

# AGP3000 Series Advanced Operator Interface

Tank A-B Flow monitor



Line operations monitoring panel

**HMI Solutions Overview** 

Total HMI Solutions Package

HMI Software

GF-FIU LA

#### Data Management Software

Pro-Server EX

#### Operator Interface & Operator Interface Plus Control

AGP3000 Series AST3000 Series LT3000 Series

**HMI Connectivity** 

Drivers and Accessories Third-Party Support



### About Pro-face

# **Pro-face**

### Globally Recognized, Globally Supported, Globally Trusted.

- We are the leading independent global supplier of industrial computing and visualization solutions for automation and manufacturing applications.
- We are recognized worldwide for innovative designs with the industry's highest quality and reliability.
- We offer the most extensive product offering of HMI touch screens available with the highest levels of system and network connectivity.

### Pro-face: A Company You Can Depend On

- More than 35 years providing industrial Human Machine Interface (HMI) technology
- Pro-face and Xycom brands: the most trusted names in the industry
- Worldwide applications support teams ready to help you
- Serving more than 50 countries, Pro-face has 17 main offices with 1200+ employees
- We speak your language: English, Spanish, Japanese
- We have a vast distribution network to provide products quickly anywhere



### Right-size, Right-technology Visualization Solutions

### A Choice of HMI Technology Solutions

#### **Dedicated Operator Interfaces**

- Performance-built, factory workhorse graphical touch screens
- Extensive hardware and software connectivity
- Use for maximum reliability and dependability of HMI applications
- 100% solid-state design



## The Right HMI for the Right Application

#### **Operator Interface Plus Control**

- Combined operator interface and PLC logic control in one package
- Supported by one software package
- Offers significant reduction in system cost and panel space
- Ultra-low maintenance



#### **Open-Platform Industrial PCs**

- Windows<sup>®</sup> XP, 2000-based industrial PC touch-screen systems
- Built to withstand high-vibration, -shock and -temperature environments
- Built-in redundancy using RAIDenabled option
- New innovative technology sends alert when PC system status is out of tolerance
- Solid-state drive options available

#### Flat-Panel Touch-Screen Monitors

- Highly detailed graphical interface with built-in touch screen
- Sizes from 10" to 19" plus built-in keypad option on some models
- Sleek, innovative styling
- Global certifications and ratings

### **Investment Protection**

Built into every unit is investment protection. Our investment protection is all about keeping your machine current with the latest technologies while minimizing migration costs and disruptions to the existing installation.

#### Minimize your total cost of ownership:

- · Pro-face and Xycom brand products have maintained cutout compatibility for more than 21 years
- Upgrade your machine with more capabilities without altering the original design
- · Recognized by the industry for providing significant savings to our customers
- It's all included no product migration service contracts required

No other industrial PC and operator interface supplier can guarantee longterm investment protection value backed by a 21-year track record.

### Lowering your total cost of ownership!



Celebrating more than 21 years of cutout compatibility!

### More Than an Operator Interface...

### HMI Solutions for OEMs, System Integrators and End Users

### **OEM/System Integrator**

#### Design

- Tools for rapid development
- Integrated solution
- Multiplatform development software
- Data management software

#### After-the-sale support

- Remote servicing
- Extensive diagnostic features

HMIs for standalone machines

HMIs for extensive networking

Work smarter, be informed, make the right choices

> Instructional HMIs for a safe and informed workforce

### An Enterprise-Wide Solution

## and Maintenance **On-demand operator interface** Windows<sup>®</sup>-based HMIs See the entire facility through your HMIs **Enterprise Connectivity End User Production** Increase productivity Decrease downtime • Efficient maintenance • Train/educate operators Management Planning/scheduling

- Reporting
- Continuous improvement

**Remote Access, Monitoring** 

Make informed decisions

### **Innovative Operator Interface Solutions**

#### **Extensive Family of Operator Interface Solutions**



#### All the standard HMI features you expect and more . . .

- High-reliability graphic touch screens
- Sizes from 3.8" to 15" (more than 75 units)
- Direct camera input, view live video, capture images
- USB and CompactFlash<sup>®</sup> ports
- 10/100 Base-T
- RS-232/422/485 and MPI serial ports
- Up to four active protocols simultaneously

#### **Advanced Solutions**

- Extensive features, including:
  - Built-in security tracks system changes by user ID
  - Event recorder captures video of machine faults
  - Device gateway: share data between different PLC vendors and other fieldbus equipment using the AGP3000 operator interface
  - Built-in logic control eliminates PLC while cutting system costs
  - Built-in discrete and distributed I/O options
  - Real-time logic and device monitoring features help diagnose system problems

#### **Remote PC Access Solutions**

- 🗸 RPA
  - Use AGP3000 operator interface to access and control a remote computer/server
  - View PDF, CAD, DOC, XLS or any file type located on a remote server PC
  - Instantly update documentation to an entire plant by storing manual, data sheet, help files on one server
  - Link directly to OEM Web pages for machine updates
  - Remotely monitor SCADA programs while reducing SCADA licensing costs

#### **Third-Party Device Support Solutions**

- More than 100 drivers supported, including:
  - AB native tag support for EtherNet/IP
  - Modbus, Modbus Plus and Modbus/TCP
  - Siemens, including PROFIBUS and MPI
  - GE serial and ethernet
  - Mitsubishi, Automation Direct/Koyo, Omron
  - Bar-code and 2-D readers
  - PLCs, temperature controllers, inverters and drives
  - Fieldbus support: CANopen, DeviceNet

And many more . . .

### From the Factory Floor to the Co

AGP3000 Operator Interfaces & LT3000 Logic Controllers



### Advanced HMI Development

One HMI development package

- Includes built-in logic editor for HMI Plus Control models
- Multiplatform solution: Supports both dedicated operator interfaces and open-platform industrial PCs



### A complete, out-of-the-box, mul

### rporate Enterprise and Beyond





Cost-effective data connectivity solution

Data collection and data sharing

Internet data access and monitoring





### tiplatform HMI solution package

#### Enterprise-wide Data Management Solutions

#### Pro-Server EX

- Use Pro-Server EX to enable multiple AGP HMI units to share PLC, fieldbus or HMI data over an ethernet network
- Upload log data, recipes, images and production data to a back-office computer/server
- Integrate shared data into Excel<sup>®</sup>, Access<sup>®</sup> or ODBC databases, such as Oracle, wherever it is needed in the enterprise
- Supports DDE, DLL, Access<sup>™</sup>, Excel<sup>®</sup>, OPC, SMTP e-mail, ODBC, SOL, MES and API interfaces
- Pro-Server includes 29 predefined Excel<sup>®</sup> productivity reports
- Use Pro-Server's API to integrate HMI data into your in-house Visual Studio<sup>™</sup> application
- Take advantage of instant health-alert system from select Pro-face industrial computers, reducing unscheduled system shutdowns

#### **Internet-Based HMI Solutions**

#### ✓ FTP server (built-in for ethernet models)

- Upload or download recipes, log files, sampling data, images, etc. to AGP CompactFlash<sup>®</sup> or USB memory device using a Web browser or FTP client
- Secured file access using user ID and password features
- Reduce travel costs by making maintenance changes remotely without having to be on-site

#### Web server (built-in for ethernet models)

- View active and historical alarms
- Modify PLC tag or HMI symbol values
- Use RSS alarm feed feature. Sends alarm data updates to you without the need to be logged into the AGP HMI unit.
  - View AGP HMI driver and runtime versions
- Launch an FTP connection to the AGP to download or upload files
- Launch GP-Viewer EX (if installed)

#### Remote access and control (GP-Viewer EX)

- Monitor, interact and control multiple AGP operator interfaces on a factory floor from a remote PC
- View the same or different AGP HMI screens as the local operator
- Remotely view production line status or diagnose problems without expense of traveling to site
- Used as a remote operator training tool by
- equipment builders

#### **Easy Maintenance Solutions**

Update AGP3000 units in the field using multiple cost-effective methods. Updates can be done in the field without need for software on-site.

#### Updating field-installed HMIs

- Via USB memory device or CompactFlash® memory card
- Via ethernet, USB cable, modem, serial port

### **Powerful Networking at Your Fingertips**

GP-Pro

Pro-Server 💽

## HMI software solutions



#### Friendly HMI development environment software

GP-Pro EX software supports:

- All AGP3000 units
- All LT3000 units
- All AST3000 units
- Built-in logic editor
- for C-Class models • PS3000 with WinGP



## Enterprise-wide data collecting, sharing, connectivity solution

Application software for sharing user-defined factoryfloor data throughout the corporate enterprise

#### ✓ GP-Viewer EX

 Remotely monitor and control HMI unit screens from the Internet or via an intranet

#### ✓ WinGP

- On-demand operator interfaces
- GP-Pro EX runtime for Pro-face PS3000 Windows<sup>®</sup>-based PCs

#### RPA software

- Harness the power of a PC through your dedicated HMI
- Access files and documentation located on a remote PC

