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0011 [D2.86]

Touchpad flickering when opening using the status data point (bit 3)

If the touchpad is opened using the status data point, it flickers as if it were opening and closing the entire time.
Until now, this problem could only be reproduced with onboard AR version V2.85.
This error behavior could not be reproduced by opening the touchpad by touching a control on it.

ID#140973 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0018 [H2.86]

Terminal mode doesn't work if the server gets its IP address from a DHCP server on the network

When an error occurs, the terminal client finds the server with the invalid IP address 0.0.0.0.
As a result, the upload of the terminal visualization is not started.

ID#137045 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0005 [I2.85]

Terminal mode doesn't work if the onboard AR and AR are incompatible. (e.g. onboard V2.82 and AR 2.83)

Terminal mode doesn't work if the onboard AR and AR are incompatible. This is because the Syslib on the server AR is transferred.
Syslib is now no longer transferred to the terminal target.

ID#134035 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.2.0011 [D2.86]

Terminal INA variables not shown after a certain time

If a page change does not take place on the terminal visualization after it has started and the pages are browsed after a few hours, then the variables at the output, which were not displayed at the beginning, are now shown.

The values shown for the variables do not change.

ID#120573 : solved problem, known since V2.5.0.0022 [E2.81], solved since V2.5.1.0019 [J2.83]

Terminal freezes if the visualization is started

Terminal freezes if the visualization is started.

ID#120473 : solved problem, known since V2.5.0.0022 [E2.81], solved since V2.5.1.0019 [J2.83]

Terminal restarts shortly after the visualization is started

Terminal restarts shortly after the visualization is started.

ID#119808 : solved problem, known since V2.5.0.0022 [E2.81], solved since V2.5.1.0020 [K2.83]

Terminal: Current page is not written to the actual page number when starting the visualization

Terminal: Current page is not written to the actual page number when starting the visualization.

ID#116688 : solved problem, known since V2.5.0.0020, solved since V2.5.2.0011 [D2.86]

INA communication disrupted after a page change in terminal mode

After several page changes, INA communication is no longer established.

ID#116495 : solved problem, known since V2.5.0.0020, solved since V2.5.2.0002 [E2.85]

No life sign monitoring for terminal mode

If a server with a terminal is operated, the terminal cannot determine if the server is operating correctly of if the connection has been lost. The correct function of the terminal can be checked by the server using the return status from a VISAPI function.

ID#133120 : new function since V2.5.2.0104 [F2.87]

Terminal target node number and IP address configurable via data module

ID#127400 : new function since V2.5.2.0104 [F2.87]

Should be able to modify node number and IP for terminal visualization using software

The node number and IP address of the terminal visualization can now be configured using a data module that is evaluated when the server is booted and then uploaded to the terminal target. This data module can also be modified at runtime. Each change in parameters requires the server and terminal target to be rebooted.

ID#125913 : new function since V2.5.2.0002 [D2.85]

Clock synchronization with one or more terminals

The VA_TimeSynchonize function makes it possible to synchronize the clocks on the server and terminal, even during operation.

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ID#144213 : known problem since unbekannt, correction planned for V2.5.2.0020 [J2.86]

Status 7130 when using VISAPI functions for terminal visualization

When using VISAPI functions for the terminal visualization application, status 7130 (no connection) occurs after an undefined number of calls.
The VCHandle must then be deleted and re-requested with VA_Setup in order to use additional VISAPI functions.

ID#141585 : known problem since V2.5.2.0007 [V2.85], correction planned for V2.5.2.0104 [F2.87]

Configured gateway for terminal configuration not evaluated

1.4.4.3.20 SG4 Runtime - VNC

ID#143795 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.0009 [B2.86]

VNC operation not possible

Only one click is accepted, but it never releases. Further operation is not possible.

ID#127093 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.2.0002 [E2.85]

VNC refresh problem

Not all picture parts are updated correctly when opening/closing the touch pad.

ID#127088 : solved problem, known since V2.5.1.0008 [V2.82], solved since V2.5.2.0006 [J2.85]

VNC server freezes after certain input on the client. Reopening the client doesn't work.

Entering information on the VNC client causes the connection to fail. A new connection to the VNC server cannot be reestablished. The CPU must be rebooted.

ID#152353 : known problem since V2.5.2.0019 [I2.86], correction planned for V2.5.2.0020 [J2.86]

Crash when entering an incorrect VNC password

A crash may occur if the VNC password is incorrectly entered after a successful login.

ID#147590 : known problem since V2.5.2.0014 [E2.86], correction planned for V2.5.2.0020 [J2.86]

Crash after entering the VNC password

ID#147353 : known problem since V2.5.2.0007 [V2.85], correction planned for V2.5.2.0020 [J2.86]

VNC connection doesn't work on rotated display

If attempting to establish a VNC connection to a rotated XGA display, the connection aborts with an error.

1.4.4.4 1A4000.02 (1.3 Automation Help)

1.4.4.4.1 General

ID#127775 : Information valid since V2.5.2.0002 [E2.85]

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CHM files on the network can no longer be opened after a Windows update

Windows security update KB896358 doesn't allow CHM files on the network to be opened any longer. This only works if the security update is uninstalled.

1.4.4.5 1A4000.02 Automation Runtime

1.4.4.5.1 AR - AC140

ID#128770 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0003 [F2.85]

Onboard AR upgrades for AC14x, EC021, and 80CIS.PS0-x

The Automation Software AS Tools CD contains an update program for updating the onboard AR of the following target systems:
- 7EC021.60-1
- 8AC140.60-1
- 8AC140.60-2
- 8AC140.61-2
- 8AC141.60-2
- 8AC141.61-2
- 80CIS.PS0-2
- 80CIS.PS0-3
- 80CIS.PS0-4

1.4.4.5.2 AR - AC141

ID#132215 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.4.1.1305 [E2.73]

FrmWrite() returns Status 8078 after a long time

If the FrmWrite() function block from the DVFrame library is called for longer times (every 10 ms) and data is being received at the same time, after several hours status 8078 "No available send buffer" is returned on the function block's status output.

1.4.4.5.3 AR - AR010

ID#147795 : solved problem, known since V2.5.2.0013 [D2.86], solved since V2.5.2.0016 [G2.86]

AR010 not starting sometimes if memory text disabled in BIOS

If the memory test is disabled in BIOS to speed up booting, it's possible that AR010 doesn't start. This error only occurs if the computer was turned off for a very short time and there are still data fragments in DRAM.

ID#147010 : solved problem, known since V2.5.1.4120 [K2.83], solved since V2.5.2.4102 [F2.86] [AR010]

Automation Runtime upgrade doesn't work

If AR010 is installed in a directory with a space (e.g. c:\Program Files\BrAutomation\AR010), its upgrade from Automation Studio doesn't work.

ID#146245 : solved problem, known since V2.5.1.4120 [K2.83], solved since V2.5.2.4101 [D2.86] [AR010]

Automation Runtime installation doesn't work

If AR010 is installed in a directory with a space (e.g. c:\Program Files\BrAutomation\AR010), its installation doesn't work.

ID#142870 : solved problem, known since V2.5.1.0021 [K2.83], solved since V2.5.1.0023 [M2.83]

Page fault when using remanent PVs and cold restart

An uninitialized pointer may cause a page fault when using remanent PVs and performing a cold restart.

ID#142375 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0009 [B2.86]

Logger entries shifted chronologically (time zone problem)

Time zone handling in AR010 may cause logger entries to be chronologically shifted. The shift is always by a multiple of an hour.

ID#139040 : solved problem, known since V2.5.2.0004 [G2.85], solved since V2.5.2.0007 [V2.85]

Remanent and/or permanent data lost during power failers on targets with power failure detection (APC)

If targets with power failure detection (APC) store remanent and/or permanent data to LS cards, this data is lost if a power failure occurs. The reason is that the system doesn't recognize the power failure, which prevents the respective data from being copied from DRAM to SRAM.

ID#138555 : solved problem, known since V2.5.1.0018 [I2.83], solved since V2.5.1.0020 [K2.83]

Remanent and/or permanent data lost during power failers on targets with power failure detection (APC)

If targets with power failure detection (APC) store remanent and/or permanent data to LS cards, this data is lost if a power failure occurs. The reason is that the system doesn't recognize the power failure, which prevents the respective data from being copied from DRAM to SRAM.

ID#136930 : solved problem, known since V2.5.1.0018 [I2.83], solved since V2.5.1.0019 [J2.83]

New command line option -w for ar010loader

The new command line option -w (ar010loader.exe -w) can be used to turn off the safety mechanism when exiting Windows. If this option isn't specified, AR010 interrupts a Windows shutdown with a message stating that AR010 must be ended first. This message can be disabled when this option is used.

ID#135635 : solved problem, known since V2.5.1.0008 [V2.82], solved since V2.5.1.0018 [I2.83]

AR010 loader crash when not enough available hard disk or CF space

If not enough space is available on the hard disk or CF, the AR010 loader crashes when starting the project.

ID#134335 : solved problem, known since V2.5.1.4108 [V2.82], solved since V2.5.1.0019 [J2.83]

PVI communication to the target lost for a few seconds

Due to the clock synchronization between AR010 and the Windows system, it's possible that the PVI (INA) communication to the target is lost for several seconds.

ID#133800 : solved problem, known since V2.5.1.4108 [V2.82], solved since V2.5.1.0016 [G2.83]

SRAM data is lost when Windows is shut down while the AR010 is running

If Windows is shut down while the AR010 is running, SRAM data is lost; if the AR010 is closed before shutting down, the SRAM data is saved.

ID#133790 : solved problem, known since V2.5.1.0008 [V2.82], solved since V2.5.1.0019 [J2.83]

INA connection is broken during communication over a longer period of time

If the SharedMemory interface is used for INA communication with an AR010 over a longer period of time, it is possible that the connection is broken. PVI outputs error 4808 "No connection to the PLC" for this broken connection.

ID#131455 : solved problem, known since V2.5.1.0008 [V2.82], solved since V2.5.1.0017 [H2.83]

Clock runs fast

A synchronization problem between AR010 and Windows causes the clock on the PC to run too fast (1-2 minutes per day).

ID#130895 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0014 [E2.83]

INA client no longer works

Forwarding broadcast packets via the Ar010 loader no longer works.

ID#130710 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0014 [E2.83]

Remanent variables on the LS172 are not backed up on the LS when closing or during a Windows restart

Remanent variables that were defined on an LS (SRAM) are not written to the LS during a Windows shutdown.
For this reason, these variables have the value they had the last time the system was started.
To avoid this problem, the AR010_end.exe file must be started before shutting down Windows.

ID#125370 : solved problem, known since V2.5.1.4403 [C2.82], solved since V2.5.1.4105 [E2.82] [AR010]

When upgrading, the English version is always installed

Upgrading the version from Automation Studio always installs the English version, even if a German AR010 version is present on the computer.

ID#123090 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.1.4104 [D2.82] [AR010]

Computer reboots after a warm or cold restart

A possible deadlock may cause the computer running AR010 to reboot after a warm or cold

restart.

