

# MAB-T660D

MAB-T660D AI PC DC Jack – Compact Size  
for Space-Constrained Medical Devices



## Features

- Compact and half in size easy for space-constraint scenarios
- Lockable DC jack to ensure secure power connection in critical medical environments
- High performance supported by 12/13/14th Generation Intel® Core™ i3/i5/i7/i9 Processors
- Half-height PCIe slot (1x PCIe x16 via riser card) for flexible expansions
- Support 2 high-resolution displays by 1 x DP++, 1 x HDMI 1.4b
- Instant data transmission by 1 x Intel 2.5 GbE LAN and 1 x Intel GbE LAN ports
- Up to 8 USB ports (USB 3.2 Gen1 incl.) for versatile peripheral integration



External  
Adapter



Slim  
Design



Riser Card  
Expansion



Smart Fan  
Control

## Specifications

### System Information

|                         |                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Processor               | 12th Gen Alder Lake/ 13th Gen Raptor Lake/ 14th Gen Raptor Lake Refresh Intel® Core™ i3/i5/i7/i9 Processors. Max TDP 65W |
| Platform Controller Hub | Intel® H610E Chipset                                                                                                     |
| System Memory           | 2 x SODIMM sockets support DDR5 5600MHz up to 64GB (Non-ECC)(CPU dependent)                                              |
| I/O Chipset             | Nuvoton NCT6126D (eSPI super IO)                                                                                         |
| BIOS                    | AMI uEFI BIOS, 256Mbit SPI Flash ROM                                                                                     |
| Watchdog Timer          | H/W Reset, 5~255 seconds/5~255 minutes                                                                                   |
| H/W Status Monitor      | CPU temperature monitoring, Voltages monitoring, CPU fan speed control                                                   |
| TPM                     | dTPM2.0                                                                                                                  |
| iAMT                    | Yes                                                                                                                      |
| SBC                     | MX610HD                                                                                                                  |

### Expansion

|      |                                                                                                  |
|------|--------------------------------------------------------------------------------------------------|
| M.2  | 1 x M.2 M-Key 2242/2280 NVMe (PCIe x4 + SATA III)<br>1 x M.2 E-Key 2230 CNVi (PCIe x1 + USB 2.0) |
| PCIe | 1 x Gen 4 PCIe x16                                                                               |

### Storage

|         |                                              |
|---------|----------------------------------------------|
| M.2     | 1 x M.2 Key-M 2242/2280 NVMe (PCIex4, SATA3) |
| Storage | 1 x Internal 2.5" Drive Bay                  |

### Front I/O

|               |                      |
|---------------|----------------------|
| Power Button  | 1 x PWR Button       |
| LED Indicator | 1 x Power on/off LED |
| USB           | 2 x USB 2.0          |

### Rear I/O

|             |                                                                                             |
|-------------|---------------------------------------------------------------------------------------------|
| USB         | 2 x USB 2.0 (Type A), 2 x USB 3.2 (Type A)<br>1 x Internal USB 3.2 Gen 1x1 Header (2 Ports) |
| LAN Port    | 2 x RJ45                                                                                    |
| Audio       | Line-out, Mic-in                                                                            |
| DP          | 1 x DP                                                                                      |
| HDMI        | 1 x HDMI                                                                                    |
| AC/DC Input | DC-In                                                                                       |

### Display

|                    |                                                                    |
|--------------------|--------------------------------------------------------------------|
| Graphic Chipset    | Intel® Integrated UHD Graphic with Xe Architecture (CPU Dependent) |
| Spec. & Resolution | 1 x DP 1.4a 4096 x 2304 @60Hz<br>1 x HDMI 1.4b 3840 x 2160 @30Hz   |

### Audio

|                 |                                |
|-----------------|--------------------------------|
| Audio Codec     | Realtek HD Audio Codec         |
| Audio Amplifier | TI TPA3005 Stereo Class-D 3W4Q |

