

PC-based Automation

Industrial PC

Panel PC

Overview



SIMATIC Panel PCs are suitable thanks to their high industrial compatibility for use in control cabinets, consoles and control panels, as well as directly on the machine. Typical areas of application can be found in both factory and process automation.

There is a broad range of robust, high-performance SIMATIC Panel PCs available for different requirements.

Shared industrial functionality

- High-quality components and modules with a high MTBF (mean time between failure), which also ensure 24-hour operation in the extended temperature range
- High swing/shock capacity of the devices through special hard-disk suspensions, locked connectors and card retainers
- Rugged housing model with high electromagnetic compatibility (EMC) and integrated industrial power supplies (also in accordance with NAMUR)
- Service-friendly device design
- Bright, brilliant displays in different sizes from 7" to 22"
- Rugged fronts protected from dust, humidity and chemical substances (front-side IP65 degree of protection)

SIMATIC IPC277: The Panel PC with optimized performance – maintenance-free and compact with displays from 7"

- High degree of flexibility for selecting rugged widescreen fronts from 7" to 19" for a more freely configurable display area
- High resolution, large viewing angle, and up to 100% dimmable backlighting for a brilliant display with optimized power consumption
- Absolutely maintenance-free due to the use of CompactFlash/CFast or SSD as mass storage and fanless operation up to 50 °C ambient temperature
- Maximum industrial functionality due to non-volatile retentive memory (option)
- Ready-to-use embedded bundles with visualization and/or control software

SIMATIC IPC377: The industrial Basic Panel PC at an appealing price

- Low-cost platform for visualization in the industrial and industry-oriented field
- Flexible installation in the control cabinet or via VESA, as well as simple connection of I/O devices due to a large number of interfaces
- Fanless industrial design
- Available directly ex stock

SIMATIC IPC477: The powerful embedded Panel PC – maintenance-free with versatile configuration

- Compact design
- High performance with highly compact design and ruggedness
- Flexible expansion using a PCIe I/O card (optional)
- No rotating parts (without fan and hard disk)
- High security due to use of the operating system
- Windows Embedded Standard 7
- Ready-to-use devices with optionally pre-installed software
- HMI: Innovative HMI software WinCC RT Advanced (inc. logging and recipes)
- Software Controller: with real-time capable software PLC
- Retentive memory onboard (NV-RAM, can be used with software controller)
- Available as PRO version (all-round IP65 degree of protection) with multi-touch

SIMATIC IPC677D: The high-end Panel PC – with maximum performance, functional scope and expansion capability

- Rugged, expandable industrial PC with choice of front panels
- Rugged design for industrial use
- Complete PC openness
- Optional PROFIBUS or PROFINET onboard
- All processors with Dual-Core

Technical specifications

Article number	6AV7882-0...0-...0 SIMATIC IPC277E	6AV7230-0...-.... SIMATIC IPC377E	6AV7241-.....-.... SIMATIC IPC 477E	6AV7260-.....-.... SIMATIC IPC677D
General information				
Product type designation	IPC277E	IPC377E		IPC677D
Installation type/mounting				
Mounting		Panel mount and VESA, horizontal and vertical	For horizontal and vertical mounting	For horizontal and vertical mounting
Design maximum permissible installation angle +/-	Panel PC, built-in unit 45°	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit 20°
Supply voltage				
Type of supply voltage	24 V DC	24 V DC	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC	100/240 V AC (autorange); 24 V DC
Line frequency				
• Rated value 50 Hz			Yes	Yes
• Rated value 60 Hz			Yes	Yes
Mains buffering				
• Mains/voltage failure stored energy time	20 ms	10 ms		10 ms
Processor				
Processor type	Intel Celeron N2807 / N2930	Intel Celeron N3160	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)	Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB Cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB Cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB Cache, AMT)
Chipset				Intel DH82C226 PCH
Graphic				
Graphics controller			Intel HD graphics controller	Intel HD graphics controller P4600 GT2 (Xeon, Core i3); Intel HD graphics controller (Celeron)
Drives				
Optical drives			possible as external drive via USB	DVD±R±RW combi-drive, optional
Hard disk		500 GB HDD	2.5" SATA hard disk, at least 320 GB	3.5" SATA ≥ 500 GB, optional: 3.5" SATA ≥ 1 TB; RAID1 2x 2.5" SATA ≥ 320 GB; solid-state drive (SSD) ≥ 240 GB; all hard disk drives within the enclosure are vibration- damped; RAID1 2x 2.5" SATA ≥ 320 GB byte in removable drive bay
SSD	Yes; ≥ 128 GB optional	Yes; 256 GB SSD	Yes; 1x 128 GB, 1x 240 GB SSD, 1x 480 GB SSD	Yes; ≥ 240 GB optional
Memory				
Type of memory	DDR3L	DDR3L	DDR4 SO-DIMM	DDR3 1600 DIMM
Main memory	2 / 4 / 8 GB	4 GB, 8 GB	4 GB to 16 GB, ECC optional	2 / 4 / 8 / 16 GB; ECC optional
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		512 kbyte; 128 KB can be stored in the buffer time; optional	2 Mbyte; 128 KB can be stored in the buffer time; optional

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Technical specifications (continued)

Article number	6AV7882-0...0-...0	6AV7230-0....-....	6AV7241-.....-....	6AV7260-.....-....
	SIMATIC IPC277E	SIMATIC IPC377E	SIMATIC IPC 477E	SIMATIC IPC677D
Hardware configuration				
Slots				
• free slots		1x mPCIe (half-size), 1x mSATA (full-size)	1x PCIe (slot with card retainer), 1x slot for CFAST card	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer
Interfaces				
PROFIBUS/MPI				Optionally onboard, isolated, max. 12 Mbit/s, compatible with CP 5622
Number of industrial Ethernet interfaces		2; 2x RJ45 (independent)	3; 3x Ethernet (RJ45)	2; 2x RJ45 (independent)
Number of PROFINET interfaces				3; Optional
USB port	1x USB 3.0 / 3x USB 2.0 (7*/9*: 2x USB 2.0)	2x USB 2.0, 2x USB 3.0 (high current)	4x USB 3.0	4x USB 3.0
Connection for keyboard/mouse serial interface	USB / USB 1x COM (1x RS 232 / 422 / 485), selectable in the BIOS		USB / USB Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS	USB / USB 1x COM1 (RS 232), optional: 1x COM2 (RS 232)
parallel interface				optional LPT1
Video interfaces				
• Graphics interface	1x DisplayPort	1x DisplayPort, 1x VGA	2x DisplayPort	1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)
Industrial Ethernet				
• Industrial Ethernet interface	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45	2x Ethernet (RJ45)	3x Ethernet (RJ45)	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45
- 100 Mbps	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes
Protocols				
Protocols (Ethernet)				
• TCP/IP		Yes		
Integrated Functions				
Monitoring functions				
• Temperature monitoring	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes
• Status LEDs	No	POWER, HDD		Yes
• Fan	No	No	No	Yes
• Monitoring function via network	Optional		Optional	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	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2	±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 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3	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	10 V/m for 80 - 1000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6

