Industrial Computing
Panel PC

Introduction

■ 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 IPC PX-32: Panel PC without fan with attractive price/performance ratio
- Single-touch
- Compact design
- High performance with highly compact design and ruggedness
- No rotating parts (without fan and hard disk)
- Ready-to-use devices with optionally preinstalled software

SIMATIC IPC PX-39: The powerful embedded Panel PC – maintenance-free with versatile configuration
- Multi-touch
- 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
- Retentive memory (NV-RAM, can be used with Software Controller)
- Available as PRO version (fully-enclosed IP65 degree of protection) with multi-touch

SIMATIC IPC677: The high-end Panel PC – with maximum performance, functional scope and expansion capability
- Rugged, expandable industrial PC with choice of operating units (front panels)
- Rugged design for industrial use
- Complete PC openness
- Optional PROFIBUS or PROFINET onboard
- All processors with Dual-Core

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■ **Technical specifications**

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	SIMATIC IPC277G	SIMATIC IPC277E	SIMATIC IPC377G	SIMATIC IPC PX-32A	SIMATIC IPC PX-39A	SIMATIC IPC 477E	SIMATIC IPC677E (Panel PC)
General information							
Product type designation	IPC277G	IPC277E	IPC377G	PX-32A	PX-39A	IPC477E	IPC677E
Installation type/mounting							
Mounting	For horizontal and vertical mounting		Panel mount and VESA, horizontal and vertical	For horizontal and vertical mounting	For horizontal and vertical mounting	For horizontal and vertical mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
maximum permissible installation angle +/-	45°	45°					
Supply voltage							
Type of supply voltage	24 V DC	24 V DC	24 V DC	9 - 36 V DC	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC	100/240 V AC (autorange); 24 V DC
Rated value (DC)	24 V				24 V	24 V; PELV / SELV floating	
Rated value (AC)					240 V		
Line frequency							
• Rated value 50 Hz					Yes	Yes	Yes
• Rated value 60 Hz					Yes	Yes	Yes
Mains buffering							
• Mains/voltage failure stored energy time	20 ms	20 ms	10 ms	20 ms	20 ms	20 ms	20 ms
Processor							
Processor type	Intel Atom X6211E / X6413E / X6414RE	Intel Celeron N2807 / N2930	Intel Atom X6413E	Intel® Celeron 6600HLE (2.1 GHz, 2C/2T) Intel® Xeon W-11155MLE (1.8/3.1 GHz, 4C/8T) Intel® Xeon W-11155MLE (1.9/4.4 GHz, 6C/12T) Intel® Xeon W-11865MLE (1.5/4.5 GHz, 8C/16T)	Intel® Celeron 6600HLE (2.1 GHz, 2C/2T) Intel® Xeon W-11155MLE (1.8/3.1 GHz, 4C/8T) Intel® Xeon W-11155MLE (1.9/4.4 GHz, 6C/12T) Intel® Xeon W-11865MLE (1.5/4.5 GHz, 8C/16T)	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 G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)
Chipset	SoC	SoC		Intel® RM590E	Intel® RM590E	Intel C236 / Intel H110	Intel C246
Graphic							
Graphics controller	Integrated	Integrated		Intel® UHD Graphics 16 EUs (for Intel® Celeron® 6600HLE and Intel® Xeon® W-11155MLE) / Intel® UHD Graphics 32 EUs (for Intel® Xeon® W-11555MLE and Intel® Xeon® W-11865MLE)	Intel® UHD Graphics 16 EUs (for Intel® Celeron® 6600HLE and Intel® Xeon® W-11155MLE) / Intel® UHD Graphics 32 EUs (for Intel® Xeon® W-11555MLE and Intel® Xeon® W-11865MLE)	Intel HD graphics controller	Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron)

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Drives							
Hard disk				M.2 SSD ≥ 240 GB	M.2 SSD ≥ 240 GB	2.5" SATA ≥ 320 GB	2.5" SATA ≥ 320 GB
SSD	Yes; 256 Eco / 240 / 480 GB	Yes; 256 Eco / 240 / 480 GB		Yes; ≥ 240 GB optional	Yes; ≥ 240 GB optional, RAID1 optional	Yes; 128 / 240 / 480 GB	Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2x SSD 2.5" SATA 480 / 960 GB in removable drive bay
Memory							
Type of memory	DDR4 SO-DIMM	DDR3L SO-DIMM	DDR4	DDR4-3200 SO-DIMM	DDR4-3200 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2666 DIMM
Main memory	4 / 8 / 16 GB; inband ECC optional	2 / 4 / 8 GB	4 GB, 8 GB, 16 GB	4 / 8 / 16 / 32 GB	4 / 8 / 16 / 32 GB; ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 / 32 / 64 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	512 kbyte; 128 KB can be stored in the buffer time; optional	512 kbyte; 128 KB can be stored in the buffer time
Hardware configuration							
Slots							
• free slots	2x M.2		2x M.2	1x PCIe; optional: 1x PCIe (x4), with card retainer	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							
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)	2; 2x Ethernet (RJ45)	2; 2x RJ45 (independent)	2; 2x Gigabit Ethernet (IE/PN), RJ45	4; 4x Gigabit Ethernet (IE/PN)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)
USB port	4x USB 3.1 Gen2 10 GB/s + 2x USB 2.0 pin header	1x USB 3.0 / 3x USB 2.0 (7" / 9": 2x USB 2.0)		4x USB 3.2 Gen2	4x USB 3.2 Gen2	4x USB 3.0	6x USB 3.1 Gen. 2 (2x type C)
Connection for keyboard/mouse	USB / USB	USB / USB		USB / USB	USB / USB	USB / USB	USB / USB
serial interface version	without / 1x / 2x COM (RS 232 / 485 / 422; selectable)	1x COM (1x RS 232 / 422 / 485), selectable in the BIOS		2x / 4x (optional) COM (RS 232 / 485 / 422; selectable)	1x / 2x (optional) COM (RS 232 / 485 / 422; selectable)		1x COM
Video interfaces							
• Graphics interface	2x DisplayPort	1x DisplayPort	2x DisplayPort	2x DisplayPort (DP1.4-capable): maximum 4096 × 2304 / 60 Hz / 36 bit	2x DisplayPort (DP1.4-capable): maximum 4096 × 2304 / 60 Hz / 36 bit	2x DisplayPort	2x DisplayPort; 1x DVI-D
Industrial Ethernet							
• Industrial Ethernet interface	3x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	4x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Protocols							
Protocols (Ethernet)							
• TCP/IP			Yes				
• DHCP	Yes						
Interrupts/diagnostics/status information							
LED status display	No	No		No	No		1x power, 3x user

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Integrated Functions							
Monitoring functions							
• Temperature monitoring	Yes	Yes	Yes	No	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	No	Yes	Yes	Yes
• Fan	No	No	No	No	No	No	Yes
• Monitoring function via network	Optional	Optional		Optional	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 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	±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	±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 for 80 - 1 000 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	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 for 80 - 1 000 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	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6	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 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 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	±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	±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	±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 61000-4-5, 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 61000-4-4, 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 (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; 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		±1 kV acc. to IEC 61000-4-4, Burst	±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

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	SIMATIC IPC277G	SIMATIC IPC277E	SIMATIC IPC377G	SIMATIC IPC PX-32A	SIMATIC IPC PX-39A	SIMATIC IPC 477E	SIMATIC IPC677E (Panel PC)
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	±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	±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	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	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	Noise emission: EN 61000-6-4:2007 +A1:2011 (industrial environments), CISPR 22 Class B, FCC Class A		IEC 61000-6-4, CAN/CSA CISPR 32 class B, FCC class A	IEC 61000-6-4, CAN/CSA CISPR 32 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	IP65	IP65	IP65
IP (rear)	20	IP20	IP40	IP20	IP20	IP20	IP20
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark				Yes	Yes		
CSA approval			Yes	Yes	Yes	Yes	
UL approval		Yes	Yes	Yes; UL 61010-2-201 Second Edition, File E472609	Yes; UL 61010-2-201 Second Edition, File E85972	Yes	Yes
• UL 508		Yes		No	No	Yes	
cULus	Yes	Yes		Yes	Yes	Yes	Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	No; in preparation	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes		Yes	No	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BSMI		Yes		No; in preparation	No; in preparation		
BIS				Yes	Yes		
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005	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	EN 61000-6-1, EN 61000-6-2, EN 61000-6-4, CAN/CSA CISPR 32 class A, EN 55032 class B, FCC class A, KN32	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Dust protection			Protection against foreign bodies > 1 mm				

