

# EC70A-MTH

Intel® Core™ Ultra Processor  
Fanless Robust Embedded System

## KEY FEATURES



### Intel® Core™ Ultra 7/ Ultra 5

TDP=15W for Fanless, TDP=28W for w/Fan



### Dual Displays

HDMI (4K@24Hz) + USB-C DP Alt. mode



### On Board Memory

Dual Channel LPDDR5 6400MHz memory  
down Up to 32GB



### 5G Support

Support M.2 B key 3042/3052 5G-NR module

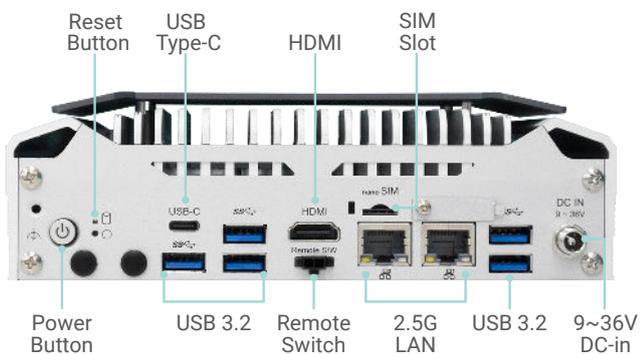


### Rich I/O

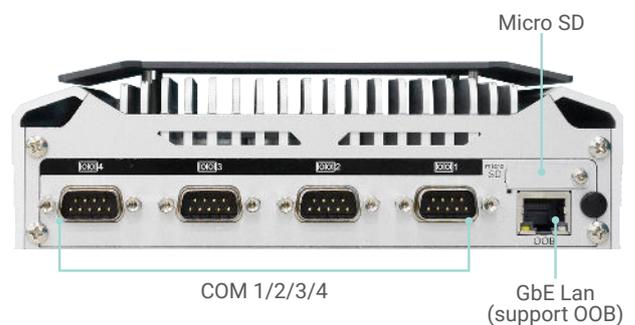
3 LAN, 5 USB3.2, 1 USB Type-C, 4 COM, 1 HDMI



