

SIMATIC IPC847D (Rack PC) (Rack PC, 19", 4HU); 2x Gbit Ethernet (IE/PN), RJ45; 1x DVI-I; 2x display ports; 1x COM 1; 2x PS/2; audio; 4x USB 3.0 incl. 1x internal; 3x USB 2.0; Temp. and fan monitoring; Watchdog, Card retainer Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache); Basic board with PROFIBUS/MPI (CP 5622-compatible) 500 GB HDD SATA, internal 0.3 G vibration, 3 G shock 2 GB DDR3 SD-RAM (1x 2 GB), Single channel Bus module 11 slots: 7X PCI, 3x PCIE X4, 1x PCIE X16; without hardware expansions without expansion (HW); Graphics onboard without operating system without software 110/240V industrial power supply unit; with NAMUR, Power supply cable Europe

### General information

Product type designation IPC847D

### Installation type/mounting

Mounting For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)

Design Rack PC, 19", 4U

### Supply voltage

Type of supply voltage 100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC; optional 100/240 V AC with UPS functionality incl. maintenance-free lead-tin battery

### Line frequency

- Rated value 50 Hz Yes
- Rated value 60 Hz Yes

### Mains buffering

- Mains/voltage failure stored energy time 20 ms

### Processor

Processor type Xeon E3-1275 v3 (4C/8T, 3.5 (3.9) GHz, 8 MB cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache); Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache)

Chipset Intel DH82C226 PCH

### Graphic

Graphics controller Onboard graphics controller Intel HD 4600 Graphics integrated into the processor / PCI-Express graphics card (Dual Head: 2x VGA or 2x DVI-D) in the PCIe (x16) slot (optional)

### Drives

Optical drives DVD±R/RW (SlimLine)

|                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hard disk                                                                                                                                                                        | 500 GB HDD, 1 TB HDD, 2x 1 TB HDD, RAID1 (2x 1 TB HDD, mirror disks), RAID1 (2x 1 TB HDD, mirror disks) + 1x 1 TB HDD as hot spare, RAID5 (3x 1 TB HDD, striping with parity), RAID5 (3x 1 TB HDD, striping with parity) + 1x 1 TB HDD as hot spare; RAID1 (2x 1 TB HDD SAS, mirror disks), RAID5 (3x 1 TB HDD SAS, striping with parity), RAID5 (3x 1 TB HDD SAS, striping with parity) + 1x 1 TB HDD SAS as hot spare incl. PCIe (x8) RAID SAS controller incl. ZMCP module |
| SSD                                                                                                                                                                              | Yes; 240 GB SSD; RAID1 (2x 240 GB SSD, mirror disks)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Slot for drives                                                                                                                                                                  | Mounted internally on the fixed hard disk support, or mounted internally in vibration/shock-absorbing hard disk support, or mounted at the front in the low-profile removable drive bay (hot-swap in RAID configurations)                                                                                                                                                                                                                                                     |
| <b>Memory</b>                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Main memory                                                                                                                                                                      | 2 GB to 32 GB DDR3 1600 DIMM, ECC optional                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Capacity of main memory, max.                                                                                                                                                    | 32 Gbyte                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Hardware configuration</b>                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Slots</b>                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>free slots</li> </ul>                                                                                                                     | 11 slots: 7x PCI, 3x PCIe (x4) (1 lane), 1x PCIe (x16) or 3x PCI, 5x PCIe mech. (x16) (4x 4 lanes, 1x 8 lanes), 3x PCIe (x4); all modules to a length of 312 mm can be used                                                                                                                                                                                                                                                                                                   |
| <b>Interfaces</b>                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Interfaces/bus type                                                                                                                                                              | 1x COM1, 1x COM2 (optional), 1x LPT (optional), 2x DisplayPort, 1x DVI-I, 2x PS/2, audio (Microphone In, Line Out), 7x USB, 2x Gigabit Ethernet, PROFIBUS or PROFINET optional                                                                                                                                                                                                                                                                                                |
| PROFIBUS/MPI                                                                                                                                                                     | Optionally onboard, isolated, max. 12 Mbit/s, no plug-in card necessary, CP 5622-compatible                                                                                                                                                                                                                                                                                                                                                                                   |
| USB port                                                                                                                                                                         | 2x USB 3.0, 2x USB 2.0 rear, 1x USB 3.0, 1x USB 2.0 front, 1x USB 3.0 internal                                                                                                                                                                                                                                                                                                                                                                                                |
| Connection for keyboard/mouse                                                                                                                                                    | 2x PS/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| serial interface                                                                                                                                                                 | COM1: 1x RS 232, COM2 (optional): 1x RS 232                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| parallel interface                                                                                                                                                               | optional LPT1                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Multimedia                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>Audio In/Out</li> <li>Microphone In</li> </ul>                                                                                            | Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Video interfaces</b>                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>Graphics interface</li> </ul>                                                                                                             | 2x DisplayPort and 1x DVI-I onboard; 1x VGA via DVI-VGA adapter cable (optional); graphics card PCIe (x16), Dual Head (2x VGA or 2x DVI-D), 1 GB graphics memory (optional)                                                                                                                                                                                                                                                                                                   |
| <b>Industrial Ethernet</b>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>Industrial Ethernet interface               <ul style="list-style-type: none"> <li>— 100 Mbps</li> <li>— 1000 Mbps</li> </ul> </li> </ul> | 2x Ethernet (RJ45)<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Integrated Functions</b>                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Monitoring functions              |                                                                                                                         |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| • Temperature monitoring          | Yes                                                                                                                     |
| • Watchdog                        | Yes                                                                                                                     |
| • Status LEDs                     | POWER, ETHERNET 1, ETHERNET 2, PN   MPI / DP, WATCHDOG, TEMP, FAN, HDD0 ALARM, HDD1 ALARM, HDD2 ALARM, HDD   HDD3 ALARM |
| • Fan                             | Yes                                                                                                                     |
| • 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 - 1000 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge                                                                                                              |
| • Interference immunity on signal cables < 30m                      | ±1 kV acc. to IEC 61000-4-4, Burst                                                                                                                                                  |
| 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, FCC Class A, EN 61000-6-4, CISPR 22, EN 55022 Class B, EN 61000-3-2 Class D, EN 61000-3-3                                                                             |

