



EMS-MTU

Fanless Rugged Embedded System powered by Intel® Meteor Lake-U Core™ Ultra 7/5 Processor



Front I/O

Rear I/O

Features

- Intel® Meteor Lake-U Core™ Ultra 7/5 Processor on board
- 2 x 262-pin SO-DIMM sockets support up to 64GB DDR5 5600MT/s
- Support 5G (Sub-6G) module, M.2 NVMe SSD Gen4 x 4
- Rich I/O, 4 x USB 3.2, 2 x USB 2.0, 1 x DP++, 2 x HDMI, 2 x COM Ports, 2 x LAN, 1 x 8-bit GPIO
- 2 x Intel® Ethernet Controller I226-IT (2.5G GbE compatible)
- DC-in Phoenix Connector
- Extended Power Connector
- 4 x SMA jacks for antenna support
- Fanless operation Temperature from -40°C ~ 65°C
- Wide range DC power input from +9~36V
- IP50
- RAID 0/1 supported (With 2.5" SATA SSD)
- Support HW TPM 2.0
- IET interface supports IET modules (more I/O interfaces)

SPECIFICATIONS

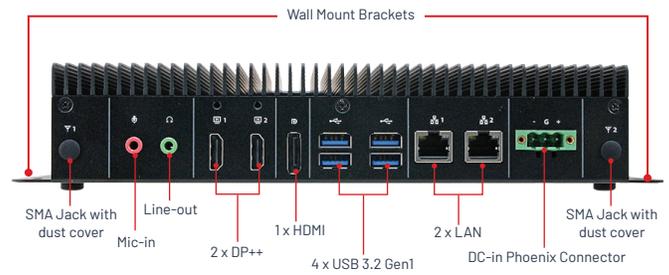
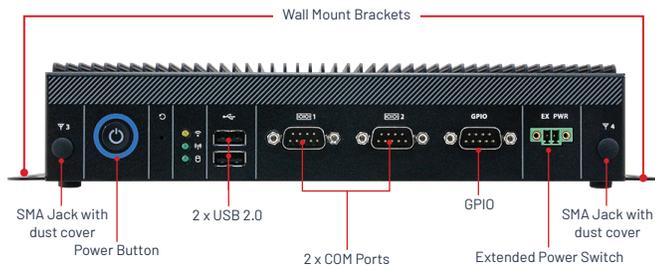
System	
Processor	Intel® Core™ Ultra Processor Meteor Lake-U Intel® Core™ Ultra 7 Processor 165U (OEM) Intel® Core™ Ultra 7 Processor 155U Intel® Core™ Ultra 5 Processor 135U (OEM) Intel® Core™ Ultra 5 Processor 125U
Memory	2 x 262-pin SO-DIMM sockets up to 64GB DDR5 5600MT/s
BIOS	AMI uEFI BIOS 256 Mbit SPI Flash ROM
Display Chipset	Integrated Intel® Graphics DP++ : 4096x2304 @ 60Hz HDMI : 4096x2304 @ 60Hz
Ethernet	2 x Intel® Ethernet Controller I226-IT (2.5G GbE compatible)
Audio Codec	Realtek HD codec
Expansion	1 x M.2 B-Key 2242/3042/3052 support SATA3 / PCIe Gen4x1/ USB3.2 Gen2 and SIM card slot (Internal) 1 x M.2 M-Key 2230 for Wi-Fi & BT Module (USB2.0 / PCIe Gen4x1) 1 x IET interface (1 x DDI, 4 x PCIe Gen4x1, 3 x USB2.0, 1 x SMBus, eSPI)
Storage via	1 x M.2 M-Key 2280 (1 x PCIe Gen4x4), support NVMe 1 x M.2 B-Key 2242, support SATA (share with expansion slot)
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec.
H/W Status Monitor	CPU & system temperature monitoring and Voltages monitoring
TPM	TPM 2.0
Supported OS	Win 10, Win 11, Linux
External I/O - Rear	
Display	2 x HDMI, 1 x DP++
USB	4 x USB 3.2 Gen.1 (5Gbps)(w/ USB 2.0)
LAN	2 x RJ-45
Audio	1 x Mic-In 1 x Line-Out
SMA Jack	2 x Antenna with dust cover
AC/DC Input	1 x 3-Pin Terminal Block (V+, V-, GND)