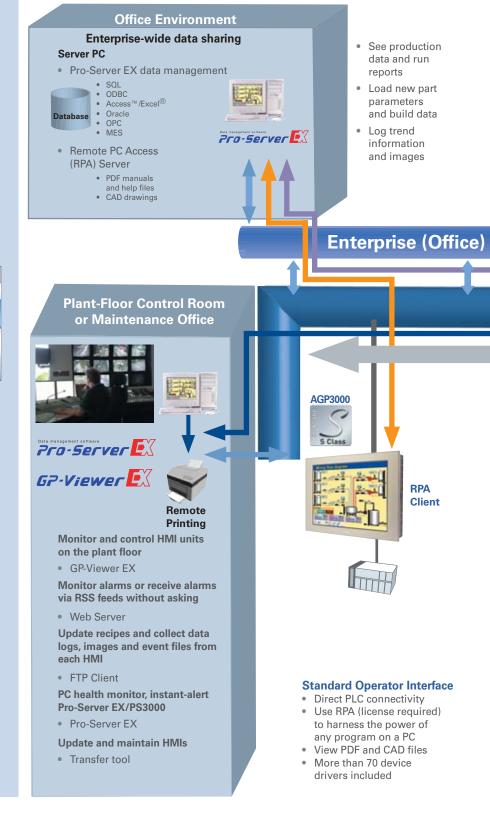
#### Movie converter

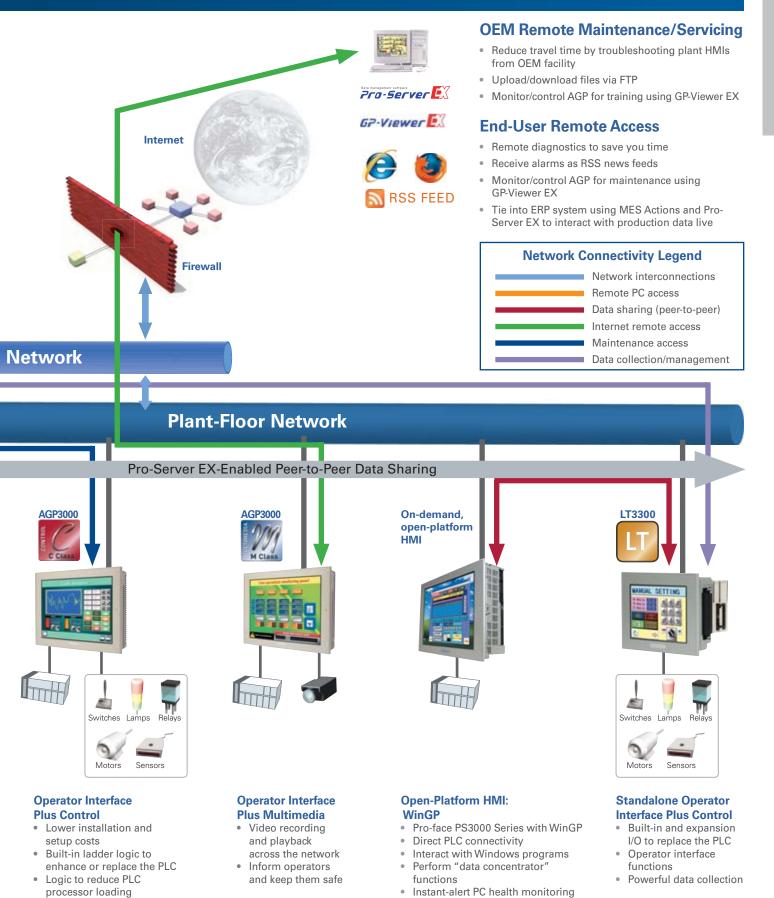
• Convert training and maintenance videos for viewing on AGP3000 displays

#### MES license software

 Manufacturing Execution System license for Pro-Server EX

## Right technology, right solutions





### **Building a Complete HMI Solution**

### Start With the HMI Development Software

### **Create Your Application in Minutes**

### Easy as 1, 2, 3, 4

### **Four Simple Steps**



#### **1.** Set up communications

- Choose and set up PLC and third-party devices effortlessly
- System settings are logically arranged and easy to find

#### **2.** Design application/screens

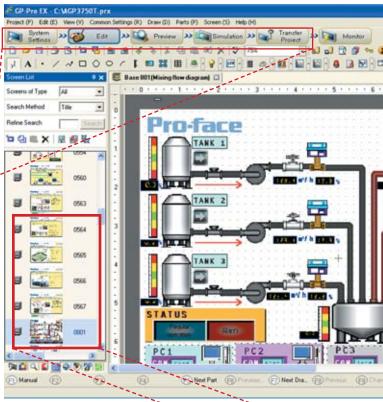
- Drag-and-drop addressing, parts and colors
- Efficient features to reduce development time
- Create consistent look and feel using the user-defined templates

#### **3.** Simulate and test

- Verify before you travel
- Debug your application without hardware
- Test without downloading

#### **4.** Download/transfer

 Tamper-proof HMI application – password-protected project source



#### **Thumbnail View**

- Visually select the screens you need
- Updated instantly
- Screen number and descriptive label are shown for clarity

#### Visual PLC Addressing

- Smart visual address mapping for fast PLC-address-to-part communication connections
  - Drag and drop PLC address onto part to quickly link controller address to push button, tank, graph, etc.
  - Gives a quick visual check on how each part is mapped to controller or I/O device
  - Significantly reduces screen development time
  - Quick indication of what controller addresses are still available

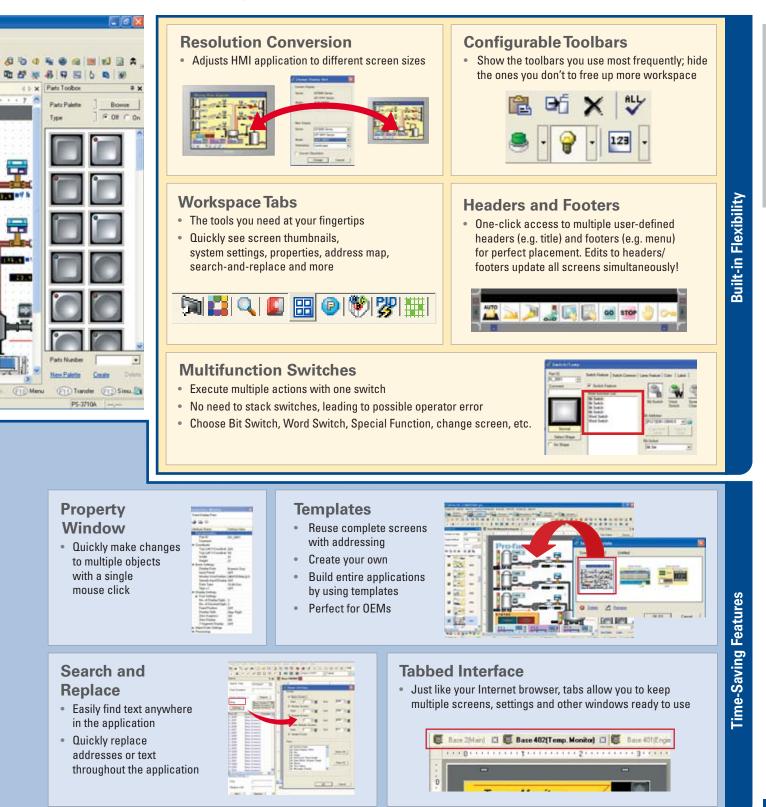




### **Extensive Time-Saving Features**

Create consistent look and feel, detailed applications in minutes!

#### Intuitive HMI Screen Development Editor



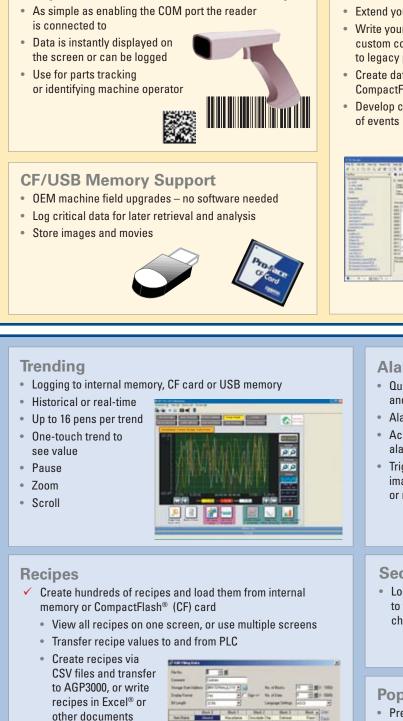
Development

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### Tools to Build an Expandable HMI

### Complete tools for the job...

Easy Bar-code and 2-D Matrix Setup



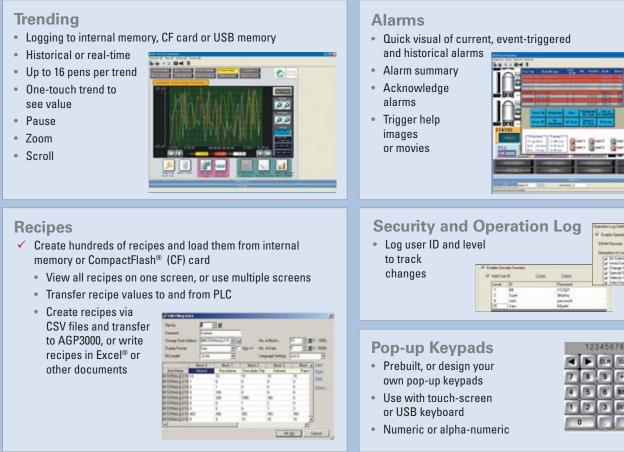
#### **Powerful D-scripting**

- Extend your serial communications capabilities!
- · Write your own simple ASCII protocol to communicate to custom controllers and third-party I/O boards and interface to legacy plant-floor equipment
- Create data logging algorithms log to internal memory, CompactFlash<sup>®</sup>, or print directly from AGP's touch screen, etc.
- Develop custom functions (macros) to execute a sequence

ate a Barner	

Timer	-
Continuous Action	
Timer	
Bit ON	
Bit OFF	
Bit Change	
When Condition is Satisfied	
When Condition is not Satisfied	

Select from various types of triggers for maximum flexibility of operations.



Development





### Tools for Training Operators and Efficient Maintenance

### The Value of a Multimedia HMI

Multimedia adds video and audio recording and playback

### Efficient information at your fingertips!

#### Reduce downtime

- By recording video, find the cause, not the symptoms, quickly
- Any alarm can trigger a movie playback to show operators how to resolve problems in the shortest time possible

#### Educate the workforce

• Reduce damaging mistakes, put training at their fingertips

#### Training where/when operators need it

- Make training available any time
- New operators can rewind and playback training examples as often as needed

#### Faster maintenance

• Show maintenance staff the exact repair location and proper procedures

#### Improve communication

- Allow operators to leave messages for other shifts
- Keep an online journal of machine activities

#### Improved safety

- Keep operators away from potential hazards
- Put a camera where a person shouldn't be, remote monitoring

Make your workforce more efficient and cut down on costly 24/7 on-site technical support and training.



