

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) with TPM; 8 GB with NVRAM Box: Basis with COM 1/2 Windows 10 IoT Enterprise LTSC 2016, 64 bit, MUI (en, de, fr, it, es) 240 GB SSD; without SIMATIC software Vertical mounting; with ATEX/IECEX CAT 3G Zone 2/ CULUS Class I Div. 2

| 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                                                | 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                                                         |                                                               |
| • free slots                                                  | 1x PCIe (x1) (optional)                                       |
| • Number of PCI slots                                         | 1; Optional                                                   |
| • Number of compact flash slots                               | 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                                              |                                                               |
| • Graphics interface                                          | 1x DisplayPort                                                |
| Industrial Ethernet                                           |                                                               |
| • Industrial Ethernet interface                               | 2x Ethernet (RJ45)                                            |
| — 100 Mbps                                                    | Yes                                                           |
| — 1000 Mbps                                                   | 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 |                                                               |

|                                                                                                                 |                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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                                                                                             |
| <b>Interference immunity against high-frequency electromagnetic fields</b>                                      |                                                                                                                                                                                      |
| <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>Ambient temperature during operation</li> </ul>                          | 0 °C up to 60 °C (-20 °C as option)                                                                                                                                                  |
| <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                         | Yes; Ultimate 32 bit or 64 bit                                                                          |
| • Windows 10                        | Yes; Windows 10 IoT Enterprise 2016 LTSC, 64bit, MUI                                                    |
| • Windows 10 Enterprise             | 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:                      | 9/9/2021               |