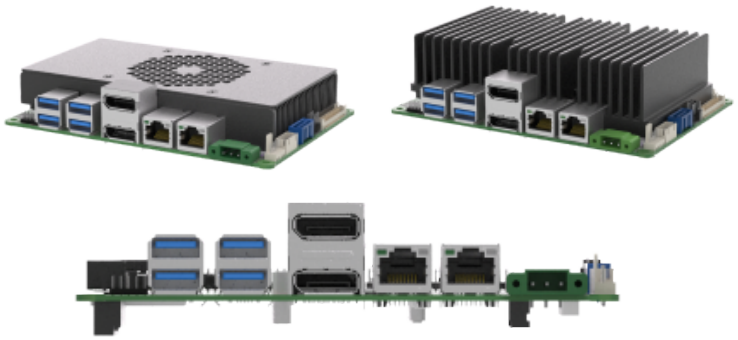
ECM-I919

Intel® Meteor Lake SoC CPU, Dual Channel DDR5, 1*HDMI+1*DP+1*eDP, 2*LAN, 4*USB3.2, 4*COM, 1*8bit DIO, 1*M.2 M-key/1*M.2 E-key, 1*Mini PCIe(mSATA), 1*SATA3.0, DC-IN 12/19/24V

JHCTECH

IoT Computer Connecting the Dots

Single Board Computer-SBC



RoHS CE FCC

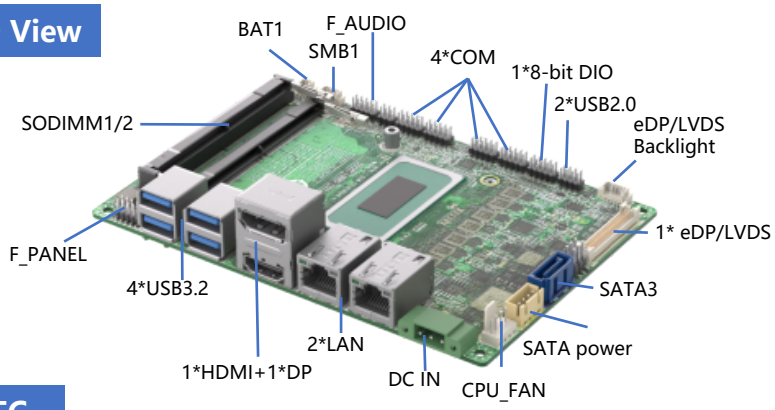
Key Features

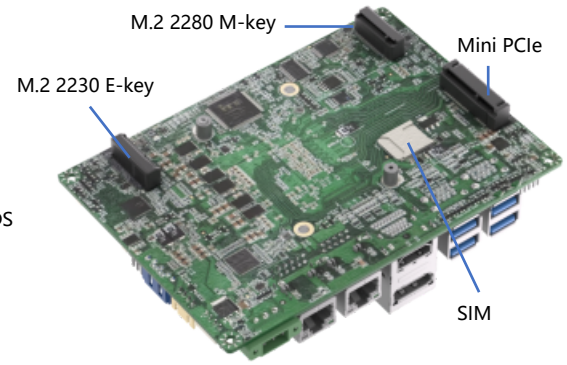
- Intel® Core Ultra Meteor Lake SoC CPU
- Dual channel DDR5 SODIMM 5600MHz, up to 96GB
- 1*HDMI, 1*DP, 1*eDP(LVDS), 3 independent displays
- 2*LAN, 4*USB3.2, 2*USB2.0, 4*COM, 1*8-bit DIO
- 1*M.2 E-key supports WiFi/BT, 1*Mini PCIe(mSATA) with SIM slot, supports 4G LTE/5G NR
- 1*SATA3.0 HDD/SSD, 1*M.2 M-key NVMe storage
- Active or passive, two different thickness radiator selection
- DC-IN 12V/19V/24V power input

Description

ECM-I919 is a 3.5-inch ultra-low power embedded mainboard equipped with Intel® Meteor Lake SoC CPU. It has complete IO functions, DC power supply, active and passive radiators, and the compact size is suitable for installation in limited space scenarios. It is very suitable for AGV and AMR, medical inspection, machine vision, industrial control, digital city and smart security and other industries and fields.

I/O View





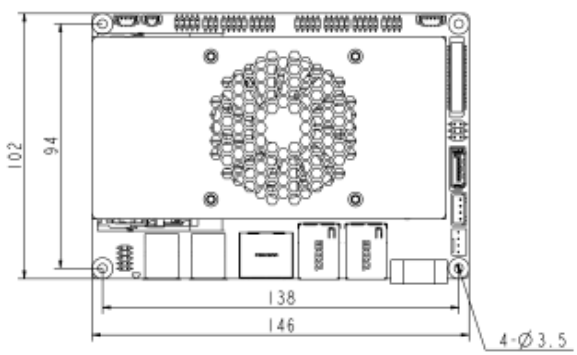
SPEC.

