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Data sheet 6AG4112-3GQ02-0DX1

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; Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, TB, VT-D, AMT); Board 2 slots: 1x PCIe x16 (16 L), 1x PCIe x16 (4 L); 480 GB SSD 2.5" 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; Without expansion (HW); Windows 10 IoT Enterprise 2019 LTSC MUI (de, en, fr, it, es), 64-bit (for Core i7/Xeon); Without expansions; Power supply cable Europe

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	

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— 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 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)
without operating system	Yes
Dimensions	
Width	430 mm
Height	88 mm; 2U
Depth	444 mm
Approvals / Certificates	
General Product Approval	

Manufacturer Declaration

Miscellaneous

General Product Approval

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BIS CRS

EMV	Maritime application				
					NK / Nippon Kaiji Kyokai

Dangerous goods	Environment	
Dangerous goods information	Environmental Confirmations	Environmental Confirmations

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