## PANEL

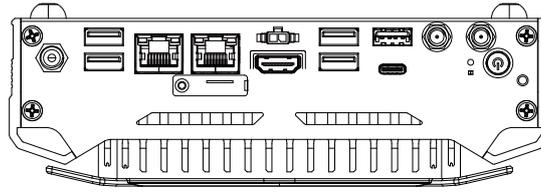


Front View

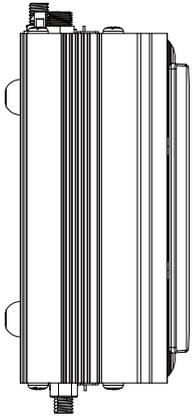


Rear View

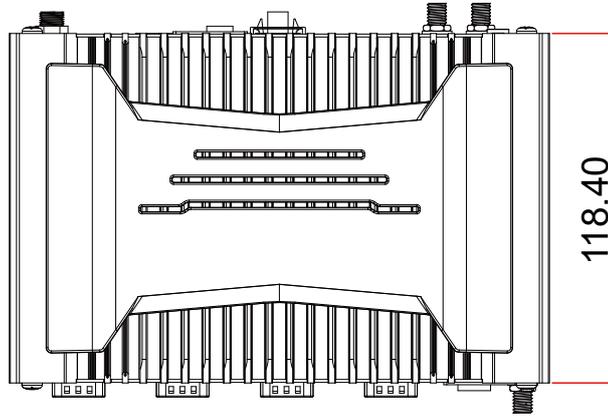
## DIMENSIONS



Front View

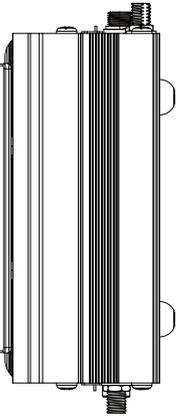


Left View

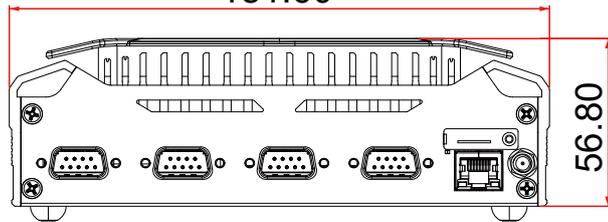


118.40

181.60



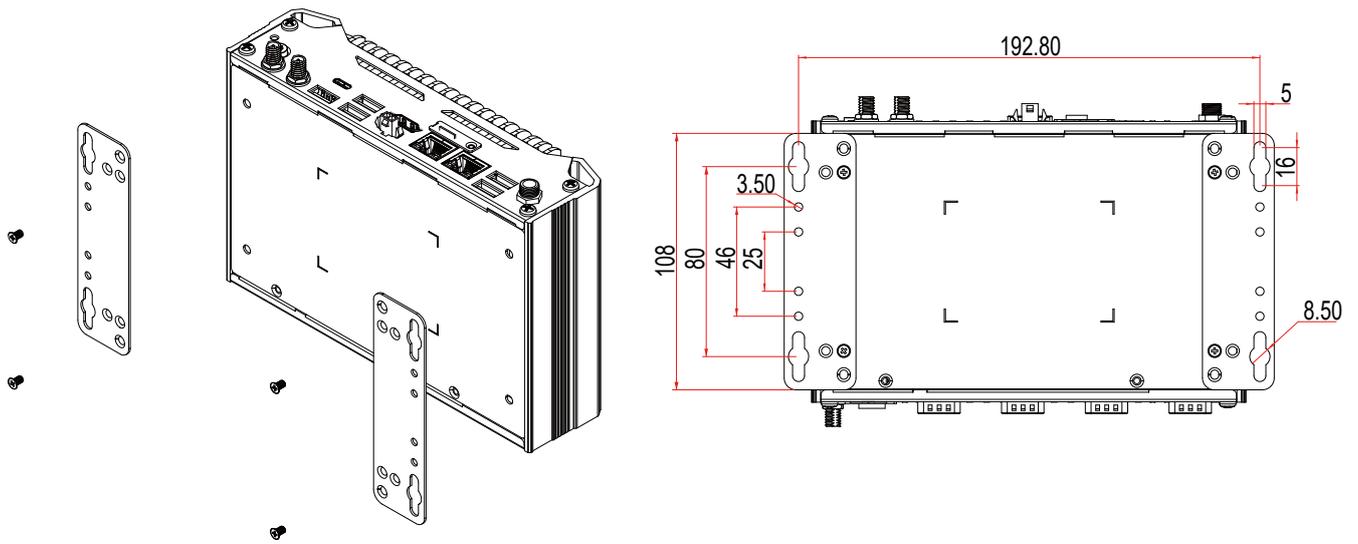
Right View



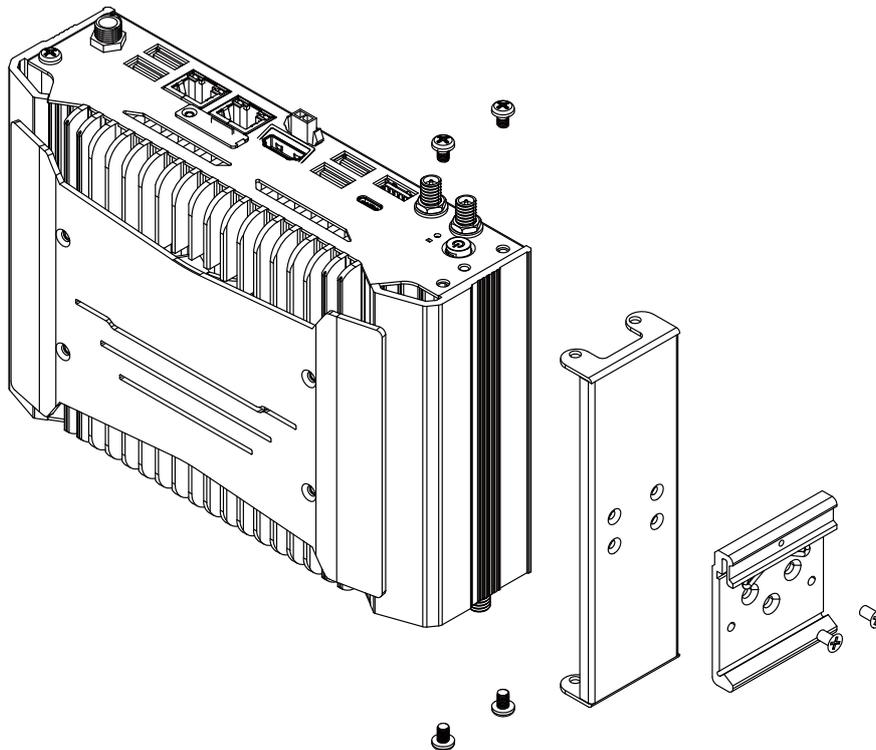
56.80

Rear View

## WALL MOUNTING



## DIN RAIL MOUNTING



## SPECIFICATION

|                              |                        |  |  |
|------------------------------|------------------------|--|--|
| SYSTEM                       | Processor              | Intel® Core™ Ultra 7/ Ultra 5 Processors<br>Intel® Core™ Ultra 7 155U, 12C, 12M Cache, 1.7GHz (4.9GHz)<br>Intel® Core™ Ultra 5 125U, 12C, 12M Cache, 1.3GHz (4.3GHz)<br>(TDP 15W for Fanless, TDP 28W for w/ Fan)          |  |
|                              | Memory                 | Dual Channel LPDDR5 6400MHz memory down 16GB (up to 32GB by request)   |  |
|                              | BIOS                   | AMI SPI 256Mbit  |  |
| GRAPHICS                     | Controller             | Intel® Arc™ Graphics   |  |
|                              | Feature                | DirectX 12, Open GL 4.6, Vulkan 1.2  |  |
|                              | Display                | 1 x HDMI<br>1 x DP   | HDMI: resolution up to 4096x2160 @24Hz<br>DP: resolution up to 4096x2304 @60Hz |
|                              | Multiple Displays      | HDMI + Type-C DP Alt. Mode   |  |
| STORAGE                      | Internal               | 1 x M.2 2280 M key (PCIe x4/SATA)  |  |
| EXPANSION                    | Interface              | 1 x M.2 M Key 2280 (PCIex4/SATA)<br>1 x M.2 B key 3052 (USB 3.0/2.0, PCIe x1, SATA), 1 x SIM slot for 4G/5G<br>1 x M.2 E Key 2230 (PCIex1/USB2.0)  |  |
|                              | Controller             | 2 x Intel® I226IT (10/100/1000/2500Mbps)<br>1 x Intel® I210IT (10/100/1000Mbps)  |  |
| LED                          | Indicators             | 1 x Power LED<br>1 x HDD LED   |  |
| FRONT I/O                    | Serial                 | COM 1: RS-232/422/485<br>COM 2/3: RS-232<br>COM 4: RS-232/422/485 or 8-bit DIO by jumper setting   |  |
|                              | Ethernet               | 1 x GbE (RJ-45), Intel® i210AT (10/100/1000Mbps) (support OOB)   |  |
| REAR I/O                     | Ethernet               | 2 x 2.5GHz (RJ-45)   |  |
|                              | USB                    | 5 x USB 3.2 + 1 x USB Type C<br>or 4 x USB 3.2 + 1 x USB 2.0 (by BIOS setting) + 1 x USB Type C  |  |
|                              | Display                | 1 x HDMI<br>1 x USB-C DP Alt. Mode   |  |
|                              | Buttons                | 1 x Power button<br>1 x Reset button   |  |
| WATCHDOG TIMER               | Output & Interval      | System Reset, Programmable via Software from 1 to 255 Seconds  |  |
| SECURITY                     | TPM                    | TPM 2.0  |  |