#### Capture the moment

Record the events that lead to machine breakdown

#### Keep operators trained

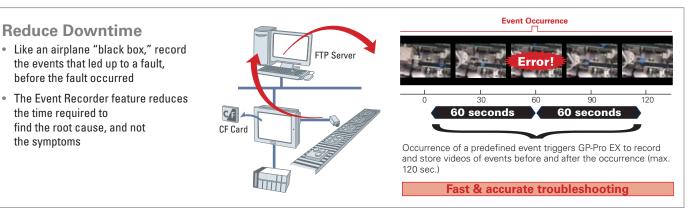
Provide the latest procedures at their fingertips

#### Convey information fast

A picture is worth a thousand words; a video is worth a thousand pictures

### Provide clear instructions to operators and maintenance personnel

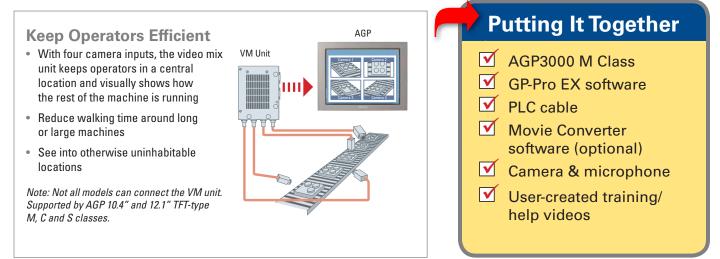
#### Find root causes fast - see what happened before it happened



#### Safe and informed employees work better

#### **Educate the Workforce** It's easy to add movies to on-site instruction FTP Server screens for better comprehension · Provide training any time, with no need for a special time or classroom. · Refresher instructions are an easy way to keep production running smoothly CF Card · Provide critical safety information in C/ a clear way, right at their fingertips And now, you can create movie files with commercially available video software. Note: Movie files you create must be converted lт with the Movie Converter EX converter tool, which requires the purchase of a license.

### Whoever said, "You can't be in two places at once" didn't have a Pro-face AGP3000



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### **Tools to Lower Overall System Cost**

### **Grow Your HMI Functionality: The Operator Interface Plus Control**

Ladder logic and I/O directly from the HMI reduces the number of components to purchase, install and learn

#### **Reduce system costs**

#### Eliminate the PLC

- Combine HMI and PLC functionality into one platform
- Several I/O types to choose from

#### ✓ One software for HMI and logic

- IEC61131-3-compliant ladder logic
- More than 100 ladder instructions supported, including PID, trigonometric and program control functions

#### ✓ Reduce part count

- Reduce the time to install
  - Hardware
  - Software
  - Wiring

#### Easier development and troubleshooting

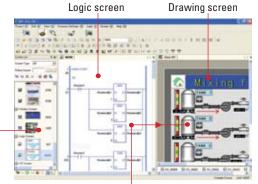
- One database for all variables
- No need for exporting and importing between packages

#### Save time and \$\$\$.

Simplify your system without losing speed and functionality.

#### Develop logic and HMI screens side-by-side

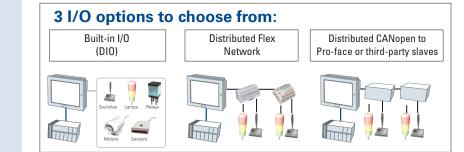
- Drag and drop between logic and screens
- ✓ Save costly "fat-finger" mistakes
- See everything you need without switching programs
- One database to save you time



NEW! Added instructions for greater ease of use

Block-structured subroutines ensure smooth editing

Create programs easily with drag-and-drop operation



#### Reduce costs by reducing component count

**C** Class **Putting It Together** Software **EXAMPLE SAVINGS:**  $\checkmark$ AGP3000 C Class PLC \$ 600  $\checkmark$ **GP-Pro EX software PLC Software** \$ 600  $\checkmark$ PLC cable Annual Contract \$ 1,500  $\mathbf{\nabla}$ Flex Network modules Labor 500 \$ or HTB (CANopen \$ 2,000 Training slave) modules Flex Network or TOTAL \$ 5,200 **CANopen cables** 1/0 Motor

### **Powerful Ladder Logic Instructions**

Category		Instruction Name	Instruction Notation	Ladder Symbol
		Normally Open	NO	$\neg \vdash$
		Normally Closed	NC	-1-1
	Bit Basic	Out	OUT	-0-
	Bit B	Negative Out	OUTN	-0-
		Set	SET	-©-
		Reset	RST	-®-
	Pulse Basic	Positive Transition	PT	⊣↑⊢
Pu Ba		Negative Transition	NT	
		Jump	JMP <*P>	—≫LABEL NAME
		Jump to Subroutine	JSR <*P>	->>SUBROUTINE NAME<-
tion		Return	RET	RET
Basic Instruction		Repeat number of times (For)	FOR	FOR S1
Ba	lo.	Repeat number of times (NEXT)	NEXT	NEXT
	Program Control	Inverse	INV	-/-
	Pro	Exit	EXIT	EXIT
		Power Bar Control	PBC	PBC S1 D1
		Power Bar Reset	PBR	
		Logic Wait Instruction LWA		LWA S1
		On Delay Timer	TON	TON (ms) Q PT ET
	Off Delay Timer Pulse Timer		TOF	TOF (ma) Q PT ET
ar Instruct			TP	TP (ma) Q PT ET
Ĕ	E Accumula On Delay Timer		TONA	TONA (ma) Q R PT ET
		Accumulate Off Delay Timer	TOFA	TOFA (ms) Q R PT ET
otion		Up Counter	CTU <*P>	CTU Q R PV CV
intar Instru	Counter Instruction		CTD <*P>	CTD Q R PV CV
č		Up/ Down Counter	CTUD <"P>	CTUD Q UP QU R QD PV CV
	Time Read/ Write	Time Read	JRD <"P>	JRD D1
R/ W Instruction	Ti Read,	Time Set	JSET <*P>	JSET S1 D1
R/ W In	Date Read/ Write	Date Read	NRD <*P>	D1
	D Read,	Date Set	NSET <*P>	NSET S1 D1
uction	ration	Add	ADD <"P>	ADD \$1 D1 \$2
Operation Instruction	Arithmetic Operation	Subtract	SUB	SUB S1 D1 S2
Οpε	Aritl	Multiplication	MUL <*P>	MUL S1 D1 S2

gory	Instruction Name	Instruction Notation	Ladder Symbol
uc	Division	DIV <*P>	S1 D1 S2
Arithmetic Operation	Modulation	MOD <*P>	S1 D1 S2
Arithmeti	Increment	INC <*P>	
	Decrement	DEC <"P>	DEC
Time Operation	Time Addition	JADD <*P>	JAD0 S1 D1 S2
Time Op	Time Subtraction	JSUB <*P>	JSUB S1 D1 S2
	Logical AND	AND <*P>	AND S1 D1 S2
peration	Logical OR	OR <*P>	0R S1 D1 S2
Logical Operation	Logical XOR	XOR <*P>	X0R S1 D1 S2
	Logical NOT	NOT <*P>	N0T 51 52
	Move (Copy)	MOV <*P>	MOV 51 D1
sfer	Block Move (Block Copy)	BLMV <*P>	BLMV S1 D1 S2
Transfer	Fill Move	FLMV <*P>	FLMV S1 D1 S2
	Exchange	XCH <*P>	D1 D2
	Shift Left	SHL <*P>	SHL S1 D1 S2
Shift	Shift Right	SHR <*P>	SHR 51 D1 52
Sh.	Arithmetic Shift Left	SAL <*P>	SAL 51 D1 52
	Arithmetic Shift Right	SAR <*P>	SAR S1 D1 S2
	Rotate Left	ROL <*P>	RDL S1 D1 S2
tion	Rotate Right	ROR <*P>	808 S1 D1 S2
Rotation	Rotate Left with Carry Over	RCL <*P>	RCL S1 D1 S2
	Rotate Right with Carry Over	RCR <*P>	BDR S1 D1 S2
	Sum	SUM <*P>	SUM S1 D1 S2
uo	Average	AVE <*P>	AVE S1 D1 S2
Calculate Function	Square Root	SQRT <*P>	SORT S1 D1
Calc	Bit Conut	BCNT <*P>	BCNT S1 D1
	PID	PID	PID S1 D1 S2 S3

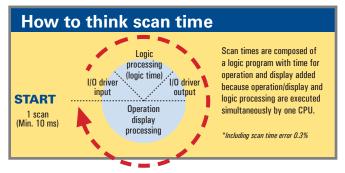
Operation Instruction

Function Instructior

egory	Instruction Name	Instruction Notation	Ladder Symbol
	Cosine	COS <"P>	COS S1 D1
	Tangent	TAN <*P>	TAN S1 D1
Trigonometric Function	Arc Sine	ASIN <*P>	ASIN S1 D1
rigonometr	Arc Cosine	ACOS <*P>	ACDS S1 D1
	Arc Tangent	ATAN <*P>	ATAN S1 D1
	Cotangent	COT <"P>	COT S1 D1
tion	Exponential	EXP <*P>	EXP S1 D1
The other Function	Logarithm	LN <*P>	LN S1 D1
The	Log Base 10	LG10 <*P>	LG10 S1 D1
	Equal	EQ.	EQ (n) S1 S2
	Greater Than	GT	GT (>) \$1 \$2
Compare	Greater Than Or Equal To	GE	GE (>=) \$1 \$2
Arithmetic Compare	Less Than	LT	LT (c) S1 S2
	Less Than Or Equal To	LE	LE (<=) \$1 \$2
	Not Equal	NE	NE (<>) \$1 \$2
	Time Compare Equal	JEQ	JEQ (n) S1 S2
	Time Compare Greater Than	JGT	JGT (>) \$1 \$2
Compare	Time Compare Less Than	JLT	JLT (<) S1 S2
Time Co	Time Compare Greater Than Or Equal To	JGE	JGE (>=) \$1 \$2
	Time Compare Less Than Or Equal To	JLE	JLE (<=) \$1 \$2
	Time Compare Not Equal	JNE	JNE (<>) S1 S2

	gory	Instruction Name	Instruction Notation	Ladder Symbol	
		Date Compare Equal	NEQ	NED (+) S1 S2	
		Date Compare Greater Than	NGT	NGT (>) \$1 \$2	
Compare Instruction	Date Compare	Date Compare Greater Than Or Equal To	NGE	NGE (>=) S1 S2	
Compare	Date (	Date Compare Less Than	NLT	NLT (<) S1 S2	
		Date Compare Less Than Or Equal To	NLE	NLE (<+) S1 S2	
		Date Compare Not Equal	NNE	NNE (c) S1 S2	
		BCD Convert	BCD <*P>	S1 D1	
		BIN Convert	BIN <*P>	S1 D1	
	art	Encode	ENCO <"P>	S1 D1	
	)ata Conve	Data Convert	Decode	DECO <"P>	DECO S1 D1
		Convert to Radian	RAD <*P>	S1 D1	
			Degree Convert	DEG <"P>	S1 D1
tion		Scale	SCL <"P>	SCL S1 D1	
Convert Instruction		Convert Integer to Float	2F <*P>	S1 D1	
Con		Convert Integer to Real	2R <"P>		
		Convert Float to Integer	F2I <*P>	521 S1 D1	
	Type Convert	Convert Float to Real	F2R <"P>	S1 D1	
		Convert Real to Integer	R2I <*P>	R21 S1 D1	
		Convert Real to Float	R2F <*P>	R2F S1 D1	
		Convert Seconds	H2S <"P>	S1 D1	
		Convert Seconds to Time	S2H	S2H S1 D1	

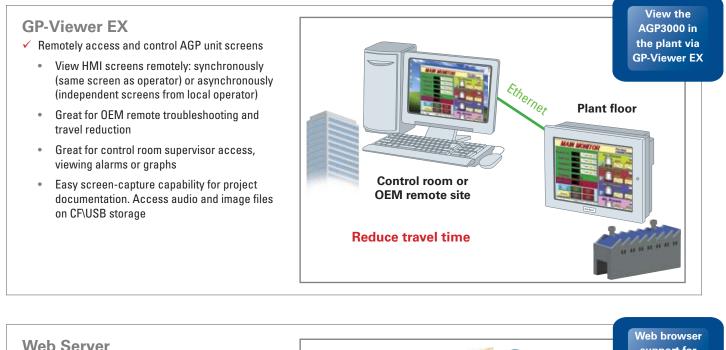
'Instructions with < \*P> correspond to positive transition instructions (differential transition). By adding P to the end of each instruction notation (LMP, etc.), you can use the instruction as a positive transition instruction (e.g., JMPP, JSRP, etc.).