Technical specifications (continued)

Article number	6AV7882-0...0...0 SIMATIC IPC277E	6AV7230-0...-.... SIMATIC IPC377E	6AV7241-.....-.... SIMATIC IPC 477E	6AV7260-.....-.... SIMATIC IPC677D
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	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)	±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	±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	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±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	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4, burst; length > 3 m	±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	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric	±1 kV acc. to IEC 61000-4-5, surge symmetric	±1 kV acc. to IEC 61000-4-5, surge symmetric	±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	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference				
• Interference emission via line/AC current cables	Noise emission: EN 61000-6-4:2007 +A1:2011 (industrial environments), CISPR 22 Class B, FCC Class A		EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	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	IP65	IP65	IP65
IP (rear)	IP20	IP40	IP20	IP20
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes; CE marking / EC Declaration of Conformity	Yes
CSA approval			Yes	
UL approval	Yes	Yes	Yes	Yes
• UL 508	Yes		Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes		Yes	Yes
EAC (formerly Gost-R)		Yes		
FCC	Yes	Yes	Yes	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005		CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Dust protection		Protection against foreign bodies > 1 mm		
Use in hazardous areas				
• ATEX Zone 2			Yes	
• IECEx Zone 2			Yes	
• cULus Class I Zone 2, Division 2			Yes	
Marine approval				
• Germanischer Lloyd (GL)	Yes; 7", 9", 12" ST; 12", 15", 19" MT		Yes	
• American Bureau of Shipping (ABS)	Yes; 7", 9", 12" single-touch		Yes	
• Bureau Veritas (BV)	Yes; 7", 9", 12" single-touch			
• Det Norske Veritas (DNV)	Yes; 7", 9", 12" ST; 12", 15", 19" MT		Yes	
• Korean Register of Shipping (KRS)			Yes	
• Lloyds Register of Shipping (LRS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT		Yes	
• Nippon Kaiji Kyokai (Class NK)	Yes; 7", 9", 12" single-touch			

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Technical specifications (continued)

Article number	6AV7882-0...0...0	6AV7230-0...-....	6AV7241-....-....	6AV7260-....-....
	SIMATIC IPC277E	SIMATIC IPC377E	SIMATIC IPC 477E	SIMATIC IPC677D
Ambient conditions				
Ambient temperature during operation				
• Ambient temperature during operation	0 °C to 50 °C	0 to +45°C	0 to +45°C	+5 °C to +45 °C with full configuration
Relative humidity				
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)
Vibrations				
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s ²	Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s ² (1g)	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s ² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s ² (hard disk)	Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s ² (1g)
Shock testing				
• Shock load during operation	Tested according to IEC 60068-2-27: 50 m/s ² , 30 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s ² , 11 ms; with HDD: 9.8 m/s ² , 20 ms	IEC 60068-2-27; 150 m/s ² , 11 ms (without hard disk); 50 m/s ² , 30 ms (with hard disk)	Tested to DIN IEC 60068-2-29: 50 m/s ² (5 g), 30 ms, 100 shocks
Operating systems				
Operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit/64-bit	Windows 7 Ultimate (Multi-Language), 64 bit; Windows 10 Enterprise 2016 LTSB, 64 bit	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit /64-bit, Windows 10	Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI
pre-installed operating system	Yes	Yes	Yes	Yes
without operating system	Yes	Yes	Yes; Optional	Yes
pre-installed operating system				
• Windows 7	Yes; Ultimate 32 bit or 64 bit		Yes; Ultimate 64 bit	Yes; Ultimate 32 bit or 64 bit
• Windows 10 Enterprise	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI		Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI
Software				
SIMATIC Software	Optional package with SIMATIC WinCC or WinAC RTX		Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle	Optional package with SIMATIC WinCC or WinAC RTX

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-panel-pc>

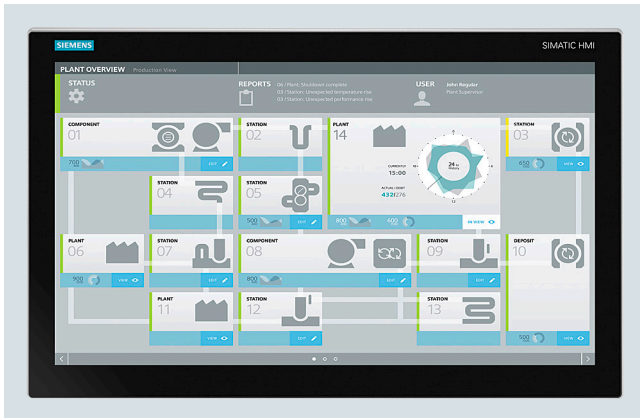
Note:

Do you need a specific modification or extension to the products described here? Then refer to "Customized Automation". There you will find information about additional and generally available sector-specific products as well as options for customer-specific modification and adaptation.

Examples are:

- Specific front panels for SIMATIC Panel PC, e.g. honing oil-resistant or with lateral function/movement keys
- SIMATIC HMI Net Panel with 46" large-scale display

Overview



SIMATIC IPC277E: The Panel PC with optimized performance – maintenance-free and compact with displays from 7"

The SIMATIC IPC277E Nanopanel PC is a flexible embedded industrial PC with rugged and durable displays.

Technologically it is based on the IPC227E Nanobox PC and thus offers maximum industrial functionality for flexible use even under harsh conditions – all without the need for maintenance.

The Panel PC is characterized by modern interfaces and a high degree of flexibility in the selection of the display.

The latest Intel Dual-Core and Quad-Core processors ensure excellent performance here for visualization and control tasks.

