

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); Vertical mounting; 16 GB; Without 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; 128 GB solid-state drive SATA; Without SIMATIC software; 24 V DC industrial power supply

### 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

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

|                                                                            |                                                                                                                                                                                      |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Slots</b>                                                               |                                                                                                                                                                                      |
| • 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                                                                                                                                                                             |
| <b>Interfaces</b>                                                          |                                                                                                                                                                                      |
| 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)                                                                                                                                    |
| <b>Video interfaces</b>                                                    |                                                                                                                                                                                      |
| • Graphics interface                                                       | 2x DisplayPort                                                                                                                                                                       |
| <b>Industrial Ethernet</b>                                                 |                                                                                                                                                                                      |
| • Industrial Ethernet interface                                            | 3x Ethernet (RJ45)                                                                                                                                                                   |
| — 100 Mbps                                                                 | Yes                                                                                                                                                                                  |
| — 1000 Mbps                                                                | Yes                                                                                                                                                                                  |
| <b>Interrupts/diagnostics/status information</b>                           |                                                                                                                                                                                      |
| Bus diagnostics                                                            | Yes                                                                                                                                                                                  |
| <b>Integrated Functions</b>                                                |                                                                                                                                                                                      |
| <b>Monitoring functions</b>                                                |                                                                                                                                                                                      |
| • Temperature monitoring                                                   | Yes                                                                                                                                                                                  |
| • Watchdog                                                                 | Yes                                                                                                                                                                                  |
| • Status LEDs                                                              | 1x power, 3x user                                                                                                                                                                    |
| • Fan                                                                      | No                                                                                                                                                                                   |
| • Monitoring function via network                                          | Optional                                                                                                                                                                             |
| <b>EMC</b>                                                                 |                                                                                                                                                                                      |
| <b>Interference immunity against discharge of static electricity</b>       |                                                                                                                                                                                      |
| • Interference immunity against discharge of static electricity            | ±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> |                                                                                                                                                                                      |
| • Interference immunity against high frequency radiation                   | 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>                   |                                                                                                                                                                                      |
| • Interference immunity on supply cables                                   | ±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                                                      |
| • Interference immunity on signal cables >30m                              | ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m                                                                                                                                    |
| • Interference immunity on signal cables < 30m                             | ±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>                         |                                                                                                                                                                                      |
| • asymmetric interference                                                  | ±2 kV acc. to IEC 61000-4-5, surge asymmetric                                                                                                                                        |
| • symmetric interference                                                   | ±1 kV acc. to IEC 61000-4-5, surge symmetric                                                                                                                                         |

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|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Interference immunity to magnetic fields             |                                                                                                                                                    |
| • Interference immunity to magnetic fields at 50 Hz  | 100 A/m; to IEC 61000-4-8                                                                                                                          |
| Emission of conducted and non-conducted interference |                                                                                                                                                    |
| • Interference emission via line/AC current cables   | EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A                                                                                          |
| Degree and class of protection                       |                                                                                                                                                    |
| IP degree of protection                              | IP20                                                                                                                                               |
| Standards, approvals, certificates                   |                                                                                                                                                    |
| CE mark                                              | Yes                                                                                                                                                |
| UL approval                                          | Yes                                                                                                                                                |
| • UL 508                                             | 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                               |                                                                                                                                                    |
| • ATEX Zone 2                                        | Yes; Optional                                                                                                                                      |
| • IECEx Zone 2                                       | Yes; Optional                                                                                                                                      |
| • cULus Class I Zone 2, Division 2                   | Yes; Optional                                                                                                                                      |
| Marine approval                                      |                                                                                                                                                    |
| • Germanischer Lloyd (GL)                            | Yes                                                                                                                                                |
| • American Bureau of Shipping (ABS)                  | Yes                                                                                                                                                |
| • Bureau Veritas (BV)                                | Yes                                                                                                                                                |
| • Det Norske Veritas (DNV)                           | Yes                                                                                                                                                |
| • Korean Register of Shipping (KRS)                  | Yes                                                                                                                                                |
| • Lloyds Register of Shipping (LRS)                  | Yes                                                                                                                                                |
| • Nippon Kaiji Kyokai (Class NK)                     | Yes                                                                                                                                                |
| Ambient conditions                                   |                                                                                                                                                    |
| Ambient temperature during operation                 |                                                                                                                                                    |
| • Ambient temperature during operation               | 0 °C to 55 °C                                                                                                                                      |
| Ambient temperature during storage/transportation    |                                                                                                                                                    |
| • min.                                               | -40 °C                                                                                                                                             |
| • max.                                               | 70 °C                                                                                                                                              |
| Relative humidity                                    |                                                                                                                                                    |
| • Relative humidity                                  | 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)      |
| <b>Shock testing</b>                                                                                            |                                                                                                         |
| <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                                                                                           |
| <b>pre-installed operating system</b>                                                                           |                                                                                                         |
| <ul style="list-style-type: none"> <li>• Windows 7</li> </ul>                                                   | Yes; Ultimate 32 bit or 64 bit                                                                          |
| <ul style="list-style-type: none"> <li>• Windows 10 Enterprise</li> </ul>                                       | 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>last modified:</b>                                                                                           | 09/10/2020                                                                                              |