### **Tools for Remote Connectivity and Access**

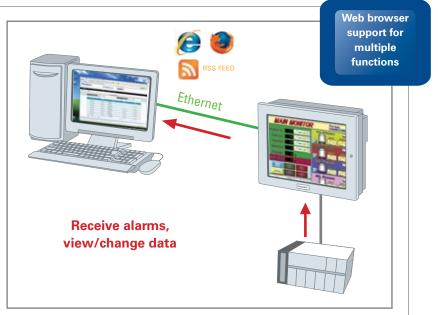
### Internet HMI solutions: Your global connection!

Off-site OEM or on-site control room remote access tools, saves you time. Don't travel to the plant or walk to the production floor when you can access the information you need from your office.



#### Web Server

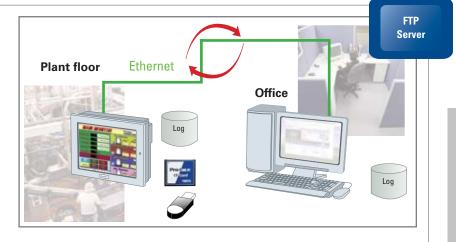
- View AGP information and alerts through a Web browser
  - View AGP alarms on any PC via Web browser . or RSS reader
  - Remote troubleshooting, Web viewing of alarms; subscribe to alarm RSS feeds
  - View PLC and internal addresses for troubleshooting
  - View the screens in GP-Viewer EX while monitoring values on the AGP in a Web browser





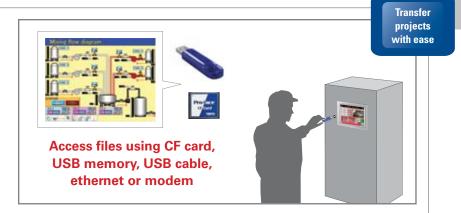
#### **FTP Server**

- ✓ Use a standard FTP client to update/retrieve data
  - Remotely read/write alarm, image, sampling data, recipe and video files on the CF card or USB memory
  - Remotely collect alarm or log information
  - Reduce travel to customer site



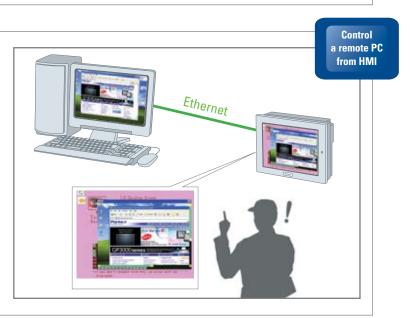
#### **Transfer Tool**

- Included and freely distributable project download utility
  - Great tool for maintenance personnel to transfer project to or from the HMI
  - Upload/download files from CF/USB storage
  - Allows OEM to transfer projects to end users without providing development software
  - Display model, driver & project information for troubleshooting



#### **Remote PC Access (RPA)**

- Harness the power of a PC from your dedicated HMI
  - View PDF, CAD, DOC, XLS or any file type located on a remote server PC
  - Instantly update documentation to an entire plant by storing manual, data sheet, help files on one server
  - Link directly to OEM Web pages for machine updates
  - Remotely monitor SCADA programs while reducing SCADA licensing costs



## Stop traveling to remote sites – update and troubleshoot from your office!

### **Enterprise-wide Data Management Solutions**

Data management software



#### **Enhanced data** collection and connectivity software

Applications

- Share data with production and maintenance groups
- Share HMI data with another HMI
  - Peer-to-peer
- Write/log data to/from PLC
- Send instant e-mail alerts
- Collect and write data to Excel<sup>®</sup>, CSV or databases

#### Collect and manage data

- Up-to-the-minute production data
- Upstream status information
- Necessary raw material requirements
- Snapshot images of machine faults or instructions

#### Connectivity Support

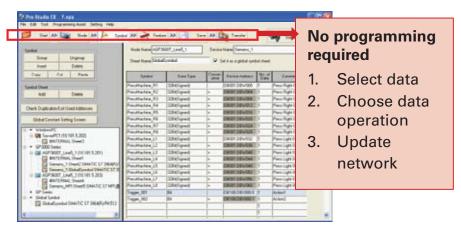
- OPC DA server
- DDE
- DLL
- API (VB, VB.NET, VC, C#.NET)
- Access<sup>™</sup>/Excel<sup>®</sup>
- ODBC, SQL, Oracle
- E-mail via SMTP
- MES actions

Collect and view up-to-theminute, accurate data to optimize your productivity.

### Information where you want it, when you want it

- Data collection/management
- Reporting
- Data sharing
- Remote IPC health monitoring
- Enterprise integration
- ✓ Save thousands of dollars per year

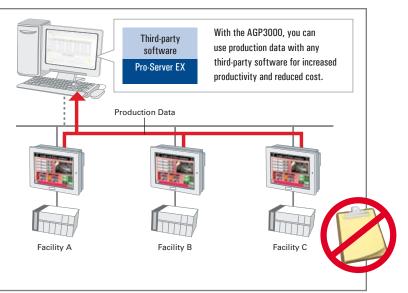
### **Fast and simple**



- ✓ Fill in the blank data configuration, no programming!
- Built-in templates save you time and get you started guickly
- ✓ Share data with Windows<sup>®</sup>-based applications
- Automatically puts DDE scripts into clipboard, ready to paste directly into Excel®

#### Data collection/management

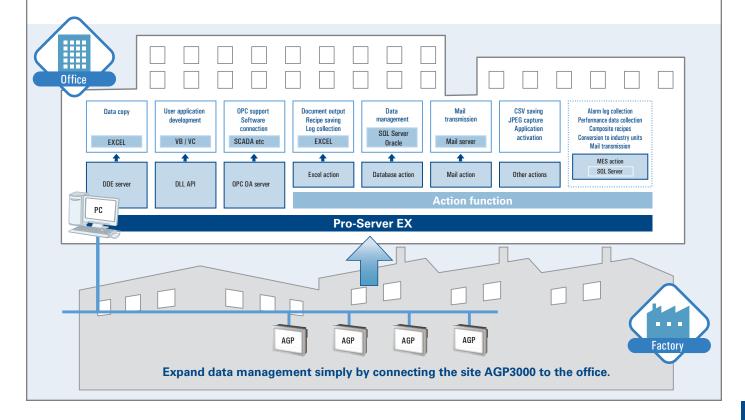
- Collect data on a remote server
- In plant or across the Internet
- Send data to another department or around the world in real-time
- Update recipes/production parameters remotely
- No more clipboard collection of data



#### **Enterprise integration**

- Connect to existing enterprise system
- Enhance existing designs
- Use common communication methods

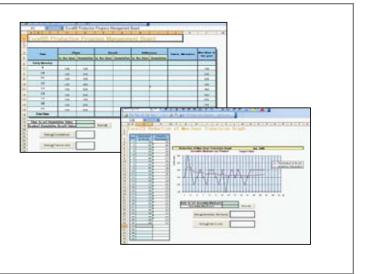
✓ OPC DA server	✓ DDE
<ul> <li>API (VB, VB.NET, VC, C#.NET)</li> </ul>	✓ DLL
<ul> <li>✓ Access<sup>™</sup> /Excel<sup>®</sup></li> </ul>	<ul> <li>ODBC, SQL, Oracle</li> </ul>
<ul> <li>Image management</li> </ul>	✓ PC health
<ul> <li>E-mail via SMTP</li> </ul>	✓ MES

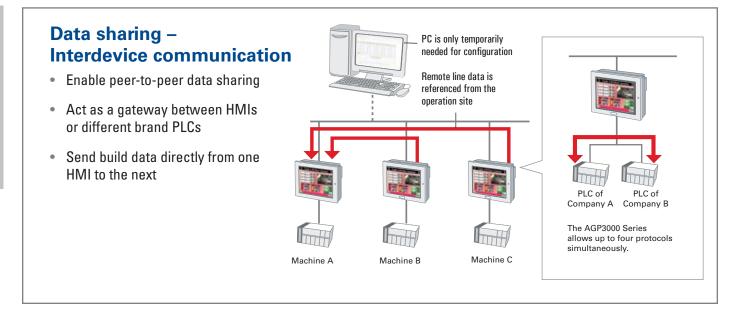


### Data Where You Need It

#### Reporting

- Includes 29 easy-to-use Excel<sup>®</sup> report templates
  - Daily/monthly/yearly reports
  - Shift downtime
  - ✓ Failure data rates
  - Preparation time graphs
- Use prebuilt templates or customize





### Across the plant or across the world, let Pro-face data management solutions work for you!

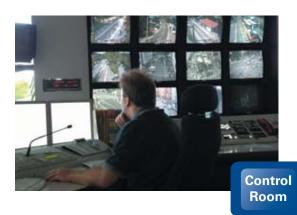


### **Pro-Server EX Remote PC Monitoring**

### Instant Alert Notification: Keep your machine/process running

### Reduce Downtime: *Use Pro-face industrial PCs with remote health monitor*

- Instant notification of Pro-face industrial PCs' health status
- Open-platform HMIs alerting you before problems occur
  - CPU and core voltages
  - 🖌 Fan RPM
  - Temperatures
  - Backlight
  - SMART hard-disk monitoring
- Power off the PC remotely in a controlled manner
- The PC knows what's happening before you do let it tell you!









