

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); Mounting onto standard rail; 4 GB; Without RS232/485, without PCIe; without operating system, CFast 16 GB, (only optionally with operating system/SW, if no internal mass storage); without internal mass storage; Without SIMATIC software; 24 V DC industrial power supply

General information

Product type designation IPC427E

Installation type/mounting

Mounting DIN rail, wall mounting, portrait mounting

Design Box PC, built-in unit

Supply voltage

Type of supply voltage 24 V DC

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

Optical drives possible as external drive via USB

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

Capacity of main memory, max. 16 Gbyte

Data areas and their retentivity

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

Hardware configuration

Slots	
• free slots	2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer
• Number of PCI slots	2; Optional
• Number of compact flash slots	1; CFast
Interfaces	
Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)
USB port	4x USB 3.0
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 485 / 422; switchable)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
— 100 Mbps	Yes
— 1000 Mbps	Yes
Interrupts/diagnostics/status information	
Bus diagnostics	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• 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 - 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 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	
<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 	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP degree of protection	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
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 55022A, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas	
<ul style="list-style-type: none"> ATEX Zone 2 	Yes; Optional
<ul style="list-style-type: none"> IECEX Zone 2 	Yes; Optional
<ul style="list-style-type: none"> cULus Class I Zone 2, Division 2 	Yes; Optional
Marine approval	
<ul style="list-style-type: none"> Germanischer Lloyd (GL) 	Yes
<ul style="list-style-type: none"> American Bureau of Shipping (ABS) 	Yes
<ul style="list-style-type: none"> Bureau Veritas (BV) 	Yes
<ul style="list-style-type: none"> Det Norske Veritas (DNV) 	Yes
<ul style="list-style-type: none"> Korean Register of Shipping (KRS) 	Yes
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	Yes
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (Class NK) 	Yes
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> Ambient temperature during operation 	0 °C to 55 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> min. 	-40 °C
<ul style="list-style-type: none"> max. 	70 °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 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 to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 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 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10

without operating system

Yes; Optional

pre-installed operating system

- Windows 7
- Windows 10 Enterprise

Yes; Ultimate 32 bit or 64 bit

Yes; Windows 10 Enterprise 2016 LTSC, 64 bit, MUI

Software

SIMATIC Software

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

Dimensions

Width

262 mm

Height

139.7 mm

Depth

55.5 mm

last modified:

10/15/2020