ID#122890 : solved problem, known since V2.5.1.4103 [C2.82], solved since V2.5.1.4108 [V2.82] [AR010]

AR010 loader crash if date configured to a year later than 2037

A Windows error results in the AR010 loader crashing whenever the date is set higher than the year 2037.

ID#121595 : solved problem, known since V2.5.1.4102 [B2.82], solved since V2.5.1.4104 [D2.82] [AR010]

Problems booting if C drive not write-protected

If the AR010 target (Windows XP e) is operated on HD_C without write protection, problems occur when booting after a power failure. The loader no longer indicates that the target is in RUN mode although AS says this is the case (online connection already reestablished). The computer restarts if loader restart or shutdown button is pressed.

ID#121570 : solved problem, known since V2.5.1.4102 [B2.82], solved since V2.5.1.4103 [C2.82] [AR010]

Changing the IP address of the Windows interface in the AR010 configurator resets the APC (if AR010 active)

ID#121390 : solved problem, known since V2.5.1.0002 [B2.82], solved since V2.5.1.4103 [C2.82] [AR010]

Serial interface no longer works after a warm or cold restart.

ID#119350 : solved problem, known since V2.5.0.4115 [T2.80], solved since V2.5.1.4103 [C2.82] [AR010]

problems after update

When drivers are updated automatically (e.g. updating AR010 components from the AS setup), the "Internet Connection Sharing" option must be deselected, the dialog box closed with OK, and then reselected.

ID#119120 : solved problem, known since V2.4.0.4187 [V2.71], solved since V2.5.1.4102 [B2.82] [AR010]

AR update from AS doesn't work with default settings

An AR update from Automation Studio doesn't work with the default settings after AR010 is set up. To complete an AR update, more than double the size of the update file (S11 file) in AS needs to be set in DRAM memory. The default setting of 40 MB RAM and 20 MB for the RAM disk doesn't meet this requirement. If these settings are changed to 50 MB and 20 MB, respectively, the AR update can be carried out flawlessly.

ID#118255 : solved problem, known since V2.5.0.4114 [S2.80], solved since V2.5.1.4103 [C2.82] [AR010]

real-time behavior can be negatively affected

The graphic settings are only permitted to be changed if Automation Runtime is NOT started

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because otherwise real-time behavior can be negatively affected.
Real-time behavior can also be negatively affected when opening the Control panel because graphic driver functions are started.

ID#116810 : solved problem, known since V2.4.0.4181 [B2.71], solved since V2.5.1.4102 [B2.82] [AR010]

Automatically setting daylight savings time

Until now, the setting for changing to and from daylight savings time was always active on AR010 (regardless of whether this setting was made in Windows or not). Now, synchronization takes place in that AR010 applies the setting in the window configuration.

ID#116800 : solved problem, known since V2.5.0.4114 [S2.80], solved since V2.5.1.4102 [B2.82] [AR010]

IRQ problem with ACPI Windows XP

Using AR010 in ACPI Windows XP may cause a problem with IRQ assignment due to the dummy IRQ drivers being used. In the worst case, IRQs may be "lost".

ID#138095 : new function since V2.5.2.0006 [J2.85]

Error log output in the console window different than the display in AS

Error log output in the console window is different than the display in AS, e.g. the latest entry is last in the list instead of first.

ID#134005 : new function since V2.5.1.0016 [G2.83]

Synchronization between Windows time and AR010 time can be deactivated using a command line option

Synchronization between Windows time and AR010 time can now be deactivated using the command line option -y (ar010config.exe -y).

ID#124025 : new function since V2.5.1.4105 [E2.82] [AR010]

Check of minimum version for MTCX software and BIOS

The AR010 now checks the minimum version of the MTCX software and BIOS. If the version is too old, an error message is output and the AR010 is not started.

ID#119960 : new function since V2.5.1.4103 [C2.82] [AR010]

Support for watchdog on APC and PPC devices

By default, the watchdog is configured with an interval of 100 msec. If the watchdog shouldn't be uised on the APC/PPC, the configurator is started with the -w option (e.g. ar010config.exe -w). This setting disables the watchdog.

ID#119255 : new function since V2.5.1.4102 [B2.82] [AR010]

Support for NMI logic on the APC

ID#116815 : new function since V2.5.2.0002 [E2.85]

AR010 automatically detects IRQ sharing conflict

When started, AR010 now checks whether known AR010 cards (LS172, LS187, LS189, or LS197) share an interrupt with an unknown PCI device (Windows device). If so, AR010 is not started and an error message is entered under the loader console tab as well as briefly in the status bar of the loader window itself.

ID#115325 : new function since V2.5.1.4102 [B2.82] [AR010]

Service interface expansion

A firmware update should also be made known via the service interface.

ID#113600 : new function since V2.5.1.4102 [B2.82] [AR010]

Support for "data execution prevention"

In order to turn off the support for "data execution prevention, the entry "/NoExecute=AlwaysOff" is set in the Boot.ini file when AR010 is installed as long as Windows XP SP2 is installed.

ID#125050 : Information valid since V2.5.1.0010 [A2.83]

AR010 support removed from 2.5.0.x

Support fo AR010 is only contained in the 2.5.1.x (>= 2.5.1.4 D2.82) product family.

ID#122845 : Information valid since V2.5.1.4104 [D2.82] [AR010]

Powerlink communication fails on DirectX visualizations

Powerlink communication fails when using DirectX visualizations because of the jitter that results. See the AR010 documentation in the Limitations section.

1.4.4.5.4 AR - AR105

ID#119985 : solved problem, known since V2.4.1.0022, solved since V2.5.1.0013 [D2.83]

IRQs from AT keyboards may cause ACOPOS error 14126

When using an AT keyboardwith a controller configuration with Powerlink and ACOPOS, the IRQs triggered by pressing keys may interrupt Powerlink communication (IRQ times too long).

1.4.4.5.5 AR - AR105 Installation Kit

ID#122110 : new function since V2.5.1.4303 [C2.82]

Creation of an installation set for AR105

Creation of an installation set (diskette set) for AR105.

1.4.4.5.6 AR - AR106

ID#141640 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0011 [D2.86]

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Watchdog error using both Ethernet interfaces on the APC

An unmanaged IRQ in the Ethernet driver may cause a watchdog error when using both Ethernet interfaces on the APC.

ID#128135 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

Permanent variables deleted when changing CF

If CF is changed, permanent variables are deleted although the setting in Sysconf is for them to be applied.

1.4.4.5.7 AR - AR106 Installation Kit

ID#122115 : new function since V2.5.1.4403 [C2.82]

Creation of an installation set for AR106

Creation of an installation set (diskette set) for AR106.

1.4.4.5.8 AR - CP2x0

ID#131480 : solved problem, known since V2.4.0.1417, solved since V2.4.0.1450 [X6.50]

Key operation no longer possible

Beginning with AR V2.37, the keys on the CPU can no longer be read or used to trigger a corresponding target boot.

1.4.4.5.9 AR - CP360

ID#99160 : solved problem, known since V2.4.0.1013, solved since V2.4.1.1312 [K2.73]

HWGetTemperature() sporadically returning values that are too high

Due to conversion errors, the HWGetTemperature() function block sporadically returns temperature values that are too high.

1.4.4.5.10 AR - Firmware

ID#147020 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.4102 [F2.86] [AR010]

EPL manager: New firmware

- Error correction: Input data sometimes wasn't shoveled by stations in the last multiplexed cycle in odd multiplexed cycles > 8.
- Lost connections and disturbances on the network sometimes led to SMN network failures. -> Corrected.
- Lost connections sometimes output error 20802, Info 0x1002. -> Timing improved.
- Change: From now on, a poll response timeout must be configured for SMNs on the manager. A calculation aid is being prepared in the Automation Studio help (under Powerlink).

ID#145215 : solved problem, known since V2.5.2.0010 [C2.86], solved since V2.5.2.0014 [E2.86]

X20CPx14x: New firmware

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Onboard EPL function didn't work from Automation Runtime C2.86 -> corrected.

ID#144345 : solved problem, known since V2.5.3.0001 [V2.85], solved since V2.5.2.0011 [D2.86]

EPL Manager 1: New firmware

Support for EPL V2 implemented.

ID#142495 : solved problem, known since V2.5.2.0100 [A2.87], solved since V2.5.2.0009 [B2.86]

New CAN firmware

Error correction: Rx counter counted incorrectly.

ID#141395 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.2.0009 [B2.86]

New firmware: 5LS197.6

Error correction: Problems on PCs with an Intel 945G chipset.

ID#141255 : solved problem, known since V2.5.2.0006 [J2.85], solved since V2.5.2.0008 [A2.86]

Support of X20DO2321, X20DO4321, X20DO4331 and X20DO8331

ID#139205 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

Support of X20CS1020 und X20CS1030

ID#138850 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

New firmware: X20CM1941

Error correction: Jumps in the positioning value sometimes occurred.

ID#138545 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

X67DC1198 update: Period measurement, gate measurement, and bus controller support

ID#138275 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

New firmware: X20DC1196 and X20DC1198

Updates:
- Edge time stamp support.

ID#138270 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

New firmware: X20AT2402 and X20AT6402

Error correction:
- Corrected error message when exceeding the measuerment value of sensor type J.

ID#138265 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

New firmware: X20AI2622, X20AI4622, X20AO2622, and X20AO4622

Updates:
- Limit value adjustment for reset threshold

ID#137885 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0007 [V2.85]

EPL manager: New firmware

Error correction: When booting, it is possible that the following exception is entered in the logbook (incorrect entry): 20807 (Node number used several times).

ID#137700 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0005 [I2.85]

New firmware: X20IF1082

Improved EPL error tolerance.

ID#137430 : solved problem, known since V2.5.2.0004 [G2.85], solved since V2.5.2.0005 [I2.85]

New firmware: X20CP1485, X20CP1486, X20CP3485 and X20CP3486

Improved EPL error tolerance.

ID#137425 : solved problem, known since V2.5.2.0004 [H2.85], solved since V2.5.2.0005 [I2.85]

New firmware: 7XV108.50-51, 7XV116.50-51 and 7XV124.50-51

Error correction: Now, the module can also be operated on the CAN bus connector.

ID#136695 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.1.0018 [I2.83]

New firmware: X67SM2436

Error correction: The edge direction for trigger counter is inverted.

ID#135225 : solved problem, known since V2.5.2.0002 [E2.85], solved since V2.5.2.0004 [G2.85]

New CAN firmware

Support of X20IFxxxx CAN modules.

ID#134765 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0016 [G2.83]

New firmware: X67SM2436

Error correction: The overtemperature cutoff occurs to early with high motor current (~3A).

ID#134680 : solved problem, known since V2.5.2.0002 [E2.85], solved since V2.5.2.0003 [F2.85]

New firmware: X20BC0083 and X67BC8321-1

Error correction: Certain configurations may cause sporadic problems on the X2X bus.

ID#134135 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0016 [G2.83]

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New firmware: X67SM2436

Error correction: Incorrect referencing of the AB&R counter and the internal step counter on the "bouncing" reference input.