Pro-face openplatform HMI

If you want to learn more about Pro-face industrial PCs with health monitor, please visit www.profaceamerica.com

### **Right-Size Operator Interface Solutions**



Multimedia M Class: Operator interface with video/audio recording/ playback to reduce downtime and increase

safety





#### **Control C Class:**

Operator interface and PLC controller all-in-one solution. Simplify your machine design while reducing overall system cost.



	15-i	nch XGA	nch XGA 12-inch SVGA 10.4-inch VGA		VGA	7.5-i		
	SIO Ethernet Expansion USB CF Unit UNIt (Host) Card		SIO 2ch Ethernet Expansion VM USB Unit Unit (Host) CF SoundOut		SIO Ethermet Expansion Unit WM USB CF (Host) Card AUX SoundOut	SIO Ethernet Expansion 2 Ch Ethernet Unit AUX SoundOut	USB CF (Host) Card	S10 2 Ch CF Card SoundOut
AGP3000	AGP3750-T1-AF	AGP3750-T1-D24	AGP3650-T1-AF		AGP3550-T1-AF AGP3550-T1-AF			AGP3450-T1-D24
AGP3000			AG P3600-T1-AF-D81K AG P3600-T1-AF-D81C	AGP3600-T1-D24-D81K AGP3600-T1-D24-D81C	AGP3500-T1-AF-D81K AGP3500-T1-AF-D81K AGP3500-T1-D24-D81K AGP3500-T1-D24-D81K AGP3500-T1-D24-D81K	AGP3500-S1-AF-D81K AGP3500-S1-AF-D81K AGP3500-S1-D24-D81K AGP3500-S1-D24-D81K AGP3500-S1-D24-D81K	Mono fs shades AGP3500-L1-D24-D81C	AGP3400-T1-D24-D81K AGP3400-T1-D24-D81K
C Class			AGP3600-AF-CA1M	AGP3600-T1-D24-CA1M	AGP3500-T1-AF-FNIM AGP3500-T1-AF-CA1M AGP3500-T1-D24-FNIM AGP3500-T1-D24-CA1M			AGP3400-T1-D24-CA1M
AGP3000			AGP3600-T1-AF	AGP3600-T1-D24	AGP3500-T1-AF AGP3500-T1-D24 AGP3510-T1-AF	AGP3500-S1-AF AGP3500-S1-D24	Mono Ishades AGP3500-L1-D24	AGP3400-T1-D24
AST								

24

#### Serial Interface

COM1: RS-232C/RS-422/RS-485 serial interface. D-SUB 9-pin male connector. Communication method can be switched via software.

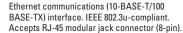
COM2: RS-422/RS-422/RS485 serial interface. D-SUB 9-pin female connector.

#### USB Interface (Host)

USB interface. Can be connected to USB printers, USB bar-code readers, keyboards, memory and a mouse.

#### CF Card Interface

Use CF cards to support data logging, recipe data and "travel-free" field updates.



Ethernet Interface (LAN)





The VM unit can be connected through this interface. Four cameras can be connected to one unit.



This interface accommodates external reset, alarm output, buzzer output and sound output.

Ethernet



#### **Standard S Class:** Operator interface with extensive communications and networking capability





#### **AST and LT Classes:**

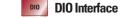
AST: Entry-level operator interfaces with serial ports and many powerful features LT: OEM HMI touch controllers ideal for standalone machines



nch VGA			5.7-inch	QVGA			3.8-inch	QVGA
Equansion USB Unit (Host)	SIO Ethernet Expansis 2 Ch Init <sup>1</sup> CF not supported; single			SIO Expansion USB 2 Ch Unit (Host) *Not supported by AGP3		SIO 1 Ch Ethernet (Hos	5	SIO * USB 2 Ch * (Host) *Serial ports not supported by LT3201
AGP3400-S1-D24-D81K AGP3400-S1-D24-D81C	AGP3300-T1-D24-D81K	AGP3300-S1-D24-D81K AGP3300-S1-D24-D81C	Mono 16 shades DC AGP3300-L1-D24-D81K AGP3300-L1-D24-D81C					
	AGP3300-T1-D24-FN1M AGP3300-T1-D24-CA1M		Mono shades C AGP3300-L1-D24-FN1M AGP3300-L1-D24-CA1M					
AGP3400-S1-D24	GE COLORED AGP3300-T1-D24	AGP3300-S1-D24	Mono Estades DE AGP3300-L1-D24	AGP3301-S1-D24 AGP3301-L1-D24	AGP3302-B1-D24	AGP3200-T1-D24	Amber shades CC AGP3200-A1-D24	
				AST3301-S1-D24	Shates Shates AST3301-B1-D24			Amber shades OC AST3201-A1-D24 AST3211-A1-D24
		ET3300-S1-D24-C <sup>1</sup> LT3300-S1-D24-K <sup>1</sup>	Mono tig shades LT3300-L1-D24-C' LT3300-L1-D24-K'	Mono Isbades LT3301-L1-D24-C LT3301-L1-D24-K				Anther shades LT3201-A1-D24-C* LT3201-A1-D24-K*



machine or process.



Reduce system cost by connecting directly to

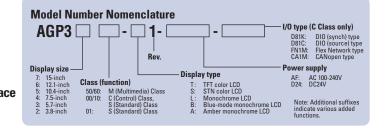
problems quickly. See "inside" the switches, lamps and stack lights.

Sound Input Interface Sound In Record audio to leave messages/ instructions for other operators.

Stream or record live video to solve



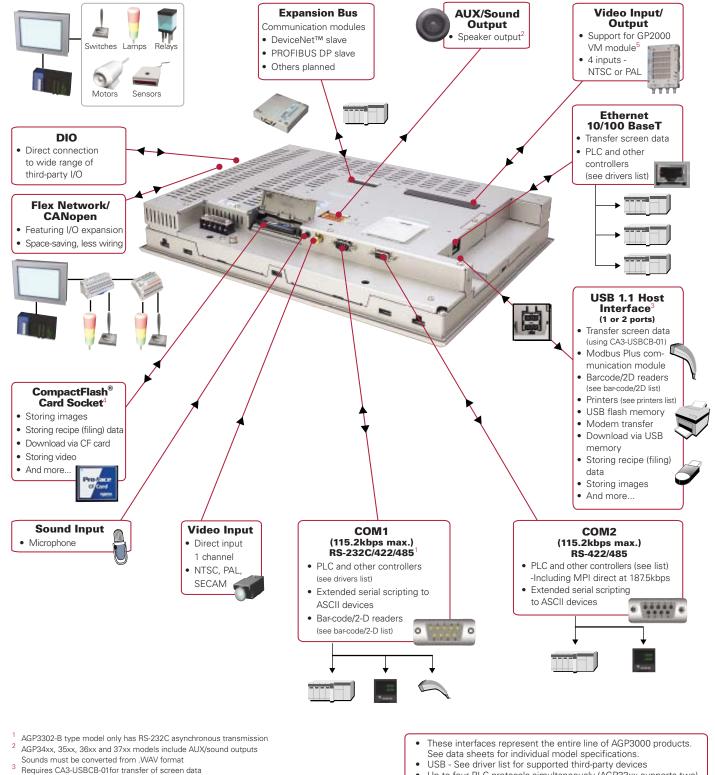
Distributed I/O architectures reduce wiring and installation costs by putting I/O where you need it.



### Interface to Anything on the Factory Floor

### The only HMI you need

The AGP3000's extensive array of connectivity options makes it easy to standardize on one HMI family



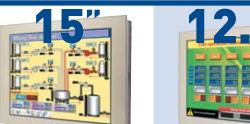
- Not available on 3302B or 32xx
- Compatible with AGP35xxT and 36xxTTFT display models only

- Up to four PLC protocols simultaneously (AGP33xx supports two).
- Please refer to documentation for allowable configurations.

Hardware

### **Operator Interface Plus Multimedia**





### AGP 3750T

#### Certifications



Display

- TFT color LCD (65K colors)
- 1024 x 768 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity:
- 10-90% noncondensing • External Dimensions: W395 [15.55in] x H294mm [11.57in] x D60mm [2.36in]

Ethernet	Com1:	
(2) USB	RS-232/422/485	
CF Type II	Com2:	
Expansion Bus	RS-422/485	
Speaker	Video: NTSC/	
Microphone	PAL/SECAM	

Ports & Interfaces

Model Numbers

AGP3750-T1-AF AGP3750-T1-D24



### AGP 3650T

#### Certifications



Display TFT color LCD (65K colors)

- 800 x 600 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity: 10-90% noncondensing
- External Dimensions: W313mm [12.31in] x H239mm [9.41in] x D56mm [2.2in]

#### Ports & Interfaces

Ethernet	Com1:
(2) USB	RS-232/422/485
CF Type II	Com2:
Expansion Bus	RS-422/485
Speaker	Video: NTSC/
Microphone	PAL/SECAM

Model Numbers

AGP3650-T1-AF



### AGP 3550T





#### Display

- TFT color LCD (65K colors)
- 640 x 480 pixels (AGP3550)
- 800 x 600 pixels (AGP3560) · Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity:
- 10-90% noncondensing • External Dimensions:
- W270.5mm [10.65in] x H212.5mm [8.37in] x D57mm [2.24in]

#### Ports & Interfaces

Ethernet	Com1:
(2) USB	RS-232/422/485
CF Type II	Com2:
Expansion Bus	RS-422/485
Speaker	Video: NTSC/
Microphone	PAL/SECAM

### AGP 3450T





#### Display

- TFT color LCD (65K colors)
- 640 x 480 pixels
- Analog touch screen (no grid)

#### Environmental

- Operating temp. 0 ° to 50 °C
- Ratings: NEMA, 4x/13, IP65f
- Humidity:
- 10-90% noncondensing
- External Dimensions:
- W215mm [8.46in] x H170mm [6.69in] x D60mm [2.36in]