Technical specifications

Article number	6AV7882-0...0-...0 SIMATIC IPC277E
General information	
Product type designation	IPC277E
Installation type/mounting	
Design	Panel PC, built-in unit
maximum permissible installation angle +/-	45°
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Celeron N2807 / N2930
Drives	
SSD	Yes; ≥ 128 GB optional
Memory	
Type of memory	DDR3L
Main memory	2 / 4 / 8 GB
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
Interfaces	
USB port	1x USB 3.0 / 3x USB 2.0 (7"/9": 2x USB 2.0)
Connection for keyboard/mouse serial interface	USB / USB 1x COM (1x RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	No
• 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 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6

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SIMATIC IPC277E**Technical specifications (continued)**

Article number	6AV7882-0...0-...0 SIMATIC IPC277E
Interference immunity to cable-borne interference	
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Interference immunity on signal cables >30m 	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> asymmetric interference 	±2 kV acc. to IEC 61000-4-5, surge asymmetric
<ul style="list-style-type: none"> symmetric interference 	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
<ul style="list-style-type: none"> Interference immunity to magnetic fields at 50 Hz 	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
<ul style="list-style-type: none"> Interference emission via line/AC current cables 	Noise emission: EN 61000-6-4:2007 +A1:2011 (industrial environments), 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
UL approval	Yes
<ul style="list-style-type: none"> UL 508 	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
<ul style="list-style-type: none"> Germanischer Lloyd (GL) 	Yes; 7", 9", 12" ST; 12", 15", 19" MT
<ul style="list-style-type: none"> American Bureau of Shipping (ABS) 	Yes; 7", 9", 12" single-touch
<ul style="list-style-type: none"> Bureau Veritas (BV) 	Yes; 7", 9", 12" single-touch
<ul style="list-style-type: none"> Det Norske Veritas (DNV) 	Yes; 7", 9", 12" ST; 12", 15", 19" MT
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	Yes; 7", 9", 12" ST; 12", 15", 19" MT
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (Class NK) 	Yes; 7", 9", 12" single-touch

Article number	6AV7882-0...0-...0 SIMATIC IPC277E
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> Ambient temperature during operation 	0 °C to 50 °C
Relative humidity	
<ul style="list-style-type: none"> Relative humidity 	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
<ul style="list-style-type: none"> Vibration resistance during operation acc. to IEC 60068-2-6 	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s ²
Shock testing	
<ul style="list-style-type: none"> Shock load during operation 	Tested according to IEC 60068-2-27: 50 m/s ² , 30 ms
Operating systems	
Operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit / 64-bit
pre-installed operating system	Yes
without operating system	Yes
pre-installed operating system	
<ul style="list-style-type: none"> Windows 7 	Yes; Ultimate 32 bit or 64 bit
<ul style="list-style-type: none"> Windows 10 Enterprise 	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Software	
SIMATIC Software	Optional package with SIMATIC WinCC or WinAC RTX

Ordering data	Article No.	Article No.
SIMATIC IPC277E (Nanopanel PC)	6AV7882 - 0 0 0 - 0 0	SIMATIC IPC277E (Nanopanel PC)
<u>Operating unit</u>		<u>Mass storage</u>
<ul style="list-style-type: none"> 7" touch 9" touch 12" touch 15" touch front USB 19" touch front USB 12" multi-touch (with WES7-E only single-touch mode) 15" multi-touch (with WES7-E only single-touch mode) 19" multi-touch (with WES7-E only single-touch mode) 15" multi-touch (1 366 x 768; ATEX/IECEX/UL HazLoc; with WES7-E only single-touch mode) 19" multi-touch (1 366 x 768; ATEX/IECEX/UL HazLoc; with WES7-E only single-touch mode) 	A B C D E H F G J K	<ul style="list-style-type: none"> None 128 GB SSD 240 GB SSD 480 GB SSD 4 GB CFast 8 GB CFast 16 GB CFast 30 GB CFast
<u>Processor</u>		<u>Software</u>
<ul style="list-style-type: none"> Celeron N2807 (2C/2T) Celeron N2930 (4C/4T) Celeron N2807 (2C/2T)/TPM Celeron N2930 (4C/4T)/TPM 	A B C D	<ul style="list-style-type: none"> Without SIMATIC software CPU 1507S WinCC RT Advanced V14, 128 PT (V15 license package) WinCC RT Advanced V14, 512 PT (V15 license package) WinCC RT Advanced V14, 2 048 PT (V15 license package) WinCC RT Advanced V14, 4 096 PT (V15 license package) CPU 1507S/WinCC RT Advanced V14, 128 PT (V15 license package) CPU 1507S/WinCC RT Advanced V14, 512 PT (V15 license package) CPU 1507S/WinCC RT Advanced V14, 2 048 PT (V15 license package) CPU 1507S/WinCC RT Advanced V14, 4 096 PT (V15 license package)
<u>Work memory/NVRAM</u>		
<ul style="list-style-type: none"> 2 GB 4 GB 8 GB 2 GB/NVRAM 4 GB/NVRAM 8 GB/NVRAM 	1 2 3 4 5 6	
<u>Operating system</u>		
<ul style="list-style-type: none"> Without operating system Windows Embedded Standard 7 E SP1, English, 32-bit Windows Embedded Standard 7 E SP1, English, 64-bit Windows Embedded Standard 7 P SP1, English, 32-bit Windows Embedded Standard 7 P SP1, English, 64-bit Windows 7 Ultimate SP1, 32-bit, MUI (en, de, fr, it, es) Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es) Windows 10 IoT Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es) 	0 1 2 3 4 5 6 7	

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or the configurator in the Industry Mall in order to ensure suitability; we do not accept any liability for configurations compiled by users themselves.

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-panel-pc>

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC377E

Overview



SIMATIC IPC377E

Based on Intel Celeron process technology, the SIMATIC IPC377E Box PC represents a new IPC platform which has been specifically developed for cost-optimized, PC-based applications in industrial and industry-oriented environments.

The SIMATIC IPC377E Panel PC is characterized by industrial touch displays in the sizes 12", 15" and 19" as well as a variety of interfaces. Fast availability from stock as well as the fanless industrial design complete the concept.