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Use in hazardous areas							
• ATEX Zone 2				No		Yes; for inscription on device rating plate	Yes; Optional
• ATEX Zone 22						Yes; for inscription on device rating plate	Yes; Optional
• IECEx Zone 2				No		Yes; for inscription on device rating plate	Yes; Optional
• IECEx Zone 22						Yes; for inscription on device rating plate	Yes; Optional
• CCC Ex						Yes; for inscription on device rating plate	Yes; Optional
• cULus Class I Zone 2, Division 2				No		Yes; for inscription on device rating plate	Yes; Optional
• cULus Class II Division 2						Yes; for inscription on device rating plate	Yes; Optional
• FM Class I Division 2						No	
• FM Class II Division 2						No	
Marine approval							
• Germanischer Lloyd (GL)		Yes; 7", 9", 12" single-touch		No	Yes	Yes	
• American Bureau of Shipping (ABS)		Yes; 7", 9", 12" ST; 12", 15", 19" MT		No	Yes	Yes	Yes; Only with SSD
• Bureau Veritas (BV)		Yes; 7", 9", 12" ST; 12", 15", 19" MT		No	Yes	Yes	Yes; Only with SSD
• Det Norske Veritas (DNV)		Yes; 7", 9", 12" ST; 12", 15", 19" MT		No	Yes	Yes	Yes; Only with SSD
• Korean Register of Shipping (KRS)		Yes; 7", 9", 12" ST; 12", 15", 19" MT		No	Yes	Yes	Yes; Only with SSD
• Lloyds Register of Shipping (LRS)		Yes; 7", 9", 12" ST; 12", 15", 19" MT		No	Yes	Yes	Yes; Only with SSD
• Nippon Kaiji Kyokai (Class NK)		Yes; 7", 9", 12" ST; 12", 15", 19" MT		No	Yes	Yes	Yes; Only with SSD
• Chinese Classification Society (CCS)		Yes; 7", 9", 12" ST; 12", 15", 19" MT					Yes; Only with SSD

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Ambient conditions							
Ambient temperature during operation							
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	5 °C
• max.	50 °C; from 19", 22", 24": max. 45 °C	50 °C; 19": max. 45 °C	50 °C; when installed vertically in horizontal format, vertical inclination maximum 45° or when installed upright in vertical format	50 °C	50 °C	45 °C	45 °C
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)	max. 85% at 30 °C, no condensation, gradient <= 10 °C/h	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: operation: temperature 30 °C, relative humidity 85%; permissible range: 0 to 31 °C: 5 - 80%; decreasing linearly to 5 - 25% at 55 °C; storage: temperature 25 °C - 55 °C, relative humidity 95%	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: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
• Operation, max.	85 %		85 %	85 %	85 %		
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 200 Hz : 9.8m/s² (1 g) (except DIN Rail) 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g) (DIN Rail)	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/s²	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/s²	tested according to IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s²	tested according to IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s²	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)	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s² (1 g)
Shock testing							
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	Tested according to IEC 60068-2-27: 50 m/s², 30 ms	tested according to IEC 60068-2-27: 150 m/s², 11 ms; 5 g, 30 ms	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	IEC 60068-2-27; 150 m/s², 11 ms (without hard disk); 50 m/s², 30 ms (with hard disk)	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks

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Industrial Computing
Panel PC

Technical specifications

Article number	6AV7886-0....-	6AV7882-0...0- ...0	6AV7231-0....- ...0	6AV7272-.....-	6AV7242-.....-	6AV7241-.....-	6AV7261-.....- ....
	SIMATIC IPC277G	SIMATIC IPC277E	SIMATIC IPC377G	SIMATIC IPC PX-32A	SIMATIC IPC PX-39A	SIMATIC IPC 477E	SIMATIC IPC677E (Panel PC)
Operating systems							
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit / 64-bit		Windows 10 IoT Enterprise 2021 LTSC, Industrial OS		Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 10 Enterprise 2016 LTSB or 2019 LTSC or 2021 LTSC 64 bit, MUI
Additional info on operating system		optional: SIMATIC Industrial OS					
without operating system	Yes; Optional	Yes; Optional	Yes	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
Software							
SIMATIC Software	Optional package with SIMATIC WinCC	Optional package with SIMATIC WinCC or WinAC RTX			Optional package with SIMATIC WinCC	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle	
Dimensions							
Width			652 mm				
Height			443 mm				
Depth			209 mm				

More information

More 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? If so, 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.

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Industrial Computing
Panel PC

SIMATIC IPC277G

■ Overview

SIMATIC IPC277G: The Panel PC with optimized performance – flexible in respect of interfaces and expansions with multi-touch displays from 7" to 24"

SIMATIC IPC277G is based on the Nanobox PC IPC227G and is characterized by its robust design and maintenance-free operation.

With its integrated interfaces, expansion options and the large range of multi-touch fronts from 7" to 24", the Nanopanel PC is intended for a broad range of applications.

■ Ordering data

	Article No.
SIMATIC IPC277G (Nanopanel PC)	6AV7886- 0 ■ ■ ■ ■ - ■ ■ ■ 0

Operating unit
• 7" multi-touch (800 x 480)	A
• 10" multi-touch (1280 x 800)	B
• 12" multi-touch (1280 x 800)	C
• 15" multi-touch (1920 x 1080)	D
• 19" multi-touch (1920 x 1080)	E
• 22" multi-touch (1920 x 1080)	F
• 24" multi-touch (1920 x 1080)	G
• 7" multi-touch (800 x 480) ATEX/IECEx/UL HazLoc	H
• 10" multi-touch (1280 x 800) ATEX/IECEx/UL HazLoc	J
• 12" multi-touch (1280 x 800) ATEX/IECEx/UL HazLoc	K
• 15" multi-touch (1920 x 1080) ATEX/IECEx/UL HazLoc	L
• 19" multi-touch (1920 x 1080) ATEX/IECEx/UL HazLoc	M
• 22" multi-touch (1920 x 1080) ATEX/IECEx/UL HazLoc	N
• 24" multi-touch (1920 x 1080) ATEX/IECEx/UL HazLoc	P
• 7" (800 x 480) multi-touch neutral front	Q
• 10" (1280 x 800) multi-touch neutral front	R
• 12" (1280 x 800) multi-touch neutral front	S
• 15" (1920 x 1080) multi-touch neutral front	T
• 19" (1920 x 1080) multi-touch neutral front	U
• 22" (1920 x 1080) multi-touch neutral front	V
• 24" (1920 x 1080) multi-touch neutral front	W

Processor
• Atom X6413E (2-core)	A
• Atom X6413E (4-core)	B
• Atom X6414RE (4-core)	C
• Atom X6413E (2-core)/TPM	D
• Atom X6413E (4-core)/TPM	E
• Atom X6414RE (4-core)/TPM	F

Work memory
• 4 GB	1
• 8 GB	2
• 16 GB	3

Hardware configuration
• Without COM	1
• 1x COM	2
• 2x COM	3
• Slim enclosure - without COM	4

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Industrial Computing
Panel PC

SIMATIC IPC277G

■ Ordering data

SIMATIC IPC277G (Nanopanel PC)	Article No. 6AV7886- 0 ■ ■ ■ ■ - ■ ■ ■ 0

Mass storage	
• None	1
• 256 GB Eco SSD	2
• 240 GB SSD	3
• 480 GB SSD	4

Hardware extension	
• Without hardware extension	A
• NVRAM	B

Software	
• Without software	A
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, es)	B
• Windows 10 IoT Enterprise 2021 LTSC, 64-bit, MUI (en, de, fr, it, es)	C

Note:

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

For an up-to-date overview, see the SIMATIC IPC online configurator at:

https://www.siemens.com/ipc-configurators

■ Technical specifications

Article number	6AV7886-0....-.... SIMATIC IPC277G
General information	
Product type designation	IPC277G
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
maximum permissible installation angle +/-	45°
Supply voltage	
Type of supply voltage	24 V DC
Rated value (DC)	24 V
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Atom X6211E / X6413E / X6414RE
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 256 Eco / 240 / 480 GB
Memory	
Type of memory	DDR4 SO-DIMM
Main memory	4 / 8 / 16 GB; inband ECC optional
Hardware configuration	
Slots	
• free slots	2x M.2
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	4x USB 3.1 Gen2 10 GB/s + 2x USB 2.0 pin header
Connection for keyboard/mouse	USB / USB
serial interface version	without / 1x / 2x COM (RS 232 / 485 / 422; selectable)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
• DHCP	Yes
Interrupts/diagnostics/ status information	
LED status display	No
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Fan	No
• Monitoring function via network	Optional

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Industrial Computing
Panel PC

Technical specifications

Article number	6AV7886-0....-.... SIMATIC IPC277G
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 - 1 000 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 (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length > 30 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)	20

Article number	6AV7886-0....-.... SIMATIC IPC277G
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C; from 19", 22", 24": max. 45 °C
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)
• Operation, max.	85 %
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 200 Hz : 9.8m/s² (1 g) (except DIN Rail) 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g) (DIN Rail)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
without operating system	Yes; Optional
Software	
SIMATIC Software	Optional package with SIMATIC WinCC

Industrial Computing
Panel PC

■ **More information**

Article number	6AV7886-0A...-....	6AV7886-0B...-....	6AV7886-0C...-....	6AV7886-0D...-....	6AV7886-0E...-....	6AV7886-0F...-....	6AV7886-0G...-....
	SIMATIC IPC277G, 7" Multitouch	SIMATIC IPC277G, 10" Multitouch	SIMATIC IPC277G, 12" Multitouch	SIMATIC IPC277G, 15" Multitouch	SIMATIC IPC277G, 19" Multitouch	SIMATIC IPC277G, 22" Multitouch	SIMATIC IPC277G, 24" Multitouch
General information							
Product type designation				IPC277G			
Display							
Design of display	7" TFT multi-touch	10" TFT multi-touch	12" TFT multi-touch	15" TFT multi-touch	19" TFT multi-touch	22" TFT multi-touch	24" TFT multi-touch
Screen diagonal	7 in	10 in	12 in	15 in	19 in	22 in	24 in
Resolution (pixels)							
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting							
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	70 000 h	50 000 h	50 000 h	30 000 h	30 000 h
Control elements							
Touch operation							
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting							
central design	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power loss							
In full configuration	30 W	30 W	80 W	80 W	80 W	80 W	80 W
Dimensions							
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm	585 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm	363 mm
Weights							
Weight, approx.	2.5 kg	3.2 kg	5.1 kg	5.3 kg	6.7 kg	8.1 kg	9.6 kg

More information

More information is available on the internet at

https://www.siemens.com/simatic-box-pc.

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Industrial Computing
Panel PC

SIMATIC IPC277E

■ 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.

■ Ordering data

SIMATIC IPC277E (Nanopanel PC)	Article No. 6AV7882-	0 ■ ■ ■ 0 - ■ ■ A 0
Operating unit		
• 7" touch		A
• 9" touch		B
• 12" touch		C
• 15" touch front USB		D
• 19" touch front USB		E
• 15" multi-touch (with WES7-E only single-touch mode)		F
• 19" multi-touch (with WES7-E only single-touch mode)		G
• 12" multi-touch (with WES7-E only single-touch mode)		H
• 15" multi-touch (1 366 x 768; ATEX/IECEx/UL HazLoc; with WES7-E only single-touch mode)		J
• 19" multi-touch (1 366 x 768; ATEX/IECEx/UL HazLoc; with WES7-E only single-touch mode)		K
Processor		
• Celeron N2807 (2C/2T)	A	
• Celeron N2930 (4C/4T)	B	
• Celeron N2807 (2C/2T)/TPM	C	
• Celeron N2930 (4C/4T)/TPM	D	
Work memory/NVRAM		
• 2 GB	1	
• 4 GB	2	
• 8 GB	3	
• 2 GB/NVRAM	4	
• 4 GB/NVRAM	5	
• 8 GB/NVRAM	6	

SIMATIC IPC277E (Nanopanel PC)	Article No. 6AV7882-	0 ■ ■ ■ 0 - ■ ■ A 0
Operating system		
• Without operating system		0
• Windows Embedded Standard 7 E SP1, English, 32-bit		1
• Windows Embedded Standard 7 E SP1, English, 64-bit		2
• Windows Embedded Standard 7 P SP1, English, 32-bit		3
• Windows Embedded Standard 7 P SP1, English, 64-bit		4
• Windows 7 Ultimate SP1, 32-bit, MUI (en, de, fr, it, es)		5
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)		6
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es)		7
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, es)		8
Mass storage		
• Without mass storage, with CFast slot		A
• 240 GB SSD		C
• 480 GB SSD		D
• 256 GB Eco SSD		E
• 8 GB CFast		L
• 16 GB CFast		M
• 128 GB CFast		N
Software		
• Without SIMATIC Software		A
• Windows 10 IoT Enterprise 2021 LTSC, 64-bit, MUI (en, de, fr, it, es)		B

Note:

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

For an up-to-date overview, see the SIMATIC IPC online configurator at:

https://www.siemens.com/ipc-configurators

Industrial Computing
Panel PC

SIMATIC IPC277E

■ **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
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 256 Eco / 240 / 480 GB
Memory	
Type of memory	DDR3L SO-DIMM
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	
Number of industrial Ethernet interfaces	2; 2x Ethernet (RJ45)
USB port	1x USB 3.0 / 3x USB 2.0 (7" / 9": 2x USB 2.0)
Connection for keyboard/mouse	USB / USB
serial interface version	1x COM (1x RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Interrupts/diagnostics/ status information	
LED status display	No

Article number	6AV7882-0...0-...0
	SIMATIC IPC277E
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 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
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	Noise emission: EN 61000-6-4:2007 +A1:2011 (industrial environments), CISPR 22 Class B, FCC Class A

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Industrial Computing
Panel PC

SIMATIC IPC277E

◼ Technical specifications

Article number	6AV7882-0...0-...0
	SIMATIC IPC277E
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 +A1:2011, EN 61000-6-2:2005
Marine approval	
• Germanischer Lloyd (GL)	Yes; 7", 9", 12" single-touch
• American Bureau of Shipping (ABS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Bureau Veritas (BV)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Det Norske Veritas (DNV)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Korean Register of Shipping (KRS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Lloyds Register of Shipping (LRS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Nippon Kaiji Kyokai (Class NK)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Chinese Classification Society (CCS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT

Article number	6AV7882-0...0-...0
	SIMATIC IPC277E
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C; 19": max. 45 °C
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)
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
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 50 m/s^2, 30 ms
Operating systems	
pre-installed operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit / 64-bit
Additional info on operating system	optional: SIMATIC Industrial OS
without operating system	Yes; Optional
Software	
SIMATIC Software	Optional package with SIMATIC WinCC or WinAC RTX

Industrial Computing
Panel PC

■ **Technical specifications**

Article number	6AV7882-0A..0-...0	6AV7882-0B..0-...0	6AV7882-0C..0-...0	6AV7882-0D..0-...0	6AV7882-0E..0-...0
	SIMATIC IPC277E, 7" Touch	SIMATIC IPC277E, 9" Touch	SIMATIC IPC277E, 12" Touch	SIMATIC IPC277E, 15" Touch	SIMATIC IPC277E, 19" Touch
Display					
Design of display	7" TFT touch	9" TFT touch	12" TFT touch	15" TFT touch	19" TFT touch
Screen diagonal	7 in	9 in	12 in	15 in	19 in
Resolution (pixels)					
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel	768 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	50 000 h
Control elements					
Input device					
• Mouse, at front				Front USB 2.0 (500mA)	Front USB 2.0 (500mA)
Touch operation					
• Design as touch screen	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive
Installation type/mounting					
central design	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Power loss					
In full configuration	26 W	29 W	32 W	46 W	46 W
Dimensions					
Width of the housing front	214 mm	274 mm	330 mm	415 mm	483 mm
Height of housing front	158 mm	190 mm	241 mm	310 mm	337 mm
Weights					
Weight, approx.	1.5 kg	1.95 kg	2.75 kg	4 kg	5.7 kg