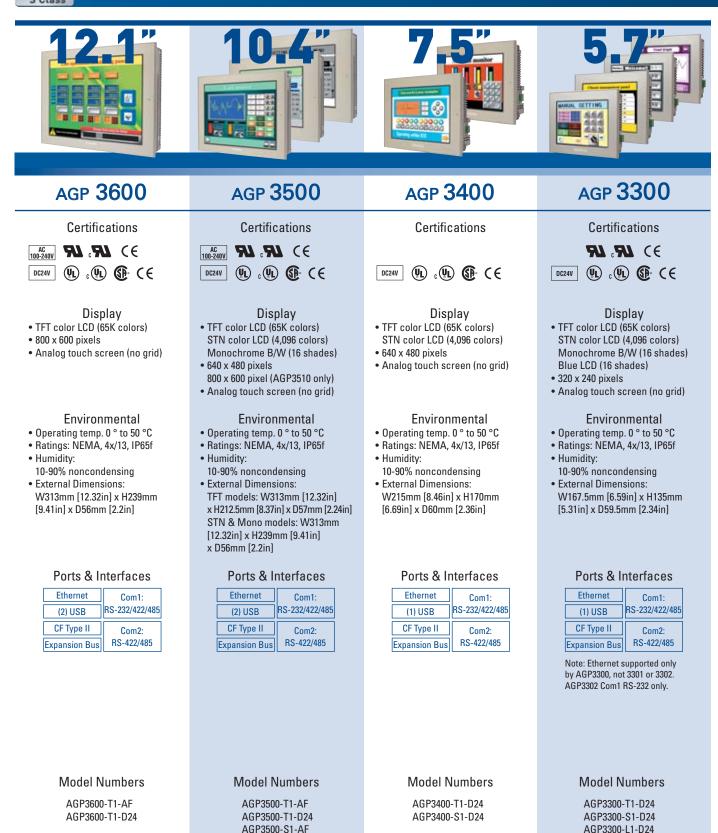
#### Ports & Interfaces

Ethernet	Com1:
(1) USB	RS-232/422/485
CF Type II	Com2:
Expansion Bus	RS-422/485
Speaker	Video: NTSC/
Microphone	PAL/SECAM

Model Numbers

AGP3550-T1-AF AGP3560-T1-AF

### Standard Operator Interface



Hardware

AGP3301-S1-D24

AGP3301-L1-D24

AGP3302-B1-D24

AGP3500-S1-D24

AGP3500-L1-D24

AGP3510-T1-AF



	3.8"	<b>3.8</b> "	Right-size, right-technology solutions Consider your HMI
AST <b>3301</b>	AGP <b>3200</b>	AST <b>3201</b>	requirements for today and tomorrow:
Certifications	Certifications	Certifications	• What size displays do you need?
DEC24V (P) C (P) C (C) Display • STN color LCD (256 colors) Blue LCD (8 shades) • 320 x 240 pixels • Analog touch screen (no grid) Environmental • Operating temp. 0 ° to 50 °C • Ratings: NEMA, 4x/13, IP65f • Humidity: 10-90% noncondensing • External Dimensions:	DE2AV       Q       Q       Q       Q       C       C       C         Display       • CFT color LCD (256 colors) Monochrome amber LCD (8 shades)       • Operations       • Operations         • 320 x 240 pixels       • Analog touch screen (no grid)         Environmental       • Operating temp. 0 ° to 50 °C         • Ratings: NEMA, 4x/13, IP65f       • Humidity: 10-90% noncondensing         • External Dimensions:	DC24V (A) C(A) C(A) C(A) C(A) C(A) C(A) C(A)	• What PLCs/protocols will you use?
W167.5mm [6.59in] x H135mm [5.31in] x D59.5mm [2.34in] Ports & Interfaces (1) USB Expansion Bus Com1: Com2: RS-232 RS-422/485	W130mm [5.12in] x H104mm [4.09in] x D40mm [1.57in] Ports & Interfaces Ethernet Com1: (1) USB RS-232/ 422/485	W130mm [5.12in] x H104mm [4.09in] x D40mm [1.57in] Ports & Interfaces (1) USB Com1: RS-232 Com2 (AST3201): RS-422/485 Com2 (AST3211): Siemens MPI (RS-485)	• What ports (serial, ethernet, USB, etc.) do you need?
Model Numbers AST3301-B1-D24 AST3301-S1-D24	Model Numbers AGP3200-T1-D24 AGP3200-A1-D24	Model Numbers AST3201-A1-D24 AST3211-A1-D24	• What other devices will you need, ie bar-code, temperature controllers or other third-party devices?

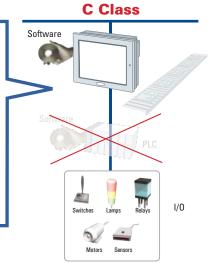


### **Operator Interface Plus Control: All-in-one-box solution**

#### Reduce cost by reducing component count

- One development software for both ladder logic and screen graphics
- Built-in I/O interface
- Use industry-standard I/O

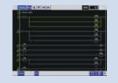
EXAMPLE SAVINGS:				
PLC	\$	600		
PLC Software	\$	600		
Annual Contract	\$	1,500		
Labor	\$	500		
Training		2,000		
► TOTAL	\$	5,200		



#### **Diagnostics at your fingertips**

- Monitor built-in ladder logic without a laptop
- See logic flow and variable values
- No more guessing of the machine's status

#### Logic monitoring for AGP3000 C-Class units



Logic Display Display ladder logic program on the operator interface so you can check status and troubleshoot without a laptop



Address Display Display addresses used in logic program. See current values and real-time updates

### Read/write PLC data directly

- Provides convenient access to PLC behind locked cabinet door
- Increase safety: Eliminate the need for personal protective equipment (PPE)
- Instant access to all I/O by creating only one graphic button



PLC Device Monitor Display I/O from any PLC or controller without creating extra operator interface screens

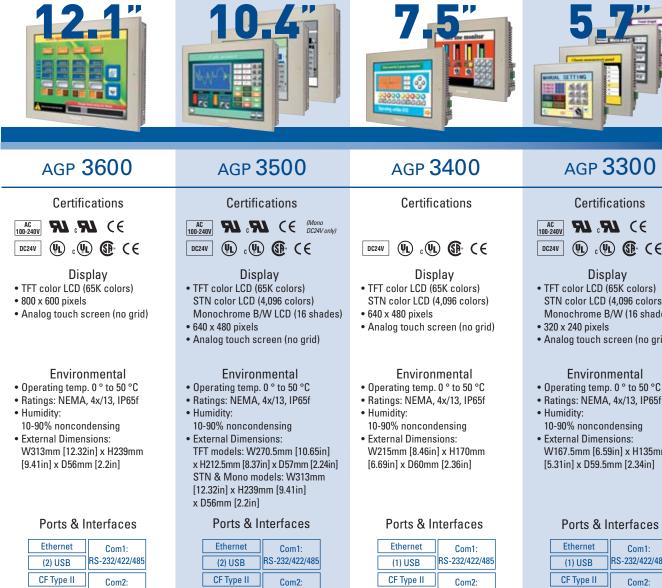


Change PLC Values Change PLC I/O, bit or word values without the need for a laptop

Not supported by EtherNet/IPTM native tag driver. Check the Pro-face Device PLC manual for details.

### **Operator Interface Plus Control**





#### I/O Architectures

Expansion Bus

RS-422/485

one:	DIO <sup>1</sup> : 6 in/2 out
Choose on	Flex Network <sup>2</sup>
Ch	CANopen to Pro-face or third-party slaves

#### Model Numbers

AGP3600-T1-AF-D81K AGP3600-T1-AF-D81C AGP3600-T1-AF-FN1M
AGP3600-T1-AF-CA1M
AGP3600-T1-D24-D81K
AGP3600-T1-D24-D81C
AGP3600-T1-D24-FN1M
AGP3600-T1-D24-CA1M

<sup>2</sup>Flex Network compatible with FN distributed I/O modules

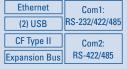
<sup>1</sup>DIO: D81C=Source, D81K=Sink

#### I/O Architectures



#### **Model Numbers**

AGP3300-T1-D24-D81K AGP3300-L1-D24-D81K AGP3300-T1-D24-D81C AGP3300-L1-D24-D81C AGP3300-T1-D24-FN1M AGP3300-L1-D24-FN1M AGP3300-T1-D24-CA1M AGP3300-L1-D24-CA1M AGP3300-S1-D24-D81K AGP3300-S1-D24-D81C



#### I/O Architectures

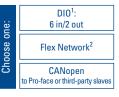


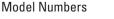
#### Model Numbers

AGP3500-T1-D24-CA1M AGP3500-S1-AF-D81K AGP3500-T1-AF-FN1M AGP3500-S1-AF-D1C AGP3500-T1-AF-CA1M AGP3500-S1-D24-D81K AGP3500-T1-D24-D81K AGP3500-S1-D24-D81C AGP3500-T1-D24-D81C AGP3500-L1-D24-D81C AGP3500-T1-D24-FN1M

Ethernet	Com1:
(1) USB	RS-232/422/485
CF Type II	Com2:
Expansion Bus	RS-422/485

#### I/O Architectures





#### AGP3400-T1-D24-D81K AGP3400-T1-D24-D81C AGP3400-T1-D24-FN1M AGP3400-T1-D24-CA1M AGP3400-S1-D24-D81K AGP3400-S1-D24-D81C

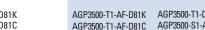
Certifications



- STN color LCD (4,096 colors) Monochrome B/W (16 shades)
- · Analog touch screen (no grid)
- Operating temp. 0 ° to 50 °C
- W167.5mm [6.59in] x H135mm

#### Ports & Interfaces

Ethernet	Com1:
(1) USB	RS-232/422/485
CF Type II	Com2:
Expansion Bus	RS-422/485

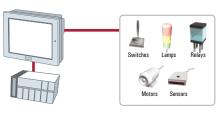




### Operator Interface Plus Control...

### C-Class models with built-in discrete I/O AGP3000 D81C or D81K models

- Reduces system cost by eliminating need for PLC in simple control applications
- I/O is built-in, with no extra modules needed for connection to local I/O
- Directly connect to buttons, limit switches, lamps, sensors or indicators
- Supports
  - 6 inputs/2 outputs (choose sink or source models)
  - I/O update rate = 10ms (minimum)
- Control a stack light or buzzer directly from the HMI



- Connect directly to I/O
   Eliminate or enhance the PLC
- Ladder logic included