Technical specifications

Article number	6AV7230-0....-.... SIMATIC IPC377E
General information	
Product type designation	IPC377E
Installation type/mounting	
Mounting	Panel mount and VESA, horizontal and vertical
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Processor	
Processor type	Intel Celeron N3160
Drives	
Hard disk	500 GB HDD
SSD	Yes; 256 GB SSD
Memory	
Type of memory	DDR3L
Main memory	4 GB, 8 GB
Hardware configuration	
Slots	
• free slots	1x mPCIe (half-size), 1x mSATA (full-size)
Interfaces	
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
USB port	2x USB 2.0, 2x USB 3.0 (high current)
Video interfaces	
• Graphics interface	1x DisplayPort, 1x VGA
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
• TCP/IP	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD
• Fan	No

Technical specifications (continued)

Article number	6AV7230-0....-.... SIMATIC IPC377E
EMC	
Interference immunity against discharge of static electricity	
<ul style="list-style-type: none"> Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 <ul style="list-style-type: none"> - Test voltage at air discharge - Test voltage at contact discharge 	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD) 8 kV 6 kV
Interference immunity against high-frequency electromagnetic fields	
<ul style="list-style-type: none"> Interference immunity against high frequency radiation 	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3
Interference immunity to cable-borne interference	
<ul style="list-style-type: none"> Interference immunity on supply cables Interference immunity on signal cables >30m Interference immunity on signal cables < 30m 	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground) ±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge ±1 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
<ul style="list-style-type: none"> asymmetric interference symmetric interference 	±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
<ul style="list-style-type: none"> Interference immunity to magnetic fields at 50 Hz 	100 A/m; to IEC 61000-4-8
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP40

Article number	6AV7230-0....-.... SIMATIC IPC377E
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> Ambient temperature during operation 	0 to +45°C
Relative humidity	
<ul style="list-style-type: none"> Relative humidity 	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
<ul style="list-style-type: none"> Vibration resistance during operation acc. to IEC 60068-2-6 	Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s ² (1g)
Shock testing	
<ul style="list-style-type: none"> Shock load during operation 	Tested in accordance with IEC 60068-2-27: with SSD: 150 m/s ² , 11 ms; with HDD: 9.8 m/s ² , 20 ms
Operating systems	
Operating system	Windows 7 Ultimate (Multi-Language), 64 bit; Windows 10 Enterprise 2016 LTSB, 64 bit
pre-installed operating system	Yes
without operating system	Yes

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC377E

Ordering data

Article No.

SIMATIC IPC377E

1 x display port graphic
1 x VGA port graphic
2x 10/100/1 000 Mbps
Ethernet RJ45; 2 x USB 3.0;
2 x USB 2.0; 4 x serial ports (COM)

Operating unit

- 12" touch (1 280 x 800)
- 15" touch (1 366 x 768)
- 19" touch (1 366 x 768)

Processor

- Celeron N3160 (4C/4T)

Work memory

- 4 GB RAM
- 8 GB RAM

Expansions/interfaces

- 1x mPCIe / 1x mSata

Operating system

- Without operating system
- Windows Ultimate SP1, 64-bit MUI (en, de, fr, es, it)

Drives

- None
- 500 GB HDD
- 256 GB SSD

Power supply

- 24 V DC

Mounting accessories

- Installation, VESA installation

Article No.
6AV7230 - 0
0
C
D
E
A
2
3
0
0
1
A
B
C
A
0

Article No.

Preferred variants (available directly ex stock)

SIMATIC IPC377E

12" Configuration 1

12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio

6AV7230-0CA20-0BA0

12" Configuration 2

12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultimate 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio

6AV7230-0CA20-1BA0

12" Configuration 3

12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio

6AV7230-0CA20-0CA0

12" Configuration 4

12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio

6AV7230-0CA20-1CA0

12" Configuration 5

12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 10 Enterprise 2016 LTSB; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio

6AV7230-0CA20-2CA0

Ordering data	Article No.	Ordering data	Article No.
15" Configuration 1 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0DA20-0BA0	19" Configuration 1 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0EA20-0BA0
15" Configuration 2 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultimate 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0DA20-1BA0	19" Configuration 2 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultimate 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0EA20-1BA0
15" Configuration 3 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0DA20-0CA0	19" Configuration 3 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0EA20-0CA0
15" Configuration 4 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0DA20-1CA0	19" Configuration 4 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0EA20-1CA0
15" Configuration 5 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 10 Enterprise 2016 LTSB; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0DA20-2CA0	19" Configuration 5 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	6AV7230-0EA20-2CA0

Note:

The SIMATIC IPC377E has a different front panel and is not directly installation-compatible with previous SIMATIC HMI devices.

Additional information is available on the Internet at:

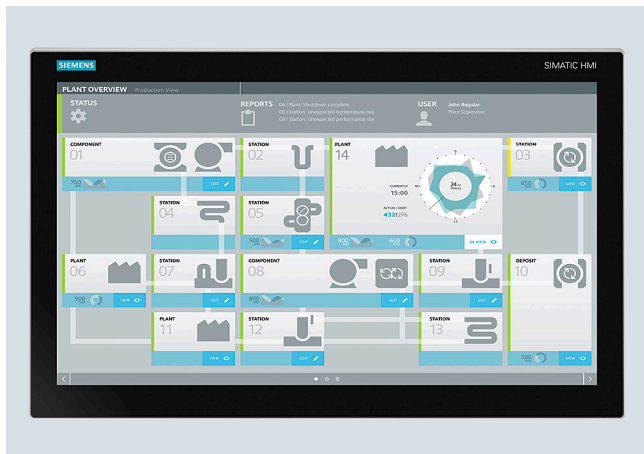
<http://www.siemens.com/simatic-panel-pc>

PC-based Automation

Industrial PC
Panel PC

SIMATIC IPC477E

Overview



SIMATIC IPC477E: The powerful embedded Panel PC – maintenance-free with versatile configuration

- Embedded PC platform with extremely high industrial compatibility for demanding tasks in the field of PC-based automation
- Maintenance-free (no rotating components such as fan and hard disk)
- Rugged construction: The PC is resistant to even the harshest mechanical stress and extremely reliable in operation
- Compact design
- Battery-independent retentive memory onboard
- High degree of investment security
- Fast integration capability
- Built-in versions
 - 15" TFT touch
 - 19" TFT touch
 - 22" TFT touch
 - 15" TFT multi-touch
 - 19" TFT multi-touch
 - 22" TFT multi-touch
 - 24" TFT multi-touch

Technical specifications

Article number	6AV7241-..... SIMATIC IPC 477E
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
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
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
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
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	4x USB 3.0
Connection for keyboard/mouse serial interface	USB / USB 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

Technical specifications (continued)

Article number	6AV7241-.....-.... SIMATIC IPC 477E
Integrated Functions	
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

Article number	6AV7241-.....-.... SIMATIC IPC 477E
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
• IECEx Zone 2	Yes
• cULus Class I Zone 2, Division 2	Yes
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 to +45°C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)
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/s ² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s ² (hard disk)
Shock testing	
• Shock load during operation	IEC 60068-2-27; 150 m/s ² , 11 ms (without hard disk); 50 m/s ² , 30 ms (with hard disk)
Operating systems	
Operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
pre-installed operating system	Yes
without operating system	Yes; Optional
pre-installed operating system	
• Windows 7	Yes; Ultimate 64 bit
• Windows 10 Enterprise	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC477E

Ordering data

Article No.