ID#133982 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0016 [G2.83]

EPL Manager: New firmware

Error correction: When booting, it is possible that the following exception is entered in the logbook (incorrect entry): 20807 (Node number used several times).

ID#133895 : solved problem, known since V2.5.2.0002 [E2.85], solved since V2.5.2.0003 [F2.85]

New firmware: X20BC0073

Error correction: Upload function for parameter data sends too much data.

ID#133885 : solved problem, known since V2.5.1.4105 [E2.82], solved since V2.5.1.0016 [G2.83]

New firmware: X20AT2402 and X20AT6402

Function update: Sensor setting 4, Type N thermocouple added. When outputting the raw value, the value 1.0625 uV/bit was corrected to 1uV/Bit measurement range +-65.536mV.

ID#133755 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0016 [G2.83]

New firmware: X20DC1196, X20DC1198, X20DC1396, X20DC2396, X20DC1398 and X20DC2398

Update: Bus controller support.

ID#133240 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0015 [F2.83]

New firmware: X20AI4632 and X20AI2632

Update: Bus controller support.

ID#133160 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0015 [F2.83]

Support of X20DI4760

ID#132980 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0015 [F2.83]

New firmware: X67SM2436

Error correction: X67SM2436 sporadically loses steps.

ID#132290 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0016 [G2.83]

New firmware: X67BC8321

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Error correction: Boot problem occur with special X67 and X20 IO combinations.

ID#132145 : solved problem, known since V2.5.2.0001 [B2.85], solved since V2.5.2.0002 [D2.85]

New firmware: X20BC0083 and X67BC8321-1

Error caused by firmware update for I/O modules corrected.

ID#132050 : solved problem, known since V2.5.2.0001 [B2.85], solved since V2.5.2.0002 [D2.85]

New firmware: X67IF1121

Asynchronous delay time optimized.

ID#131020 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.2.0001 [B2.85]

New firmware: X67SM2436

Error correction: Microsteps lost.

ID#130855 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0015 [F2.83]

Support of X20DO6529

ID#130850 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0015 [F2.83]

Support of X20CM2900

ID#130845 : solved problem, known since V2.4.1.1302 [B2.73], solved since V2.4.1.1303 [C2.73]

New firmware: 3IF787.9

Error correction: Strong thermal loads sometimes caused CAN communication to fail.
-> Affected version: From Automation Runtime: B2.71
-> Automation Runtime >= C2.73 is not affected by this problem.

ID#130130 : solved problem, known since V2.5.1.0012 [C2.83], solved since V2.5.1.0013 [D2.83]

Support of X20PS4951

ID#130125 : solved problem, known since V2.5.1.0012 [C2.83], solved since V2.5.1.0013 [D2.83]

Support of X20DM9324

ID#129425 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

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New firmware: X67AT1402

The X67AT1402 could not be operated in connection with the following bus couplers: X67BC7321, X67BC7321-1, X67BC4321, and X64BC5321.
This error first occurs with V2.4.0.1389 [B2.72] and V2.5.0.0024 [G2.81]. The X67AT1402 devices delivered until now are programmed with an older firmware version (without the error described above).
Note: A firmware update is not carried out on X2X modules that are operated with a bus coupler.

ID#128805 : solved problem, known since V2.4.0.1387 [V2.71], solved since V2.4.1.1302 [B2.73]

EPL manager: New firmware

When failed Powerlink stations go back online, it was possible in infrequent cases that distorted input data occurred for a short amount of time (a few Powerlink cycles).

ID#126935 : solved problem, known since V2.5.0.0028 [V2.81], solved since V2.5.1.0010 [A2.83]

New firmware: X20DI2377

Update: Additional prescaler for gate measurement.

ID#126030 : solved problem, known since V2.5.0.0026 [I2.81], solved since V2.5.1.0010 [A2.83]

80CIS.PS0-x: New firmware

Cycle time violations may occur due to a locking problem when reading the timer.

ID#125605 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.0007 [V2.85]

Problems with the following X20 modules: X20AI2622, X20AI4622, X20AO2622, X20AO4622, X20AT2222, X20AT4222, X20AT2402, and X20AT6402

If the X2X bus supply is provided after the I/O supply, it's possible that these modules will remain in preoperational mode and not go into RUN mode.
The solution is to provide the X2X bus supply before the I/O supply.
This error cannot be corrected by an update, but is corrected beginning with the following hardware revisions:

X20AT2222: Revision E0 and higher
X20AT4222: Revision E0 and higher
X20AT2402: Revision D0 and higher
X20AT6402: Revision D0 and higher
X20AI2622: Revision D5 and higher
X20AI4622: Revision D5 and higher
X20AO2622: Revision C5 and higher
X20AO4622: Revision C5 and higher

ID#122625 : solved problem, known since V2.5.0.0023 [F2.81], solved since V2.5.1.0013 [D2.83]

X67SM2436: New firmware

Improved X2X timing.

ID#118325 : solved problem, known since V2.5.0.1328 [D2.81], solved since V2.5.1.0010 [A2.83]

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ReadyRelay drops out

If the system clock on the AR010 is derived from the LS172 and the mouse is moved, then the LS172 ReadyRelay drops out.

ID#116280 : solved problem, known since V2.5.0.1314 [S2.80], solved since V2.5.1.0010 [A2.83]

EPL manager: New firmware

Asynchronous data packets may be lost or duplicated in SMN mode.

ID#116165 : solved problem, known since V2.5.0.1313 [R2.80], solved since V2.5.1.0013 [D2.83]

EPL manager: New firmware

Error correction: If the EPL interface was operated in SMN or MN mode asynchronously to the host, it could lead to inconsistent data points in certain circumstances when using multiplexed controllers.

ID#144360 : new function since V2.5.2.0011 [D2.86]

Support of X20DI2372 and X20DI4372

ID#143865 : new function since V2.5.2.0010 [C2.86]

Support for 5LS166.6 in revisions >= B0

ID#142750 : new function since V2.5.2.0009 [B2.86]

Support of X20IF1091

ID#141040 : new function since V2.5.2.0008 [A2.86]

Support of X20IF1063

ID#139225 : new function since V2.5.2.0007 [V2.85]

New firmware: X67SM2436-K01

Update: The resolution can be set separately for both motors.

ID#137910 : new function since V2.5.2.0005 [I2.85]

New firmware: X20CM1941

Change: Synchronization of measurements to the X2X cycle.

ID#137900 : new function since V2.5.2.0005 [I2.85]

New firmware: X20DC2396, X20DC1396, X20DC2398, X20DC1398, X20DC4395 and X20DC2395

Updates:
- Edge time stamp support.
- Bus controller support.

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ID#137705 : new function since V2.5.2.0005 [I2.85]

Support of X20DI4760

ID#137675 : new function since V2.5.2.0005 [I2.85]

New firmware: 5LS182.6-1

Improved EPL error tolerance.

ID#137440 : new function since V2.5.2.0005 [I2.85]

Support of 3IF771.9-C01

ID#136090 : new function since V2.5.2.0004 [H2.85]

New firmware: 5LS182.6-1

Error correction: Flash update not possible.

ID#136085 : new function since V2.5.2.0004 [H2.85]

New firmware: X20IF1082

Error correction: Flash update not possible.

ID#135875 : new function since V2.5.2.0004 [G2.85]

New firmware: X20IF1061

Status LED changed from red to green after reset.

ID#135870 : new function since V2.5.2.0004 [G2.85]

Support of 5LS182.6-1

ID#135575 : new function since V2.5.2.0004 [G2.85]

New firmware: X20BC0083 and X67BC8321-1

Updates:
- Various statistic counters for Ethernet and X2X available in the OD.
- Date/Time of the firmware available in the OD (index 1F50h).
- X2X CycleCount (UINT8) can be mapped in PollResponse (index 20F0h/Sub14).

Changes:
- X2X bus resets if the connection to the MN is lost.
- I/O modules are only put in run mode the first time READY_TO_PREOP or OPERATIONAL is reached (exception: local PS is always started).

ID#135370 : new function since V2.5.2.0004 [G2.85]

Support of X20IF1082

ID#135165 : new function since V2.5.1.0017 [H2.83]

Support of X20CM1941

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ID#135150 : new function since V2.5.1.0017 [H2.83]

Support of X67SM2436-K01

ID#134665 : new function since V2.5.2.0003 [F2.85]

Support of X20IF1061

ID#134660 : new function since V2.5.2.0003 [F2.85]

Support of 5LS166.6

ID#134250 : new function since V2.5.2.0002 [E2.85]

EPL manager firmware for following modules:

EPL manager firmware for following modules:

- X20CP1485
- X20CP1486
- X20CP3485
- X20CP3486
- X20IF1082
- 3IF782.9-1
- 3IF786.9-1
- 3IF787.9-1
- 3IF789.9-1
- 5LS182.6-1

ID#134052 : new function since V2.5.2.0003 [F2.85]

Support of X20CP1485, X20CP1486, X20CP3485 and X20CP3486

ID#133915 : new function since V2.5.1.0016 [G2.83]

Support for X20BR9300 (D0 and higher), X20BT9100 (D0 and higher), X20PS2100 (D0 and higher), X20PS3300 (D0 and higher), X20PS9400, and X20PS9500.

ID#132100 : new function since V2.5.2.0002 [D2.85]

Support of X20DO2649 and X20DO4529

ID#131555 : new function since V2.5.2.0002 [D2.85]

New firmware: X67SM2436

Adaptation of the format position counter to the delta step preset.

ID#131535 : new function since V2.5.2.0002 [D2.85]

Support X20BC0073

ID#131525 : new function since V2.5.2.0002 [D2.85]

Support: 7XV108.50-51, 7XV116.50-51, 7XV124.50-51

ID#131350 : new function since V2.5.2.0002 [D2.85]

Support X20CS1070

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ID#130395 : new function since V2.5.1.0013 [D2.83]

Support of X67SM2436 starting with Rev. AA

ID#130120 : new function since V2.5.1.0013 [D2.83]

Support of X20AI4632

ID#130115 : new function since V2.5.1.0013 [D2.83]

Support of X20AI2632

ID#130057 : new function since V2.5.1.0013 [D2.83]

Support of X67BC8321-1

ID#128025 : new function since V2.5.1.0010 [A2.83]

Support of X20CM8323 starting with Rev. A5

ID#127695 : new function since V2.5.1.0010 [A2.83]

Support of X67SM2436

ID#126735 : new function since V2.5.1.0010 [A2.83]

Support of 5E9000.32

ID#126730 : new function since V2.5.1.0010 [A2.83]

Support of 4XP0000.00-K11

ID#152425 : known problem since V2.5.2.0019 [I2.86], correction planned for V2.5.2.0020 [J2.86]

If the network fails often, the BC could be brought to a state where I/Os were no longer enabled (could only be corrected by turning off/on).(only relevant for EPL V1 operation)

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ID#150260 : known problem since V2.5.2.0016 [G2.86], correction planned for V2.5.2.0020 [J2.86]

New firmware: X20DC2190

Support for the DPI/IP protocol
Default measurement rate derived from 3 times the measuring stick length
Additional stick/magnet combinations (with a total of less than 4 magnets)

ID#150100 : known problem since V2.5.2.0016 [G2.86], correction planned for V2.5.2.0020 [J2.86]

New firmware: X20IF1091

Error in LED operation corrected.