### C-Class models with Flex Network interface AGP3000 FN1M models

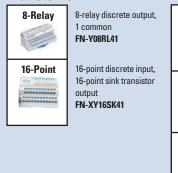
- Pro-face dedicated I/O network for use in distributed I/O applications
- Uses low-cost, industry-standard, twisted-pair network wiring
- Supports:
  - 256 discrete inputs and 256 discrete outputs (512 bits)
  - 64 analog inputs and 64 analog outputs (128 words)
  - I/O update rate = 10ms (minimum)
  - Distance of up to 200 meters
- Reduces system cost by eliminating need for PLC in simple control applications



- Connect directly to I/O
- Eliminate or enhance the PLC
- Ladder logic included

### Use any mix of Flex Network distributed I/O modules

### Flex Network FN modules Discrete I/O





16-Point

32-Point

32-Point

32-point discrete input **FN-X32TS41** 



#### Analog I/O modules

2-Channel

4-Channel

2-channel analog input: 0-10VDC 0-20ma, 4-20ma **FN-AD02AH41** 

4-channel analog input: 0-10VDC, +/-10VDC, 0-20ma, 4-20ma **FN-AD04AH11** 





4-channel analog output 0-10VDC, +/-10VDC, 0-20ma, 4-20ma **FN-DA04AH11** 



Hardware

### ...With Local and Distributed I/O Solutions



#### NEW!

### C-Class models with CANopen interface for distributed I/O

#### AGP3000 CA1M models

- CANopen-based network for use in distributed I/O applications
- Uses Pro-face CANopen slave (HTB module) or any third-party CANopen slaves
- Supports
  - 256 discrete inputs and 256 discrete outputs (512 bits)
  - 64 analog inputs and 64 analog outputs (128 words)
  - I/O update rate = 10ms (minimum)

**HTB modules** 

with EXM I/O

Third-party CANopen slaves

Up to 63 CANopen slaves

- Distance of up to 1000 meters
- Reduces system cost by eliminating need for PLC in simple control applications

HTB

module

### Pro-face CANopen interface supports:

Pro-face brand CANopen slaves (HTB)

#### OR

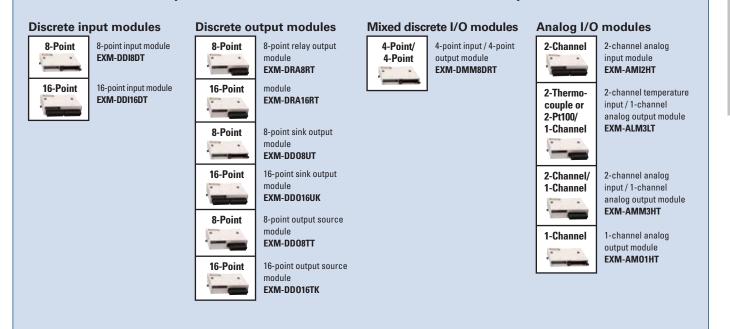
Third-party CANopen slaves

#### **Putting It Together**

- AGP3000 CA1M C-Class unit
- GP-Pro EX HMI software
   HTB CANopen slave module
  - EXM I/O modules (optional)
- Third-party CANopen slaves

#### **EXM analog and discrete I/O modules** Compatible with LT3000 units and AGP3000 C-Class CANopen units

Up to 7 EXM modules



Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com

### LT3000 Series - Standalone Machine Controller

### Reduce machine costs while increasing performance

- Reduce component count
- Eliminate PLC/custom controls
- Cut remote maintenance costs
- Eliminate multiple software packages and support

#### LT3000 Series - A space-saving control solution

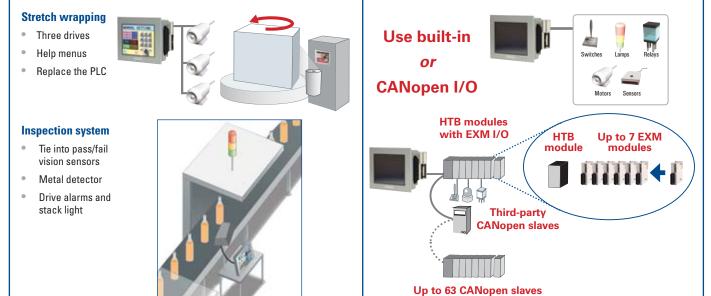
**LT3000 Series Features** 

#### **Typical applications**

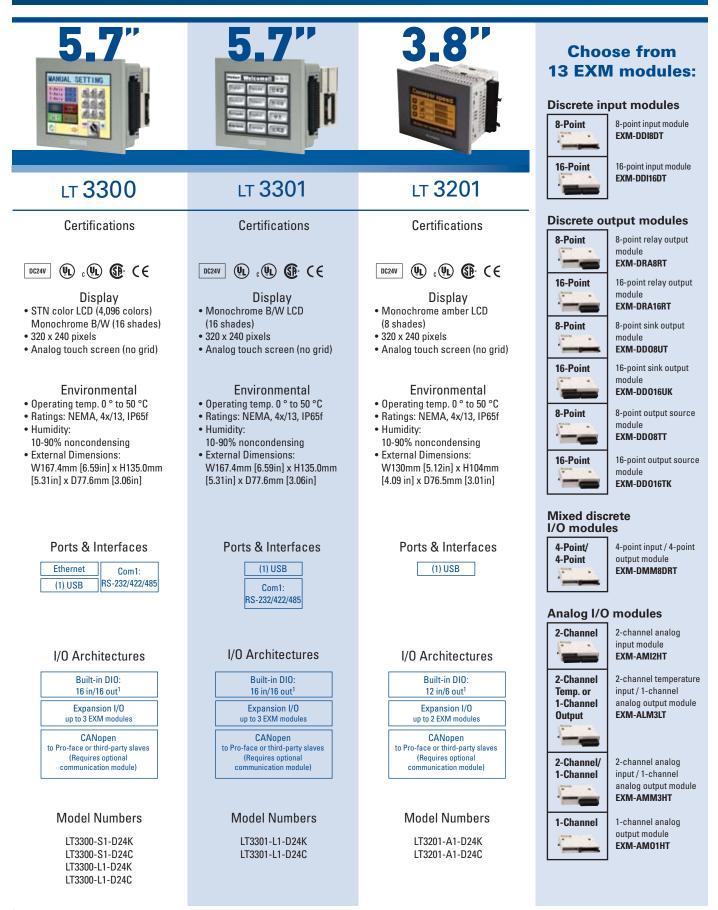
- Motor speed control
- Wrapping machines
- Feeder machines
- Inspection systems
- Labeling machines







### LT3000 OEM HMI Touch Controllers



<sup>1</sup>DIO can be configured as standard input/outputs or used for PWM, PLC, HSC or pulse-catch.

Hardware

### Software and Accessories

GP-Pro EX HMI Development Software EX-ED-Vxx (Includes one user license) Additional GP-Pro EX Development License EX-ED-LICENSE	Remote PC Access (RPA) EX-RPA (1) runtime license 10-Pack User Licenses: EX-RPA-10 30-Pack User Licenses: EX-RPA-30 AGP3000 Movie Converter Software EX-MOVCON-LICENSE M-Class Units: Required to convert videos into AGP3000 Series format	GP-Viewer EX Remote Monitoring Software EX-VIEWER LICENSE (Requirements: One license for each GP3000 Series with Ethernet port) 10-Pack User Licenses: EX-VIEWER LICENSE-10 30-Pack User Licenses: EX-VIEWER LICENSE-30	Pro-Server EX Data Management Software EX-SDV-Vxx (Includes one user license) Additional User License EX-SED-LICENSE	Manufacturing Execution System (MES) Action License EX-MES-LICENSE-Vxx Allows one installation from Pro-Server EX
		In the States		AN THE OWNER

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AUX Connector CA5-AUXCNALL-01 The AUX connector for AGP3000 series required in case an external output is used.	Terminal Block Conversion CA3-ADPTRM-01 9-pin male D-sub to screw terminal.	Siemens COM Port Conversion Adapter CA3-ADPSEI-01 9-pin D-sub to MPI adapter. Adapts COM port to accept Profibus MPI- style connectors and cables.	COM Port Conversion Adapter CA3-ADPCOM-01 9-pin D-sub plug to 9-pin D-sub socket adapter for AGP3000 COM port 1. Not intended for AGP3302 model.	Online Adapter CA4-ADPONL-01 9-pin D-sub plug to 9-pin D-sub socket adapter for AGP3000 COM port 2 only. NOTE: Includes network pull-up/pull- down resistors. Not intended for AGP3302 model.

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DC Power Supply Connector for AGP330x and AGP34x0 models CA5-DCCNM-01	DC Power Supply Connector for AGP35x0 and AGP36x0 models CA5-DCCNL-01	Mitsubishi PLC A, QnA, FX Series 2-Port Adapter II GP070-MD11 Allows simultaneous use of an AGP3000 Series unit and a Mitsubishi PLC A, QnA, FX series peripheral device.	USB Cable Clamp (2-port) CA5-USBATL-01 USB cable clamp for 2-port HMI units to prevent disconnection.	USB Cable Clamp (1 port) CA5-USBATM-01 USB cable clamp for 1-port HMI units to prevent disconnection.

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Installation Fastener CA3-ATFALL-01 Used to install the AGP3000 Series into a solid panel (included with unit).	PROFIBUS Slave Unit CA5-PFSALL/EX-01 PROFIBUS slave communication module for connecting AGP to PROFIBUS DP network. DeviceNet <sup>™</sup> Slave Unit CA6-DNSALL/EX-01 DeviceNet slave module for connecting AGP to DeviceNet network.	CompactFlash <sup>®</sup> card Inserts into the unit'S CF card slot. 512MB CA3-CFCALL/512MB-01 1GB CA6-CFCALL/1GB-01	CompactFlash <sup>®</sup> Card Adapter GP077-CFAD10 Used for read/write of CF card data via a PC's PCMCIA slot.	Panel Cutout Adapter for AGP3500 Series CA4-ATIM10-01 Panel cutout adapter for mounting in cutout of GP2500 (TFT). Panel Cutout Adapter for AGP3300 Series CA4-ATIM5-01 Panel cutout adapter for mounting in cutout of GP37W2B.

