ROBO-8113VG2AR is based on Intel ${ }^{\circledR}$ workstation processors and C236 chipset. Built with flexible PCI Express configuration, ROBO-8113VG2AR is suitable for medical, industrial automation, and digital signage applications.

## FEATURES

-6th Gen Intel ${ }^{\oplus}$ Xeon ${ }^{\circledR}$ and Core $^{\text {TM }}$ i3 processors

- DDR4 2133/1866 MHz ECC/non-ECC memory, $2 \times 288$-pin DIMM sockets, up to 32 GB
- Triple independent display by DVI-D, HDMI, and VGA
- Dual Gigabit Ethernet
- PCle 3.0, USB 3.0, SATA III ports


## ORDERING GUIDE

| ROBO-8113VG2AR | PICMG ${ }^{\oplus} 1.3$ full-size SHB based on 6th Gen Intel ${ }^{\text {® }}$ <br> Xeon $/$ Core ${ }^{\text {TM }}$ is LGA1151 processor and Inte ${ }^{\circ}$ <br> C236 chipset |
| :--- | :--- |

OPTIONAL ITEMS

| B6902980 | PS/2 keyboard/mouse cable with <br> bracket |
| :--- | :--- |
| B6903090 | USB 3.0 cable with bracket |
| AB9-2066 | PA-M1AU multimedia kit (Mic-in, <br> Line-in, Line-out, 2x USB 2.0) |

## PACKING LIST

|  | 1x ROBO-8113 PICMG $^{\circledR}$ 1.3 SHB |
| :--- | :--- |
| B8981980 | 1x SHB handling and installation <br> notice |
| B8983660 | 1x driver CD |
| B6902932 | 1x SATA III cable |
| B6903350 | 1x DVI-D + VGA cable |
| B6902350 | 1x dual COM port cable with <br> bracket |


+12V power connector LGA1151 socket

Four SATA III ports
Dual 288-pin DDR4 DIMM sockets HDMI port Eight USB 3.0 ports


COM4: RS-232/422/485 COM2: RS-232 COM3:RS-232/422/485

| General |  |
| :---: | :---: |
| Processor | Intel Intel® Xeon® E3-1200 v5 series / Core ${ }^{\text {TM }}$ i3 processors up to 3.6 GHz (35~80W) in LGA1151 package |
|  | Intel® Turbo Boost, Hyper-Threading, Virtualization, Thermal Monitoring, Trusted Execution, and SpeedStep Technology (depend on processor SKU) |
| Chipset | Intel ${ }^{\text {® }} \mathrm{C} 236$ |
| BIOS | AMI UEFI BIOS (SPI ROM) |
| Memory | Dual-channel (ECC/non-ECC) DDR4 2133/1866 MHz memory $2 \times 288$-pin DIMM sockets, up to 32 GB |
| Storage Devices | $4 x$ SATA III ports <br> $2 x$ SATA III ports via backplane SW RAID 0, 1, 5, 10 |
| Watchdog Timer | Programmable 0.5 to 254.5 seconds interval |
| Hardware Monitoring | System monitor (voltage, fan speed, and temperature) |
| Expansion Interface | From CPU: <br> $-1 \times$ PCle $\times 16$ or $2 x$ PCle $\times 8$ or $1 \times$ PCle $\times 8+2 x$ PCle $\times 4$ (Gen3, by jumper setting) |
|  | From chipset: <br> $-1 \times$ PCle $x 4$ or 4 x PCle $\times 1$ (Gen3, by BIOS support) |

## I/O Interface

| Embedded Controller | ITE IT8528E |
| :---: | :---: |
| Audio | Intel ${ }^{\oplus}$ High Definition audio interface Realtek ${ }^{\circledR}$ ALC886-GR High Definition Audio 1x audio pin header ( 2.54 mm pitch) |
| Ethernet | $2 x$ Gigabit Ethernet (Intel ${ }^{\ominus}$ I219-LM and Intel ${ }^{\ominus}$ I210-AT) $2 \times$ RJ45 connectors with LED on rear bracket |
| Serial Port | LPC to COM port IC: Fintek F81216DG <br> $2 x$ RS- 232 ports on pin header ( 2.54 mm pitch) <br> $2 \times$ RS-232/422/485 on pin header (selectable by BIOS; 2.54 mm pitch) |
| USB | $2 x$ USB 3.0 on rear bracket <br> $8 x$ USB 3.0 on pin header ( 2.00 mm pitch) <br> $2 \times$ USB 2.0 through backplane |
| Keyboard \& Mouse | PS/2 keyboard \& mouse on pin header (optional cable is required) |
| GPIO | 8-bit |
| Other | TPM 2.0 (Infineon SLB 9665 TT2.0) |

## Display

Graphic Controller
Display Interface
Integrated Inte ${ }^{\circledR}$ Iris Pro or HD graphics
Supports DirectX 11/12, OpenGL 4.3/4.4, ES 2.0, OpenCL 2.x
Triple independent display by:
1x VGA (through DVI-I on rear bracket), resolution up to $1920 \times 1200 @ 60 \mathrm{~Hz}$
1x DVI-D (through DVI-I on rear bracket), resolution up to $1920 \times 1200 @ 60 \mathrm{~Hz}$
$1 \times \mathrm{HDMI}$ on internal connector, resolution up to $4096 \times 2160 @ 24 \mathrm{~Hz}$

## Mechanical \& Environmental

Dimension
$338.5 \times 126.4 \mathrm{~mm}\left(13.3^{\prime \prime} \times 5.0^{\prime \prime}\right)$
Power Supply
Environment Operating temperature: $0^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}$
Storage temperature: $\quad-20^{\circ} \mathrm{C}$ to $80^{\circ} \mathrm{C}$
Relative humidity: $\quad 5 \sim 90 \%$, non-condensing
MTBF