ID#149895 : known problem since V2.5.2.0016 [G2.86], correction planned for V2.5.2.0020 [J2.86]

New firmware: X20IF1063

Error in LED operation corrected.

1.4.4.5.11 AR - General

ID#130925 : solved problem, known since V2.5.1.0016 [G2.83], solved since V2.4.0.1450 [X6.50]

Bus errors or page faults caused by fragmented INA frames

Due to a missing monitor function, fragmented INA frames may cause bus errors or page faults. The problem can be reproduced if PVI connections to targets exist (e.g. Watch) and INA frames are caused by disturbances.

ID#116620 : new function since V2.5.1.0018 [I2.83]

Status variable return value doesn't work in terminal mode

The status data point on the terminal doesn't return a value indicating whether the control now has the focus, is in edit mode, or if the touchpad is open.
This depends on the asynchronous communication so that no application data is overwritten.

1.4.4.5.12 AR - General SG3

ID#149355 : Information valid since V2.5.2.1441 [X8.00]

Support for CPUs below cancelled

The following CPUs are no longer supported beginning with Automation Runtime Version X8.00 (SG3):
CP430
CP470
CP770
ME910
ME913
IF100
IF101

AC701
QBAUE
ME960
ME963
ME965

1.4.4.5.13 AR - General SG4

ID#149195 : solved problem, known since V2.4.0.4194 [V2.72], solved since V2.4.1.1320 [S2.73]

High Ethernet network load (broadcasts) leading to cycle time violations

The system task responsible for Ethernet handling has a priority between task classes 2 and 3. If Ethernet communication is heavily loaded down, e.g. because of several broadcasts, it's possible that a cycle time violation occurs in task class 3 or any of the lower task classes.
This problem has been corrected by changing the priority of the Ethernet system task. In the future, this system task will have a priority lower than all task classes, which prevents these cycle time violations from happening. However, this change may also slow down Ethernet processing in some circumstances (high load from the task classes).

ID#147675 : solved problem, known since V2.5.1.0024 [N2.83], solved since V2.5.1.0025 [O2.83]

Can no longer start X67IF1121 communication if buffer overrun

If a buffer overrun occurs for the serial communication on the X67IF1121, then the communication can no longer be started since the data exchange between the CPU and the X67IF1121 is disrupted. The problem is only cleared by restarting the entire system.
The buffer could have been overrun because e.g. the CPU cannot read the data fast enough (DVFrame).

ID#145210 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0014 [E2.86]

Watchdog error when using the CANquwr() function block in the CAN_lib library

Due to faulty handling of an IRQ routine in AR G2.85 or higher, a watchdog error may occur when using the CANquwr() function block.

ID#144620 : solved problem, known since V2.4.1.0026, solved since V2.4.1.1316 [O2.73]

Page fault caused by incorrect RTC values

After a power failure (if there is no buffer battery present), it's possible that the RTC doesn't receive any plausible values after booting. The RTC cannot correct this error by itself anymore. The system therefore checks for plausible values when the RTC is booted and, if necessary, initializes it using default values.

ID#142995 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0010 [C2.86]

Watchdog error when using the parameter FCCTS = 1 in the mode string of the FRM_xopen() function block in the DVFrame library

Due to faulty interrupt handling, using the FCCTS=1 parameter (hardware handshake in the output direction) may cause a watchdog error on the target.

ID#139270 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.1.0020 [K2.83]

Error 9099: "TC idle generator max. cycle time error" when booting

Missing events may cause error 9099 "TC idle generator max. cycle time error" when booting the target.

ID#139070 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.4.1.1308 [H2.73]

SG4 targets don't send an ARP request during booting

SG4 targets don't send an ARP request during booting, which may prevent a target from being recognized on the network. Reconnecting the Ethernet cable now sends an ARP request.

ID#138725 : solved problem, known since V2.5.1.0018 [I2.83], solved since V2.4.1.1308 [H2.73]

Using "dynamic event variables" via PVI may cause a page fault if the pointer for the dynamic variable is not referenced yet.

If "dynamic" variables are used as event variables for the communication between an SG4 target and PVI and the pointer for the dynamic variables has not yet been referenced, then accessing with PVI causes a page fault.
These types of situations may occur e.g. if the pointer for the dynamic variable is referenced at a later time during booting or during cyclic operation.

ID#138171 : solved problem, known since V2.5.1.0019 [J2.83], solved since V2.5.1.0020 [K2.83]

A watchdog error is registered when a cycle time violation is detected.

Because of incorrect error handling for cycle time violations, a watchdog error is registered in the ErrorLog.

ID#137970 : solved problem, known since V2.5.1.0018 [I2.83], solved since V2.5.1.0019 [J2.83]

Error 27306 when using DataObj function blocks for data objects in USRRAM

If function blocks from the DataObj library are used, it's possible that error 27306 "AR-SIOS: IO cycle time violation" occurs when processing data objects in USRRAM. This problem is caused by the relative long PCI access of SRAM.

ID#137746 : solved problem, known since V2.5.2.0002 [D2.85], solved since V2.5.2.0006 [J2.85]

Possible cycle time violation a large number of entries are made by the Logger in ErrorLog

Because the ErrorLog was moved to the CF card, it's possible that locking mechanisms can cause cycle time violations when the Logger writes ErrorLog entries.

ID#134735 : solved problem, known since V2.4.1.1304 [D2.73], solved since V2.4.1.1305 [E2.73]

Status 25000 and 25004 with CANwrite()

Due to a locking problem, calling the CANwrite() function block several times may sometimes result in status 25000 or 25004.

ID#134681 : solved problem, known since V2.5.2.0002 [E2.85], solved since V2.5.2.0003 [F2.85]

Write protection for "BootFlash" ("B:")

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The "BootFlash" (drive "B:") is now write-protected on all targets with the exception of the PP100/PP200. These Power Panel devices are exceptions because the touch calibration data, which can also be written during runtime, is saved in the boot flash.

ID#134585 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0016 [G2.83]

Status 25000 and 25004 with CANwrite()

Due to a locking problem, calling the CANwrite() function block several times may sometimes result in status 25000 or 25004.

ID#134366 : solved problem, known since V2.5.1.0015 [F2.83], solved since V2.5.1.0016 [G2.83]

Modules from USRRAM incorrectly copied to DRAM

ON the AR106 and AR010 targets, modules are incorrectly copied from USRRAM (data objects) to DRAM. This can cause data to be lost when using the modules with direct write access (pointer access).

ID#134010 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0016 [G2.83]

Cycle time violation when downloading a module or in cycle operation

Due to an earlier error correction, a task class cycle violation may occur when downloading a module or during cyclic operation.

ID#133900 : solved problem, known since V2.5.2.0002 [E2.85], solved since V2.5.2.0003 [F2.85]

Increased INA upload and download speed for targets AR102, AR105, AR106 and PPxxx

ID#132410 : solved problem, known since V2.4.1.1304 [D2.73], solved since V2.4.1.1307 [G2.73]

Cycle time violation when setting the IP address during runtime

A blocking problem may cause a task class cycle time violation when setting the IP address during runtime (AsArCfg library).

ID#126645 : solved problem, known since V2.4.0.1393 [F2.72], solved since V2.4.1.1302 [B2.73]

Status 26012 for the CANrtr() function block

A blocking problem may result in status 26012 "AR-DevMan: Device not opened" being reported for the CANrtr() function block.

ID#125815 : solved problem, known since V2.4.0.13xx, solved since V2.4.1.1302 [B2.73]

Defined starting order for cyclic task classes

Task classes are now sorted according to cycle time (low to high) and started in this order.

ID#112990 : solved problem, known since V2.5.0.4112 [Q2.80], solved since V2.5.1.0018 [I2.83]

Watchdog error when setting a breakpoint

In certain circumstances (e.g. using an ACOPOS device in an application), setting a breakpoint

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crashes the controller with a watchdog error.

ID#95975 : solved problem, known since V2.4.1.0006, solved since V2.5.2.0002 [D2.85]

Directory path > 254 characters causes a page fault

Using a directory path with more than 254 characters causes error 25314 "AR-RTK: EXCEPTION Page fault" on the target.

ID#127010 : new function since V2.5.1.0010 [A2.83]

Dynamic device configuration for X67IF1121 interfaces

When configuring the X67IF1121 module in the ARConfig module, the interface is now automatically attached as devices and can therefore be operated using the DVFrame library. This update now makes it possible to use the serial interface for the X67IF1121 module even with a dynamic configuration on the target (ARConfig.br created on the target).

ID#76995 : new function since V2.5.2.0002 [D2.85]

Support of up to 16 INA devices

Up until now, a max. of 8 INA devices were supported. This has now been increased to 16 INA devices. If devices that exceed this maximum are configured for INA communication, then an entry is made in the logbook (Error 14924) for each of them.

ID#135210 : Information valid since V2.5.2.0003 [F2.85]

AR version F2.85 and higher require new versions of the ACP10 software or ARNC0 to be used

Due to changes in internal data structures, the following versions (or higher) must be used for APC10 software or ARNC0 when using AR F2.85:
V 1.192 ACP10 software (see ID 135267)
V 0.425 ARNC0 (see ID 135277)

ID#135205 : Information valid since V2.4.1.1305 [E2.73]

AR version E2.73 and higher require new versions of the ACP10 software or ARNC0 to be used

Due to changes in internal data structures, the following versions (or higher) must be used for APC10 software or ARNC0 when using AR E2.73:
V 1.192 ACP10 software (see ID 135267)
V 0.425 ARNC0 (see ID 135277)

ID#146820 : known problem since V2.5.2.0001 [B2.85]

Data can be lost in SRAM when changing the CF during an AR update.

If a CF with AR < 2.85 is changed to a CF with AR 2.85 or higher, then all data in SRAM is deleted. This also occurs in the other direction if a CF with AR 2.85 or higher is changed to a CF with AR < 2.85. Settings in the Sysconf (for the acceptance of the permanent data or that the data in USRRAM should remain intact) have no effect in these certain situations.
The reason for this behavior is because SRAM memory handling was changed starting with AR 2.85.
Changing CFs without losing SRAM data (according to Sysconf settings) functions between AR versions if both are lower than 2.85 or both are higher than 2.85.

1.4.4.5.14 AR - Netboot

ID#129510 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.2.0005 [I2.85]

Problems booting if DHCP server missing

If there isn't a DHCP server available when booting the target, this may lead to problems since the DHCP client on the target isn't started.

1.4.4.5.15 AR - PP100

ID#137235 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0008 [A2.86]

Cannot turn off Mobile Panel backlight

The backlight cannot be turned off with either VC-internal functions or VISAPI functions.
This is true for both VC SG3 and VC SG4.

