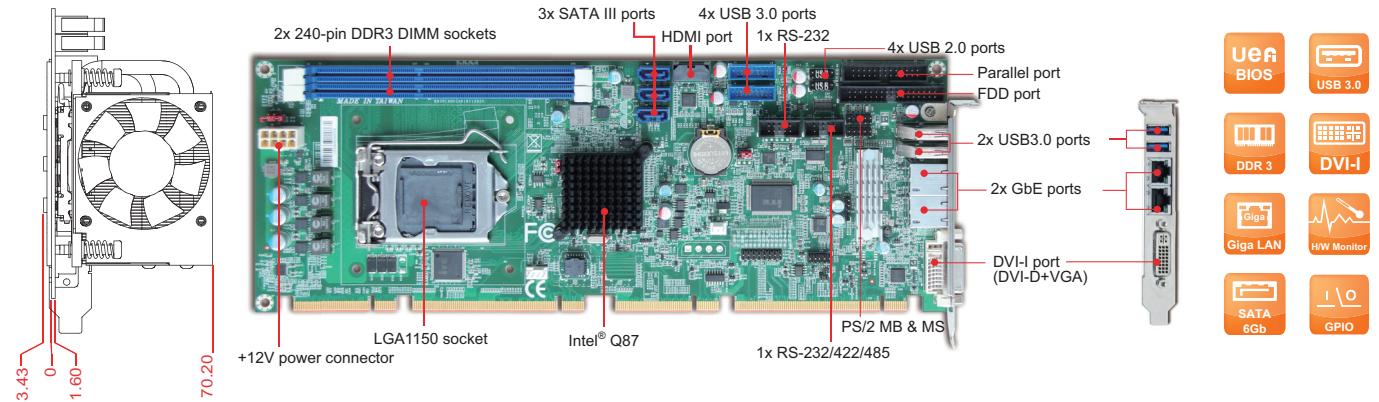# ROBO-8112VG2AR-Q87

Intel® Core™ i5/i7 series processor based on PICMG 1.3 SHB with DDR3 SDRAM, VGA, Dual Gigabit Ethernet, Audio and USB

- 2x 240-pin DDR3 DIMM sockets
- 3x SATA III ports
- HDMI port
- 4x USB 3.0 ports
- 1x RS-232
- 4x USB 2.0 ports
- Parallel port
- FDD port
- 2x USB3.0 ports
- 2x GbE ports
- DVI-I port (DVI-D+VGA)
- PS/2 MB & MS
- 1x RS-232/422/485
- Intel® Q87
- LGA1150 socket
- +12V power connector

UEFI BIOS · USB 3.0 · DDR 3 · DVI-I · Giga LAN · H/W Monitor · SATA 6Gb · GPIO

ROBO-8112VG2AR-Q87 is based on Intel® Q87 chipset and workstation processor sku like Core™ i5/i7. Build with flexible PCI express expension, it's suitable for Medical, Industrial automation, and Digital Signage applications.

FEATURES

- Supports Intel® Core™ i5/i7 processors in LGA1150 package
- Delivers up to 16GB maximum DDR3 1333/1600 MT/s non-ECC SDRAM on two DIMM sockets
- Supports triple display by DVI-I (DVI-D+VGA) and HDMI
- Supports iAMT 9.0 on Intel® Core™ i5/i7 processors
- High speed dual Gigabit Ethernet based on PCI Express x1, high bandwidth I/O interface
- Rich I/O connections such as FDD, two Gigabit Ethernet, serial ports, parallel port, USB 2.0/3.0"
- On-board five SATA III ports support RAID 0,1,5,10 (dual ports on backplane)

ORDERING GUIDE

AB1-3955	ROBO-8112VG2AR-Q87
	PICMG 1.3(PCI-E+PCI).LGA1150. Intel® Core™ i5/i7 processors.SHB.w/VGA/Dual GbE/Audio

