

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIe (optional), Celeron G3902E; 2x Gbit Ethernet (IE/PN); Mounting onto standard rail; 8 GB; Without RS232/485, without PCIe; Windows 10 IoT Enterprise 2016 LTSC (64-bit) for Celeron, i3 and i5; Without replaceable mass storage; 240 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                                    |                                                                                                                                                                                                            |
| 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       |                                                                                                                                                                                      |
| • 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                                                                                                                            |
| <b>Degree and class of protection</b>                               |                                                                                                                                                                                      |
| IP degree of protection                                             | IP20                                                                                                                                                                                 |
| <b>Standards, approvals, certificates</b>                           |                                                                                                                                                                                      |
| 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                                                                                                                                                                                  |
| <b>Ambient conditions</b>                                           |                                                                                                                                                                                      |
| 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 <sup>2</sup> (1 g)                                                                                   |
| Shock testing                                                       |                                                                                                                                                                                      |
| • Shock load during operation                                       | 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                                                             |                                                                                                         |
| <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 LTSC, 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>Classifications</b> |        |                |                       |
|                        |        | <b>Version</b> | <b>Classification</b> |
|                        | eClass | 14             | 19-20-01-02           |
|                        | eClass | 12             | 19-20-01-02           |
|                        | eClass | 9.1            | 19-20-01-02           |
|                        | eClass | 9              | 19-20-01-02           |
|                        | eClass | 8              | 19-20-01-02           |
|                        | eClass | 7.1            | 19-20-01-02           |
|                        | eClass | 6              | 19-20-01-02           |
|                        | ETIM   | 9              | EC001413              |
|                        | ETIM   | 8              | EC001413              |
|                        | ETIM   | 7              | EC001413              |

|                                 |  |
|---------------------------------|--|
| <b>Approvals / Certificates</b> |  |
| <b>General Product Approval</b> |  |



[Manufacturer Declaration](#)



[KC](#)



|                                       |                          |
|---------------------------------------|--------------------------|
| <b>For use in hazardous locations</b> | <b>Marine / Shipping</b> |
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[Miscellaneous](#)

[CCC-Ex](#)



|                          |
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| <b>Marine / Shipping</b> |
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[NK / Nippon Kaiji Kyokai](#)

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



|                        |                    |
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| <b>Dangerous goods</b> | <b>Environment</b> |
|------------------------|--------------------|

[Dangerous goods information](#)

[Environmental Conformations](#)

last modified:

5/3/2023