ID#144180 : known problem since V2.5.2.0008 [A2.86]

Insufficient memory for VC applications on targets with only 16 MB DRAM

Targets with only 16 MB of DRAM do not have enough memory to provide a VC application. A corresponding error entry is generated in the error log (AR-RTK: Not enough free memory).

1.4.4.5.16 AR - PP200

ID#123395 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.0001 [B2.85]

Watchdog when starting the visualization application

Due to the necessary process initialization when starting the visualization application, a watchdog may occur during booting.

1.4.4.5.17 AR - USB Support

ID#142690 : solved problem, known since V2.5.1.0022 [L2.83], solved since V2.5.2.0011 [D2.86]

High system load if system event not handled (USB overcurrent)

The USB stack used doesn't include handling for the so-called overcurrent bit (too much current for the USB device). This can cause high system loads if "Overcurrent" is reported by the USB controller.

ID#140930 : solved problem, known since V2.5.1.0020 [K2.83], solved since V2.5.1.0022 [L2.83]

Reading the paper status on USB printers may cause watchdog error

If using USB printers that don't support reading the paper status and a corresponding query is refused with NACK, the USB driver tries to repeat the query within a very short cycle (9 µs). This may result in a very high IRQ load that alerts the watchdog.

ID#140575 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0016 [G2.86]

Data larger than 16 KB incorrectly copied to USB flash drive

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If data > 16 KB is copied to a USB flash drive (e.g. with the FileIO library), then it is stored incorrectly on the flash drive.

ID#123840 : solved problem, known since V2.5.1.0003 [C2.82], solved since V2.5.2.0001 [B2.85]

USB memory stick doesn't work if inserted during operation

Some USB memory sticks don't work on the AR target (no access via FileIO possible), if it's not inserted before the target is booted.
This problem could be traced with the Kingston Data Traveler 2 PLUS USB memory stick.

ID#127365 : new function since V2.5.1.0010 [A2.83]

AR106: Cycle time violation when accessing the USB interface on the Automation Panel

Due to a priority problem with system tasks, accessing the USB interface on the Automation Panel may cause a cycle time violation (task class cycle or I/O cycle).

ID#137775 : Information valid since V2.5.2.0005 [I2.85]

Hot plugging a USB device while it's being accessed can cause a page fault.

Due to a missing hotplug mechanism in the USB stack, removing a USB device while it's being accessed can cause a page fault.

1.4.4.5.18 Diagnose - Line Coverage

ID#133145 : solved problem, known since V2.5.1.0010 [A2.83], solved since V2.5.1.0016 [G2.83]

Using LineCoverage can cause cycle time violations

1.4.4.5.19 Diagnose - Profiler

ID#148655 : solved problem, known since V2.4.1.1315 [N2.73], solved since V2.4.1.1319 [R2.73]

Profiling data not saved after booting in RUN mode after an error

Profiling data is not stored (in BR modules) if a warm or cold restart is configured for booting in Sysconf after an error.

ID#132675 : solved problem, known since V2.4.1.1304 [D2.73], solved since V2.4.1.1307 [G2.73]

Page fault when starting the profiler

A page fault sometimes occurs when starting the profiler on SG4 targets due to problems determining task names.

1.4.4.5.20 Diagnose - Tracer

ID#146460 : solved problem, known since V3.0.44, solved since V2.5.2.0014 [E2.86]

Cannot record variables outside of the 64 KB limit

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If the offset of variables or variable members is over 64 KB, the variables can no longer be recorded.
The value 0 is always recorded instead.

1.4.4.5.21 IO System - 2003 Backplane

ID#99492 : solved problem, known since V2.5.0.1301, solved since V2.5.2.0002 [D2.85]

Inserting and removing 2003 screw-in modules on the AF10x in the main rack not supported

Inserting and removing 2003 screw-in modules on the AF10x in the main rack is not supported.

1.4.4.5.22 IO System - 2005 Backplane

ID#132336 : solved problem, known since V2.5.2.0001 [B2.85], solved since V2.5.1.0019 [J2.83]

When using the ERR_fatal() ERRxfatal() function block, outputs on the 2005 backplane don't drop immediately

When using the ERR_fatal() ERRxfatal() function block, outputs on the 2005 backplane don't always drop immediately. This problem occurs in particular e.g. when saving profiling data. Outputs can remain for several seconds.

1.4.4.5.23 IO System - CANIO

ID#151100 : solved problem, known since V2.5.1.0024 [N2.83], solved since V2.5.2.0019 [I2.86]

Toggling outputs on modules used with CANIO

If tolerance times are too low (particularly if the CAN network is heavily loaded down), it's possible that outputs operated on CANIO modules might toggle.

ID#128085 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0010 [B2.83]

Digital I/Os on the X67BC7321-1 bus connector not operated correctly

Due to an error in the transfer format, digital I/Os on the X67BC7321-1 bus connector are not operated correctly (e.g. outputs are not set although they should be set by the application).

1.4.4.5.24 IO System - CANopen

ID#132310 : solved problem, known since V2.5.1.0013 [D2.83], solved since V2.5.1.0016 [G2.83]

Cycle time violation caused by CANopen master configuration activities

It is possible that cycle time violations occur because of the high-priority processing of CANopen master configuration activities. This problem can occur e.g. if a CANopen slave is connected to the bus during system runtime.

1.4.4.5.25 IO System - Expansion

ID#130905 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0014 [E2.83]

ModuleOk is false with 9, 10, etc. module on 2005 expansion

Due to an error mapping the ModuleOk channels, they are false for slots 9, 10, etc. for modules on the 2005 expansion.

1.4.4.5.26 IO System - General

ID#145190 : solved problem, known since V2.5.1.0023 [M2.83], solved since V2.5.2.0014 [E2.86]

Page fault when using I/O variables in watch or using the I/O monitor

In certain hardware configurations, a page fault may occur when using I/O variables in watch or using the I/O monitor.

ID#134885 : solved problem, known since V2.5.1.0016 [G2.83], solved since V2.5.1.0017 [H2.83]

Error 27306 when booting an APC620 target with several ACOPOS stations on Powerlink

When using several ACOPOS devices on a Powerlink network (7 in the test), booting the APC620 may be cancelled with error 27306 "AR-SIOS: I/O cycle time violation". This problem is caused by a locking error.

ID#133680 : solved problem, known since V2.5.0.0014, solved since V2.5.1.0016 [G2.83]

Error 27306 when booting a SG4 target with several Powerlink stations

Because of initialization activities when booting a target, it is possible that the PCI bus is blocked for a longer period of time. This causes error 27306 "AR-SIOS: I/O cycle time violation", because the I/O data can no longer be copied in the specified time slot.

ID#128570 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

Cycle time violation when using AsIOMMcreate() from the AsIOMMan library

Using the AsIOMMcreate() function block from the AsIOMMan library may cause a cycle time violation due to a problem with priorities.

ID#109415 : solved problem, known since V2.5.0.0015, solved since V2.5.2.0002 [D2.85]

Maximum 5,000 link nodes

The number of link nodes must be 5,000 or less.

ID#110480 : new function since V2.5.2.0002 [D2.85]

80CIS.PS0-1 not supported by I/O system

The 80CIS.PS0-1 target is not supported by the I/O system.

1.4.4.5.27 IO System - HWD

ID#143985 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.1.0024 [N2.83]

Error generating hardware description files

Due to an error generating hardware description files, it's possible that the following modules returned error 29103 "HWScript: wrong channel":
7AI261.7
7AI351.7
7AI774.7

7AI901.70-1
7AI902.70-1
7AM351.70
7AT324.7
7AT351.7
7AT352.7
7AT664.7
7CM211.7
7CM411.70-1

ID#129917 : solved problem, known since V2.5.2ßeta, solved since V2.5.2.0002 [D2.85]

3EX282.6, 7EX481.50-1, and 7EX484.50-1 now providing the "ModuleOk" data point

ID#138285 : new function since V2.5.2.0006 [J2.85]

X67DC1198 update: Period measurement, gate measurement, and bus controller support

ID#138210 : new function since V2.5.2.0006 [J2.85]

X20DC1196 update: 32-bit ABR

ID#138195 : new function since V2.5.2.0006 [J2.85]

X20DC2396 update: 32-bit ABR

ID#138185 : new function since V2.5.2.0005 [I2.85]

X20DC1396 update: 32-bit ABR

ID#138000 : new function since V2.5.2.0006 [J2.85]

X20DC4395 update: Period measurement, gate measurement, and bus controller support

ID#137895 : new function since V2.5.2.0005 [I2.85]

X20DC2395 update: Period measurement, gate measurement, and bus controller support

ID#136595 : new function since V2.4.1.1307 [G2.73]

Support of 4PP220.1214-K01

ID#135810 : new function since V2.5.1.0018 [I2.83]

Support for the 3IF671.9 and 3IF672.9 modules

ID#129665 : new function since V2.5.1.0013 [D2.83]

7MM432.70-1: Data points, reference check, and digital signals updated

ID#129560 : new function since V2.5.1.0013 [D2.83]

New "ARNC0" function model

ID#129265 : new function since V2.5.2.0002 [D2.85]

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Updated hardware status information

3CP340.60-1; 3CP340.60-2; 3CP360.60-1; 3CP360.60-2; 3CP380.60-1; 3CP382.60-1:
- Mode switch
- CPU battery status
- Backplane battery status
- CPU temperature
- Heatsink temperature
- Node switch

3IF797.9-1; 3IF797.9; 3IF789.9; 3IF787.9; 3IF789.9; 3IF786.9; 3IF782.9; 3IF781.9; 3IF779.9; 3IF772.9; 3IF771.9; 3IF722.9:
- Node switch

5LS172.6; 5LS172.61; 5LS187.6; 5LS187.61; 5LS189.6; 5LS189.61; 5LS197.6:
- Battery status
- Node switch

5LS172.4:
- Node switch

1A4601.02; 1A4601.02-2; 1A4601.05; 1A4601.05-2:
- Batterie Status

PP1xx:
- Mode switch
- CPU temperature
- Heatsink temperature
- Node switch

MP1xx:
- Mode switch
- CPU temperature
- Heatsink temperature
- Node switch

PP2xx:
- Mode switch
- CPU battery status
- CPU temperature
- Heatsink temperature
- Node switch

MP2xx:
- Mode switch
- CPU battery status
- CPU temperature
- Heatsink temperature
- Node switch

7CP570.60-1; 7CP570.60-2:
- Mode switch
- CPU battery status
- CPU temperature
- Heatsink temperature
- Node switch

0CISCP.01:
- Mode switch
- CPU battery status
- CPU temperature
- Heatsink temperature

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- Node switch

7EC021.60-1:
- Mode switch
- CPU battery status
- CPU temperature
- Heatsink temperature
- Node switch

8AC140.60-1; 8AC140.60-2; 8AC140.61-2; 8AC141.60-2; 8AC141.61-2:
- Mode switch
- CPU battery status
- CPU temperature
- Heatsink temperature
- Node switch

ID#129240 : new function since V2.5.2.0002 [D2.85]

X20DI2377: Update function model 1 input latch function

ID#129220 : new function since V2.5.2.0002 [D2.85]

X20DO8332: Update function model 1 delayed switching function

ID#128970 : new function since V2.5.2.0002 [D2.85]

X20BT9100: Additional channels for current and voltage data as well as the I/O power diagnose bit

ID#128965 : new function since V2.5.2.0002 [D2.85]

X20PS2100: Additional channels for voltage data

ID#128960 : new function since V2.5.2.0002 [D2.85]

X20BR3300: Additional channels for current and voltage data

ID#128955 : new function since V2.5.2.0002 [D2.85]

X20BR9300: Additional channels for current and voltage data

ID#128255 : new function since V2.4.1.1302 [B2.73]

Support for 0CISCP.01

ID#127300 : new function since V2.5.1.0010 [A2.83]

X20AT6402: Update for non-cyclic data point for accessing compensation temperature with the AsIoAcc library

ID#127295 : new function since V2.5.1.0010 [A2.83]

X20AT2402: Updated non-cyclic data point for compensation temperature for accessing the AsIoAcc library

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ID#127000 : new function since V2.5.2.0001 [B2.85]

Address string for 3EX450.xx-x modules changed

The form for the address string for 3EX450.xx-x modules has been changed so that the subslot specification (SS1) is dropped. The new address string looks like this: "SL1.IF1" as opposed to "SL1.SS1.IF1".

