

SIMATIC IPC847E (Rack PC, 19", 4HU); 3x Gbit Ethernet (IE/PN), RJ45; 1x DVI-D; 2x display ports; 1x COM 1; audio, 4x USB 3.1, 2x USB 3.1 (Type C) on the rear side; 2x USB 3.0 on the front; 1x USB 3.1 internal, temperature and fan monitoring; Watchdog, card retainer Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (8 L), 5x PCIe x16 (4 L), 2x PCIe x4 (4 L); 1 TB HDD 3.5" SATA; Enclosure with drive support Type B (for internal installation/ 0.5 g vibration, 5 g shock); 100/240 V AC industrial power supply unit; 16 GB DDR4 SDRAM (2x 8 GB), Dual Channel; 1024 GB SSD M.2 NVMe to PCIe x4 adapter card (1 slot occupied); (for operating system); Windows 10 IoT Enterprise 2019 LTSC MUI (de, en, fr, it, es), 64-bit (for Core i7/Xeon); Without expansions; Power supply cable China

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
Line frequency	
<ul style="list-style-type: none"> <li>Rated value 50 Hz</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Rated value 60 Hz</li> </ul>	Yes
Mains buffering	
<ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>	20 ms
Processor	
Processor type	Intel Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-x/-d-Technology)
Chipset	Intel C246
Graphic	
Graphics controller	Onboard Intel UHD graphics P630/630 integrated in processor; graphics card NVIDIA Quadro P400 PCIe (x16) triple head (optional)

Drives	
Hard disk	1x 1 TB 3.5" SATA HDD, 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise) + 2 TB 3.5" SATA HDD (Enterprise) as hot spare, RAID5 3x 2 TB 3.5" SATA HDD (Enterprise), RAID5 3x 2 TB 3.5" SATA HDD (Enterprise) + 2 TB 3.5" SATA HDD (Enterprise) as hot spare, RAID1 2x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module, RAID5 3x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module
SSD	Yes; 1x 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD
Slot for drives	Mounting internally in vibration/shock-absorbing drive cage Type B or mounting on the front in removable trays (hot swap in RAID configurations) in drive cage Type A; mounting internally on the fixed drive cage optional

Memory	
Main memory	4 GB to 128 GB DDR4 2666 SDRAM DIMM, ECC optional
Capacity of main memory, max.	128 Gbyte

Hardware configuration	
Slots	
<ul style="list-style-type: none"> <li>free slots</li> </ul>	9 slots: 7x PCI, 2x PCI Express (x16) (8 lanes) or 11 slots: 3x PCI, 1x PCI Express (x16) (8 lanes), 5x PCI Express (x16) (4 lanes), 2x PCI Express (x4) (4 lanes) or 11 slots: 3x PCI, 1x PCI Express (x16) (16 lanes), 3x PCI Express (x16) (4 lanes), 2x PCI Express (x16) (1 lane), 2x PCI Express (x4) (4 lanes); expansion modules up to a length of 312 mm can be used

Interfaces	
Interfaces/bus type	1x COM1, 1x COM2 (optional), 2x DisplayPort, 1x DVI-D, audio (microphone in, line in, line out), 9x USB, 3x Gigabit Ethernet
PROFIBUS/MPI	can be implemented with plug-in card
USB port	4x USB 3.1 Gen. 2 Type A, 2x USB 3.1 Gen. 2 Type C on the rear; 1x USB 3.1 Gen. 2 Type A internally, e.g. for software dongle with optional interlock, 2x USB 3.1 Gen. 1 Type A on the front, can be used with door closed
Connection for keyboard/mouse	USB
serial interface	COM1: 1x RS 232, COM2 (optional): 1x RS 232
Multimedia	
<ul style="list-style-type: none"> <li>Audio In/Out</li> <li>Microphone In</li> </ul>	Yes Yes
Video interfaces	

<ul style="list-style-type: none"> <li>Graphics interface</li> </ul>	2x DisplayPort and 1x DVI-D onboard; 1x VGA via DP-VGA adapter cable (optional); graphics card PCIe (x16), Triple Head (3x mini DisplayPort, 2 GB graphics memory, 3x mini DisplayPort to DisplayPort adapter cable) (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>	3x Gigabit Ethernet (IE/PN), RJ45 Yes Yes

<b>Integrated Functions</b>	
<b>Monitoring functions</b>	
<ul style="list-style-type: none"> <li>Temperature monitoring</li> <li>Watchdog</li> <li>Status LEDs</li> <li>Fan</li> <li>Monitoring function via network</li> </ul>	Yes Yes POWER, HDD, ETHERNET 1, ETHERNET 2, ETHERNET 3, WATCHDOG, TEMP, FAN, HDD3 ALARM, HDD2 ALARM, HDD1 ALARM, HDD0 ALARM Yes Optional

<b>EMC</b>	
<b>Interference immunity against discharge of static electricity</b>	
<ul style="list-style-type: none"> <li>Interference immunity against discharge of static electricity</li> </ul>	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
<b>Interference immunity against high-frequency electromagnetic fields</b>	
<ul style="list-style-type: none"> <li>Interference immunity against high frequency radiation</li> </ul>	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6
<b>Interference immunity to cable-borne interference</b>	
<ul style="list-style-type: none"> <li>Interference immunity on supply cables</li> <li>Interference immunity on signal cables &gt;30m</li> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	±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 ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst, length < 3 m
<b>Interference immunity against voltage surge</b>	
<ul style="list-style-type: none"> <li>asymmetric interference</li> <li>symmetric interference</li> </ul>	±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric
<b>Interference immunity to magnetic fields</b>	
<ul style="list-style-type: none"> <li>Interference immunity to magnetic fields at 50 Hz</li> </ul>	100 A/m; to IEC 61000-4-8
<b>Emission of conducted and non-conducted interference</b>	
<ul style="list-style-type: none"> <li>Interference emission via line/AC current cables</li> </ul>	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3

<b>Degree and class of protection</b>	
IP (at the front)	IP41
IP (rear)	IP20

Standards, approvals, certificates	
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; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
UL approval	Yes; UL 61010-2-201 Second Edition, File E85972
cULus	Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered

Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to +50 °C with full configuration
Ambient temperature during storage/transportation	
• min.	-20 °C; Max. 20 °C/h (no condensation)
• max.	60 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 10 cycles, 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	
• Shock load during operation	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	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB, multi-language (64-bit); Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 multi-language clients (64-bit); Windows Server 2019 Standard Edition incl. 5 multi-language clients (64-bit)
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes

Software	
SIMATIC Software	Optional package with SIMATIC WinCC

## Dimensions

Width	430 mm
Height	177 mm; 4U
Depth	444 mm
<b>last modified:</b>	11/11/2020