## Degree and class of protection

|                   |      |
|-------------------|------|
| IP (at the front) | IP41 |
| IP (rear)         | IP20 |

## Standards, approvals, certificates

|                       |                                                                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval              | CE, cULus 60950, KCC                                                                                                                                                             |
| CE mark               | Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005) |
| CSA approval          | Yes; Included in cULus                                                                                                                                                           |
| UL approval           | Yes                                                                                                                                                                              |
| cULus                 | Yes; UL 60950-1, file number E115352                                                                                                                                             |
| RCM (formerly C-TICK) | Yes                                                                                                                                                                              |

|                       |                                                                           |
|-----------------------|---------------------------------------------------------------------------|
| KC approval           | Yes                                                                       |
| EAC (formerly Gost-R) | Yes                                                                       |
| EMC                   | CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005                         |
| Dust protection       | With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered |

## Ambient conditions

|                                                                                                               |                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature during operation                                                                          |                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Ambient temperature during operation</li> </ul>                        | 0 °C to +45 °C, no burner operation, 0 °C to +50 °C, no operation of optical drive, power dissipation of the expansion cards in total < 30 W, maximum 3 removable drive bays, 0 °C to +40 °C with AC UPS, 0 °C to +35 °C with hardware RAID controller |
| Ambient temperature during storage/transportation                                                             |                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>min.</li> <li>max.</li> </ul>                                          | -20 °C<br>60 °C                                                                                                                                                                                                                                        |
| Relative humidity                                                                                             |                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Relative humidity</li> </ul>                                           | Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)                                                                                                     |
| Vibrations                                                                                                    |                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul> | Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s <sup>2</sup> (0.5 g)                                                                                                                                        |
| Shock testing                                                                                                 |                                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>Shock load during operation</li> </ul>                                 | Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s <sup>2</sup> (5 g), 30 ms, 100 shocks per axis                                                                                                                                   |

## Operating systems

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating system                    | Windows 7 Ultimate, multi-language (32-bit/64-bit), Windows 10 Enterprise 2015 LTSC, multi-language (64-bit), Windows 10 Enterprise 2016 LTSC, multi-language (64-bit), Windows Server 2008 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2012 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 clients, multi-language (64-bit) |
| pre-installed operating system      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Additional info on operating system | Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)                                                                                                                                                                                                                                                                                                                              |
| without operating system            | Yes                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Software

|                  |                                                            |
|------------------|------------------------------------------------------------|
| SIMATIC Software | Optionally in package with SIMATIC WinCC or WinCC flexible |
|------------------|------------------------------------------------------------|

## Dimensions

|        |            |
|--------|------------|
| Width  | 430 mm     |
| Height | 177 mm; 4U |
| Depth  | 444 mm     |

**last modified:** 11/02/2018