1.4.4.5.28 IO System - Powerlink

ID#148240 : solved problem, known since V2.5.2.0104 [F2.87], solved since V2.5.2.0017 [H2.86]

Modules sometimes not recognized during booting (EX282)

Using a large number of analog modules on the EX282 (Powerlink slave) may have caused the waiting time of the PnP manager to be too low, resulting in modules not being detected during booting.

ID#139480 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0007 [V2.85]

Watchdog error on APC if configured hardware not connected

If an AR010 project for an APC (existing watchdog functionality) is created and this project is transferred to the target although e.g. individually configured Powerlink modules are not physically present, then this causes a watchdog error on the target.

ID#133430 : solved problem, known since V3.0.36, solved since V2.5.2.0003 [F2.85]

Function blocks from the AsIOAcc library only function for the X20BC0083

ID#133180 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0016 [G2.83]

EX48x doesn't work if the 16 log. module slots are filled.

If 16 I/O modules are connected to the EX481 or EX484, then node of the modules are recognized.

ID#131950 : solved problem, known since , solved since V2.5.2.0002 [D2.85]

Cyclically booting a 3CP382.60-1 when using Powerlink and X2X interfaces

Due to the high level of configuration needed for the X2X interface, the PCI bus is blocked for a long time. This causes a timeout in Powerlink communication, which requires the target to be restarted. During the reboot, this problem occurs again, causing the target to begin booting cyclically.

ID#130415 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0013 [D2.83]

Modules not recognized during booting

A timing problem sometimes prevents inserted modules (3EX282.6) on the Powerlink bus from being recognized during booting.

1.4.4.5.29 IO System - X2X

ID#143735 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.0011 [D2.86]

No firmware update carried out when using the X67DM1321 module on the X20BC0083

ID#137135 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.2.0007 [V2.85]

Page fault in the X2X driver when connecting and disconnecting the X2X cables repeatedly during operation

ID#134950 : solved problem, known since V2.5.2.0003 [F2.85], solved since V2.5.2.0005 [I2.85]

Error 26456 beginning with a higher number of X20 modules on the X20BC0083 bus coupler

Installing the I/O mapping to the target system is rejected with error 26456 when using a higher number of X20 modules on the X20BC0083 bus coupler. The number of X20 modules depends on their type and the number of channels they require.

ID#134235 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.5.1.0017 [H2.83]

X67DM1321 outputs set randomly on modules with "old" FPGA versions

If the X67DM1321 module is operated with an old FPGA version, then outputs can be set any which way. Beginning with AR F2.85, the error message 30337 "ERR_DDIOX2X_OLDFPGA" is entered in the error logbook, and the module is not started.

ID#127930 : solved problem, known since V2.5.1.0010 [A2.83], solved since V2.5.1.0010 [B2.83]

X67IF1121 no longer works

Using an X67IF1121 enters the error 30030 "AR-PnP: error on boot up of IO master" in the error log.

ID#134260 : Information valid since V2.5.2.0006 [J2.85]

EX48x/EX290: Detecting screw-in module failures

AF101 and AF104 modules together with all sub-modules (screw-in modules) are considered one unit. If there are differences between the configuration and the physical hardware structure or when starting operation of a screw-in module, all other screw-in modules on this AF module are also affected des (ModuleOK set to false).

1.4.4.5.30 Library - AsARCfg

ID#127075 : new function since V2.5.2.0001 [B2.85]

Error 29003 when calling CfgGetDefaultGateway() without a configured gateway address

If the CfgGetDefaultGateway() function block is called and there isn't a gateway address configured, then statusw 29003 "Invalid FBK parameter 'pGateway' or 'len'" is returned, which doesn't have allow a conclusion to be drawn about the actual cause of the error.

ID#121135 : new function since V2.5.2.0001 [B2.85]

Turning FTP on/off

The FTP server can be protected from unauthorized access by turning it off.

1.4.4.5.31 Library - AsARProf

ID#117790 : new function since V2.5.2.0001 [B2.85]

New AsARProf library

New AsARProf library (see AS help).

1.4.4.5.32 Library - AsCisMan

ID#135905 : new function since V2.5.1.0018 [I2.83]

Expansion in library functionality

- vf_bsl data loaded from data module in SRAM broken up into 128-byte packets.
- DC bus measurement integrated via FPGA.
- New parameter UDCMax (overvoltage cutoff).
- UDC cross-connection measured to PS <-> VF (overvoltage cutoff ORs (OR operation) both voltages).
- In case of error: dAxis.Internal.SpeedRamped=0.0.
- MaxUDCLink revived when measuring DC via FPGA.

1.4.4.5.33 Library - AsIMA

ID#136735 : solved problem, known since V2.5.1.0017 [H2.83], solved since V2.5.1.0018 [I2.83]

Page fault or incorrect PV values for structures or arrays with length 3

Structures or arrays with a length of 3 were not taken into consideration (e.g. structures with 3 USINT). Page faults or incorrect PV values are possible when using structures or arrays with a length of 3 in the versions up to and including 2.23.1!

ID#135690 : solved problem, known since V2.5.1.0016 [G2.83], solved since V2.5.1.0018 [I2.83]

Error transferring structures

Due to stack problems in the INA area of AR, it's possible that large structures are transferred incorrectly.

1.4.4.5.34 Library - AsIO

ID#118095 : solved problem, known since V2.5.0.0021 [T2.80], solved since V2.5.2.0008 [A2.86]

AsIODPStatus() only supports 42 channels at once

If the AsIODPStatus() function is called in a loop and the FBK instance variable is an array, then only 42 channels work. Status 30150 "Internal queue read/write error" is then output.

1.4.4.5.35 Library - AsIODiag

ID#126775 : solved problem, known since V2.5.1.0007 [G2.82], solved since V2.5.2.0004 [H2.85]

Double-wide modules incorrectly detected

2003 modules that have one or more slots occupied are incorrectly detected by the AsIODiag library. An incorrect module ID is usually returned for the higher slots.

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1.4.4.5.36 Library - AsL2DP

ID#127661 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.5.1.0010 [B2.83]

Support of 8AC140.60-2

ID#141390 : new function since V2.5.2.0008 [A2.86]

Support for 8AC140.61-3

ID#139085 : new function since V2.5.2.0008 [A2.86]

Support for X20IF1063

ID#132125 : new function since V2.5.1.0015 [F2.83]

Support for 7EC021.60-1

1.4.4.5.37 Library - BRSystem

ID#138500 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.4.1.1320 [S2.73]

Cycle time violation when using MEMInfo()

Blocking problems may cause a cycle time violation when using the MEMInfo() function block. To avoid this problem, the MEMxInfo() function block should be used.

1.4.4.5.38 Library - CAN_lib

ID#144695 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0012 [D2.86]

Page fault when using CANdftab()

An error in the data type conversion process may cause an error when using CANdftab(). This problem only exists in version V2.05.08 of CAN_lib.

ID#142765 : solved problem, known since V2.4.0.1451 [V2.40], solved since V2.4.0.1452 [V2.40]

Bus error when using GetNdNr()

The "dev_adr" parameter is overwritten due to an internal error in the function block.

ID#138300 : solved problem, known since V2.4.1.1306 [F2.73], solved since V2.4.1.1310 [I2.73]

Data consistency of PVs on SG4 targets not guaranteed when using CMS services

Due to a missing locking mechanism, the data consistency of PVs transported by CMS services cannot be guaranteed on SG4 targets.

ID#130285 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.4.1.1306 [F2.73]

Runtimes for CAN transmit functions increased

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The runtime of CAN transmit functions has been increased (by up to a factor of 20) due to a previously corrected CAN error.

ID#92550 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1452 [V2.40]

CANdftab() returning status 8833 instead of 14710 during cyclic operation

If the first variable specified in the CANdftab data object isn't present, the CANdftab function block doesn't return status "14710 - PV not found". Instead it returns "8833 - CAN object error: Tried to use a dynamic PV. Use a normal PV".

1.4.4.5.39 Library - DPMaster

ID#126335 : new function since V2.5.2.0002 [D2.85]

Support for 3IF766.9

1.4.4.5.40 Library - DRV_mbus

ID#141550 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.4.1.1316 [O2.73]

Page fault after calling MBSlave()

If ein MBSOpen() and MBSlave() are called after INADevClose() and INADevOpen(), the target may crash with a page fault.

ID#131945 : solved problem, known since V2.4.0.4194 [V2.72], solved since V2.5.1.0015 [F2.83]

Same ident with several MBMopen() instances, using X67IF1121

If MBMopen() is called with local FBK data in two different tasks, then both calls return the same ident.

ID#131360 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.4.0.1451 [V2.40]

Incorrect framing for Modbus slave

A faulty include file caused structures to be transferred in an incorrect byte order for SG3 targets.

1.4.4.5.41 Library - Ethernet

ID#131515 : new function since V2.5.2.0018 [H2.86]

SMTPxsendmail() - server authentication

The SMTPXsendmail() function block has been updated to include server authentication. Both the PLAIN and LOGIN modes are supported.

1.4.4.5.42 Library - EthSock

ID#148126 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.0015 [F2.86]

sock_select() not working on AR106 and CP570

ID#134600 : solved problem, known since V2.4.0.0009, solved since V2.5.2.0015 [F2.86]

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Error 9999 when using the functions fd_clr(), fd_set() and fd_isset() on the AR106 and CP570

If one of the functions fd_clr(), fd_set(), or fd_isset() is called on an AR106 or CP570 target, it returns error 9999 "Function not supported with this OS".

