

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 N2807 (2C/2T) 4 GB RAM; Box: Basis without COM Windows 7 Ultimate SP1, 64 bit; MUI (de, en, fr, es, it) 320 GB HDD; 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> <li>Number of PCI slots</li> <li>Number of compact flash slots</li> </ul>   | 1x PCIe (x1) (optional)<br>1; Optional<br>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)<br>Yes<br>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<br>Yes<br>1x power, 3x user<br>No<br>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

#### Dimensions

|        |        |
|--------|--------|
| Width  | 191 mm |
| Height | 100 mm |
| Depth  | 60 mm  |

**last modified:**      6/25/2021 