Article number	6AV7882-0F..0-...0	6AV7882-0G..0-...0	6AV7882-0H..0-...0	6AV7882-0J..0-...0	6AV7882-0K..0-...0
	SIMATIC IPC277E, 15" Multitouch	SIMATIC IPC277E, 19" Multitouch	SIMATIC IPC277E, 12" Multitouch	SIMATIC IPC277E, 15" Multitouch Atex	SIMATIC IPC277E, 19" Multitouch Atex
Display					
Design of display	15" TFT multi-touch	19" TFT multi-touch	12" multi-touch	15" TFT multi-touch	19" TFT multi-touch
Screen diagonal	15 in	19 in	12 in	15 in	19 in
Resolution (pixels)					
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 280 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	800 pixel	768 pixel	768 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	70 000 h	50 000 h	50 000 h	70 000 h	50 000 h
Control elements					
Touch operation					
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting					
central design	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Power loss					
In full configuration	46 W	46 W	36 W	46 W	46 W
Dimensions					
Width of the housing front	398 mm	464 mm	315 mm	398 mm	464 mm
Height of housing front	257 mm	294 mm	227 mm	257 mm	294 mm
Weights					
Weight, approx.	5.5 kg	6.5 kg	2.65 kg	5.5 kg	6.5 kg

More information

More information is available on the internet at

https://www.siemens.com/simatic-box-pc.

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Industrial Computing
Panel PC

SIMATIC IPC377G

■ Overview

SIMATIC IPC377G

Based on Intel Atom processor technology,
the SIMATIC IPC377G Panel 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 IPC377G Panel PC is characterized by a large number of interfaces.

Fast availability ex stock as well as the fanless industrial design complete the concept.

■ Ordering data

	Article No.
SIMATIC IPC377G	**6AV7231- 0 ■ ■ ■ ■ - ■ ■ ■ 0**

2x DisplayPort graphics;
2x 10/100/1000 Mbps,
Ethernet RJ45;
4x USB 3.0; 3x USB 2.0;
4x serial ports (COM)

Operating unit
- 12" touch (1 280 x 800) **C**
- 15" touch (1 366 x 768) **D**
- 19" touch (1 366 x 768) **E**
- 22" touch (1 920 x 1 080) **F**

Processor
- Intel Atomx6413E Processor (4-core)/audio **A**
- Intel Atomx6413E Processor (4-core)/TPM/audio **B**
- Intel Atomx6413E Processor (4-core) **C**
- Intel Atomx6413E Processor (4-core) audio **D**

Work memory
- 4 GB RAM **2**
- 8 GB RAM **3**
- 16 GB RAM **4**

Expansions/interfaces
- 2x COM **1**
- 4x COM **2**

Operating system
- Without operating system **0**
- Windows 10 IOT Enterprise LTSC 2019, 64-bit MUI (en, de, fr, it, es) **2**

Drives
- None **A**
- 256 GB SSD **B**
- 512 SSD **C**

Power supply
- 24 V DC **A**

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Industrial Computing
Panel PC

SIMATIC IPC377G

◼ **Ordering data**	**Article No.**		**Article No.**

Preferred variants
(available directly ex stock)

SIMATIC IPC377G

12"
12" touch (1 280 x 800);
Processor: Intel Atomx6413E
(up to 3.0 GHz);
Drives: SATA/NvME;
without mass storage;
Main memory: 4 GB RAM
(1x 4 GB);
Without operating system

6AV7231-0CC21-0AA0

12"
12" touch (1 280 x 800);
Processor: Intel Atomx6413E
(up to 3.0 GHz);
Drives: SATA/NvME; 256G SSD;
Main memory: 4 GB DRAM (1x 4 GB);
Windows 10 Enterprise LTSC 2019,
64-bit, MUI (de, en, fr, it, es)

6AV7231-0CC21-2BA0

15"
15" touch (1 366 x 768);
Processor: Intel Atomx6413E
(up to 3.0 GHz);
Drives: SATA/NvME;
without mass storage;
Main memory: 4 GB DRAM (1x 4 GB);
Without operating system

6AV7231-0DC21-0AA0

15"
15" touch (1 366 x 768);
Processor: Intel Atomx6413E
(up to 3.0 GHz);
Drives: SATA/NvME; 256G SSD;
Main memory: 4 GB DRAM (1x 4 GB);
Windows 10 Enterprise LTSC 2019,
64-bit, MUI (de, en, fr, it, es)

6AV7231-0DC21-2BA0

19"
19" touch (1 366 x 768);
Processor: Intel Atomx6413E
(up to 3.0 GHz);
Drives: SATA/NvME; 256G SSD;
Main memory: 4 GB DRAM
(1x 4 GB);
Windows 10 Enterprise LTSC 2019,
64-bit, MUI (de, en, fr, it, es)

6AV7231-0EC21-2BA0

22"
22" touch (1 920 x 1 080); built-in unit;
Atom x6413E (up to 3.9 GHz);
4 GB RAM;
4x USB+2x COM;
Windows10 Enterprise 2019 LTSC;
64-bit; MUI (en, de, fr, it, es);
256 GB SSD;

2x DisplayPort graphics;
without audio;
2x 10/100/1000 Mbps Ethernet RJ45;
4x USB 3.1; 3x USB 2.0;
4x serial ports (COM);
2x M.2 modules;
24 V DC power supply

6AV7231-0FC21-2BA0

22"
22" touch (1 920 x 1 080); built-in unit;
Atom x6413E (up to 3.9 GHz);
8 GB RAM;
4x USB+2x COM;
Windows10 Enterprise 2019 LTSC;
64-bit; MUI (en, de, fr, it, es);
256 GB SSD;

2x DisplayPort graphics;
without audio;
2x 10/100/1000 Mbps Ethernet RJ45;
4x USB 3.1; 3x USB 2.0;
4x serial ports (COM);
2x M.2 modules;
24 V DC power supply

6AV7231-0FC31-2BA0

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Industrial Computing
Panel PC

SIMATIC IPC377G

■ **Technical specifications**

Article number	6AV7231-0....-...0
	SIMATIC IPC377G
General information	
Product type designation	IPC377G
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 Atom X6413E
Memory	
Type of memory	DDR4
Main memory	4 GB, 8 GB,16 GB
Hardware configuration	
Slots	
• free slots	2x M.2
Interfaces	
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
Video interfaces	
• Graphics interface	2x DisplayPort
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
• Fan	No

Article number	6AV7231-0....-...0
	SIMATIC IPC377G
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 ... 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
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP40
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
BSMI	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C; when installed vertically in horizontal format, vertical inclination maximum 45° or when installed upright in vertical format
Relative humidity	
• Relative humidity	max. 85% at 30 °C, no condensation, gradient <= 10 °C/h
• Operation, max.	85 %
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/s²
Shock testing	
• Shock load during operation	tested according to IEC 60068-2-27: 150 m/s², 11 ms; 5 g, 30 ms
Operating systems	
without operating system	Yes
Dimensions	
Width	652 mm
Height	443 mm
Depth	209 mm

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Industrial Computing
Panel PC

■ **Technical specifications**

Article number	6AV7231-0CC21-0AA0	6AV7231-0CC21-2BA0	6AV7231-0DC21-0AA0	6AV7231-0DC21-2BA0	6AV7231-0EC21-2BA0	6AV7231-0FC21-2BA0	6AV7231-0FC31-2BA0
	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G
General information							
Product type designation			IPC377G				
Installation type/mounting							
Mounting	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
Supply voltage							
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering							
• Mains/voltage failure stored energy time	10 ms	10 ms	10 ms	10 ms	10 ms	10 ms	10 ms
Processor							
Processor type			Intel Atom X6413E				
Memory							
Type of memory	DDR4	DDR4	DDR4	DDR4	DDR4	DDR4	DDR4
Main memory			4 GB, 8 GB, 16 GB				
Hardware configuration							
Slots							
• free slots	2x M.2	2x M.2	2x M.2	2x M.2	2x M.2	2x M.2	2x M.2
Interfaces							
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)
Video interfaces							
• Graphics interface	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort
Industrial Ethernet							
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Protocols							
Protocols (Ethernet)							
• TCP/IP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Integrated Functions							
Monitoring functions							
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Fan	No	No	No	No	No	No	No
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 ... 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						
Degree and class of protection							
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP40	IP40	IP40	IP40	IP40	IP40	IP40

