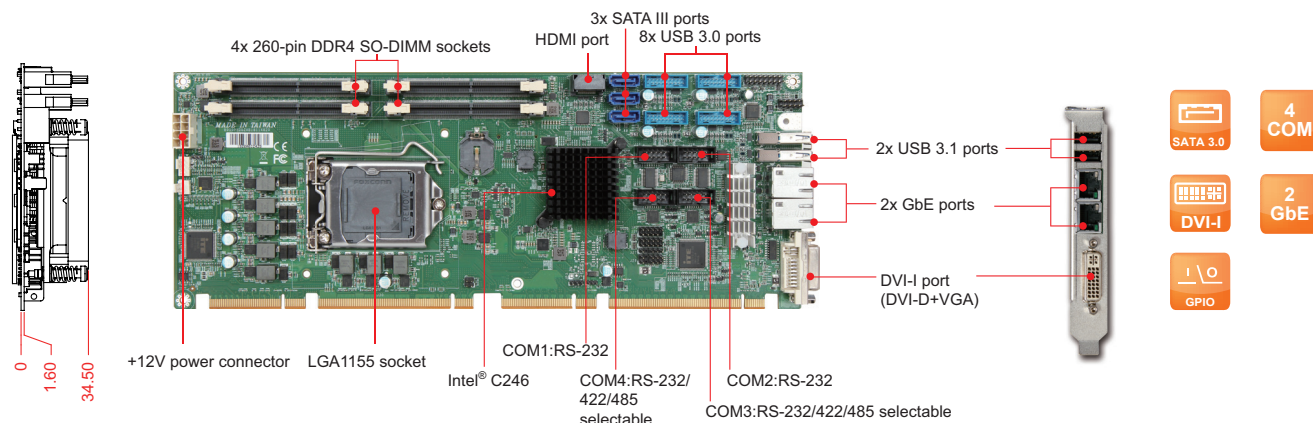# ROBO-8114VG2AR

Intel® Xeon® E/ Core™ i3/i5/i7 Pentium® / Celeron® processor based on PICMG 1.3 SHB with DDR4 SDRAM, HDMI, DVI-I, Dual Gigabit Ethernet, Audio and USB



4x 260-pin DDR4 SO-DIMM sockets
HDMI port
3x SATA III ports
8x USB 3.0 ports
2x USB 3.1 ports
2x GbE ports
DVI-I port (DVI-D+VGA)
+12V power connector
LGA1155 socket
Intel® C246
COM1:RS-232
COM4:RS-232/ 422/485 selectable
COM3:RS-232/422/485 selectable
COM2:RS-232

ROBO-8114VG2AR is based on Intel® C246 chipsetand workstation processors. Built with flexible PCI express expansions, ROBO-8114VG2AR is suitablefor Medical, Industrial Automation.

## FEATURES

- Supports Intel® Xeon®/Core™ i3/i5/i7/ Pentium®/ Celeron® processors in LGA 1151 package

- Delivers up to 64GB maximum DDR4 2133 ECC SO-DIMM on four sockets

- Supports mutiple display by DVI-I(DVI-D+VGA)and HDMI

- High speed dual Gigabit Ethernet based on PCIe x press x 1, high bandwidth I/O interface

- Rich I/O connections such as four serials ports,USB 3.0/3.1, SATA III ports

- Support on board TPM2.0

## ORDERING GUIDE

| AB1-3J28 | ROBO-8114VG2AR PICMG 1.3(PCI-E+PCI).LGA1151. C246 PCH. IntelXeon/Core i3 processors.SHB.w/ VGA/Dua lGbE/Audio/four COM ports |
|---|---|

## PACKING LIST

| Standard | TBD Installation CD |
|---|---|
| | B6902352 dual head COM port cable with bracket |
| | B6903351 DVI-D + VGA cable |
| | B8981980 PICMG SBC Handling and Installation Notice |
| | B6902932 SATA III cable |
| Optional | B6903090 USB 3.0 cable with bracket |
| | B6902980 PS/2 Keyboard / Mouse Cable with bracket |
| | B6902230 USB port cable with bracket |

