

SIMATIC IPC677D (Panel PC), 2x10/100/1000 Mbit/s Ethernet; 4x USB V3.0, 1x serial (COM1); Watchdog, temperature and Fan monitoring; RAID controller onboard; 22" Multitouch (1920x 1080) XEON E3-1268LV3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache VT-D, AMT); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB buffered SRAM RAID1 2x 320 GB HDD SATA (2.5") in removable frame; Solid-state drive 240 GB 16 GB DDR3 1600 DIMM; ECC; 1x PCIE (X16); 1x PCIE (X4) 2x USB additive; COM2; LPT (2 slots occupied) Windows 7 Ultimate 64 bit SP1, MUI (de, en, fr, es, it) without expansion (software) 24 V DC industrial Power supply

| General information                        |                                                                                                                                                                                                                                        |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product type designation                   | IPC677D                                                                                                                                                                                                                                |
| Display                                    |                                                                                                                                                                                                                                        |
| Design of display                          | 22" TFT multi-touch                                                                                                                                                                                                                    |
| Screen diagonal                            | 22 in                                                                                                                                                                                                                                  |
| Resolution (pixels)                        |                                                                                                                                                                                                                                        |
| • Horizontal image resolution              | 1 920 pixel                                                                                                                                                                                                                            |
| • Vertical image resolution                | 1 080 pixel                                                                                                                                                                                                                            |
| Backlighting                               |                                                                                                                                                                                                                                        |
| • MTBF backlighting (at 25 °C)             | 30 000 h                                                                                                                                                                                                                               |
| Control elements                           |                                                                                                                                                                                                                                        |
| Touch operation                            |                                                                                                                                                                                                                                        |
| • Design as multi-touch screen             | Yes; Projective-capacitive                                                                                                                                                                                                             |
| Installation type/mounting                 |                                                                                                                                                                                                                                        |
| Mounting                                   | For horizontal and vertical mounting                                                                                                                                                                                                   |
| Design                                     | Panel PC, built-in unit                                                                                                                                                                                                                |
| central design                             | Yes                                                                                                                                                                                                                                    |
| Mounting in portrait format possible       | Yes                                                                                                                                                                                                                                    |
| maximum permissible installation angle +/- | 20°                                                                                                                                                                                                                                    |
| Supply voltage                             |                                                                                                                                                                                                                                        |
| Type of supply voltage                     | 100/240 V AC (autorange); 24 V DC                                                                                                                                                                                                      |
| Line frequency                             |                                                                                                                                                                                                                                        |
| • Rated value 50 Hz                        | Yes                                                                                                                                                                                                                                    |
| • Rated value 60 Hz                        | Yes                                                                                                                                                                                                                                    |
| Mains buffering                            |                                                                                                                                                                                                                                        |
| • Mains/voltage failure stored energy time | 10 ms                                                                                                                                                                                                                                  |
| Power loss                                 |                                                                                                                                                                                                                                        |
| In full configuration                      | 165 W                                                                                                                                                                                                                                  |
| Processor                                  |                                                                                                                                                                                                                                        |
| Processor type                             | Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB Cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB Cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB Cache, AMT)                                                                                    |
| Chipset                                    | Intel DH82C226 PCH                                                                                                                                                                                                                     |
| Graphic                                    |                                                                                                                                                                                                                                        |
| Graphics controller                        | Intel HD graphics controller P4600 GT2 (Xeon, Core i3); Intel HD graphics controller (Celeron)                                                                                                                                         |
| Drives                                     |                                                                                                                                                                                                                                        |
| Optical drives                             | DVD±R±RW combi-drive, optional                                                                                                                                                                                                         |
| Hard disk                                  | 3.5" SATA ≥ 500 GB, optional: 3.5" SATA ≥ 1 TB; RAID1 2x 2.5" SATA ≥ 320 GB; solid-state drive (SSD) ≥ 240 GB; all hard disk drives within the enclosure are vibration-damped; RAID1 2x 2.5" SATA ≥ 320 GB byte in removable drive bay |
| SSD                                        | Yes; ≥ 240 GB optional                                                                                                                                                                                                                 |
| Storage                                    |                                                                                                                                                                                                                                        |
| Type of memory                             | DDR3-1600 DIMM                                                                                                                                                                                                                         |
| Main memory                                | 2 / 4 / 8 / 16 GB; ECC optional                                                                                                                                                                                                        |