SIMATIC IPC477E ¹⁾	6AV7241 -	
Processor and fieldbus		
• Celeron G3902E; 3 x Gigabit Ethernet (IE/PN)		1
• Core i3-6102E; 3 x Gigabit Ethernet (IE/PN)		3
• Core i5-6442EQ; 3 x Gigabit Ethernet (IE/PN)		5
• Xeon E3-1505L; 3 x Gigabit Ethernet (IE/PN)		7
Operating unit		
• 15" single-touch (1 280 x 800) with front USB		B
• 19" single-touch (1 366 x 768) with front USB		D
• 22" single-touch (1 920 x 1 080) with front USB		E
• 15" multi-touch (1 366 x 768), single-touch mode only with WES7-E		J
• 19" multi-touch (1 366 x 768), single-touch mode only with WES7-E		K
• 22" multi-touch (1 920 x 1 080), single-touch mode only with WES7-E		L
• 24" multi-touch (1 920 x 1 080), single-touch mode only with WES7-E		R
Work memory/NVRAM		
• 4 GB		A
• 8 GB		B
• 16 GB		C
• 8 GB with ECC		D
• 16 GB with ECC		E
• 4 GB and NVRAM		F
• 8 GB and NVRAM		G
• 16 GB and NVRAM		H
• 8 GB with ECC and NVRAM		J
• 16 GB with ECC and NVRAM		K
Expansions/interfaces		
• No RS 232/RS 485, without PCIe		0
• No RS 232/RS 485 and one PCIe		1
• Second RS 232/RS 485, without PCIe		3
• Second RS 232/RS 485 and one PCIe		4
• No RS 232, without PCIe with ATEX/IECEX Cat 3G Zone 2		5
• No RS 232 and one PCIe with ATEX/IECEX Cat 3G Zone 2		6
• Two RS 232 without PCIe with ATEX/IECEX Cat 3G Zone 2		7
• Two RS 232 and one PCIe with ATEX/IECEX Cat 3G Zone 2		8
Operating system		
• Without operating system		0
• Windows Embedded Standard 7 SP1, English, 32-bit		1
• Windows Embedded Standard 7 SP1, English, 64-bit		2
• Windows Embedded Standard 7 P SP1, English, 64-bit, multi-touch		3
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)		4
• Windows 10 Enterprise 2016 LTSC (64-bit) for Celeron, Core i3 and Core i5 processors		7
• Windows 10 Enterprise 2016 LTSC (64-bit) for Xeon processors		8

Article No.

SIMATIC IPC477E ¹⁾	6AV7241 -	
Mass storage, externally accessible		
• Without external mass storage		0
• CFAST 2 GB, without operating system		1
• CFAST 4 GB, without operating system		2
• CFAST 8 GB (only optionally with operating system/software if no internal mass storage or HDD)		3
• CFAST 16 GB (only optionally with operating system/software if no internal mass storage or HDD)		4
• CFAST 30 GB (only optionally with operating system/software if no internal mass storage or HDD)		5
Mass storage, internal		
• Without internal mass storage		A
• 128 GB solid-state drive SATA		D
• 240 GB solid-state drive SATA		F
• 480 GB solid-state drive SATA		G
• 320 GB HDD		J
SIMATIC software (bundles and starter systems)		
• Without SIMATIC software		A
• CPU 1507S		B
• WinCC RT Advanced V15		
- 128 PT		C
- 512 PT		D
- 2 048 PT		E
- 4 096 PT		F
- 8 192 PT		G
• CPU 1507S / WinCC RT Advanced V15		
- 128 PT		H
- 512 PT		J
- 2 048 PT		K
- 4 096 PT		L
- 8 192 PT		M
• IPC starter system with CPU 1507S and WinCC RT Advanced, without licenses		S
Power supply:		
• 24 V DC industrial power supply		0
• 110/230 V AC industrial power supply with NAMUR; European power cable		1
• 110/230 V AC industrial power supply with TPM ²⁾ (not for China or Russia) NAMUR, European power cable		7
• 24 V DC industrial power supply and TPM ²⁾ (not for China or Russia)		8

¹⁾ For an up-to-date overview, see the SIMATIC PC Online Configurator:
<http://www.siemens.com/ipc-configurator>

²⁾ TPM = Trusted Platform Module

Overview



Now available as fully-enclosed IPC477D PRO 15", 19" or 22" with degree of protection IP65.

The following front versions are available:

- Built-in versions
 - 12" TFT touch
 - 15" TFT touch
 - 15" TFT touch/key
 - 19" TFT touch
 - 22" TFT touch
 - 15" TFT multi-touch
 - 19" TFT multi-touch
 - 22" TFT multi-touch
 - 15" TFT multi-touch with marine approval
 - 19" TFT multi-touch with marine approval
 - 22" TFT multi-touch with marine approval

SIMATIC IPC477D: The powerful embedded Panel PC – maintenance-free with versatile configuration

- Embedded PC platform with extremely high industrial compatibility for demanding tasks in the field of PC-based automation
- Maintenance-free (no rotating components such as fan and hard disk)
- Rugged construction: The PC is resistant to even the harshest mechanical stress and is extremely reliable in operation
- Compact design
- Battery-independent retentive memory onboard
- High degree of investment security
- Fast integration capability

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC477D**Technical specifications**

