

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 Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB cache, TB, VT-D, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (16 L), 3x PCIe x16 (4 L), 2x PCIe x16 (1 L); 2x PCIe x4 (4 L); RAID1, 2x 1 TB HDD (Enterprise) 3.5" SATA; Enclosure with drive support Type B (for internal installation/ 0.5 g vibration, 5 g shock); 2x 100/240V AC redundant industrial power supply unit; 64 GB DDR4 SDRAM (4x 16 GB), ECC, Dual Channel (only with Xeon); 512 GB SSD M.2 NVMe to PCIe x4 adapter card (1 slot occupied); (for operating system) and PCIe x16 graphics card (3x mDP: 3x adapter mDP to DP) (1 slot occupied); Windows Server 2016 Standard edition including clients, 64-bit, MUI (de, en, fr, es, it, es); Adapter cable DP acc. to DVI-D for onboard graphic; Without power supply cable

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"> Rated value 50 Hz 	Yes
<ul style="list-style-type: none"> Rated value 60 Hz 	Yes
Mains buffering	
<ul style="list-style-type: none"> Mains/voltage failure stored energy time 	20 ms
Processor	
Processor type	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)
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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, RAID1 2x 2 TB 3.5" SATA HDD [Enterprise] + 480 GB 2.5" SATA SSD, 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
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 64 GB DDR4 2666 SDRAM DIMM, ECC optional
Capacity of main memory, max.	64 Gbyte

Hardware configuration

Slots	
<ul style="list-style-type: none"> free slots 	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"> Audio In/Out Microphone In 	Yes Yes
Video interfaces	

<ul style="list-style-type: none"> • Graphics interface 	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)
Industrial Ethernet	
<ul style="list-style-type: none"> • Industrial Ethernet interface — 100 Mbps — 1000 Mbps 	3x Gigabit Ethernet (IE/PN), RJ45 Yes Yes

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

EMC	
Interference immunity against discharge of static electricity	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Interference immunity against high frequency radiation 	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
Interference immunity to cable-borne interference	
<ul style="list-style-type: none"> • Interference immunity on supply cables • Interference immunity on signal cables >30m • Interference immunity on signal cables < 30m 	±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
Interference immunity against voltage surge	
<ul style="list-style-type: none"> • asymmetric interference • symmetric interference 	±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
<ul style="list-style-type: none"> • Interference immunity to magnetic fields at 50 Hz 	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
<ul style="list-style-type: none"> • Interference emission via line/AC current cables 	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

Degree and class of protection	
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 E115352 (I.T.E.)
cULus	Yes; UL 61010-2-201 Second Edition, File E115352 (I.T.E.)
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	
<ul style="list-style-type: none"> Ambient temperature during operation 	0 °C to +50 °C with full configuration
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> min. max. 	-20 °C; Max. 20 °C/h (no condensation) 60 °C
Relative humidity	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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 ² (0.5 g)
Shock testing	
<ul style="list-style-type: none"> Shock load during operation 	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s ² (5 g), 30 ms, 100 shocks per axis

Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 clients, multi-language (64-bit)
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes

Dimensions	
Width	430 mm
Height	177 mm; 4U
Depth	444 mm
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