

Overview



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

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

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

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

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

Technical specifications

Article number	6AV7882-0...0-...0 SIMATIC IPC277E
General information	
Product type designation	IPC277E
Installation type/mounting	
Design	Panel PC, built-in unit
maximum permissible installation angle +/-	45°
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Celeron N2807 / N2930
Drives	
SSD	Yes; ≥ 128 GB optional
Memory	
Type of memory	DDR3L
Main memory	2 / 4 / 8 GB
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
Interfaces	
USB port	1x USB 3.0 / 3x USB 2.0 (7"/9": 2x USB 2.0)
Connection for keyboard/mouse serial interface	USB / USB 1x COM (1x RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	No
• Fan	No
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6

PC-based Automation

Industrial PC

Panel PC

SIMATIC IPC277E**Technical specifications (continued)**

Article number	6AV7882-0...0-...0 SIMATIC IPC277E
Interference immunity to cable-borne interference	
<ul style="list-style-type: none"> Interference immunity on supply cables 	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
<ul style="list-style-type: none"> Interference immunity on signal cables >30m 	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
<ul style="list-style-type: none"> Interference immunity on signal cables < 30m 	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
<ul style="list-style-type: none"> asymmetric interference 	±2 kV acc. to IEC 61000-4-5, surge asymmetric
<ul style="list-style-type: none"> symmetric interference 	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
<ul style="list-style-type: none"> Interference immunity to magnetic fields at 50 Hz 	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
<ul style="list-style-type: none"> Interference emission via line/AC current cables 	Noise emission: EN 61000-6-4:2007 +A1:2011 (industrial environments), CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
<ul style="list-style-type: none"> UL 508 	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
<ul style="list-style-type: none"> Germanischer Lloyd (GL) 	Yes; 7", 9", 12" ST; 12", 15", 19" MT
<ul style="list-style-type: none"> American Bureau of Shipping (ABS) 	Yes; 7", 9", 12" single-touch
<ul style="list-style-type: none"> Bureau Veritas (BV) 	Yes; 7", 9", 12" single-touch
<ul style="list-style-type: none"> Det Norske Veritas (DNV) 	Yes; 7", 9", 12" ST; 12", 15", 19" MT
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	Yes; 7", 9", 12" ST; 12", 15", 19" MT
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (Class NK) 	Yes; 7", 9", 12" single-touch

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

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

Note:

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

Additional information is available on the Internet at:

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