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Industrial Computing
Panel PC

Technical specifications

Article number	6AV7231-0CC21-0AA0	6AV7231-0CC21-2BA0	6AV7231-0DC21-0AA0	6AV7231-0DC21-2BA0	6AV7231-0EC21-2BA0	6AV7231-0FC21-2BA0	6AV7231-0FC31-2BA0
	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CSA approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BSMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm						
Ambient conditions							
Ambient temperature during operation							
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C; when installed vertically in horizontal format, vertical inclination maximum 45° or when installed upright in vertical format	50 °C	50 °C	50 °C	50 °C
Relative humidity							
• Operation, max.	85 %	85 %	85 %	85 %	85 %	85 %	85 %
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						
Shock testing							
• Shock load during operation			tested according to IEC 60068-2-27: 150 m/s^2, 11 ms; 5 g, 30 ms				
Operating systems							
without operating system	Yes	Yes	Yes	Yes	Yes	Yes	Yes

More information

More information is available on the internet at

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

Industrial Computing
Panel PC

SIMATIC IPC PX-32A

■ **Overview**

SIMATIC IPC PX-32A

SIMATIC IPC PX-32A: The cost and function-optimized alternative to SIMATIC IPC PX-39A.

Ready-to-run, complete solution:

• Ultra-compact
• Maintenance-free
• Intel CPU technology of the 11th generation.

■ **Ordering data**

SIMATIC IPC PX-32A (Panel PC)	6AV7272-	■ ■ ■ ■ ■ - ■ ■ ■ ■
Standard device		
• Intel Celeron 6600HLE (2.1 GHz, 2C/2T)		
• 15" single-touch		
• 4 GB		
• M.2 SSD 256 GB Eco		
• Without SSD 2		
• Without operating system		
• Without option 1		
• With USB flash drive (restore image; D&D)		
• 9-36 V DC industry power supply (wide range)		
Processor		
• Intel Celeron 6600HLE (2.1 GHz, 2C/2T)		1
• Intel Xeon W-11155MLE (1.8/3.1 GHz, 4C/8T)		3
Front		
• 12" single-touch		A
• 15" single-touch		B
• 19" single-touch		C
• 22" single-touch		D
Work memory		
• 4 GB		A
• 8 GB		B
• 16 GB		C
• 32 GB		D

SIMATIC IPC PX-32A (Panel PC)	6AV7272-	■ ■ ■ ■ ■ - ■ ■ ■ ■
SSD 1 (incl. OS)		
• Without SSD 1		0
• M.2 SSD 256 GB Eco		1
• M.2 SSD 512 GB Eco		2
SSD 2		
• Without SSD 2		0
Software configuration		
• Without operating system		0
• Windows 10 IoT Enterprise 2021 LTSC		1
Option 1		
• Without option 1		A
• Additive 1 x Com (RS232/485/422) (3 in total)		C
• Additive 2 x Com (RS232/485/422) (4 in total)		D
Option 2		
• With USB flash drive (restore image; D&D)		B
Power supply		
• 9-36 V DC industry power supply (wide range)		1

[1] For an up-to-date overview, see the SIMATIC PC online configurator:
http://www.siemens.com/ipc-configurators
TPM = Trusted Platform Module

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the SiePortal in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview at:

https://www.siemens.com/ipc-configurators

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Industrial Computing
Panel PC

■ **Technical specifications**

Article number	6AV7272-.....-....
	SIMATIC IPC PX-32A
General information	
Product type designation	PX-32A
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	9 - 36 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel® Celeron 6600HLE (2.1 GHz, 2C/2T) Intel® Xeon W-11155MLE (1.8/3.1 GHz, 4C/8T) Intel® Xeon W-11555MLE (1.9/4.4 GHz, 6C/12T) Intel® Xeon W-11865MLE (1.5/4.5 GHz, 8C/16T)
Chipset	Intel® RM590E
Graphic	
Graphics controller	Intel® UHD Graphics 16 EUs (for Intel® Celeron® 6600HLE and Intel® Xeon® W-11155MLE) / Intel® UHD Graphics 32 EUs (for Intel® Xeon® W-11555MLE and Intel® Xeon® W-11865MLE)
Drives	
Hard disk	M.2 SSD ≥ 240 GB
SSD	Yes; ≥ 240 GB optional
Memory	
Type of memory	DDR4-3200 SO-DIMM
Main memory	4 / 8 / 16 / 32 GB
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Gigabit Ethernet (IE/PN), RJ45
USB port	4x USB 3.2 Gen2
Connection for keyboard/mouse	USB / USB
serial interface version	2x / 4x (optional) COM (RS 232 / 485 / 422; selectable)
Video interfaces	
• Graphics interface	2x DisplayPort (DP1.4-capable): maximum 4096 × 2304 / 60 Hz / 36 bit
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Interrupts/diagnostics/ status information	
LED status display	No
Integrated Functions	
Monitoring functions	
• Temperature monitoring	No
• Watchdog	No
• Fan	No
• Monitoring function via network	Optional

Article number	6AV7272-.....-....
	SIMATIC IPC PX-32A
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 - 1 000 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
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	IEC 61000-6-4, CAN/CSA CISPR 32 class B, FCC class A
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
UKCA mark	Yes
CSA approval	Yes
UL approval	Yes; UL 61010-2-201 Second Edition, File E472609
• UL 508	No
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	No; in preparation
EAC (formerly Gost-R)	No
FCC	Yes
BSMI	No; in preparation
BIS	Yes
EMC	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A
Use in hazardous areas	
• ATEX Zone 2	No
• IECEx Zone 2	No
• cULus Class I Zone 2, Division 2	No

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Industrial Computing
Panel PC

SIMATIC IPC PX-32A

Technical specifications

Article number	6AV7272-.....-.... SIMATIC IPC PX-32A
Marine approval	
• Germanischer Lloyd (GL)	No
• American Bureau of Shipping (ABS)	No
• Bureau Veritas (BV)	No
• Det Norske Veritas (DNV)	No
• Korean Register of Shipping (KRS)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (Class NK)	No
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)
• Operation, max.	85 %

Article number	6AV7272-.....-.... SIMATIC IPC PX-32A
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s^2
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2021 LTSC, Industrial OS
without operating system	Yes; Optional

More information

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview at:

https://www.siemens.com/ipc-configurators

More information is available on the internet at

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

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Industrial Computing
Panel PC

SIMATIC IPC PX-39A

■ Overview

SIMATIC IPC PX-39A

SIMATIC IPC PX-39A (Micropanel PC): The powerful
Panel IPC – maintenance-free with versatile configuration.

Ready-to-run, complete solution:

- Ultra-compact
- Maintenance-free
- Intel CPU technology of the 11th generation.