CPU	Intel® Meteor Lake SoC CPU: Ultra 5 125U TDP 15W, Ultra 5 125H TDP 28W
System Memory	2*260-pin DDR5 SO-DIMM slots, supports 5600MHz, up to 96GB
Expansion	1*M.2 2230 E-key (USB2.0 and PCIe x1), supports WiFi7/BT5.4 1*Full size Mini PCIe (USB2.0 and PCIe x1/SATA), with SIM slot, supports 4G LTE/5G NR 1*M.2 2280 M-Key (PCIe 4.0 x4), supports NVMe high-speed storage
Graphics	Intel® Graphics up to 7 TOPS (INT8) or Intel® Arc™ Graphics up to 18 TOPS (INT8), supports DirectX12.2, OpenGL 4.6, OpenCL 3.0, HDMI 2.1 up to 4096x2304@60Hz, DP 2.1 UHBR20 up to 7680x4320@60Hz, eDP up to 3820*2400@120Hz, support 3 independent displays
NPU	Intel® AI Boost up to 11 TOPS (INT8), supports OpenVINO™, WindowsML, DirectML, ONNX RT
Audio	Realtek ALC897 HD audio chip, support 5.1 channels, Line out +Line in+ Mic in,
LAN	1*Intel I210AT, 1*Intel® I219V, 10/100/1000Mbps, supports WOL
Storage	1*SATA3.0 port, up to 6Gbps; 1*M.2 2280 M-Key (PCIe 4.0 x4), supports NVMe; 1*Full size mSATA (Mini PCIe slot SATA/PCIe auto-detection)
Rear I/O	2*LAN(RJ45 w/LED); 1*HDMI+1*DP; 4*USB3.2 gen2.0(Type A), up to 10Gbps
Internal I/O	2*USB2.0(2*4pin dupont), 1*RS232/422/485(2*5pin dupont), 3*RS232(3*2*5pin dupont), 1*8-bit DIO(2*5pin dupont), 1*F-Audio(2*5pin dupont), 1*eDP(2*20pin DF13, BOM optional LVDS), 1*SM BUS(1*4pin wafer), 1*SATA 3.0, 1*FAN(1*4pin wafer)
Switch & LED	Rear: 1*Power LED, 1*SATA HDD LED; Internal:1*F_Panel(Power SW, Reset, Power LED, HDD-LED) 2x5pin dupont; 1*AT/ATX jumper switch, 1*Clear CMOS Jumper switch
Power Supply	DC 12V/19V/24V input, over-voltage, over-current and short-circuit protection, 1*3pin 3.81mm terminal block
Watchdog Timer	Programmable timeout interrupt or system reset, 1 to 255 seconds
OS Support	Windows 10, Windows 11, Linux
Security	TPM2.0 SLB9670VQ2.0 (optional)

Dimension	(W*H) : 146*102mm
Height	Signal board: 36mm, the radiator with fan: 37mm, fanless radiator: 52mm, PCB: 1.6mm
Operating Temperature	0～60℃
Storage Temperature	-40°C~85°C
Storage Humidity	10~95%@40°C, Non-condensing
EMC/Certification	CE/FCC Class A

Dimension

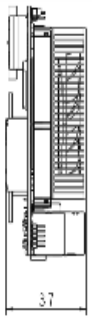
Unit: mm



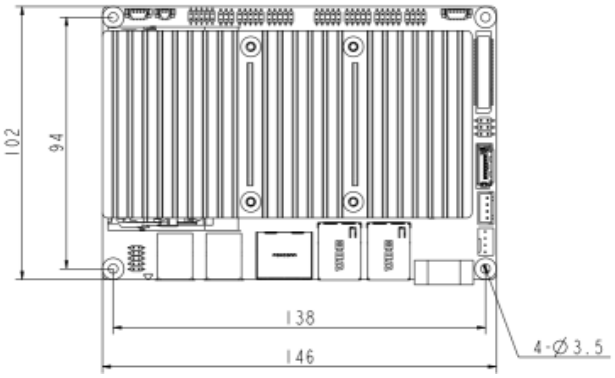
Radiator with Fan



Height of Board



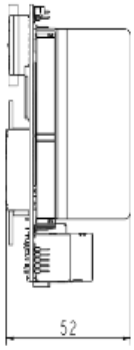
Total Height



Fanless Radiator



Height of Board



Total Height

Ordering Info

Model No.	CPU	Introduction
ECM-I919/S001	Intel® Core Ultra 5 125U	3.5" Embedded Single Board Computer, 2*SODIMM DDR5, 2*LAN, 4*USB3.2, 2*USB2.0, 1*M.2 2230 E-Key, 1*M.2 2280 M-Key, 1*Full size Mini PCIe/mSATA, 4*COM, 1*8-bit DIO, 1*DP, 1*HDMI, 1*eDP(LVDS), 1*SM BUS, 1*F-Audio, 1*SATA3.0, DC 12/19/24V
ECM-I919/S002	Intel® Core Ultra 5 125H	
Radiator with Fan(Opt.)	Pure copper+Aluminium alloy heat radiator，four-wire intelligent temperature control ball-bearing fan，silent ultra-thin design，fan cable 100mm，size：137*70*24.2mm （After installation, the total thickness of the motherboard is 37mm)	
Fanless Radiator(Opt.)	Pure copper+Aluminium alloy heat radiator，size：137*70*39.3mm （After installation, the total thickness of the motherboard is 52mm)	

Accessory Pack

Standard configuration			Selectinve configuration	
Accessory	description	Amount	Accessory	description
Serial ports cable	DB9 male，300mm	4	DIO cable	DB9 male，300mm
SATA cable	(7+15)pin SATA power supply +SATA data cable，300mm	1	Audio cable	Three in a row(Line-out/Line-in/Mic) 3.5mm phone jack, 300mm
Screw jumper package	Two M2 screws +Two jumper caps (spare)	1	USB2.0 cable	Two in a row Type A，300mm
DC – IN pin	3.81 pitch 3pin terminal block with earhole	1		