1.4.4.5.43 Library - FB_lib

ID#126340 : new function since V2.5.2.0002 [D2.85]

Support for 3IF766.9

1.4.4.5.44 Library - FileIO

ID#149356 : solved problem, known since V2.5.3.0011 [C2.90], solved since V2.5.2.0017 [H2.86]

FileDelete() returning error status 20718 on an external FTP server

Deleting a large amount of files on an external FTP server may cause error status 20718 "General error from Ioctl" since e.g. there are no more available sockets.

ID#147060 : solved problem, known since V2.5.2.4101 [D2.86], solved since V2.5.2.0015 [F2.86]

No support of network drives with AR010

Due to an incorrect driver for the file system, network drives do not work with AR010.

ID#145805 : solved problem, known since V2.5.2.0007 [V2.85], solved since V2.5.2.0016 [G2.86]

Problems accessing external FTP servers

Frequently opening and closing a TCP connection can cause a resource bottleneck since a TCP connection goes into a 2MSL wait state (TCP-RFC) after being closed. It's now sometimes the case that all descriptors (2 MSL wait state) are kept when frequently opening and closing, making reopening impossible. It's then only possible to reopen when a descriptor (TCP connection) leaves the 2MSL wait state again (can take up to 2 minutes).
The AR library responsible for transferring (TCP) a file to an FTP server incorrectly returns an error if no descriptor is available. Because of this, the FileIO library may report an error when writing several files to a network drive (FTP) when closing (files are sent to the FTP server only during closing).
The AR library has been changed to wait until a descriptor is available and not return an error (closing a file can take up to 2 minutes).

ID#145510 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0015 [F2.86]

Different values for constants

Beginning with version 2.00.1 of the FileIO library, individual constants have different values compared with earlier versions and are therefore no longer compatible.

ID#145095 : solved problem, known since V2.5.2.0009 [B2.86], solved since V2.5.2.0017 [H2.86]

Memory drained when calling the DevLink() or DevUnlink() function

The size of the DRAM is reduced each time the DevLink() or DevUnlink() function is called.

ID#144650 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.0015 [F2.86]

Changed status value for the FileCopy() function block in FileIO library V2.00.1 compared with V1.03.8

The FileCopy() function block from the FileIO V2.00.1 library returns a status that is different than with FileIO V1.03.8.
Example:
FileCopy() V1.03.8 generates status 20708 if the source doesn't exist.
FileCopy() V2.00.1 generates status 20700 if the source doesn't exist.

ID#134990 : solved problem, known since V2.5.1.0016 [G2.83], solved since V2.5.2.0007 [V2.85]

Incorrect status returned by DirInfo if directory missing

If DirInfo() is used to read file device data, the function block returns status 20709 "File device not allowed".

1.4.4.5.45 Library - IF361

ID#129710 : solved problem, known since V2.5.1.0009 [V2.82], solved since V2.4.0.1451 [V2.40]

Library contains dependencies to certain versions of other libraries

The IF361 library contains dependencies to certain versions of other libraries (SYS_lib, runtime, DVFrame, IO_lib) and therefore prevents the use of newer versions of these libraries.

ID#78375 : solved problem, known since V2.3.0.0009, solved since V2.5.2.1442 [V2.46]

Error 3035 after booting

After booting the target, calling the IF361() function block can cause error 3035 "Semaphore allocated".

1.4.4.5.46 Library - INAclient

ID#139606 : solved problem, known since V2.5.2.0005 [I2.85], solved since V2.5.2.0015 [F2.86]

Faulty structure transfers

Faulty implementation when transferring structures may cause INA function blocks to output corresponding error messages. These error messages are output e.g. when using the AsIMA library as well.

ID#124110 : solved problem, known since V2.5.0.0022 [E2.81], solved since V2.5.2.0002 [D2.85]

Target crashes when transferring nested structures

When using INA communication (and transferring structures and structure arrays), Intel CPUs carry out a conversion between the network format (Big Endian - Motorola) and the target format (Little Endian - Intel). Every link process, i.e. INAlink(), for a PV goes through the complete structure recursively and calculates the corresponding offset. In structures nested at deeper levels, the system task "Commserv" may not have enough stack, resulting in a fatal error (page fault).

1.4.4.5.47 Library - Printer

ID#140015 : solved problem, known since V2.5.1.0016 [G2.83], solved since V2.5.1.0022 [L2.83]

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Buffer no longer freed up

Due to a locking problem, buffers that are used by the Printer library sometimes may not be freed up, which aborts the printing procedure.

1.4.4.5.48 Library - SYS_lib

ID#135800 : solved problem, known since V2.5.2.0003 [F2.85], solved since V2.5.2.0004 [G2.85]

A new version of SYS_lib needs to be used in AR version F2.85 and higher

Due to changes in internal data structures, the following version (or higher) of the SYS_lib must be used when using AR F2.85 or higher:
V1.38.6

ID#135650 : solved problem, known since V2.4.1.1305 [E2.73], solved since V2.4.1.1305 [E2.73]

A new version of SYS_lib needs to be used in AR version E2.73 and higher

Due to changes in internal data structures, the following version (or higher) of the SYS_lib must be used when using AR E2.73 or higher:
V1.38.6

ID#139445 : Information valid since V2.5.2.0007 [V2.85]

Changed behavior for PV_xlist

If the "index" parameter in the PV_xlist function block had to be given to the "prev_index" parameter after each call in AR < 2.85, then this no longer has to be done with AR >2.85.

1.4.4.5.49 Setup

ID#146765 : Information valid since V2.5.2.4101 [D2.86] [AR010]

New AR010 setup

A new AR010 Setup was created to allow AR010 to be installed on computers with Automation Software V2.5.2.x and higher.

1.4.4.5.50 System Modules - DBTracer

ID#134525 : solved problem, known since V2.5.1.0014 [E2.83], solved since V2.4.1.1307 [G2.73]

Using line coverage causing page faults

A locking problem between the active line coverage and a new line coverage task can cause a page fault. This problem primarily occurs when scrolling in the editor while line coverage is active.

1.4.4.5.51 System Modules - DHCP

ID#149321 : solved problem, known since V2.5.2.0102 [D2.87], solved since V2.5.2.0017 [H2.86]

Warning 14889 if standard gateway configuration missing

If no standard gateway is specified in the DHCP server configuration in AS versions up to V2.5.3.0001, warning 14889 "DHCP: Server initialization error" is entered in the error log.

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1.4.4.5.52 System Modules - MEMCARD Manager

ID#148125 : solved problem, known since V2.5.2.0014 [E2.86], solved since V2.5.2.1441 [X8.00]

New Memcards not working

The new generation of SG3 Memcards do not work on all SG3 targets.

1.4.4.5.53 System Modules - tcpipdrv

ID#128400 : solved problem, known since V2.4.0.1432 [V2.39], solved since V2.4.0.1451 [V2.40]

3IF681.86: Cycle time violations if many broadcasts

A high network load with several broadcasts may cause cycle time violations when using the 3IF681.86.

1.4.4.5.54 Windriver - VxWorks

ID#115776 : Information valid since V2.5.2.0005 [I2.85]

DirCopy() doesn't copy directories with long path names

Copying directories with long path names (more than 99 characters) is not supported by the DirCopy() function block. The function block returns status 20700 "Invalid path".

ID#115661 : Information valid since V2.5.2.0005 [I2.85]

DirInfo() returns status 20799 for long filenames

The DirInfo() function block returns status 20799 "System error. General error from the system (more information can be read with the FileIOGetSysError() function)" if filenames are too long (more than 99 characters).

1.4.4.6 1A4000.02 Automation Net/PVI

1.4.4.6.1 ICOMM

ID#118185 : solved problem, known since V2.5.0.3015, solved since V2.5.2.3101

PanelStudio - No project download possible on C200 / C220 /300 PANELWARE controllers (TIMEOUT after clearing ROM)

PanelStudio didn't allow projects to be downloaded to C200 / C220 / C300 controllers.

ID#112385 : solved problem, known since V2.5.0.3012, solved since V2.5.2.3101

Download with Panel Studio aborted with 4808 or timeout

Downloading a project to a PANELWARE controller C200, C220, C300, or P150 was aborted due to a timeout error.
Downloading to a C221 is working with PVI 2.5.0.3016 and higher, and downloading to all other PANELWARE controllers works beginning with 2.5.2.3001 / 2.5.0.3101.

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1.4.4.6.2 INA2000 Line

ID#136367 : solved problem, known since V2.5.2.0003 [F2.85], solved since V2.5.2.3055

Opening the logger cancels the online connection

A TCP/IP connection to a CP570 is lost when opening the logger.

ID#132785 : solved problem, known since V2.5.2.3102, solved since V2.5.2.3103

Error 4824 if an element in an array or a structure variable is registered as an event variable

If an element of an array (e.g. a[0]) or a structure variable (e.g. a.b) is registered as an event variable (AT=rwe), then error 4824 is output.

ID#128270 : solved problem, known since V3.0.24, solved since V2.5.2.3102

Crash when a tooltip shows the value of a structure variable or function block instance in monitor mode

ID#134365 : new function since V2.5.2.3104

Reducing proceeding events

When downloading or uploading larger modules and an active proceeding event (EV=p), proceeding data is sent to the PVI application with the same contents. This causes an unnecessary additional load on PVI and the application. Proceeding events are now triggered only after the proceeding data changes.

1.4.4.6.3 INAFRM

ID#131705 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3102

PVIException in LnIna2 if the connection to the Bluetooth device is lost.

When using a Bluetooth connection (serial), a PVI exception (eace2000) occurs in the INA line after about a minute if the PLC is turned off and the application is ended.
The reason is that the close function in the Bluetooth driver freezes when communication is running. This problem doesn't occur with a normal serial connection or over a modem.

ID#129445 : new function since V2.5.2.3102

Two-digit COM ports not supported

COM ports with 2 digits (e.g. COM10) are not supported.

ID#122580 : new function since V2.5.2.3101

Identifying a PLC from its DNS name

In addition to the node number and IP address, the DNS name can also be used to identify a PLC in the INA2000 line.

ID#116542 : new function since V2.5.2.3101

Recognizing an error configuration in the node number setting

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Several PLCs can generally have the same node number setting in an Ethernet network. When this is the case, the PLC cannot be uniquely identified using its node number. Up until now, the PLC with the fastest response time has been selected. This error configuration has since been recognized and a connection error is output for the application. Specifying "/CKDA=0" in the connection description for the PVI CPU object restores the old behavior.

1.4.4.6.4 Mininet Linie

ID#125300 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

Communication not possible to mini/midi/multi with station numbers > $1F

It is now possible to communicate with a station number (NODE) > $1F (e.g. $21 -$2F, $31 - $3F).

1.4.4.6.5 PVI Alarm Server & Alarm API

ID#126940 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

Text / Category / Group is shown only as a resource, not as fixed text

If an alarm text / alarm category / alarm group is fixed and not entered from a text resource, it is not shown in the PviAlarmView control.

1.4.4.6.6 PVI AlarmView Control

ID#116880 : new function since V2.5.2.3001

File specification for the LoadHistroyUseFilter method (wildcards not possible)

Specifying wildcards "*,"" as a filename is not possible. This allows the entire history directory to be filtered by calling BeginTime and EndTime.