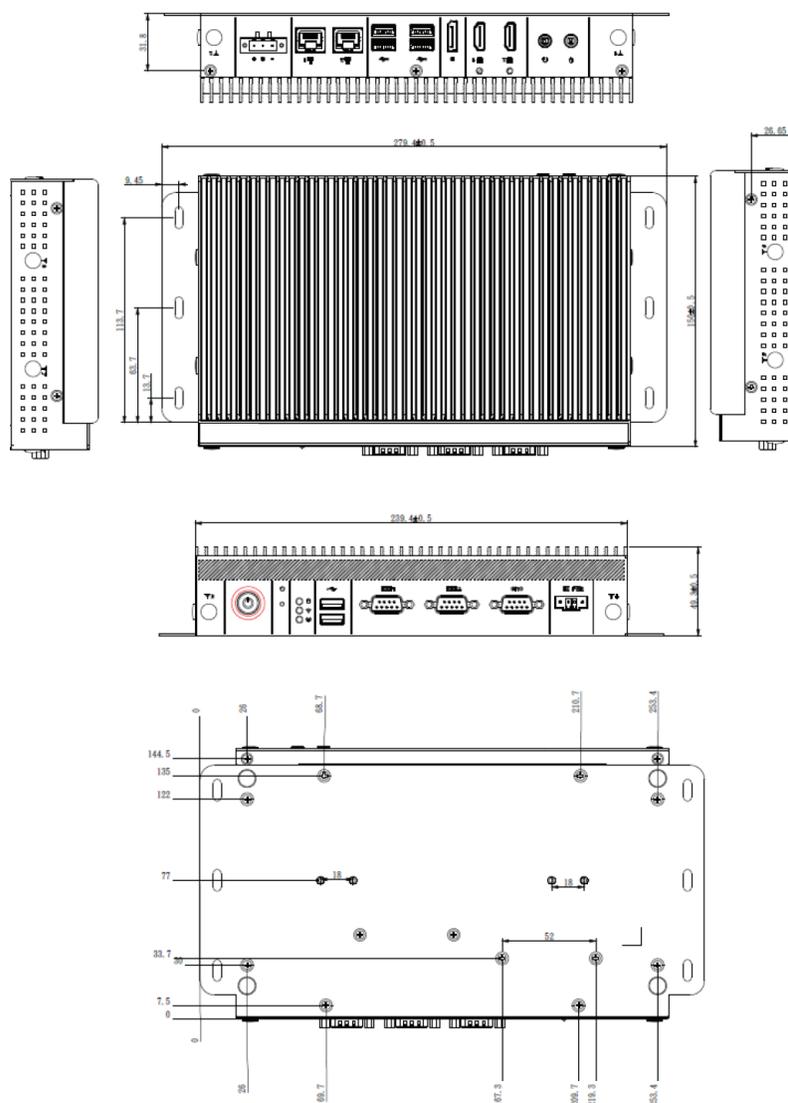
External I/O - Front	
USB	2 x USB2.0
COM Port	2 x COM RS232/422/485(BIOS & Jumper)
GPIO	1 x 8-bit GPIO (DB9)
Wire-Control Power On/Off	1 x 2-Pin Terminal Block for wire-control power on/off
SMA Jack	2 x Antenna with dust cover
Power Button	1 x Push Button for Power on/off
Reset Button	1 x Reset Button
LED Indicator	1 x Power LED (Blue), 1 x Storage LED (Yellow) 1 x LTE LED (Green), 1 x Wi-Fi LED (Green)
Mechanical, Power, and Environment	
Voltage Input	DC-in 12/24V (+9V ~ +36V), wide voltage single power input TVS component for surge protection Reverse current/voltage protection (Max. Currency: 13A)
Voltage Input	1 x 3-pin Phoenix connector
ACPI	Single power ATX Support S0, S4, S5 ACPI 5.0 Compliant
Power Mode	AT/ATX (Default: ATX)
Operating Temp	-40°C ~ 65°C (w/SSD) ambient air flow (w/ 32G DDR5) -40°C ~ 60°C (w/SSD) ambient air flow (w/ 64G DDR5, Maximum capacity)
Storage Temp	-30°C ~ 70°C (-22°F ~ 158°F)
OP Humidity	40°C @ 95% Relative Humidity, Non-condensing
IP Rating	IP 50
Mounting Kit	Wall mount (standard), Din rail (optional)
Regulatory Compliance	CE, FCC Class B
Dimensions	240mm x 150mm x 49 mm (Standard) 240mm x 150mm x 75 mm (with IET module)
Weight	2.1 kg (System), 2.9 kg (with Package)

* All product specifications and images are subject to change without notice. Last update: 6/03/2025

SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



DIMENSIONS



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