

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; 8 GB; Without RS232/485, without PCIe; Windows 10 IoT Enterprise 2016 LTSB (64-bit) for Celeron, i3 and i5; CFast 2 GB, without operating system; 480 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"> 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 | |
| Slots | |
| <ul style="list-style-type: none"> free slots Number of PCI slots Number of compact flash slots | 2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer 2; Optional 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"> Graphics interface | 2x DisplayPort |
| Industrial Ethernet | |
| <ul style="list-style-type: none"> Industrial Ethernet interface <ul style="list-style-type: none"> — 100 Mbps — 1000 Mbps | 3x Ethernet (RJ45) Yes Yes |
| Interrupts/diagnostics/status information | |
| Bus diagnostics | Yes |
| Integrated Functions | |
| Monitoring functions | |
| <ul style="list-style-type: none"> Temperature monitoring Watchdog | Yes Yes |

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|-----------------------------------|-------------------|
| • Status LEDs | 1x power, 3x user |
| • Fan | No |
| • Monitoring function via network | Optional |

EMC

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| Interference immunity against discharge of static electricity | |
| • 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 |
| Interference immunity against high-frequency electromagnetic fields | |
| • 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 |
| Interference immunity to cable-borne interference | |
| • 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 |
| Interference immunity against voltage surge | |
| • asymmetric interference | ±2 kV acc. to IEC 61000-4-5, surge asymmetric |
| • symmetric interference | ±1 kV acc. to IEC 61000-4-5, surge symmetric |
| 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

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| IP degree of protection | IP20 |
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Standards, approvals, certificates

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|-----------------------|---|
| 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 |

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| Use in hazardous areas | |
| • ATEX Zone 2 | Yes; Optional |
| • IECEx Zone 2 | Yes; Optional |
| • cULus Class I Zone 2, Division 2 | Yes; Optional |

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| 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

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|---|--|
| Ambient temperature during operation | |
| • min. | 0 °C |
| • max. | 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 | |
| • Vibration resistance during operation acc. to IEC 60068-2-6 | tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s ² (1 g) |
| Shock testing | |
| • Shock load during operation | Tested to DIN IEC 60068-2-29: 50 m/s ² (5 g), 30 ms, 100 shocks |

| Operating systems | |
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| 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"> • Windows 7 • Windows 10 Enterprise | Yes; Ultimate 32 bit or 64 bit 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 