### Power Requirement

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Voltage Input Spec  | 12V-24V Wide Range DC-In                              |
| Voltage Input Conn. | 4-pin DC Jack                                         |
| ACPI                | Single power ATX support S0, S3, S4, S5               |
| Power Mode          | AT / ATX mode (Default ATX)                           |
| Adapter             | External 180W adapter (Optional medical 180W adapter) |

### Ethernet

|                    |                                                                                    |
|--------------------|------------------------------------------------------------------------------------|
| LAN Chipset        | 1 x Intel® i225LM 2.5 Gigabit Controller<br>1 x Intel® I219-V Gigabit Ethernet PHY |
| Data Rate Per Port | 2.5GbE (I225-LM)<br>1GbE (I219-V)                                                  |

### Software Support

|    |                       |
|----|-----------------------|
| OS | Win 10, Win 11, Linux |
|----|-----------------------|

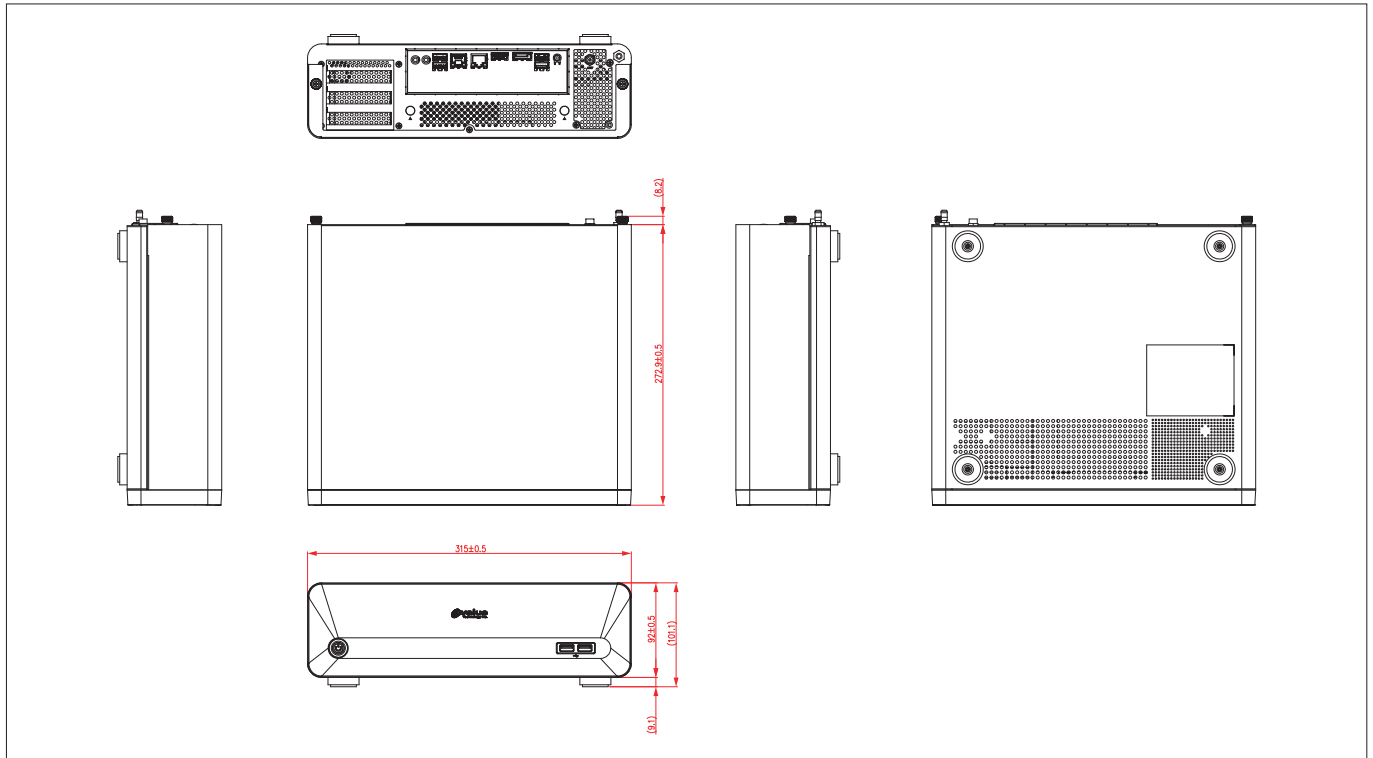
### Certification

|                           |            |
|---------------------------|------------|
| Certification Information | ITE CE/FCC |
|---------------------------|------------|