Article number	6AV7240-.....-.... SIMATIC IPC 477D	6AV7240-.....-....8 SIMATIC IPC 477D with TPM
Installation type/mounting		
Mounting	For horizontal and vertical mounting	
Design	Panel PC, built-in unit	Box PC, built-in unit
Supply voltage		
Type of supply voltage	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC
Line frequency		
• Rated value 50 Hz	Yes	Yes
• Rated value 60 Hz	Yes	Yes
Mains buffering		
• Mains/voltage failure stored energy time	10 ms	
Processor		
Processor type	Celeron 827E (1C/1T, 1.40 GHz, 1.5 MB Cache); Core i3-3217UE (2C/4T, 1.60 GHz, 3 MB Cache); Core i7-3517UE (2C/4T, 1.70 (2.80) GHz, 4 MB Cache, iAMT)	Intel Core i7-3517UE Intel Core i3-3217UE Intel Celeron 827E
Graphic		
Graphics controller	Intel HD graphics controller	Intel HD graphics controller
Drives		
Optical drives	Optional: DVD±R±RW combi drive; on rear, can be operated from side	Optional: DVD±R±RW combi drive; on rear, can be operated from side
Hard disk	2.5" SATA hard disk, at least 320 GB	2.5" SATA hard disk, at least 320 GB
SSD	Yes; 1x 240 GB SSD, 1x 480 GB SSD	Yes; 1x 240 GB SSD, 1x 480 GB SSD
Memory		
Type of memory	DDR3-SDRAM	DDR3-SDRAM
Main memory	2 / 4 / 8 GB; ECC optional	2 / 4 / 8 GB
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	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	1x PCIe (slot with card retainer), 1x slot for CFAST card
Interfaces		
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbps, compatible with CP 5611	Optionally onboard, isolated, max. 12 Mbps, compatible with CP 5611
Number of PROFINET interfaces	3; 3 ports (IRT, with switch, optional)	3; 3 ports (IRT, with switch, optional)
USB port	4x USB 3.0 high speed/high current	4x USB 3.0 high speed/high current
Connection for keyboard/mouse serial interface	USB / USB COM1: 1x RS 232, COM2 (optional): 1x RS 232	USB / USB COM1: 1x RS 232, COM2 (optional): 1x RS 232
Video interfaces		
• Graphics interface	DVI VGA / DVI integrated	DVI VGA / DVI integrated
Industrial Ethernet		
• Industrial Ethernet interface	Onboard, 2x 10/100 Mbit, RJ45, no plug-in card necessary	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45
Integrated Functions		
Monitoring functions		
• Temperature monitoring	Yes	Yes
• Watchdog	Yes	Yes
• Status LEDs	Yes	Yes
• Fan	No	No
• Monitoring function via network	Optional	Optional

Technical specifications (continued)

Article number	6AV7240-.....-.... SIMATIC IPC 477D	6AV7240-.....-....8 SIMATIC IPC 477D with TPM
EMC		
Interference immunity against discharge of static electricity		
<ul style="list-style-type: none"> Interference immunity against discharge of static electricity 	<ul style="list-style-type: none"> ± 6 kV contact discharge at the front in accordance with IEC 61000-4-2; ± 4 kV, housing contact discharge at the back in accordance with IEC 61000-4-2; ± 8 kV air discharge in accordance with IEC 61000-4-2 	
Interference immunity against high-frequency electromagnetic fields		
<ul style="list-style-type: none"> Interference immunity against high frequency radiation 	<ul style="list-style-type: none"> 10 V/m for 80 - 1000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6 	
Interference immunity to cable-borne interference		
<ul style="list-style-type: none"> Interference immunity on supply cables Interference immunity on signal cables >30m Interference immunity on signal cables < 30m 	<ul style="list-style-type: none"> ±2 kV (to IEC 1000-4-4; 1995; burst); ±1 kV (to IEC 1000-4-5; 1995; surge symm); ±2 kV (to IEC 1000-4-5; 1995; surge asymm) ±2 kV acc. to IEC 61000-4-4, burst; length > 30 m; ±2 kV acc. to IEC 61000-4-5, surge; length > 30 m ±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		
<ul style="list-style-type: none"> asymmetric interference symmetric interference 	<ul style="list-style-type: none"> ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric 	<ul style="list-style-type: none"> ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields		
<ul style="list-style-type: none"> Interference immunity to magnetic fields at 50 Hz 	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference		
<ul style="list-style-type: none"> Interference emission via line/AC current cables 	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	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	IP65
IP (rear)	IP20	IP20
Standards, approvals, certificates		
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes
UL approval	Yes	Yes
<ul style="list-style-type: none"> UL 508 	Yes	Yes
cULus	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes
KC approval	Yes	Yes
FCC	Yes	Yes
EMC	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A
Use in hazardous areas		
<ul style="list-style-type: none"> ATEX Zone 2 ATEX Zone 22 IECEX Zone 2 cULus Class I Zone 2, Division 2 	<ul style="list-style-type: none"> Yes; Optional Yes; Optional Yes; Optional Yes 	<ul style="list-style-type: none"> Yes; Optional Yes; Optional Yes; Optional Yes
Marine approval		
<ul style="list-style-type: none"> Germanischer Lloyd (GL) American Bureau of Shipping (ABS) Bureau Veritas (BV) Det Norske Veritas (DNV) Korean Register of Shipping (KRS) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (Class NK) 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes Yes

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC477D**Technical specifications** (continued)

Article number	6AV7240-.....-.... SIMATIC IPC 477D	6AV7240-.....-....8 SIMATIC IPC 477D with TPM
Ambient conditions		
Ambient temperature during operation		
• Ambient temperature during operation	0 °C to +45 °C with full configuration	0 °C to +50 °C with full configuration
Relative humidity		
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)
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/s ² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s ² (hard disk)	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s ² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s ² (hard disk)
Shock testing		
• Shock load during operation	IEC 60068-2-27; 150 m/s ² , 11 ms (without hard disk); 50 m/s ² , 30 ms (with hard disk)	IEC 60068-2-27; 150 m/s ² , 11 ms (without hard disk); 50 m/s ² , 30 ms (with hard disk)
Operating systems		
Operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI
pre-installed operating system	Yes	Yes
without operating system	Yes; Optional	Yes
pre-installed operating system		
• Windows 7	Yes; Ultimate 32 bit or 64 bit	Yes; Ultimate 32 bit or 64 bit
Software		
SIMATIC Software	Optionally with pre-installed software bundle SIMATIC WinCC RT Advanced / WinAC RTX	Optionally with pre-installed software bundle SIMATIC WinCC RT Advanced / WinAC RTX

