

SIMATIC IPC647E (Rack PC, 19", 2U); 3x Gbit Ethernet (IE/PN), RJ45; 1x DVI-D, 2x displayport, 1x COM1, audio, 4x USB 3.1, 2x USB 3.1 (Typ C) rear side; 2x USB 3.0 front, 1x USB3.1 internally; 1x M.2 Slot internally; 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 4 slots: 2x PCI, 2x PCIe x16 (8 L); RAID1, 2x 2 TB HDD (Enterprise) 3.5" SATA; Enclosure with drive support Type A (for rack units on the front); COM2 interface; 2x 100/240V AC redundant industrial power supply unit; 16 GB DDR4 SDRAM (2x 8 GB), ECC, Dual Channel (only with Xeon); Without expansion (HW); Windows Server 2016 Standard edition including 5 clients, 64-bit, MUI (de, en, fr, it, es); Without expansions; Power supply cable USA

General information	
Product type designation	IPC647E
Installation type/mounting	
Mounting	For horizontal installation; prepared for telescopic rails; 19" mounting bracket can be removed externally
Design	Rack PC, 19", 2U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC
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	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" 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
Storage	
Main memory	4 GB to 128 GB DDR4 2666 SDRAM DIMM, ECC optional
Capacity of main memory, max.	128 Gbyte
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
serial interface	COM1: 1x RS 232, COM2 (optional): 1x RS 232
Video interfaces	
• 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	
• Industrial Ethernet interface	

— 100 Mbps	Yes		
— 1000 Mbps	Yes		
Interrupts/diagnostics/status information			
LED status display		Power, HDD, Ethernet 1, Ethernet 2, Ethernet 3, Watchdog, Temp, Fan, HDD1 alarm, HDD0 alarm	
Integrated Functions			
Monitoring functions			
• Temperature monitoring		Yes	
• Fan		Yes	
• Monitoring function via network		Optional	
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 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	
Dust protection		With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered	
Marine approval			
• Germanischer Lloyd (GL)		Yes; Only with SSD	
• American Bureau of Shipping (ABS)		Yes; Only with SSD	
• Bureau Veritas (BV)		Yes; Only with SSD	
• Det Norske Veritas (DNV)		Yes; Only with SSD	
Ambient conditions			
Ambient temperature during operation			
• min.		0 °C; Max. 10 °C/h (no condensation)	
• max.		50 °C	
Ambient temperature during storage/transportation			
• min.		-20 °C; Max. 20 °C/h (no condensation)	
• max.		60 °C	
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/s² (0.5 g)	
Operating systems			
pre-installed operating system		Windows 10 Enterprise 2016 LTSC, 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)	
without operating system		Yes	
Dimensions			
Width		430 mm	
Height		88 mm; 2U	
Depth		444 mm	
Classifications			
		Version	Classification
	eClass	16	19-20-01-02
	eClass	14	19-20-01-02
	eClass	12	19-20-01-02
	eClass	9.1	19-20-01-02
	eClass	9	19-20-01-02
	eClass	8	19-20-01-02
	eClass	7.1	19-20-01-02

eClass	6	19-20-01-02
ETIM	10	EC001413
ETIM	9	EC001413
ETIM	8	EC001413
ETIM	7	EC001413

Approvals / Certificates

General Product Approval



General Product Approval



EMV Maritime application



Dangerous goods Environment

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