PACKING LIST

Standard	B6902932 SATA III cable (Black)
	B690021S Cable kit for FDD+PRN with bracket
	B8981980 PICMG SBC Handling and Installation Notice
	B6903350 DVI-D + VGA cable
	B6903240 dual head COM port cable with bracket
	B3751640 Installation CD
Optional	B6902980 PS/2 Keyboard / Mouse Cable with bracket
	B6902230 USB port cable with bracket
	AB9-2066 PA-M1AU Multiple Media kit
	B6903090 USB 3.0 cable with bracket

GENERAL

Processor	- Intel® Core™ i5/i7 processors up to 3.1 GHz (35~65W) with (4~8MB) Cache in LGA-1150 package - DMI x4 Link: 5.0GT/s - Support Intel® Turbo Boost , Hyper-Threading, Virtualization, Thermal Monitoring, Trusted Execution and SpeedStep Technology (depends on CPU sku)"
Chipset	Intel® Q87 PCH
BIOS	Phoenix UEFI BIOS
Memory	- Supports up to 16GB DDR3 1333/1600 MT/s SDRAM on two 240-pin non-ECC DIMM sockets - Supports non-ECC
Storage Devices	- Suppors 5x SATA III drive (Dual ports via Backplane) - RAID 0,1,5,10 - 1x FDD channel
Watchdog Timer	Programmable via S/W from 0.5 sec. to 254.5 sec
Hardware Monitoring	System monitor (Voltage, Fan speed and Temperature)
Expansion Interface	- From CPU (Core™ i5/i7): 1x PCI Express x16 (Gen3 up to 8.0 GT/s) - From PCH: 1x PCIe x4 or 4x PCIe x1 x1 by different bios support (Gen2 up to 5.0 GT/s) - 4x PCI devices at 32 bit 33 MHz

I/O INTERFACE

Super I/O	ITE IT8728F
Audio	- Intel® BD82Q87 PCH built-in High Definition Audio up to 192-kHz 32-bit - Realtek ALC886-GR HDA codec, 5.1 channels
Ethernet	- Intel® WGI217LM + WGI210AT Gigabit Ethernet controller - Dual 10BASE-T / 100BASE-TX / 1000BASE-T Ethernet - PCI Express x1 interface based on Gigabit Ethernet - Dual RJ-45 connector with two LED indicators
Serial Port	- 1x RS-232 and 1x selectable RS-232/422/485 on board
USB	- 8x USB 2.0 ports (four ports through backplane) - 480Mb/s bus capable of high-speed/full-speed/low-speed data ranges - 6x USB 3.0 ports on board (four ports on board, dual ports on bracket) - 5Gbps bus capable of high-speed/ full-speed/low-speed data ranges
Keyboard & Mouse	- 2x USB 3.0 ports on bracket dedicated to keyboard & mouse (on bracket) - 1x 10 pin box header for external PS/2 MB & MS
GPIO	On board programmable 8-bit Digital I/Os
Others	1x Parallel port

DISPLAY

Graphic Controller	- Intel® Core™ i5/i7 processors integrated graphics engine - Provides improved 3D multimedia capabilities including Microsoft DirectX 11.1, Shader Model 4.0, MPEG-2 and OpenGL 3.2
Display Interface	Support independent triple display by - CRT on bracket:up to 1920x1200 @ 60Hz - DVI-D on bracket: up to 1920x1200 @ 60Hz - HDMI: up to 4096x2160 @ 24Hz (CRT + DVI-D on bracket by DVI-I port)

Mechanical & Environment

Dimension	- 338.5mm(L) x 126.39mm(W), 13.33""(L) x 4.98""(W) - PCB: 8 layers
Power Supply	- Typical: +12V@5.29A;+5V@4.94A - Support ATX mode
Environment	- Operation Temperature: 0°C~60°C - Storage Temperature: -20°C~80°C - Relative Humidity: 5~90%, non-condensing
Certification	CE,FCC Class A
MTBF	Over 100,000 hours at 40°C