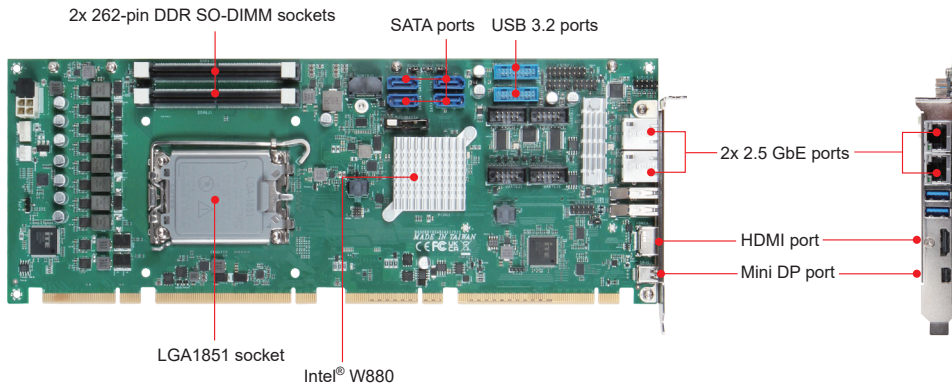# ROBO-8117G2AR

Intel® Core™ Ultra Series Processors and 800 Series Chipset based PICMG 1.3 SBC/SHB with DDR5 SDRAM, HDMI®, MiniDP, Dual 2.5GbE Ethernet, Audio and USB

2x 262-pin DDR SO-DIMM sockets
SATA ports
USB 3.2 ports
2x 2.5 GbE ports
HDMI port
Mini DP port
LGA1851 socket
Intel® W880

ROBO-8117G2AR features Intel® 800 Series chipset and Intel® Core™ Ultra Series workstation processors, delivering AI-ready performance for diverse edge applications. Built with flexible PCI Express expansions, ROBO-8117G2AR enables scalable solutions for Medical, Industrial Automation, and Digital Signage applications.

FEATURES

- Support Intel® Core™ Ultra Series processors in LGA1851 package
- Delivers up to 96GB DDR5 6400 ECC SO-DIMM on two sockets
- Supports multiple display by MiniDP and dual HDMI
- High speed dual 2.5GbE Ethernet based on PCI Express x1, high bandwidth I/O interface
- Support two USB 3.2 Gen2 on rear I/O
- Support onboard TPM 2.0

ORDERING GUIDE

AB1-3T07	**(R).ROBO-8117G2AR**
	PICMG 1.3(PCI-E+PCI).LGA1851.W880 PCH. Intel Core Ultra processors. SHB. w/ miniDP/HDMI/Dual GbE/Audio/four COM ports

PACKING LIST

Standard	B6902932 SATA III cable
	TBD Installation CD
	B6902352 *(GP).Cable.DB9x2 to HSG(5x2)x2 L=300mm W/Bracket for Ruby-9717/Ruby-9718. CY-8A08006R.CHUAN YANG
Optional	B6903090 USB 3.0 cable with bracket
	B6902230 USB port cable with bracket

GENERAL

Processor	- Intel® Core™ Ultra Series Processors in LGA1851 package - Support Intel® Turbo Boost, Hyper-Threading, Virtualization, Thermal Monitoring, - Trusted Execution and Speed Step Technology (depends on CPU SKU)
Chipset	Intel® W880
BIOS	AMI uEFI BIOS
Memory	Supports up to 96GB DDR5 6400 SDRAM on two 262-pin SODIMM sockets Supports ECC
Storage Devices	- 6x 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) and 1x PCIe x4(Gen4) setting (Gen5 up to 32 GT/s) - From PCH: 1x PCIe x4 or 4x PCIe x1 by different bios support (Gen 4 up to 16 GT/s), 4x PCI devices at 32bit 33MHz

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 F81216E
USB	- 4x USB 2.0 ports on board - 4x USB 2.0 ports (through backplane) - 2x USB 3.2(Gen2) ports on bracket - 4x USB 3.2(Gen2) ports on board
Keyboard & Mouse	TBD
GPIO	On board programmable 8-bit Digital I/Os

DISPLAY

Graphic Controller	Graphic with Xe LPG architecture, up to 4Xe Graphics Engines
Display Interface	- Support independent triple display by mini-DP on bracket: Resolution up to 7680 x 4320 @ 60Hz - HDMI on bracket: Resolution up to 7680 x 4320 @ 60Hz - HDMI on board: Resolution up to 7680 x 4320 @ 60Hz

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

*All information provided is subject to change without notice. Last updated: January 6, 2025