

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; 4 GB; 2x RS232/485; 1x PCIe (x4); without operating system, Without replaceable mass storage; 320 GB HDD 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                                         |
| serial interface                         | Without / 2x COM (RS 232 / 485 / 422; switchable) |

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

## EMC

### 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                                |                                                                                                                                                    |
| 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                                                    |                                                                                                                                                    |
| • 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                              |
| Operating systems              |                                                                                                         |
| pre-installed operating system | Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 |
| without operating system       | Yes; Optional                                                                                           |
| pre-installed operating system |                                                                                                         |
| • Windows 7                    | Yes; Ultimate 32 bit or 64 bit                                                                          |
| • Windows 10 Enterprise        | 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:                 | 08/19/2020                                                                                              |