Ordering data	Article No.	Article No.
SIMATIC IPC477D¹⁾	6AV7240 -	SIMATIC IPC477D¹⁾
<u>Processor and fieldbus:</u>		<u>Expansions/interfaces:</u>
• Celeron U827E (1C/1T, 1.4 GHz, 1.5 MB cache); 2 x Gigabit Ethernet (IE/PN)	0	• 1 x RS 232, without PCIe
• Celeron U827E (1C/1T, 1.4 GHz, 1.5 MB cache); 2 x Gigabit Ethernet (IE/PN); PROFIBUS DP12	1	• 1 x RS 232 and one PCIe
• Core i3-3217UE (2C/4T, 1.6 GHz, 3 MB cache); 2 x Gigabit Ethernet (IE/PN)	3	• Two RS 232, without PCIe
• Core i3-3217UE (2C/4T, 1.6 GHz, 3 MB cache); 2 x Gigabit Ethernet (IE/PN); PROFIBUS DP12	4	• Two RS 232 and one PCIe
• Core i3-3217UE (2C/4T, 1.6 GHz, 3 MB cache); 1 x Gigabit Ethernet (IE/PN); 1 x PROFINET (IRT, 3 ports)	5	<u>Operating system:</u>
• Core i7-3517UE (2C/4T, 1.7 (2.8) GHz, 4 MB cache); 2 x Gigabit Ethernet (IE/PN)	6	• Without operating system
• Core i7-3517UE (2C/4T, 1.7 (2.8) GHz, 4 MB cache); 2 x Gigabit Ethernet (IE/PN); PROFIBUS DP12	7	• Windows Embedded Standard 7 Professional, 32-bit, MUI
• Core i7-3517UE (2C/4T, 1.7 (2.8) GHz, 4 MB cache); 1 x Gigabit Ethernet (IE/PN); 1 x PROFINET (IRT, 3 ports)	8	• Windows Embedded Standard 7 SP1, English, 32-bit
<u>Operator control unit:</u>		• Windows Embedded Standard 7 SP1, English, 64-bit
• 12" touch (1 280 x 800) (caution, restrictions regarding options: HDD, PCI, AC, DVD)	A	• Windows 7 Ultimate SP1, 32-bit, MUI (en, de, fr, it, es)
• 15" touch (1 280 x 800) with front USB	B	• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)
• 15" touch/key (1 280 x 800) with front USB	C	<u>Externally accessible mass storage (without operating system):</u>
• 19" touch (1 366 x 768) with front USB	D	• Without external mass storage
• 22" touch (1 920 x 1 080) with front USB	E	• CFAST 2 GB, w/o operating syst.
• 15" multi-touch (1 366 x 768) without front USB	H	• CFAST 4 GB ²⁾
• 19" multi-touch (1 366 x 768) without front USB	K	• CFAST 8 GB ²⁾
• 22" multi-touch (1 920 x 1 080) without front USB	L	• CFAST 16 GB ²⁾
• 15" multi-touch (1 366 x 768) without front USB, with marine approval	M	• DVD
• 19" multi-touch (1 366 x 768) without front USB, with marine approval	N	<u>Internal mass storage:</u>
• 22" multi-touch (1 920 x 1 080) without front USB, with marine approval	P	• Without internal mass storage
<u>Work memory/NVRAM</u>		• CFAST 2 GB
• 2 GB	B	• CFAST 4 GB
• 4 GB	C	• CFAST 8 GB
• 8 GB	D	• CFAST 16 GB
• 2 GB and NVRAM	K	• 320 GB HDD
• 4 GB and NVRAM	L	• DVD
• 8 GB and NVRAM	M	• SSD 240 GB standard without DVD
		• SSD 480 GB standard without DVD
		• HDD min. 320 GB with DVD
		<u>SIMATIC software pre-installed (bundles):</u>
		• Without SIMATIC software
		<u>Power supplies:</u>
		• 24 V DC industrial power supply
		• 110/230 V AC industrial power supply with NAMUR; without power cable
		• 110/230 V AC industrial power supply with NAMUR; European power cable
		• 110/230 V AC industrial power supply with NAMUR; US power cable
		• 110/230 V AC industrial power supply with NAMUR; Chinese power cable
		• 110/230 V AC industrial power supply with NAMUR; Italian power cable
		• 110/230 V AC industrial power supply with NAMUR; Swiss power cable
		• 110/230 V AC industrial power supply with NAMUR; UK power cable
		• 24 V DC industrial power supply and TPM ⁴⁾ (not for China or Russia)

1) Built-to-order versions with a delivery time of max. 15 working days and with identified repair.
 2) Optional operating system/software only if no internal mass storage or HDD
 3) Only with work memory and NVRAM
 4) TPM = Trusted Platform Module

Note:
Please assemble the required IPC configuration using the TIA Selection Tool or the configurator in the Industry Mall in order to ensure suitability; we do not accept any liability for configurations compiled by users themselves.

PC-based Automation

Industrial PC
Panel PC

SIMATIC IPC677D

Overview



SIMATIC IPC677D: The high-end Panel PC – with maximum performance, functional scope and expansion capability

PC platform with extremely high industrial compatibility for demanding tasks in the field of PC-based automation.

Rugged construction: The PC is resistant to even the harshest mechanical stress and is extremely reliable in operation.

- Compact design
- High degree of investment protection
- Fast integration capability

The following widescreen front variants are available:

- 15", 19" or 22" resistive single-touch color display with front USB
- 15", 19" or 22" capacitive multi-touch color display

Technical specifications

Article number	6AV7260-..... SIMATIC IPC677D
General information	
Product type designation	IPC677D
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
maximum permissible installation angle +/-	20°
Supply voltage	
Type of supply voltage	100/240 V AC (autorange); 24 V DC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Processor	
Processor type	Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB Cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB Cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB Cache, AMT)
Chipset	Intel DH82C226 PCH
Graphic	
Graphics controller	Intel HD graphics controller P4600 GT2 (Xeon, Core i3); Intel HD graphics controller (Celeron)
Drives	
Optical drives	DVD±R±RW combi-drive, optional
Hard disk	3.5" SATA ≥ 500 GB, optional: 3.5" SATA ≥ 1 TB; RAID1 2x 2.5" SATA ≥ 320 GB; solid-state drive (SSD) ≥ 240 GB; all hard disk drives within the enclosure are vibration-damped; RAID1 2x 2.5" SATA ≥ 320 GB byte in removable drive bay
SSD	Yes; ≥ 240 GB optional
Memory	
Type of memory	DDR3 1600 DIMM
Main memory	2 / 4 / 8 / 16 GB; ECC optional
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	2 Mbyte; 128 KB can be stored in the buffer time; optional
Hardware configuration	
Slots	
• free slots	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer

Technical specifications (continued)

Article number	6AV7260-.....-.... SIMATIC IPC677D
Interfaces	
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbit/s, compatible with CP 5622
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
Number of PROFINET interfaces	3; Optional
USB port	4x USB 3.0
Connection for keyboard/mouse serial interface	USB / USB
parallel interface	1x COM1 (RS 232), optional: 1x COM2 (RS 232) optional LPT1
Video interfaces	
• Graphics interface	1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)
Industrial Ethernet	
• Industrial Ethernet interface	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	Yes
• Fan	Yes
• 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 for 80 - 1000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM 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

Article number	6AV7260-.....-.... SIMATIC IPC677D
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
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	+5 °C to +45 °C with full configuration
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s ² (1g)
Shock testing	
• Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s ² (5 g), 30 ms, 100 shocks
Operating systems	
Operating system	Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI
pre-installed operating system	Yes
without operating system	Yes
pre-installed operating system	
• Windows 7	Yes; Ultimate 32 bit or 64 bit
• Windows 10 Enterprise	Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI
Software	
SIMATIC Software	Optional package with SIMATIC WinCC or WinAC RTX

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC677D

Ordering data

Article No.