### Mechanical & Environmental

|                       |                                                                                  |
|-----------------------|----------------------------------------------------------------------------------|
| Operating Temp.       | 0°C ~ 40°C (32°F ~ 104°F) with 0.5m/s air flow (turbo mode off)                  |
| Drop Test             | Package drop test: One corner, three edges, six faces<br>ISTA 2A, IEC-60068-2-32 |
| Shock Test            | With SSD : 10 Grms, IEC 60068-2-27, half sine, 11ms                              |
| Vibration Test        | Operating with SSD : 0.5 Grms, IEC 60068-2-64, 5 ~ 500Hz, 0.5hr/axis             |
| Weight                | 4.8 kg                                                                           |
| Dimension (W x L x H) | 315 x 273 x 92 mm                                                                |
| Operating Humidity    | 40°C @ 95% Relative Humidity, Non-condensing                                     |
| Storage Temp.         | -20°C ~ 60°C (-4°F ~ 140°F)                                                      |

## Mechanical Drawing



## Ordering Information

| P/N             | Processor                                                                                                                                          | Memory                                                                                              | Storage                    | Video Out          | USB                                                                 | LAN | Power Input | Working Temp. |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------|--------------------|---------------------------------------------------------------------|-----|-------------|---------------|
| MAB-T660D-A1-1R | LGA 1700 socket supports 12th Gen Alder Lake/ 13th Gen Raptor Lake/ 14th Gen Raptor Lake Refresh Intel® Core™ i3/i5/i7/i9 Processors (max TDP 65W) | 2 x SODIMM sockets support Dual Channel DDR5 memory speed up to 5600MHz, up to 64GB (CPU Dependent) | 1 x 2.5" SATAIII SSD drive | 1 x DP<br>1 x HDMI | 2 x USB 2.0 (front I/O)<br>2 x USB 3.2 Type A<br>2 x USB 2.0 Type A | 2   | ATX         | 0°C~ 40°C     |

## Packing List

| Item                                        | P/N              | Quantity |
|---------------------------------------------|------------------|----------|
| AC/DC Adapter                               | ACC-ADP-180N-02R | 1        |
| CPU cooler 0.84A/12V/Fan 91 x 87.5 x 64.6mm | ACC-FAN-170-02R  | 1        |
| Screw kits                                  |                  | 1        |

## Optional Items

| Item                                 | P/N                |
|--------------------------------------|--------------------|
| NVIDIA A1000                         | RCC-GPU-RTXADA-04R |
| NVIDIA RTX2000 ADA                   | RCC-GPU-RTXADA-03R |
| NVIDIA RTX4000 SFF ADA               | RCC-GPU-RTXADA-02R |
| SC710N2-L HDMI Capture Card          | RCC-CAP-PCIE-01R   |
| SC400N2-L HDMI Capture Card          | RCC-CAP-PCIE-04R   |
| Intel 82574 LAN Card                 | RCC-LAN-PCIE-01R   |
| Intel I350AM2 LAN Card               | RCC-LAN-PCIE-02R   |
| Intel I210 PoE Card                  | RCC-POE-PCIE-03R   |
| Intel WIFI 6E module with kits       | RCC-WIFI-M2BT-01R  |
| WiFi 6E set ENL-5400PCI PCIe Adapter | RCC-WIFI-PCIE-01R  |
| EU Power Cord                        | E1702031000R       |
| US Power Cord                        | E1702031833R       |
| JP Power Cord                        | E1702031834R       |
| UK Power Cord                        | E170P060380R       |
| AU Power Cord                        | E1702031831R       |
| CN Power Cord                        | E170P060391R       |