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USB Transfer Cable (1m) CA3-USBCB-01 Downloads project data created with GP-Pro EX from PC's USB port to AGP's USB port.	USB Cable (5m) FP-US00 Connects a USB printer (Type B) port to AGP's USB port.	USB Front Cable (1m) CAS-USBEXT-01 USB extension cable.	RS-232 Cable (5m) CA3-CBL232/5M-01 Connects Mitsubishi PLC A-Series to the AGP RS-232 COM port.	GP RS-422 Cable (5m) CA3-CBL422-01 Connects the AGP RS-422 COM port 2 via 9-pin plug to host controller via open wires.
RS-422 Cable (5m) CA3-CBL422/5M-01 Connects the AGP RS-422 COM port 1 via 9-pin socket to host controller via open wires.	Mitsubishi PLC A-Series Connection Cable (5m) CA3-CBLA-01 Connects Mitsubishi PLC A-Series and QnA-Series programming console port to AGP.	Mitsubishi PLC Q-Series Cable (5m) CA3-CBLQ-01 Connects Mitsubishi PLC Q-Series programming console port to AGP. Connection cable.	Mitsubishi PLC Q-Series Cable (5m) CA3-CBLLNKMQ-01 Connects Mitsubishi PLC Q-Series to the AGP RS-232C COM port. Link cable.	Mitsubishi PLC FX-Series Cable CA3-CBLFX/5M-01 (5m) CA3-CBLFX/1M-01 (1m) Connects Mitsubishi PLC FX- Series programming console port to AGP RS-422 COM port.
Omron PLC SYSMAC Link Cable (5m) CA3-CBLSYS-01 Connects Omron PLC SYSMAC Series unit to AGP RS-232C port.	GP Multi-Link Cable (5m) CA3-CBLMLT-01 Connects a host controller to the AGP RS-422 port for multilink (n:1) communication.	GP 2 Port Adapter Cable (5m) CA3-MDCB11 Connects Mitsubishi PLC to the AGP RS-422 port using 2-port adapter II (GP070-MD11).	9-pin-to-25-pin RS-232C Conversion Cable CA3-CBLCBT232-01 9-pin D-sub socket to 25-pin RS-232 cable adapter (for use with some HMI-CAB-Cxxx cables).	9-pin-to-25-pin RS-422 Conversion Cable CA3-CBLCBT422-01 9-pin D-sub socket to 25-pin RS-422 cable adapter (for use with some HMI-CAB-Cxxx cables).
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Allen-Bradley SLC™ 5/03, 5/04 Series Cable HMI-CAB-ST52 HMI-CAB-ST52-30X HMI-CAB-ST52-50X Connects AGP3000/ST401 to A-B PLC via RS-232 9-pin D-sub.	Ethernet Crossover Cable HMI-CAB-ETH 6-ft. HMI to PLC ethernet port or to program HMI.	MicroLogix <sup>™</sup> PLC Cable HMI-CAB-ST106 Connects AGP3000/ST401 to PLC RS-232 8-pin DIN port.	PLC Adapter Cable HMI-CAB-ST001 Connects to AGP3000/ST40x serial port with 9-conductor open-ended wires for connecting to third-party screw terminal devices.	RS-232C Cross-Type Cable (5m) GP410-IS00-O 25-pin D-sub connector both ends. Requires CA3-CBLCBT232-01.
		RS-485 Isolation Unit CA3-ISO485-01 RS-232 Isolation Unit CA3-ISO232-01 Unit for electrically isolating a serial interface signal from the AGP internal current (RS-422 and RS-485 are switchable, or RS-232C and RS-422 are switchable).	AGP3500T/AGP3550T Backlight Replacement CA5-BLU10T-01 AGP3750T Backlight Replacement CA3-BLU15-01 AGP3600T/AGP3650T Backlight Replacement	Protection Sheets Disposable, dirt- resistant cover for screen (5 sheets/set) 15" for AGP3750 series CA3-DFS15-01 12" for AGP3600 series CA3-DFS12-01
Serial USB Cable for Modem Download CA6-USB232-01	1-Amp Power Supply 510-1000-004 2-Amp Power Supply 510-1000-041 24/DC Din-Rail Mount Class 1 Div 2.		AGP3500S/GP2501S Backlight Replacement PS501S-BU00 Note: AGP3300, AGP3400 and AGP3500L backlights cannot be replaced in the field.	10" for AGP3500 series CA5-DFS10-01 8" for AGP3400 series PS400-DF00 6" for AGP/AST/LT33xx CA3-DFS6-01 3.8" for AGP/AST/LT 32xx CA6-DFS4-01

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### **Third-Party Device Support**

#### Drivers

#### **PLC Drivers**

#### **Rockwell Automation**

DF1 DH-485 EtherNet/IP (SLC500/PLC5/ MicroLogix) EtherNet/IP (ControlLogix/ CompactLogix Tag-Based) DeviceNet Slave

Siemens AG SIMATIC S7 3964(R)/RK512 SIMATIC S7 MPI Direct SIMATIC S7 Ethernet SIMATIC S5 CPU Direct PROFIBUS DP Slave

**GE Fanuc Automation** Series 90 Ethernet (SRTP) Series 90-30/70 SNP Series 90-30/70 SNP-X

Schneider Electric Modbus Master (SIO or TCP) Modbus Slave (SIO or TCP) Modbus Plus Uni-Telway

#### FANUC

Power Mate Series

FATEK Automation Corporation FB Series SIO

Fuji Electric Corp. MICREX-F Series SIO MICREX-SX Series SIO MICREX-SX Series Ethernet Hitachi Industrial Equipment Systems HIDIC H Series Ethernet HIDIC H Series S10V Series Ethernet S10 Series SIO

#### Hyundai Heavy Industries Hi4 Robot Driver

KEYENCE Corp. KV-700/1000 Series Ethernet KV-700/1000 Series CPU Direct KV-10/16/24/40 Series CPU Direct

Koyo Electronics Co. Ltd. KOSTAC/DL Series CCM SIO KOSTAC/DL Series Modbus TCP

**LS Industrial Systems** XGT Series FEnet (Ethernet) Master-K Series Cnet

Matsushita Electric Works FP Series Computer Link SIO

Meidensha UNISEQUE Series Ethernet

Mitsubishi Electric Corp. A Series CPU Direct A Series Ethernet A Series Computer Link FX Series CPU Direct FX Series CPU Direct Q/QnA Serial Communication Q/QnA Series Ethernet

**QnA Series CPU Direct** 

**QUTE Series CPU Direct** 

Mitsubishi Heavy Industries DIASYS Netmation Modbus TCP OMRON Corp. C/CV Series Host Link CS/CJ Series Host Link

CS/CJ Series Ethernet Temp. Controller CompoWay/F **RKC Instrument** 

Temp. Controller MODBUS SIO Temp. Controller SIO

Saia-Burgess Controls SAIA S-Bus SIO

Sharp MS Corp. JW Series Computer Link SIO JW Series Computer Link Ethernet

**Toshiba** Computer Link SIO PROSEC-T Ethernet

Toshiba Machine PROVISOR TC200 (SIO) TOYODA Machine Works

(JTEKT Corp.) TOYOPUC CMP-LINK SIO TOYOPUC CMP-LINK Ethernet TOYOPUC-PC3J Series

Yamatake DMC50, SDC45 SIO

YASKAWA Electric Corp. MEMOBUS SIO

MEMOBUS SIO MEMOBUS Ethernet MP Series SIO (extension) YOKOGAWA Electric Corp.

Personal Computer Link SIO Personal Computer Link Ethernet FA-M3 (Ethernet)

#### Temperature Controllers

Shinko Technos Co. Ltd. Indicating Controller SIO

Yamatake Corp. Digital Controller SIO

Yokogowa M&C Personal Computer Link SIO

#### **Fieldbus Module**

CC-Link Partner Association CC-Link Intelligent Device ODVA DeviceNet Slave

PROFIBUS International PROFIBUS DP Slave

#### **Other Connections**

**Digital Electronics Corp.** Memory Link (SIO and Ethernet) General Ethernet (using D-Script)

Banner Engineering Corp. PresencePlus Ethernet Cameras IAI

X-Sel Controller

Please visit our web site for the most updated list of device drivers.

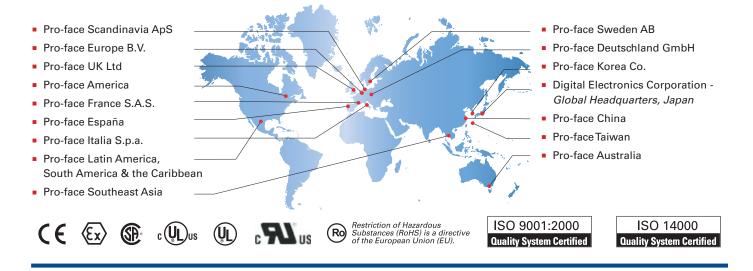
Bar-Code, 2-D Readers & Printers				
Serial	Manufacturer	Model	Туре	Comments
	Aimex Corp.	BR-530RS	Pen	Requires BB-60 power supply
	OPT Electronics	OPT-6125-RS	Touch scanner (read width: 65mm)	Requires DC5300T for power
	Denso Co.	HC-36IITR	Touch scanner (read width: 61mm)	Requires P-200 for power; also requires KRS-423-XF1K connector cable (from Sanwa Supply)
	ННР	IT3800LR-12	Linear imager	Requires cable 42203758-03 (IT3800LR-12 reader has been shown to work but is not fully tested)
	Cognex	Dataman 7500	1-D and 2-D bar-code scanner	Requires cable 42206139-04E cable, also requires power supply
	Any/All	Any	Printer	ASCII text
USB	Aimex Corp.	BR-530UK	Pen	Power supply not required
	OPT Electronics	OPT-6125-USB	Touch scanner (read width: 65 mm)	Power supply not required
	Denso Co.	HC-36TU-K	Touch scanner (read width: 61mm)	Power supply not required
	ННР	IT5800	Hand-held industrial scanner	5800SR050-0F00 is complete with USB cable
	Symbol	LS3408-FZ	Hand-held industrial scanner	Part #LS3408-FZ20005 needs cable CBA-U01-S07ZA
	Symbol	LS2800	1-D bar-code scanner	
	Epson	Stylus Photo R200/R260	Inkjet printer	Use USB cable FP-US00 or commercial type
	Epson	Any	ECS/P24-J84(C) compatible	Use USB conversion cable IEE1284 (commercially available)
	NEC	Any	PC-PR201-PL compatible	Use USB conversion cable IEE1284 (commercially available)
ETH	Any/All	Any	Remote print server	Use ethernet network to connect to remote print server
	Any/All	Any	Printer	ASCII text

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