■ Ordering data

SIMATIC IPC PX-39A (Panel PC)	Article No. 6AV7242- ■ ■ ■ ■ ■ - ■ ■ ■ ■
Processor	
• Intel® Celeron® 6600HLE 2 cores/2 threads, 2.1 GHz, 8 MB cache, TCC	1
• Intel® Xeon® W-11155MLE 4 cores/8 threads, 1.8 (3.1) GHz, 8 MB cache, ECC, TCC	3
• Intel® Xeon® W-11555MLE 6 cores/12 threads, 1.9 (4.4) GHz, 12 MB cache, vPro, ECC, TCC	5
• Intel® Xeon® W-11555MLE 6 cores/12 threads, 1.9 (4.4) GHz, 12 MB cache, vPro, ECC, TCC	7
Front Panel	
• 15" multi-touch (1920 x 1080)	A
• 19" multi-touch (1920 x 1080)	B
• 22" multi-touch (1920 x 1080)	C
• 24" multi-touch (1920 x 1080)	D
• 12" multi-touch (1280 x 800)	E
• 15" multi-touch neutral (1920 x 1080)	L
• 19" multi-touch neutral (1920 x 1080)	M
• 22" multi-touch neutral (1920 x 1080)	N
• 24" multi-touch neutral (1920 x 1080)	P

SIMATIC IPC PX-39A (Panel PC)	Article No. 6AV7242- ■ ■ ■ ■ ■ - ■ ■ ■ ■
Work memory/ECC	
• 4 GB	A
• 8 GB	B
• 16 GB	C
• 32 GB	D
• 16 GB with ECC	E
• 32 GB with ECC	F
• 8 GB and NVRAM (M.2 module)	G
• 16 GB and NVRAM (M.2 module)	H
• 32 GB and NVRAM (M.2 module)	J
• 16 GB with ECC and NVRAM (M.2 module)	K
• 32 GB with ECC and NVRAM (M.2 module)	L
1st mass storage in SIMATIC Slider (incl. OS)	
• Without 1st mass storage	0
• M.2 SSD 256 GB Eco	1
• M.2 SSD 512 GB Eco	2
• M.2 SSD 240 GB	4
• M.2 SSD 480 GB	5
• M.2 SSD 960 GB	6
• RAID1 with SSD 512 GB Eco (SSD 2 with 512 GB Eco required)	8
2nd mass storage in SIMATIC Slider	
• Without 2nd mass storage	0
• M.2 SSD 256 GB Eco	1
• M.2 SSD 512 GB Eco	2
• M.2 SSD 240 GB	4
• M.2 SSD 480 GB	5
• M.2 SSD 960 GB	6
• Without 2nd mass storage	0
• M.2 SSD 256 GB Eco	1
• M.2 SSD 512 GB Eco	2

Industrial Computing
Panel PC

SIMATIC IPC PX-39A

Ordering data

SIMATIC IPC PX-39A (Panel PC)	Article No.
SIMATIC IPC PX-39A (Panel PC)	6AV7242 ▪▪▪▪▪-▪▪▪▪

Operating systems
- Without operating system — **0**
- Windows 10 Enterprise 2021 LTSC with Celeron, W-11155MLE processors — **1**
- W-11555MLE, Windows 10 Enterprise 2021 LTSC with W-11865MLE processor — **2**
- SIMATIC Industrial OS — **7**

Option 1
- Without option 1 — **A**
- With 1 x PCIe slot — **B**
- Additionally 1 x Com — **C**
- With 1 x PCIe slot and additionally 1 x Com (RS232/485/422) — **D**

Option 2
- Without USB flash drive (restore image; D&D) — **A**
- With USB flash drive (restore image; D&D) — **B**

Power supply
- 24 V DC industry power supply (Premium, NAU, isolated, "bridging time") — **0**
- 110/230 V AC industrial PS with Namur; without power cable — **2**
- 110/230 V AC industrial PS with Namur; with power cable Europe — **3**
- 24 V DC industry power supply (Premium, NAU, isolated, "bridging time") with ATEX — **7**

1) For an up-to-date overview, see the SIMATIC PC online configurator:
http://www.siemens.com/ipc-configurators
TPM = Trusted Platform Module

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the SiePortal in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

Technical specifications

Article number	6AV7242-.....-.... SIMATIC IPC PX-39A
General information	
Product type designation	PX-39A
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
Rated value (DC)	24 V
Rated value (AC)	240 V
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel® Celeron 6600HLE (2.1 GHz, 2C/2T) Intel® Xeon W-11155MLE (1.8/3.1 GHz, 4C/8T) Intel® Xeon W-11555MLE (1.9/4.4 GHz, 6C/12T) Intel® Xeon W-11865MLE (1.5/4.5 GHz, 8C/16T)
Chipset	Intel® RM590E
Graphic	
Graphics controller	Intel® UHD Graphics 16 EUs (for Intel® Celeron® 6600HLE and Intel® Xeon® W-11155MLE) / Intel® UHD Graphics 32 EUs (for Intel® Xeon® W-11555MLE and Intel® Xeon® W-11865MLE)
Drives	
Hard disk	M.2 SSD ≥ 240 GB
SSD	Yes; ≥ 240 GB optional, RAID1 optional
Memory	
Type of memory	DDR4-3200 SO-DIMM
Main memory	4 / 8 / 16 / 32 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; optional: 1x PCIe (x4), with card retainer
Interfaces	
Number of industrial Ethernet interfaces	4; 4x Gigabit Ethernet (IE/PN)
USB port	4x USB 3.2 Gen2
Connection for keyboard/mouse	USB / USB
serial interface version	1x / 2x (optional) COM (RS 232 / 485 / 422; selectable)
Video interfaces	
• Graphics interface	2x DisplayPort (DP1.4-capable): maximum 4096 × 2304 / 60 Hz / 36 bit
Industrial Ethernet	
• Industrial Ethernet interface	4x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

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Industrial Computing
Panel PC

SIMATIC IPC PX-39A

■ **Technical specifications**

Article number	6AV7242-.....-....
	SIMATIC IPC PX-39A
Interrupts/diagnostics/ status information	
LED status display	No
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 for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
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	IEC 61000-6-4, CAN/CSA CISPR 32 class B, FCC class A
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20

Article number	6AV7242-.....-....
	SIMATIC IPC PX-39A
Standards, approvals, certificates	
CE mark	Yes
UKCA mark	Yes
CSA approval	Yes
UL approval	Yes; UL 61010-2-201 Second Edition, File E85972
• UL 508	No
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
BSMI	No; in preparation
BIS	Yes
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-4, CAN/CSA CISPR 32 class A, EN 55032 class B, FCC class A, KN32
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	
• min.	0 °C
• max.	50 °C
Relative humidity	
• Relative humidity	tested according to IEC 60068-2-78, IEC 60068-2-30: operation: temperature 30 °C, relative humidity 85%; permissible range: 0 to 31 °C: 5 - 80%; decreasing linearly to 5 - 25% at 55 °C; storage: temperature 25 °C - 55 °C, relative humidity 95%
• Operation, max.	85 %
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s²
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2021 LTSC, Industrial OS
without operating system	Yes; Optional
Software	
SIMATIC Software	Optional package with SIMATIC WinCC

More information

More information is available on the internet at

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

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Industrial Computing
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

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**
- 19" multi-touch (1 920 x 1 080), single-touch mode only with WES7-E — **G**
- 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 RS232/RS485, without PCIe — **0**
- No RS232/RS485 and one PCIe — **1**
- Second RS232/RS485, without PCIe — **3**
- Second RS232/RS485 and one PCIe — **4**
- No RS232, without PCIe with ATEX/IECEx Cat 3G Zone 2 — **5**
- No RS232 and one PCIe with ATEX/IECEx Cat 3G Zone 2 — **6**
- Two RS232 without PCIe with ATEX/IECEx Cat 3G Zone 2 — **7**
- Two RS232 and one PCIe with ATEX/IECEx Cat 3G Zone 2 — **8**

Industrial Computing
Panel PC

SIMATIC IPC477E

Ordering data   **Article No.**   **Article No.**

SIMATIC IPC477E[1]	6AV7241- ■■■■■ - ■■■■
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 IoT Enterprise 2019 LTSC (64-bit) for Celeron, Core i3 and Core i5 processors	5
• Windows 10 IoT Enterprise 2019 LTSC (64-bit) for Xeon processor	6
• Windows 10 Enterprise 2016 LTSB (64-bit) for Celeron, Core i3 and Core i5 processors	7
• Windows 10 Enterprise 2016 LTSB (64-bit) for Xeon processor	8
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 128 GB (only optionally with operating system/software if no internal mass storage or HDD)	5

SIMATIC IPC477E[1]	6AV7241- ■■■■■ - ■■■■
Mass storage, internal	
• Without internal mass storage	A
• 256 GB Eco solid-state drive	D
• 240 GB solid-state drive SATA	F
• 480 GB solid-state drive SATA	G
• 320 GB HDD	J
SIMATIC Software	
• Without SIMATIC Software	A
Power supply:	
• 24 V DC industrial power supply	0
• 110/230 V AC industrial power supply unit with NAMUR; without power cable	1
• 110/230 V AC industrial power supply unit with NAMUR; European power supply cord	2
• 110/230 V AC industrial power supply unit with TPM NAMUR; without power cable	6
• 110/230 V AC industrial power supply unit with TPM NAMUR; European power supply cord	7
• 24 V DC industrial power supply and TPM[2]	8

