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Intelligent manufacturing

PARHELIA

M80

High-performance Embedded System

M80 is a high-performance embedded platform with an Intel® W480E chipset on the motherboard, supporting the 10th/11th Gen Xeon® Core™ processors. The PC has a simple structure, small form factor, excellent heat dissipation and anti-vibration performance. The PC has multiple IO ports and supports both WIFI and 4G functions. Multiple IO ports can be expanded by means of high-speed connectors, and can be self-defined by users. The PC supports PCI and PCIE expansions to meet different application needs. The product is mainly used in machine vision, highway lane controller, AI and edge computing, vehicle infrastructure cooperative System and asisted driving, intelligent manufacturing of non-standard equipment and other application fields.

Product Features

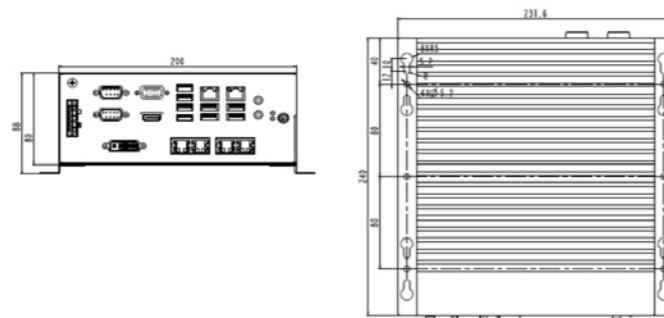| Fully-sealed and fanless design | WIFI Supports 4G and WIFI modules | Excellent heat dissipation and anti-vibration performance | High performance |

Product Dimensions Drawing

Please refer to the user manual to check detailed specifications and dimension. (Unit: MM)

Product Specifications

Item		Description
System Configuration	Processor	Intel® Xeon® W & 10th /11th Core™ i9/i7/i5/i3, LGA1200, processors with power consumption no more than 65W;
	Chipset	Intel® W480E
	Memory	2 x 260 Pin DDR4 SO-DIMM slot, a single slot supporting up to 32G, and the PC supporting up to 64G;
I/O Ports	External Ports on the PC	2 x RJ45 10/100/1000Mbps LAN port, expandable to 6 x LAN port; 4 x USB3.2 (Gen 2) +4 x USB3.2 (Gen 1) port; 2 x COM port (RS232/485/422 optional); 1 group of Audio ports (supports MIC-IN and LINE-OUT); 1 x VGA, 1 x HDMI display, internal 1 x DVI port;
	Internal Ports on the Motherboard	1 x 8-channel GPIO; 4 x built-in 2x5Pin Wafer pin (expandable to RS232); 1 x built-in USB2.0 (1x5PIN wafer pin, supporting expansion to built-in dongle by means of USB cable); 4 x SATA 3.0 (6Gbps), supporting Raid 0/1/5/10; 1 x TPM port, supporting TPM2.0;
Expansion Bus	Motherboard Integration	1 x M-SATA slot (realizes 4G or storage function, 4G function and storage expansion cannot coexist for use); 1 x internal SIM card slot; 1 x M.2 Key E (can realize WIFI expansion); 1 x 2×30Pin high speed connector, self-defined expansion port, supporting external connection to an expansion module;
Storage	Hard Disk	M80 supports 1 x 2.5" hard disk bay Expansion box supports optional hard disk expansion bracket, and the bracket occupies expansion slots: 1-slot expansion box, optional expansion to 1 x 2.5" hard disk bay by means of expansion bracket; 2-slot expansion box, optional expansion to 2 x 2.5" hard disk bay by means of expansion bracket; 3-slot expansion box, optional expansion to 2 x 2.5" hard disk bay by means of expansion bracket;
	MSATA/M.2	Supports 1 x M-SATA slot;
Remote Maintenance		Supports AMT function;
Power Supply		1 x 4Pin phoenix terminal power connector;External AC 220V power adapter or DC 9-36V wide-voltage input optional;
Switch Indicator		Power supply, hard disk indicator lights
Environment Requirements	Working Temperature	0°C～+45°C (HDD/normal temperature SSD); -20°C～+60°C (wide-temperature SSD/electronic hard disk, CPU TDP≤35W) -20°C～+50°C (wide-temperature SSD/electronic hard disk, 35W＜CPU TDP≤35W) Notes: 1.For fanless PC, HDD common mechanical hard disk is not recommended, and the air flow rate in the working environment of the PC must be greater than 0.7m/s. 2.For the configuration with fan, HDD mechanical hard disk can be used.
	Storage Temperature	-40°C～+85°C; humidity: 5%～95% (non-condensing)
Mounting Method		Wall mount, desktop;
Dimensions		80mm (W) ×240mm (D)×200mm (H) M80-1P:108mm (W) ×240mm (D)×200mm (H) M80-2P:129mm (W) ×240mm (D)×200mm (H) M80-3P:154mm (W) ×240mm (D)×200mm (H)
Operating System		Supports WIN10 (64 bit), Server 2019 and Ubantu X64,Cent OS and other high kernel version Linux operating systems;

Ordering Information

Part No.	Description	Specifications
0010-169421	M80-01	Fanless computing unit/Intel® W480E chipset/I5-10500 3.1Ghz six-core processor/8G memory/128G SSD/COM port*2/ USB3.2 (Gen 2) *4+ USB3.2 (Gen 1) *4/Gigabit LAN port*2/VGA*1/HDMI*1/Line-out*1/MIC*1/9~36V DC power supply/19V adapter*1
0020-066141	M80-01	Fanless barebone system/Intel® W480E chipset/no CPU/no memory/no hard disk/COM port*2/ USB3.2 (Gen 2) *4+USB3.2 (Gen 1) *4/Gigabit LAN port*2/VGA *1/HDMI *1/Line-out*1/MIC*1/9~36V DC power supply/no adapter
0010-171991	M80-1P-01	Expandable computing unit/Intel® W480E chipset/I3-10100 3.6Ghz quad-core processor/8G memory/128G SSD/COM port*4/USB3.2 (Gen 2) *4+ USB3.2 (Gen 1) *4/Gigabit LAN port*2/VGA *1/HDMI*1/Line-out*1/MIC*1/ PCIEx16*1/9~36V DC power supply/19V adapter*1
0010-172001	M80-2P-01	Expandable computing unit/Intel® W480E chipset/I5-10500 3.1Ghz six-core processor/8G memory/128G SSD/COM port*4/USB3.2 (Gen 2) *4+ USB3.2 (Gen 1) *4/Gigabit LAN port*4/VGA*1/HDMI*1/Line-out*1/MIC*1/PCIEx16*1/ PCI*1/9~36V DC power supply/19V adapter*1
0010-172011	M80-2P-02	Expandable computing unit/Intel® W480E chipset/I5-11500 2.7Ghz six-core processor/8G memory/128G SSD/ COM port*4/USB3.2 (Gen 2) *4+ USB3.2 (Gen 1) *4/Gigabit LAN port*2/VGA *1/HDMI *1/Line-out*1/MIC*1/ PCIEx16*1/ PCIEx4*1/9~36V DC power supply/19V adapter*1
0010-172021	M80-3P-01	Expandable computing unit/Intel® W480E chipset/ I7-11700 2.5Ghz eight-core processor/8G memory/128G SSD/COM port*4/USB3.2 (Gen 2) *4+ USB3.2 (Gen 1) *4/Gigabit LAN port*6/VGA*1/HDMI*1/Line-out*1/MIC*1/ PCIEx16*1/ PCI*2/9~36V DC power supply/19V adapter*1

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