

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); Without mounting accessories; 8 GB; without RS232/485; 1x PCIe (x4); WIN Embedded Standard 7 SP1, English, 64-bit; Without replaceable mass storage; 240 GB solid-state drive SATA Without SIMATIC software; 24 V DC industrial power supply

| General information                                                                                                                                                                            |                                                                                                                                                                                                            |
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| 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                                                                                                                                                                                |                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>                                                                                                     | 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                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>free slots</li> <li>Number of PCI slots</li> <li>Number of compact flash slots</li> </ul>                                                                           |
|                                                                                                                                                                                                | 2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer<br>2; Optional<br>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                                                                                                                                                                               |                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>Graphics interface</li> </ul>                                                                                                                           | 2x 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> | 3x Ethernet (RJ45)<br>Yes<br>Yes                                                                                                                                                                           |
| Interrupts/diagnostics/status information                                                                                                                                                      |                                                                                                                                                                                                            |
| Bus diagnostics                                                                                                                                                                                | Yes                                                                                                                                                                                                        |
| Integrated Functions                                                                                                                                                                           |                                                                                                                                                                                                            |
| Monitoring functions                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Temperature monitoring</li> <li>Watchdog</li> <li>Status LEDs</li> </ul>                                                                                            |
|                                                                                                                                                                                                | Yes<br>Yes<br>1x power, 3x user                                                                                                                                                                            |

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| <ul style="list-style-type: none"> <li>• Fan</li> <li>• Monitoring function via network</li> </ul>                                                                                                                                                                                                                              | No<br>Optional                                                                                                                                                                                                                                                                             |
| <b>EMC</b>                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                            |
| 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                                                                                                       |
| Interference immunity to cable-borne interference                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Interference immunity on supply cables</li> <li>• Interference immunity on signal cables &gt;30m</li> <li>• Interference immunity on signal cables &lt; 30m</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<br>±2 kV acc. to IEC 61000-4-5, surge, length > 30 m<br>±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"> <li>• asymmetric interference</li> <li>• symmetric interference</li> </ul>                                                                                                                                                                                                                   | ±2 kV acc. to IEC 61000-4-5, surge asymmetric<br>±1 kV acc. to IEC 61000-4-5, surge symmetric                                                                                                                                                                                              |
| Interference immunity to magnetic fields                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                            |
| <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                                                                                                                                                                                                                                                                  |
| Emission of conducted and non-conducted interference                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                            |
| <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                                                                                                                                                                                                                                                                                                         | IP20                                                                                                                                                                                                                                                                                       |
| <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                                                                                                                                                                                                                                                                                        |
| 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"> <li>• ATEX Zone 2</li> <li>• IECEx Zone 2</li> <li>• cULus Class I Zone 2, Division 2</li> </ul>                                                                                                                                                                                             | Yes; Optional<br>Yes; Optional<br>Yes; Optional                                                                                                                                                                                                                                            |
| Marine approval                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Germanischer Lloyd (GL)</li> <li>• American Bureau of Shipping (ABS)</li> <li>• Bureau Veritas (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Korean Register of Shipping (KRS)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (Class NK)</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                              |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                            |
| Ambient temperature during operation                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>                                                                                                                                                                                                                                                        | 0 °C<br>55 °C                                                                                                                                                                                                                                                                              |
| Ambient temperature during storage/transportation                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>                                                                                                                                                                                                                                                        | -40 °C<br>70 °C                                                                                                                                                                                                                                                                            |
| Relative humidity                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                            |
| <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 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)                                                                                                                                         |
| Vibrations                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                            |
| <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)                                                                                                                                                                                         |
| Shock testing                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Shock load during operation</li> </ul>                                                                                                                                                                                                                                                 | Tested to DIN IEC 60068-2-29: 50 m/s <sup>2</sup> (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                                                                 |                                                                                                         |
| <ul style="list-style-type: none"> <li>• Windows 7</li> <li>• Windows 10 Enterprise</li> </ul> | Yes; Ultimate 32 bit or 64 bit<br>Yes; Windows 10 Enterprise 2016 LTSP, 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:** 6/25/2021 