[1] For an up-to-date overview, see the SIMATIC PC online configurator: http://www.siemens.com/ipc-configurators

[2] TPM = Trusted Platform Module

Note:

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

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Industrial Computing
Panel PC

SIMATIC IPC477E

■ **Technical specifications**

Article number	6AV7241-.....-....
	SIMATIC IPC 477E
General information	
Product type designation	IPC477E
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
Rated value (DC)	24 V; PELV / SELV floating
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
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)
Chipset	Intel C236 / Intel H110
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 128 / 240 / 480 GB
Memory	
Type of memory	DDR4-2400 SO-DIMM
Main memory	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
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	USB / USB
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

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

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Industrial Computing
Panel PC

■ Technical specifications

Article number	6AV7241-.....-....
	SIMATIC IPC 477E
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	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; for inscription on device rating plate
• ATEX Zone 22	Yes; for inscription on device rating plate
• IECEx Zone 2	Yes; for inscription on device rating plate
• IECEx Zone 22	Yes; for inscription on device rating plate
• CCC Ex	Yes; for inscription on device rating plate
• cULus Class I Zone 2, Division 2	Yes; for inscription on device rating plate
• cULus Class II Division 2	Yes; for inscription on device rating plate
• FM Class I Division 2	No
• FM Class II Division 2	No
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

Article number	6AV7241-.....-....
	SIMATIC IPC 477E
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	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/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
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle

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Industrial Computing
Panel PC

◼ Technical specifications

Article number	6AV7241-.B...-....	6AV7241-.D...-....	6AV7241-.E...-....	6AV7241-.G...-....	6AV7241-.J...-....	6AV7241-.K...-....	6AV7241-.L...-....	6AV7241-.R...-....	6AV7241-.S...-....
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC 477E 19" MT (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920x1080) neutr
General information									
Product type designation	IPC477E	IPC477E	IPC477E		IPC477E	IPC477E	IPC477E	IPC477E	IPC477E
Display									
Design of display	15" TFT touch	19" TFT touch	22" TFT touch	19" TFT multi-touch	15" TFT multi-touch	19" TFT multi-touch	22" TFT multi-touch	24" TFT multi-touch	24" TFT multi-touch
Screen diagonal	15.6 in	18.5 in	21.5 in	18.5 in	15.6 in	18.5 in	21.5 in	23.8 in	23.8 in
Resolution (pixels)									
• Horizontal image resolution	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel	1 366 pixel	1 366 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	800 pixel	768 pixel	1 080 pixel	1 080 pixel	768 pixel	768 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting									
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	30 000 h	50 000 h	50 000 h	50 000 h	30 000 h	30 000 h	30 000 h
Control elements									
Input device									
• Mouse, at front	Front USB 2.0 (500mA)	No	No	No	No	No	No	No	No
Keyboard fonts									
• Function keys	No	No	No	No	No	No	No	No	No
• alphanumeric keyboard	No	No	No	No	No	No	No	No	No
Touch operation									
• Design as touch screen	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive						
• Design as multi-touch screen				Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting									
Mounting	For horizontal and vertical mounting				For horizontal and vertical mounting				
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit		Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
central design	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
distributed design	No	No	No	No	No	No	No	No	No
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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				
Rated value (DC)	24 V; PELV / SELV floating				24 V; PELV / SELV floating				
Line frequency									
• Rated value 50 Hz	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Rated value 60 Hz	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Mains buffering									
• Mains/voltage failure stored energy time	20 ms	20 ms	20 ms		20 ms	20 ms	20 ms	20 ms	20 ms
Power loss									
In full configuration	24 V DC: max. 65 W, PCIe APCB additionally 5 W	24 V DC: max. 65 W, PCIe APCB additionally 5 W	24 V DC: max. 74 W, PCIe APCB additionally 5 W	24 V DC: max. 82 W, 110 ... 230 V AC	24 V DC: max. 88 W, 110 ... 230 V AC	24 V DC: max. 82 W, 110 ... 230 V AC	24 V DC: max. 88 W, 110 ... 230 V AC	24 V DC: max. 88 W, 110 ... 230 V AC	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)				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)				
Chipset	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 /		Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110

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Industrial Computing
Panel PC

◼ Technical specifications

Article number	6AV7241-.B...-....	6AV7241-.D...-....	6AV7241-.E...-....	6AV7241-.G...-....	6AV7241-.J...-....	6AV7241-.K...-....	6AV7241-.L...-....	6AV7241-.R...-....	6AV7241-.S...-....
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC 477E 19" MT (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920x1080) neutr
Graphic									
Graphics controller	Intel HD graphics controller				Intel HD graphics controller				
Drives									
Hard disk	2.5" SATA ≥ 320 GB				2.5" SATA ≥ 320 GB				
SSD	Yes; 128 / 240 / 480 GB				Yes; 128 / 240 / 480 GB				
Memory									
Type of memory	DDR4-2400 SO-DIMM				DDR4-2400 SO-DIMM				
Main memory	4 / 8 / 16 GB, ECC optional				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				
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									
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)				3; 3x Ethernet (RJ45)				
USB port	4x USB 3.0	4x USB 3.0	4x USB 3.0		4x USB 3.0	4x USB 3.0	4x USB 3.0	4x USB 3.0	4x USB 3.0
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB		USB / USB	USB / USB	USB / USB	USB / USB	USB / USB
Video interfaces									
• Graphics interface	2x DisplayPort				2x DisplayPort				
Industrial Ethernet									
• Industrial Ethernet interface	3x Ethernet (RJ45)				3x Ethernet (RJ45)				
- 100 Mbps	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Integrated Functions									
Monitoring functions									
• Temperature monitoring	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Fan	No	No	No		No	No	No	No	No
• Monitoring function via network	Optional	Optional	Optional		Optional	Optional	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 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				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				±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 61000-4-5, 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; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m				

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Industrial Computing
Panel PC

SIMATIC IPC477E

Technical specifications

Article number	6AV7241-.B...-....	6AV7241-.D...-....	6AV7241-.E...-....	6AV7241-.G...-....	6AV7241-.J...-....	6AV7241-.K...-....	6AV7241-.L...-....	6AV7241-.R...-....	6AV7241-.S...-....
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC 477E 19" MT (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920x1080) neutr
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				
• symmetric interference	±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				
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				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	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20		IP20	IP20	IP20	IP20	IP20
Standards, approvals, certificates									
CE mark	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
CSA approval	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• UL 508	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes		Yes	Yes	Yes	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									
• ATEX Zone 2	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• ATEX Zone 22	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• IECEx Zone 2	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• IECEx Zone 22	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• CCC Ex	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• cULus Class I Zone 2, Division 2	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• cULus Class II Division 2	Yes; for inscription on device rating plate				Yes; for inscription on device rating plate				
• FM Class I Division 2	No	No	No		No	No	No	No	No
• FM Class II Division 2	No	No	No		No	No	No	No	No
Marine approval									
• Germanischer Lloyd (GL)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Ambient conditions									
Ambient temperature during operation									
• min.	0 °C	0 °C	0 °C		0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C		45 °C	45 °C	45 °C	45 °C	45 °C

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Industrial Computing
Panel PC

SIMATIC IPC477E

■ **Technical specifications**

Article number	6AV7241-.B...-....	6AV7241-.D...-....	6AV7241-.E...-....	6AV7241-.G...-....	6AV7241-.J...-....	6AV7241-.K...-....	6AV7241-.L...-....	6AV7241-.R...-....	6AV7241-.S...-....
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC 477E 19" MT (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920x1080) neutr
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/s² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s² (hard disk)				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)				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				Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10				
without operating system	Yes; Optional	Yes; Optional	Yes; Optional		Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
Software									
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle				Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle				
Dimensions									
Width of the housing front	415 mm	483 mm	560 mm	464 mm	398 mm	464 mm	529 mm	585 mm	585 mm
Height of housing front	310 mm	337 mm	380 mm	294 mm	257 mm	294 mm	331 mm	363 mm	363 mm
Weights									
Weight, approx.	6.8 kg	8.4 kg	9.5 kg	7.9 kg	5.2 kg	6.6 kg	7.9 kg	9 kg	9 kg

More information

More information is available on the internet at

https://www.siemens.com/simatic-panel-pc.