1.4.4.6.7 PVI Controls .NET - ACConfigurator

ID#127870 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3004

Response timeout not specified to PviServices

A response timeout defined in the AC configurator on the CPU object is not specified to PviServices and therefore has no function.

ID#118315 : solved problem, known since V2.5.0.3015, solved since V2.5.2.3001

Exception if an empty scaling resource is connected to a variable

An exception is triggered at runtime if an empty scaling resource is connected to a variable.

ID#118310 : solved problem, known since V2.5.0.3015, solved since V2.5.2.3001

The connection path of a logical group can only be selected after the configuration is saved

If a connection (server + CPU object) is created first, it can only be selected for the ConnectionPath of a new logical group after the configuration is saved.

ID#118290 : solved problem, known since V2.5.0.3015, solved since V2.5.2.3001

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A new language's name is not added to the Resources tab when it's added

If a new language is inserted in the Project tab of the AC configurator, its name is not applied in the Resources tab.

1.4.4.6.8 PVI Services .NET

ID#131805 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3002

VariableCollection - Remove method doesn't work.

If a variable is added to a variable collection and then removed, then it's no longer possible to add the same variable again.

ID#131720 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3002

Error 12004 if accessing to variable object before the connected event

ID#131700 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3002

Exception when accessing a structure array with PlcString or BOOL variables on SG3 targets

An exception could occur when accessing a structure variable that contains plcStrings and BOOL variables.

ID#130600 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3002

PviServices in Windows CE.NET

If PviServices are used in Windows CE, an exception may occur when generating the service object.

ID#129070 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3001

No events triggered with internal variables

If PVI-internal variables are created (creating a variable at the service object), then no events are triggered.

ID#111905 : solved problem, known since V2.5.0.3608, solved since V2.5.2.3002

Not possible to preset the data type of "internal" variable objects

It is not possible to preset the data type of "internal" variable object. Only INT can be worked with as the default data type.

ID#131395 : new function since V2.5.2.3002

Reading a structure's data type now possible

The StructName property can be used to determine the name of a structure. However, the variable must have been uploaded beforehand for this.

ID#125365 : new function since V2.5.2.3001

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Uploaded event of a task object also returns global variables

When uploading a task, the global variable objects used in the task are also returned in the "Globals" property of the Uploaded event.

1.4.4.6.9 PVI Setup

ID#61475 : solved problem, known since V2.3.0.0001, solved since V2.5.2.3054

Setup if PVI components are open

If PVI Setup is run while other PVI components are open (e.g. Help or Monitor), then a write-protection error occurs. This can be acknowledged with a dialog box.
Setup is then cancelled due to a "critical error".
This could lead to all components not being installed the next time Setup is run.

1.4.4.6.10 Tools - PVITransfer

ID#135050 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

CD creation: Absolute paths entered for "CFGenerate"

If a CD is created from a .pil file that contains the "CFGenerate" command, then the absolute path is applied. However, a relative path should be entered since the absolute path won't work on another PC.

ID#135045 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

Default setting for partition sizes too small for CF creation

In the "Create CompactFlash" dialog box, the SYSTEM partition is set to 5 MB by default. However, a functioning CF cannot be created with this setting since 5 MB is too small for the SYSTEM partition in all cases.

ID#135035 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

"CFGenerate" command: Incorrect error number if the partition sizes are too small

If the partition sizes are too small with the "CFGenerate" command, then the error message "The memory control bocks were destroyed" is output.

ID#135010 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

"Download / Upload" command: "MT=BRT" option doesn't work from the created CD

If a created CD is started with the "MT=BRT" option being used with the "Download" or "Upload" command, then the download or upload doesn't work.

ID#134670 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

"VariableList" command: Long variable names truncated

If the "VariableList" command is used to read nested structures, the variable name is cut off after the 64th character.

ID#134560 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

CD creation: Error 12070 if PviTransfer started on PCs without a PVI installation

If a PviTransfer CD is started on a PC without a PVI installation, error 12070 is returned when establishing the connection and for each additional command to be executed.
This problem can be corrected by copying the BrMod103.dll file from the BrAutomation\Bin directory to the PviTransfer CD directory.

ID#134550 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

Incorrect line termination in the log file

Each line is now terminated with "CR", "CR", "LF" in the log file. This should be "CR","LF".

ID#133725 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

CF creation: BR modules sporadically modified in the original project

If a CF card is created, it's possible that BR modules in the original project (AS project) are modified. This makes it necessary to retransfer the project with Automation Studio each time the CF card is created.

ID#133700 : solved problem, known since V2.5.2.3003, solved since V2.5.2.3004

CF creation: Original BR files modified if "Strip library info for transfer" option used

If a CF card is created where the "String library info for transfer" option is enabled, then the library information in the original BR files is deleted, i.e. BR files are modified in the original project.

ID#131995 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3004

CF creation from CD doesn't work without administrator rights

If a CF creation is started from a previously generated CD and PVI Transfer is not installed on the corresponding PC and administrator rights also aren't present, the created CF is empty. An error message is also not output.

ID#131860 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3004

CF creation: "Not enough available memory" error message although the partition sizes were specified correctly

If CF is created with 4 partitions with all partition sizes being set small, it could happen that the procedure is cancelled with the error "Not enough available memory".

ID#129695 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3001

CF creation: APC (AR106) doesn't boot with a 64 MB Silicon Systems CF

If a 64 MB Silicon Systems CF is created and used as AR106 CF, then the APC (AR106) freezes during bootings. All other CFs work without problems.

ID#129095 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

BRErrorLB.ocx: Texts always read in English

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The "Language" property in BRErrorLB.ocx is ignored, and the texts are always read out in English.

ID#129060 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

User mode: Canceling the "Choice" command is not possible

If the "Choice" command is canceled in user mode, the PVI Transfer tool freezes.

ID#128625 : solved problem, known since V2.5.2.3001, solved since V2.5.2.3002

"Call" command: Parameters cannot be specified with spaces

Parameters that contain spaces are not passed to the batch file correctly, i.e. the batch file is called incorrectly by the "Call" command.

ID#126920 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3002

"ConnectionChange" command: Not possible to switch the connection after it has been selected

If a connection is established with several "Connection" commands with the "C" parameter, then a subsequent "ConnectionChange" command may not work although the connection parameters were specified correctly.

ID#126135 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

CF creation: No check if the CF is too small for the project

When starting the dialog box for CF creation, the PVI Transfer tool sets the partition sizes to the minimum size needed for the project.
If a disk is then selected, the partition sizes are configured so that the entire disk is used.
However, if the project is too large for the disk, then the partition sizes are simply reduced after the disk is selected. If the CF creation is then started, the resulting CF may be unusable.

ID#125970 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

CF creation: "Silicon Systems" CF is not displayed in connection with a PCMCIA adapter

If using a CF card from "Silicon Systems", it is not displayed in the disk selection. This problem only occurs in connection with a PCMCIA adapter. If a USB CF reader is used, then it works.

ID#125770 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

PVI Transfer CD crashes on certain PCs

The PVI Transfer tool may crash and output a "Microsoft Visual C++ Runtime Error" error message on certain PCs or laptops when starting directly from a CD (created with the CD generation). If the data is copied to the hard drive, everything works without problems.

ID#125510 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

Crash if the directory for the log file doesn't exist

If the directory where the log file should be created doesn't exist, then an error message is output and PVI Transfer crashes. The same problem occurs when trying to create the log file in

a partition's root directory.

ID#125505 : solved problem, known since V2.5.0.3017, solved since V2.5.2.3001

CF creation: Image file cannot be created if the DATA1 partition is 1 MB

If attempting to create an image file where the DATA1 partition is only 1 MB, a confusing error message is output and the procedure is canceled.

ID#124280 : solved problem, known since V2.5.0.0024 [G2.81], solved since V2.5.2.3001

CF creation: Problem creating CF with a full hard drive

If a CF is created and the amount of available memory on the C partition is smaller than the CF itself, a confusing error message is output and the process is cancelled. The resulting CF becomes unusable.

ID#124000 : solved problem, known since V2.5.0.3417, solved since V2.5.2.3001

Remote connection problem if the remote computer doesn't exist

If a remote connection is being established and the specified computer doesn't exist, the PVITransfer tool freezes. The timeout specified is not taken into account.

ID#119285 : solved problem, known since V2.5.0.3015, solved since V2.5.2.3001

Cannot erase memory on C200

The "DeleteMemory" command freezes on a C200 (4C2000.02-110).

ID#134075 : new function since V2.5.2.3004

CF creation: Support of X20CP1486, X20CP3485 and X20CP3486

ID#132880 : new function since V2.5.2.3003

CF creation: Support of X20CP1485

ID#131755 : new function since V2.5.2.3004

Date format in logbook in ISO format

The date is now stored in ISO format so that the format of the logbook remains the same on every PC.

ID#130595 : new function since V2.5.2.3004

Configuring download mode with PVI Transfer

For the "Download" command, you can choose between "Overload", "CopyMode", and "OneCycleMode".

ID#128740 : new function since V2.5.2.3004

Retaining settings in the CF creation dialog box

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The settings in the dialog box for CF creation are saved separately for each .pil file. The following settings are restored the next time the dialog box is opened:
- Disk no. and size
- Partition sizes
- Settings for the USER partition

ID#126205 : new function since V2.5.2.3001

Host name configuration

The host name can be configured in the Ethernet configuration dialog box.

ID#126120 : new function since V2.5.2.3001

CF creation: Support of 3CP340.60-2

ID#112590 : new function since V2.5.2.3001

Backing up / restoring files on CF

This function makes it possible to back up individual files / modules on the Compact Flash card. The files are copied to a certain directory on the hard drive and can be restored at a later time.

The following functions are available:
- Backing up / restoring the entire CF
- Backing up / restoring individual partitions
- Backing up / restoring individual files or directories

1.4.4.7 1A4000.02 Automation Tools

1.4.4.7.1 Version Changer

ID#142950 : solved problem, known since V2.5.2.0008 [A2.86], solved since V2.5.2.7004

Problem if starting an AS 2.5.2.8 project from the explorer (*.GDM)

If an AS 2.5.2.8 project will be started from the explorer by double-clicking the *.GDM file, the AS 2.5.2.7 setup comes up.

ID#140865 : solved problem, known since V2.5.2.7002, solved since V2.5.2.7003

Entering -p pg.exe on the command line no longer works.

ID#135720 : solved problem, known since V2.5.2.0003 [F2.85], solved since V2.5.2.7001

Shortcut to pg.exe not created

If the Version Changer is used to switch to Version 2.5.2.2 umgeschaltet, then the shortcut to pg.exe no longer works. Automation Studio can therefore no longer be started.

ID#137195 : new function since V2.5.2.7001

Help file for Version Changer in new directory

Due to a change in the directory structure in the AS2.5.2.x setup, the help file (VersChange.chm) is now copied to the same directory as AS_VersionChanger_xxx.exe.

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