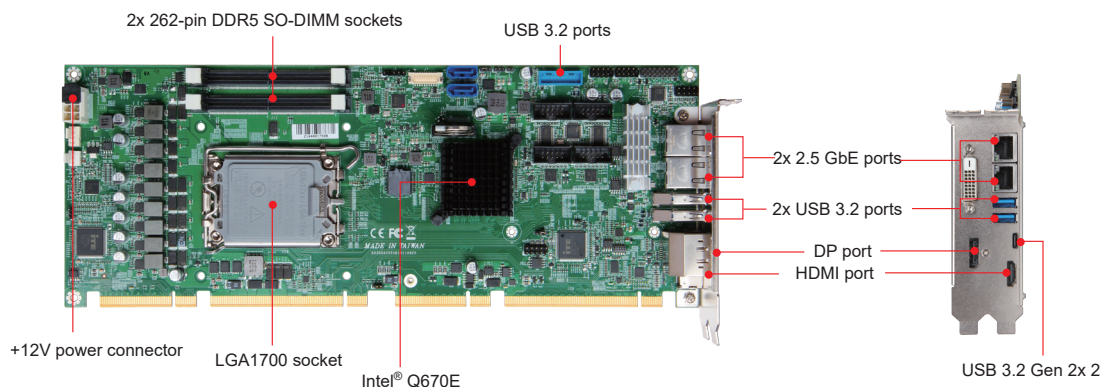


ROBO-8116G2AR-Q670E-R

Intel® Core™ Series 2, Intel® Core™ Series2 with P-cores and 14th/13th/12th Generation chipset 600 series with processor based on PICMG 1.3 SHB with DDR5 SDRAM, HDMI, DVI-D, DP, Dual 2.5Gigabit Ethernet, Audio and USB



ROBO-8116G2AR-Q670E-R is based on Intel® 600 series chipset and workstation processors. Built with flexible PCI express expansions, ROBO-8116G2AR-Q670E is suitable for Medical, Industrial automation, and Digital Signage application.

FEATURES

- Supports Intel® Core™ processors (Series 2), Intel® Core™ processors (Series2) with P-cores and 12th/13th/14th Generation Core processors Family in LGA 1700 package
- Two SO-DIMM support DDR5 DRAM up to 96GB
- Supports mutiple display by DVI-D ,DP and HDMI
- High speed dual 2.5Gigabit Ethernet based on PCI express x 1, high bandwidth I/O interface
- Support two USB 3.2 Gen2 and USB 3.2 Gen2x2 on REAR I/O
- Support on board TPM2.0

ORDERING GUIDE

AB1-3S33	(R). ROBO-8116G2AR-Q670E-R. PICMG 1.3(PCI-E+PCI).LGA1700. Q670E PCH. Intel Core i3/i5/i7/i9 processors. SHB. w/DP/HDMI/DVI/Dual GbE/Audio/four COM ports(Raptor lake-s refresh)
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PACKING LIST

Standard	B6902932 SATA III cable B8981980 PICMG SBC handling notice B6902352 Cable, DB9x2 to HSG(5x2)x2 L=300mm W/Bracket
Optional	B6903090 USB 3.0 cable with bracket B6902230 USB port cable with bracket



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GENERAL

Processor	- Intel® Core™ processors (Series 2), Intel® Core™ processors (Series2) with P-cores and 12 th /13 th /14 th Generation Core™ processors family in LGA 1700 package - DMI x4 Link : 16GT/s - Support Intel® Turbo Boost, Hyper-Threading, Virtualization, Thermal Monitoring, Trusted Execution and Speed Step Technology (depends on CPU sku)
Chipset	Intel® Q670E
BIOS	AMI uEFI BIOS
Memory	- Supports two DDR5 dual channel up to 96GB non-ECC SO-DIMM sockets* - Supports DDR5-5600 MT/s 1DPC 1R and DDR5-5200 MT/s 1DPC 2R SO-DIMM memory on all i9, i7 and select i5 SKUs *Actual support capacity depends on CPU SKU
Storage Devices	- 4x SATAIII drives (Dual ports via Backplane) - Supports RAID 0, 1, 5, 10 - 1x M.2 Type M 2280 (on bottom side)
Watchdog Timer	Programmable watchdog timer, time out period from 0.5 sec to 254.5 secs
Hardware Monitoring	System monitor(Voltage,Fan Speed and Temperature)
Expansion Interface	- From CPU: 1x PCIe x16(Gen5) or 2x PCIe x8(Gen5) (Gen5 up to 32GT/s), 1x PCIe x4(Gen4)* - From PCH: 1x PCIe x4(Gen4) or 4x PCIe x1(Gen4) by different BIOS support, 1x PCIe x4(Gen4)*, 1x PCIe x4(Gen3)* (Gen3 up to 8.0GT/s) - 4x PCI devices at 32bit 33MHz * Extra board to board card is required

I/O INTERFACE

Super I/O	ITE IT5121E-I
Audio	- Intel® PCH built-in High Definition Audio up to 192-kHz 32-bit - Realtek ALC888S HDA codec, 7.1 channels one on board audio pin header
Ethernet	- Dual Intel® WGI226LM Gigabit Ethernet controller - Dual 10BASE-T / 100BASE-TX / 1000BASE-T / 2500BASE-T Ethernet - PCI Express x1 interface based on Gigabit Ethernet - Dual RJ-45 connectors with two LED indicators
Serial Port	- 2x RS-232 ports - 2x RS-232/422/485 ports selectable - LPC to COM port IC: Fintek F81216DG
USB	- 1 x USB 3.2 Gen2x2 Type C on Bracket - 2 x USB 3.2 Gen2 Type A on Bracket - 2x USB 3.2 Gen1 on board (through 1x header) - 4x USB 2.0 on board (through 2x headers) - 4x USB 2.0 (through backplane)
Keyboard & Mouse	TDB
GPIO	On board programmable 8-bit Digital I/Os

DISPLAY

Graphic Controller	Intel® Core™ i3/i5/i7/i9 processors integrated graphics engine Provides improved 3D multimedia capabilities including Microsoft DirectX 12, OpenGL 4.5
Display Interface	- Support independent triple display - DP 1.2 on bracket: Resolution up to 4096 x 2160@60 Hz - DVI-D on bracket: Resolution up to 1920 x 1200@60Hz - HDMI® 2.0 on board: Resolution up to 4096 x 2160@30Hz

Mechanical & Environment

Dimension	- 338.5mm(L) x 126.39mm(W),13.33"(L) x 4.98"(W) PCB: 12 layers
Power Supply	- Typical: +12V, +5V - Support ATX mode
Environment	- Operation Temperature: 0°C to 60°C - Storage Temperature: -20°C to 80°C - Relative Humidity: 5~95%, non-condensing
Certification	CE,FCC Class A
MTBF	Over 100,000 hours at 40°C