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Industrial Computing
Panel PC

SIMATIC IPC677E

◼ Overview

SIMATIC IPC677E: The high-end Panel PC – with maximum performance, functional scope and expansion capability

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

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

• Compact design
• High degree of investment security
• High degree of expandability

The following widescreen front variants are available:

• 19", 22" or 24" capacitive multi-touch color display

◼ Ordering data | Article No.

SIMATIC IPC677E[1]	6AV7261- ◼ ◼ ◼ ◼ - ◼ ◼ ◼ ◼

UHD graphics onboard; 2x DP;
1x DVI-D;
3x Gigabit Ethernet (IE/PN) RJ45;
6x USB 3.1 Gen. 2;
1x serial (COM1);
RAID controller onboard;
watchdog, temperature/fan monitoring

Operating unit
• 19" multi-touch (1 920 x 1 080)	0
• 22" multi-touch (1 920 x 1 080)	1
• 24" multi-touch (1 920 x 1 080)	2

Processor
• Intel Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d);	A
• Intel Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); NVRAM	B
• Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d)	C
• Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); NVRAM	D
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)	G
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT); NVRAM	H

Drives
• HDD 2.5" SATA 320 GB internal	A
• SSD 2.5" SATA 480 GB internal	B
• SSD 2.5" SATA 960 GB internal	D
• RAID1 2x SSD 2.5" SATA 480 GB internal	E
• RAID1 2x SSD 2.5" SATA 480 GB in removable drive bay	G
• RAID1 2x SSD 2.5" SATA 960 GB in removable drive bay	H
• M.2 SSD NVMe 512 GB	J
• M.2 SSD NVMe 512 GB; HDD 2.5" SATA 320 GB internal	K
• M.2 SSD NVMe 512 GB; SSD 2.5" SATA 480 GB internal	L
• M.2 SSD NVMe 512 GB; SSD 2.5" SATA 960 GB internal	M
• M.2 SSD NVMe 512 GB; RAID1 2x SSD 2.5" SATA 480 GB in removable drive bay	Q
• M.2 SSD NVMe 512 GB; 2 removable drive bays without media	S

Industrial Computing
Panel PC

SIMATIC IPC677E

■ **Ordering data** Article No. Article No.

SIMATIC IPC677E[1]	6AV7261- ■■■■■ - ■■■■
Memory configuration	
• 4 GB DDR4-2666 (1x 4 GB)	0
• 8 GB DDR4-2666 (2x 4 GB)	1
• 16 GB DDR4-2666 (2x 8 GB)	2
• 32 GB DDR4-2666 (2x 16 GB)	3
• 64 GB DDR4-2666 (4x 16 GB)	4
Power supply	
• 24 V DC industrial power supply	0
• 110/230 V AC industrial power supply unit with NAMUR; without power cable	1
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord Europe	2
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord USA	3
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord China	4
• 24 V DC industrial power supply; ATEX/IECEx/UL HazLoc device certification	6
Operating system	
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	0
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es), for Core i7	1
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	2
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, sp), for Core i7	3
• Windows 10 IoT Enterprise 2021 LTSC, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	4
• Windows 10 IoT Enterprise 2021 LTSC, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	5
• Without operating system	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 configurator in the SiePortal in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

For an up-to-date overview, see the SIMATIC IPC online configurator at:
https://mall.industry.siemens.com/mall/ww/en/Catalog/Configurators

SIMATIC IPC677E[1]	6AV7261- ■■■■■ - ■■■■
Expansion (SW)	
• Without expansion	A
• SIMATIC IPC DiagMonitor included	B
• SIMATIC IPC Image & Partition Creator included	C
• SIMATIC IPC DiagMonitor, Image & Partition Creator included	D
• TPM[2]	X
Expansion 1 (HW)	
• Without expansion (HW)	A
• 2x USB 2.0 (1 slot occupied)	B
• Device without CMOS battery (CR2450N)	C
Expansion 2 (HW)	
• 2 x PCI	0
• 1 x PCIe (x16); 1 x PCI	1
• 1 x PCIe (x16); 1 x PCIe (x4)	2

Accessories

Memory expansion	
• 4 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL60-0QA0**
• 8 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL70-0QA0**
• 16 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL80-0QA0**
Non-heating apparatus cable for SIMATIC Box and Panel PC SIMATIC PC power cable, 230 V AC, angled, 3 m, for:	
• Germany	**6ES7900-1AA00-0XA0**
• United Kingdom	**6ES7900-1BA00-0XA0**
• Switzerland	**6ES7900-1CA00-0XA0**
• USA	**6ES7900-1DA00-0XA0**
• Italy	**6ES7900-1EA00-0XA0**
• China	**6ES7900-1FA00-0XA0**
Touch pen	See "SIMATIC HMI accessories -> Input tools"
Expansion components	See Expansion components
Communication components	See Expansion components

Industrial Computing
Panel PC

Technical specifications

Article number	6AV7261-.....-....
	SIMATIC IPC677E (Panel PC)
General information	
Product type designation	IPC677E
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); 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
Processor	
Processor type	Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)
Chipset	Intel C246
Graphic	
Graphics controller	Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron)
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2x SSD 2.5" SATA 480 / 960 GB in removable drive bay
Memory	
Type of memory	DDR4-2666 DIMM
Main memory	4 / 8 / 16 / 32 / 64 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
Hardware configuration	
Slots	
• free slots	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	6x USB 3.1 Gen. 2 (2x type C)
Connection for keyboard/mouse	USB / USB
serial interface version	1x COM
Video interfaces	
• Graphics interface	2x DisplayPort; 1x DVI-D
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

Article number	6AV7261-.....-....
	SIMATIC IPC677E (Panel PC)
Interrupts/diagnostics/ status information	
LED status display	1x power, 3x user
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	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 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 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
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

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Industrial Computing
Panel PC

Technical specifications

Article number	6AV7261-.....-....
	SIMATIC IPC677E (Panel PC)
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Use in hazardous areas	
• ATEX Zone 2	Yes; Optional
• ATEX Zone 22	Yes; Optional
• IECEx Zone 2	Yes; Optional
• IECEx Zone 22	Yes; Optional
• CCC Ex	Yes; Optional
• cULus Class I Zone 2, Division 2	Yes; Optional
• cULus Class II Division 2	Yes; Optional
Marine approval	
• American Bureau of Shipping (ABS)	Yes; Only with SSD
• Bureau Veritas (BV)	Yes; Only with SSD
• Det Norske Veritas (DNV)	Yes; Only with SSD
• Korean Register of Shipping (KRS)	Yes; Only with SSD
• Lloyds Register of Shipping (LRS)	Yes; Only with SSD
• Nippon Kaiji Kyokai (Class NK)	Yes; Only with SSD
• Chinese Classification Society (CCS)	Yes; Only with SSD

Article number	6AV7261-.....-....
	SIMATIC IPC677E (Panel PC)
Ambient conditions	
Ambient temperature during operation	
• min.	5 °C
• max.	45 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% 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/s² (1 g)
Shock testing	
• Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB or 2019 LTSC or 2021 LTSC 64 bit, MUI
without operating system	Yes; Optional

Article number	6AV7261-0....-....	6AV7261-1....-....	6AV7261-2....-....
	SIMATIC IPC677E, 19" Multitouch	SIMATIC IPC677E, 22" Multitouch	SIMATIC IPC677E, 24" Multitouch
Display			
Design of display	19" TFT multi-touch	22" TFT multi-touch	24" TFT multi-touch
Screen diagonal	19 in	22 in	24 in
Resolution (pixels)			
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	50 000 h	30 000 h	30 000 h
Control elements			
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting			
central design	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible		Yes	Yes
Power loss			
In full configuration	150 W	150 W	150 W
Dimensions			
Width of the housing front	464 mm	529 mm	585 mm
Height of housing front	294 mm	331 mm	363 mm
Weights			
Weight, approx.	9.5 kg	10.5 kg	12.5 kg

More information

More information is available on the internet at

https://www.siemens.com/simatic-panel-pc.