| POWER                        | Type                   | Wide range 9~36V   |  |
|                              | Connector              | DC Jack  |  |
| OS SUPPORT                   | Microsoft              | Windows 10 IoT Enterprise 64-bit<br>Windows 11 IoT Enterprise LTSC 2024  |  |
|                              | Linux                  | Linux  |  |
| ENVIRONMENT                  | Operating Temperature  | Fanless(CPU TDP 15W):<br>-20 to 60°C (wide-temp SSD)   | W/Fan(CPU TDP 28W):<br>-20 to 70°C (wide-temp SSD)                             |
|                              | Storage Temperature    | -20 to 85°C  |  |
|                              | Relative Humidity      | 5 to 95% RH (non-condensing)   |  |
| MECHANISM                    | Construction           | Aluminum + Metal Aluminum  |  |
|                              | Mounting               | Wall/VESA/DIN rail mount   |  |
|                              | Dimensions (W x H x D) | 181.6mm x 57mm x 118.4mm   |  |
|                              | Weight                 | TBD  |  |
|                              | Shock                  | · Operating:<br>IEC 60068-2-27 Test Ea: Shock Test<br>Half-Sine, 3G @ 11ms, 18 Shock ±X, ±Y, ±Z (each axis 3 times)  |  |
| STANDARDS AND CERTIFICATIONS | Vibration              | · Operating:<br>IEC 60068-2-64 Test Fh: Vibration Board-Band Random Test<br>Random, 1Grms @ 5~500 Hz, 30min<br>· Non-Operating:<br>IEC 60068-2-6 Test Fc: Vibration Sinusoidal Test<br>Sweep Sine, 3Grms @ 10~500Hz, 30min |  |
|                              | Certifications         | CE, FCC Class A, RoHS, UKCA  |  |

## ORDERING INFORMATION

| Model Name            | Part Number     | CPU          | Memory | Display                            | COM | USB 3.2                    | LAN | TPM             | Fanless | Power             |
|-----------------------|-----------------|--------------|--------|------------------------------------|-----|----------------------------|-----|-----------------|---------|-------------------|
| EC70A-MTH4051TC3-125U | 750-EC70A5-000G | Ultra 5 125U | 16GB   | 1 HDMI,<br>1 USB-C DP<br>Alt. mode | 4   | 5 USB 3.2,<br>1 USB Type-C | 3   | Yes<br>(TPM2.0) | Yes     | DC 9~36V<br>input |
| EC70A-MTH4051TC3-125U | 750-EC70A5-100G | Ultra 5 125U |        |                                    |     |                            |     |                 | No      |                   |
| EC70A-MTH4051TC3-155U | 750-EC70A5-200G | Ultra 7 155U |        |                                    |     |                            |     |                 | No      |                   |
| EC70A-MTH4051TC3-155U | 750-EC70A5-300G | Ultra 7 155U |        |                                    |     |                            |     |                 | Yes     |                   |

## PACKING LIST

|                             |
|-----------------------------|
| 1 EC70A-MTH system          |
| 3 M.2 slot screws           |
| 4 Foot screws & Rubber Foot |
| 1 Grounding screw           |
| 1 Remote switch cable       |