|                                                                     |                                                                                                                                                                                      |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capacity of main memory, max.                                       | 16 Gbyte                                                                                                                                                                             |
| <b>Data areas and their retentivity</b>                             |                                                                                                                                                                                      |
| Retentive data area (incl. timers, counters, flags), max.           | 2 Mbyte; 128 KB can be stored in the buffer time; optional                                                                                                                           |
| <b>Hardware configuration</b>                                       |                                                                                                                                                                                      |
| Slots                                                               |                                                                                                                                                                                      |
| • free slots                                                        | 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer                                                                                                      |
| • Number of PCI slots                                               | 2                                                                                                                                                                                    |
| • Number of PCI slots                                               | 2                                                                                                                                                                                    |
| <b>Interfaces</b>                                                   |                                                                                                                                                                                      |
| PROFIBUS/MPI                                                        | Optionally onboard, isolated, max. 12 Mbit/s, compatible with CP 5622                                                                                                                |
| Number of industrial Ethernet interfaces                            | 2; 2x RJ45 (independent)                                                                                                                                                             |
| Number of PROFINET interfaces                                       | 3; Optional                                                                                                                                                                          |
| USB port                                                            | 4x USB 3.0                                                                                                                                                                           |
| Connection for keyboard/mouse                                       | USB / USB                                                                                                                                                                            |
| parallel interface                                                  | optional LPT1                                                                                                                                                                        |
| Video interfaces                                                    |                                                                                                                                                                                      |
| • Graphics interface                                                | 1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)                                                                                                                     |
| Industrial Ethernet                                                 |                                                                                                                                                                                      |
| • Industrial Ethernet interface                                     | Onboard, 2x 10 / 100 / 1000 Mbit, RJ45                                                                                                                                               |
| — 100 Mbps                                                          | Yes                                                                                                                                                                                  |
| — 1000 Mbps                                                         | Yes                                                                                                                                                                                  |
| <b>Interrupts/diagnostics/status information</b>                    |                                                                                                                                                                                      |
| Bus diagnostics                                                     | Yes                                                                                                                                                                                  |
| <b>Integrated Functions</b>                                         |                                                                                                                                                                                      |
| Monitoring functions                                                |                                                                                                                                                                                      |
| • Temperature monitoring                                            | Yes                                                                                                                                                                                  |
| • Watchdog                                                          | Yes                                                                                                                                                                                  |
| • Fan                                                               | Yes                                                                                                                                                                                  |
| • 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 (at the front)                                                   | IP65                                                                                                                                                                                 |
| IP (rear)                                                           | 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                                                                                                                                                                                  |

|                                                               |                                                                                                                                          |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| FCC                                                           | Yes                                                                                                                                      |
| EMC                                                           | CE, EN 61000-6-4:2007, EN 61000-6-2:2005                                                                                                 |
| <b>Ambient conditions</b>                                     |                                                                                                                                          |
| Ambient temperature during operation                          |                                                                                                                                          |
| • min.                                                        | 5 °C                                                                                                                                     |
| • max.                                                        | 45 °C                                                                                                                                    |
| Ambient temperature during storage/transportation             |                                                                                                                                          |
| • min.                                                        | -20 °C                                                                                                                                   |
| • max.                                                        | 60 °C                                                                                                                                    |
| Relative humidity                                             |                                                                                                                                          |
| • Relative humidity                                           | Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)                                                 |
| Vibrations                                                    |                                                                                                                                          |
| • Vibration resistance during operation acc. to IEC 60068-2-6 | tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s² (1 g)                                          |
| Shock testing                                                 |                                                                                                                                          |
| • Shock load during operation                                 | Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks                                                                           |
| <b>Operating systems</b>                                      |                                                                                                                                          |
| pre-installed operating system                                | Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSP, 64-bit, MUI |
| without operating system                                      | Yes                                                                                                                                      |
| pre-installed operating system                                |                                                                                                                                          |
| • Windows 7                                                   | Yes; Ultimate 32 bit or 64 bit                                                                                                           |
| • Windows 10 Enterprise                                       | Yes; Windows 10 Enterprise 2015 or 2016 LTSP, 64-bit, MUI                                                                                |
| <b>Software</b>                                               |                                                                                                                                          |
| SIMATIC Software                                              | Optional package with SIMATIC WinCC or WinAC RTX                                                                                         |
| <b>Dimensions</b>                                             |                                                                                                                                          |
| Width of the housing front                                    | 560 mm                                                                                                                                   |
| Height of housing front                                       | 380 mm                                                                                                                                   |
| Mounting cutout, width                                        | 542 mm                                                                                                                                   |
| Mounting cutout, height                                       | 362 mm                                                                                                                                   |
| mounting depth                                                | 112 mm                                                                                                                                   |
| • additional mounting depth (optical drive)                   | 26 mm                                                                                                                                    |
| <b>Weights</b>                                                |                                                                                                                                          |
| Weight, approx.                                               | 16 kg                                                                                                                                    |
| <b>Classifications</b>                                        |                                                                                                                                          |

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 14      | 19-20-01-03    |
| eClass | 12      | 19-20-01-03    |
| eClass | 9.1     | 19-20-01-03    |
| eClass | 9       | 19-20-01-03    |
| eClass | 8       | 27-24-23-01    |
| eClass | 7.1     | 27-24-23-01    |
| eClass | 6       | 27-24-23-01    |
| ETIM   | 10      | EC001414       |
| ETIM   | 9       | EC001414       |
| ETIM   | 8       | EC001414       |
| ETIM   | 7       | EC001414       |

#### Approvals / Certificates

|                          |
|--------------------------|
| General Product Approval |
|--------------------------|



[Manufacturer Declaration](#)

[Miscellaneous](#)



[BIS CRS](#)

|                          |                 |
|--------------------------|-----------------|
| General Product Approval | Dangerous goods |
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last modified:

11/24/2025 