SIMATIC IPC677D ¹⁾

6AV7260 -

HD graphics onboard;
2 x Gigabit Ethernet (IE/PN) RJ45;
4 x USB V3.0; 1x serial (COM1);
RAID controller onboard;
watchdog, temp./fan monitoring

Operating unit

- 15" touch (1 280 x 800) with front USB **0**
- 19" touch (1 366 x 768) with front USB **1**
- 22" touch (1 920 x 1 080) with front USB **2**
- 15" multi-touch (1 366 x 768) **3**
- 19" multi-touch (1 366 x 768) **4**
- 22" multi-touch (1 920 x 1 080) **5**

Processor

- Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache) **A**
- Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache); PROFIBUS/MPI (CP 5622-compatible); 2 MB buffered SRAM **B**
- Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB buffered SRAM **C**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x) **D**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x); PROFIBUS/MPI (CP 5622-compatible); 2 MB buffered SRAM **E**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB buffered SRAM **F**
- Xeon E3-1268Lv3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, VT-d, AMT) **G**
- Xeon E3-1268Lv3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, VT-d, AMT); PROFIBUS/MPI (CP 5622-compatible); 2 MB buffered SRAM **H**
- Xeon E3-1268Lv3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, VT-d, AMT); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB buffered SRAM **J**

Drives

- 500 GB HDD SATA **A**
- 500 GB HDD SATA; DVD+/-RW **B**
- 1 TB HDD SATA **D**
- 1 TB HDD SATA; DVD+/-RW **E**
- RAID1 2 x 320 GB SATA (2.5") **G**
- RAID1 2 x 320 GB SATA (2.5"); DVD+/-RW **H**
- Exchangeable SSD RAID1 2x 240 GB SATA (2.5") **J**
- Exchangeable HDD RAID1 2 x 320 GB SATA (2.5") **K**
- Exchangeable HDD RAID1 2 x 320 GB SATA (2.5"); solid-state drive 240 GB **L**
- Solid-state drive 240 GB; **M**
- Solid-state drive 240 GB; 320 GB HDD SATA (2.5") **N**
- Solid-state drive 240 GB; 320 GB HDD SATA (2.5"); DVD+/-RW **P**

Article No.

SIMATIC IPC677D ¹⁾

6AV7260 -

Memory configuration

- 2 GB DDR3 1600 DIMM **1**
- 4 GB DDR3 1600 DIMM **2**
- 8 GB DDR3 1600 DIMM **3**
- 16 GB DDR3 1600 DIMM **4**
- 8 GB DDR3 1600 DIMM; ECC **5**
- 16 GB DDR3 1600 DIMM; ECC **6**

Expansions (HW)

- 2 x PCI **0**
- 1 x PCIe (x16); 1 x PCI **1**
- 1 x PCIe (x16); 1 x PCIe (x4) **2**

Expansion 2 (HW)

- Without expansion (HW) **0**
- 2 x USB in addition (1 slot occupied) **1**
- COM2; LPT (1 slot occupied) **2**
- 2 x USB in addition; COM2; LPT (2 slots occupied) **3**

Operating system

- Windows 7 Ultimate 32-bit, SP1, MUI (en, de, fr, it, es) **A**
- Windows 7 Ultimate 64-bit, SP1, MUI (en, de, fr, it, es) **B**
- Windows 10 Enterprise 2015 LTSB, 64-bit, MUI (en, de, fr, it, es) **C**
- Windows Embedded Standard 7 P, 32-bit, SP1, MUI (en, de, fr, it, es) with SSD 80 GB option **D**
- Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es), for Celeron and i3 processors **E**
- Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es) for Xeon processors **F**
- None **X**

Expansion (SW)

- SIMATIC IPC DiagMonitor enclosed **A**
- SIMATIC IPC Image & Partition Creator included **B**
- SIMATIC IPC DiagMonitor, Image & Partition Creator enclosed **C**
- Without **X**
- TPM ²⁾ (not for China or Russia) **Y**

Country-specific version / power supply

- 110/230 V AC industrial power supply with NAMUR; power cable for Europe **0**
- 110/230 V AC industrial power supply with NAMUR; power cable for UK **1**
- 110/230 V AC industrial power supply with NAMUR; power cable for CH **2**
- 110/230 V AC industrial power supply with NAMUR; power cable for the USA **3**
- 110/230 V AC industrial power supply NAMUR; power cable for Italy **4**
- 110/230 V AC industrial power supply with NAMUR; power cable for China **5**
- 24 V DC industrial power supply **6**
- 110/230 V AC industrial power supply with NAMUR; without power cable **8**

¹⁾ Production and delivery as per order

²⁾ TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or the configurator in the Industry Mall in order to ensure suitability; we do not accept any liability for configurations compiled by users themselves.

Ordering data	Article No.	More information
Accessories Memory expansion <ul style="list-style-type: none"> • 2 GB DDR3 1600 SDRAM, DIMM • 4 GB DDR3 1600 SDRAM, DIMM • 8 GB DDR3 1600 SDRAM, DIMM • 8 GB DDR3 1600 SDRAM, DIMM, ECC 	6ES7648-2AJ50-0MA0 6ES7648-2AJ60-0MA0 6ES7648-2AJ70-0MA0 6ES7648-2AJ70-1MA0	Additional information is available on the Internet at: http://www.siemens.com/simatic-panel-pc
Non-heating apparatus cable for SIMATIC Box and Panel PC SIMATIC PC power cable, 230 V AC, angled, 3 m, for: <ul style="list-style-type: none"> • Germany • United Kingdom • Switzerland • USA • Italy • China 	6ES7900-1AA00-0XA0 6ES7900-1BA00-0XA0 6ES7900-1CA00-0XA0 6ES7900-1DA00-0XA0 6ES7900-1EA00-0XA0 6ES7900-1FA00-0XA0	Note: Do you need a specific modification or option for the products described here? Under "Customized products", you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.
Touch pen	See "SIMATIC HMI accessories -> Accessibility"	
Expansion components	See Expansion components	
Communication components	See Expansion components	