

Data sheet

6AV7241-1RB47-3DF0

SIMATIC IPC 477E; 24" Multitouch (1920 x 1080); without front USB (with WES7-E only single-touch operation); 4 USB (back), Ethernet (10/100/1000); Celeron G3902E; 3x Gbit Ethernet (IE/PN); 8 GB; 2x RS232/RS485; 1x PCIe (x4); Windows 10 IoT Enterprise 2016 LTSC (64-bit) for Celeron, i3 and i5; CFAST 8 GB, (only optionally with operating system/SW, if no internal mass storage); 128 GB solid-state drive SATA; WinCC RT Advanced V15, 4096PT; WinCC Recipes + Logging; 24 V DC industrial power supply

General information

Product type designation	IPC477E
--------------------------	---------

Display

Design of display	24" TFT multi-touch
Screen diagonal	23.8 in
Resolution (pixels)	
• Horizontal image resolution	1 920 Pixel
• Vertical image resolution	1 080 Pixel
Backlighting	
• MTBF backlighting (at 25 °C)	30 000 h

Control elements

Input device	
• Mouse, at front	No
Keyboard fonts	
• Function keys	No
• alphanumeric keyboard	No
Touch operation	
• Design as multi-touch screen	Yes; Projective-capacitive

Installation type/mounting

Design	Panel PC, built-in unit
central design	Yes
distributed design	No
Mounting in portrait format possible	Yes

Supply voltage

Type of supply voltage	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	

- Mains/voltage failure stored energy time

20 ms

Power loss

In full configuration 24 V DC: max. 88 W, 110 ... 230 V AC

Processor

Processor type Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)

Graphic

Graphics controller Intel HD graphics controller

Drives

Optical drives possible as external drive via USB
 Hard disk 2.5" SATA hard disk, at least 320 GB
 SSD Yes; 1x 128 GB, 1x 240 GB SSD, 1x 480 GB SSD

Memory

Type of memory DDR4 SO-DIMM
 Main memory 4 GB to 16 GB, ECC optional
 Capacity of main memory, max. 16 Gbyte

Data areas and their retentivity

Retentive data area (incl. timers, counters, flags), max. 512 kbyte; 128 KB can be stored in the buffer time; optional

Hardware configuration

Slots

- free slots 1x PCIe (slot with card retainer), 1x slot for CFAST card
- Number of PCI slots 1; Optional
- Number of compact flash slots 1; CFAST

Interfaces

Number of industrial Ethernet interfaces 3; 3x Ethernet (RJ45)
 USB port 4x USB 3.0
 Connection for keyboard/mouse USB / USB
 serial interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS

Video interfaces

- Graphics interface 2x DisplayPort

Industrial Ethernet

- Industrial Ethernet interface 3x Ethernet (RJ45)
 - 100 Mbps Yes
 - 1000 Mbps Yes

Interrupts/diagnostics/status information

Bus diagnostics Yes

Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Fan	No
• Monitoring function via network	Optional

EMC

Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A

Degree and class of protection

IP (at the front)	IP65
IP (rear)	IP20

Standards, approvals, certificates

CE mark	Yes; CE marking / EC Declaration of Conformity
CSA approval	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A

Use in hazardous areas

- ATEX Zone 2 Yes; Optional, only with Multitouch
- IECEx Zone 2 Yes; Optional, only with Multitouch
- cULus Class I Zone 2, Division 2 Yes; Optional, only with Multitouch

Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes

Ambient conditions

Ambient temperature during operation

- Ambient temperature during operation 0 to +45°C

Ambient temperature during storage/transportation

- min. -20 °C
- max. 60 °C

Vibrations

- Vibration resistance during operation acc. to IEC 60068-2-6 IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s² (hard disk)

Shock testing

- Shock load during operation IEC 60068-2-27; 150 m/s², 11 ms (without hard disk); 50 m/s², 30 ms (with hard disk)

Operating systems

pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
--------------------------------	---

without operating system	Yes; Optional
--------------------------	---------------

pre-installed operating system

- Windows 7 Yes; Ultimate 64 bit
- Windows 10 Enterprise Yes; Windows 10 Enterprise 2016 LTSC, 64 bit, MUI

Software

SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle
------------------	---

Dimensions

Width of the housing front	585 mm
Height of housing front	363 mm
Mounting cutout, width	569 mm
Mounting cutout, height	347 mm
Overall depth	76 mm

Weights

Weight, approx.

9 kg

last modified:

03/19/2020

