

SIMATIC IPC227E (Nanobox PC); 1x display port; 2x 10/100/1000 Mbit/s Ethernet RJ45; 1 x USB3.0, 3 x USB2.0; CFast slot; 24 V DC industrial power supply Celeron N2930 (4C/4T) 2 GB RAM; Box: Basis with COM 1/2 without operating system 240 GB SSD; without SIMATIC software DIN rail mounting

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	
<ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>	20 ms
Processor	
Processor type	Intel Celeron N2807 / N2930, Intel Atom E3845
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 256 Eco / 240 / 480 GB
Memory	
Type of memory	DDR3L SO-DIMM
Main memory	2 / 4 / 8 GB
Capacity of main memory, max.	8 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	
<ul style="list-style-type: none"> <li>free slots</li> </ul>	1x PCIe (x1) (optional)
<ul style="list-style-type: none"> <li>Number of PCI slots</li> </ul>	1; Optional
<ul style="list-style-type: none"> <li>Number of compact flash slots</li> </ul>	1; CFast
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Ethernet (RJ45)
USB port	1x USB 3.0 / 3x USB 2.0
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
<ul style="list-style-type: none"> <li>Graphics interface</li> </ul>	1x DisplayPort
Industrial Ethernet	
<ul style="list-style-type: none"> <li>Industrial Ethernet interface <ul style="list-style-type: none"> <li>— 100 Mbps</li> <li>— 1000 Mbps</li> </ul> </li> </ul>	2x Ethernet (RJ45) Yes Yes
Integrated Functions	
Monitoring functions	
<ul style="list-style-type: none"> <li>Temperature monitoring</li> <li>Watchdog</li> <li>Status LEDs</li> <li>Fan</li> <li>Monitoring function via network</li> </ul>	Yes Yes 1x power, 3x user No Optional
EMC	
Interference immunity against discharge of static electricity	
<ul style="list-style-type: none"> <li>Interference immunity against discharge of static electricity</li> </ul>	±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	

<ul style="list-style-type: none"> <li>Interference immunity against high frequency radiation</li> </ul>	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
<b>Interference immunity to cable-borne interference</b>	
<ul style="list-style-type: none"> <li>Interference immunity on supply cables</li> </ul>	±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"> <li>Interference immunity on signal cables &gt;30m</li> </ul>	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
<ul style="list-style-type: none"> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
<b>Interference immunity against voltage surge</b>	
<ul style="list-style-type: none"> <li>asymmetric interference</li> </ul>	±2 kV acc. to IEC 61000-4-5, surge asymmetric
<ul style="list-style-type: none"> <li>symmetric interference</li> </ul>	±1 kV acc. to IEC 61000-4-5, surge symmetric
<b>Interference immunity to magnetic fields</b>	
<ul style="list-style-type: none"> <li>Interference immunity to magnetic fields at 50 Hz</li> </ul>	100 A/m; to IEC 61000-4-8
<b>Emission of conducted and non-conducted interference</b>	
<ul style="list-style-type: none"> <li>Interference emission via line/AC current cables</li> </ul>	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
<b>Degree and class of protection</b>	
IP degree of protection	IP40
<b>Standards, approvals, certificates</b>	
CE mark	Yes
UL approval	Yes
<ul style="list-style-type: none"> <li>UL 508</li> </ul>	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Dust protection	Protection against foreign bodies > 1 mm
<b>Use in hazardous areas</b>	
<ul style="list-style-type: none"> <li>ATEX Zone 2</li> </ul>	Yes; Optional
<ul style="list-style-type: none"> <li>IECEx Zone 2</li> </ul>	Yes; Optional
<ul style="list-style-type: none"> <li>cULus Class I Zone 2, Division 2</li> </ul>	Yes; Optional
<b>Marine approval</b>	
<ul style="list-style-type: none"> <li>Germanischer Lloyd (GL)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>American Bureau of Shipping (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Bureau Veritas (BV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Det Norske Veritas (DNV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Korean Register of Shipping (KRS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Lloyds Register of Shipping (LRS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Nippon Kaiji Kyokai (Class NK)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Chinese Classification Society (CCS)</li> </ul>	Yes
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>min.</li> </ul>	0 °C; -20 °C as option
<ul style="list-style-type: none"> <li>max.</li> </ul>	60 °C
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>min.</li> </ul>	-20 °C
<ul style="list-style-type: none"> <li>max.</li> </ul>	60 °C
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>Relative humidity</li> </ul>	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)
<b>Vibrations</b>	
<ul style="list-style-type: none"> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s <sup>2</sup> (1 g)
<b>Shock testing</b>	
<ul style="list-style-type: none"> <li>Shock load during operation</li> </ul>	Tested according to IEC 60068-2-27: 150 m/s <sup>2</sup> , 11 ms
<b>Operating systems</b>	
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
pre-installed operating system	

- Windows 7
- Windows 10
- Windows 10 Enterprise

Yes; Ultimate 32 bit or 64 bit  
 Yes; Windows 10 IoT Enterprise 2016 LTSC, 64bit, MUI  
 Yes; Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI

#### Software

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

Width	191 mm
Height	100 mm
Depth	60 mm

**last modified:** 2/3/2021 