

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; 16 GB; 2x RS232/485; without PCIe; Windows 10 Enterprise 2019 LTSC (64-bit), MUI (en,de,fr,it,es), for Celeron, i3 and i5, Without replaceable mass storage; 480 GB solid-state drive SATA Without SIMATIC software; 24 V DC industrial power supply and TPM;

| 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                                                    |                                                                                                                                                                                                            |
| 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                                                                                                                                                                                                  |
| 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                                                                                                                                                                                                        |
| • Fan                                                     | No                                                                                                                                                                                                         |
| • Monitoring function via network                         | 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> </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                                                                                   |
| Interference immunity against voltage surge                                                                     |                                                                                                                                                                                      |
| <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                                                                                                                                         |
| 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> </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                                                                                                                                                                        |
| Marine approval                                                                                                 |                                                                                                                                                                                      |
| <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                                                                                                                                                                                  |
| <b>Ambient conditions</b>                                                                                       |                                                                                                                                                                                      |
| Ambient temperature during operation                                                                            |                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>min.</li> </ul>                                                          | 0 °C                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>max.</li> </ul>                                                          | 55 °C                                                                                                                                                                                |
| Ambient temperature during storage/transportation                                                               |                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>min.</li> </ul>                                                          | -40 °C                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>max.</li> </ul>                                                          | 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                                                                                                           |
| <b>Operating systems</b>                                                                                        |                                                                                                                                                                                      |
| 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                     | Yes; Ultimate 32 bit or 64 bit                                                                          |
| • Windows 10 Enterprise         | Yes; Windows 10 Enterprise 2016 LTSP, 64 bit, MUI                                                       |
| <b>Software</b>                 |                                                                                                         |
| SIMATIC Software                | Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle |
| <b>Dimensions</b>               |                                                                                                         |
| Width                           | 262 mm                                                                                                  |
| Height                          | 139.7 mm                                                                                                |
| Depth                           | 55.5 mm                                                                                                 |
| <b>Approvals / Certificates</b> |                                                                                                         |
| <b>General Product Approval</b> |                                                                                                         |



[Manufacturer Declaration](#)



[KC](#)



|                                |                      |
|--------------------------------|----------------------|
| For use in hazardous locations | Maritime application |
|--------------------------------|----------------------|



[Miscellaneous](#)

[CCC-Ex](#)



|                      |
|----------------------|
| Maritime application |
|----------------------|



[NK / Nippon Kaiji Kyokai](#)

[CCS \(China Classification Society\)](#)



|                 |             |
|-----------------|-------------|
| Dangerous goods | Environment |
|-----------------|-------------|

[Dangerous goods information](#)

[Environmental Confirmations](#)

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