## GENERAL

| Processor | - Intel® Xeon® E Family/ Core™ i3/i5/i7/ Pentium®/ Celeron® processors up to 3.6 GHz(35~95W) in LGA-1151 package<br>- DMI x4 Link: 5.0GT/s<br>- Support Intel® Turbo Boost, Hyper-Threading, Virtualization, Thermal Monitoring, Trusted Execution and SpeedStep Technology (depends on CPU sku) |
|---|---|
| Chipset | Intel® C246 PCH |
| BIOS | AMI UEFI BIOS (SPI ROM) |
| Memory | - Supports up to 128GB DDR4 2133 SDRAM on four 260-pin SO-DIMM sockets<br>- Supports ECC |
| Storage Devices | - 5x SATAIII drives (Dual ports via Backplane)<br>- Supports RAID 0, 1, 5, 10<br>- 1x M.2 Type M 2280 (on bottom side) |
| Watchdog Timer | Programmable via S/W from 0.5 sec. to 255 sec |
| Hardware Monitoring | System monitor(Voltage, Fan Speed and Temperature) |

## I/O INTERFACE

| Expansion Interface | - From CPU: 1x PCIe x16 or 2x PCIe x8 or 1x PCIe x8 + 2x PCIe x4 by jumper seng (Gen3 up to 8.0 GT/s)<br>- From PCH: 1x PCIe x4 or 4x PCIe x1 by different bios support (Gen 3 up to 8.0 GT/s)<br>- 4x PCI devices at 32bit 33MHz |
|---|---|
| Super I/O (Embedded Controller) | ITE IT5121E-I-128 |
| Audio | - Intel® PCH built-in High Definition Audio up to 192-kHz 32-bit<br>- Realtek ALC886 HDA codec, 7.1 channels<br>- one on board audio pin header |
| Ethernet | - Intel® WGI219LM + WGI225LM Gigabit Ethernet controller<br>- Dual 10BASE-T / 100BASE-TX / 1000BASE-T Ethernet<br>- PCI Express x1 interface based on Gigabit Ethernet<br>- Dual RJ-45 connectors with two LED indicators |
| Serial Port | - 2x RS-232 ports<br>- 2x RS-232/422/485 ports selectable<br>- LPC to COM port IC: Fintek F81216DG |
| USB | - 4x USB 2.0 ports (through backplane) 480Mb/s bus capable of high-speed/full-speed/low-speed data ranges<br>- 5Gbps bus capable of high-speed/ full-speed/low-speed data ranges<br>- 10Gbps bus capable of high-speed/ full-speed/low-speed data ranges |
| Keyboard & Mouse | - 2x USB 3.1 ports on bracket dedicated to keyboard & mouse<br>- 1x 10 pin box header for external PS/2 KB & MS |
| GPIO | On board programmable 8-bit Digital I/Os |

## DISPLAY

| Graphic Controller | - Intel® Xeon® and Core™ i3 processors integrated graphics engine<br>- Provides improved 3D multimedia capabilities including Microso DirectX 12, OCL 2.x and OpenGL 4.3/4.4 |
|---|---|
| Display Interface | Support independent triple display by<br>- VGA on bracket: Resolution up to 1920x1200 @ 60Hz<br>- DVI-D on bracket: up to 1920x1200 @ 60Hz (VGA + DVI-D on bracket by DVI-I port)<br>- HDMI on board: up to 3200x2000 @ 60Hz |

## Mechanical & Environment

| Dimension | - 338.5mm(L) x 126.39mm(W), 13.33"(L) x 4.98"(W)<br>- PCB: 8 layers |
|---|---|
| Power Supply | - Typical: +12V, +5V<br>- Support ATX mode |
| Environment | - Operation Temperature: 0~60°C<br>- Storage Temperature: -20~80°C<br>- Relative Humidity: 5~95%, non-condensing |