

# EC70A-ADP

12th Gen Intel® Core™  
Fanless Robust Embedded System



## KEY FEATURES



### Alder Lake-P

Intel® 12th Gen Core™ Alder Lake-P Processor, TDP=15W for Fanless, TDP=28W for w/Fan.



### Dual Displays

HDMI (4K@30Hz) + DP (4K@60Hz)



### On Board Memory

On board memory and 1 SO-DIMM DDR4



### 5G Support

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



### Rich I/O

up to 3 LAN & 4 USB3.2 (or 2 USB3.2 + 2 USB type-C)

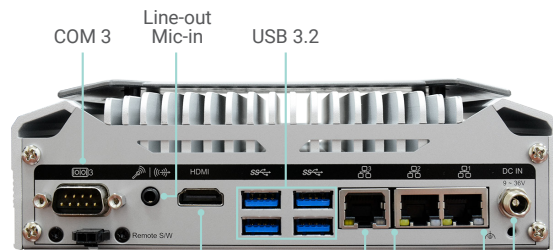


## PANEL



Power Button DP++ COM 4 COM 1/2

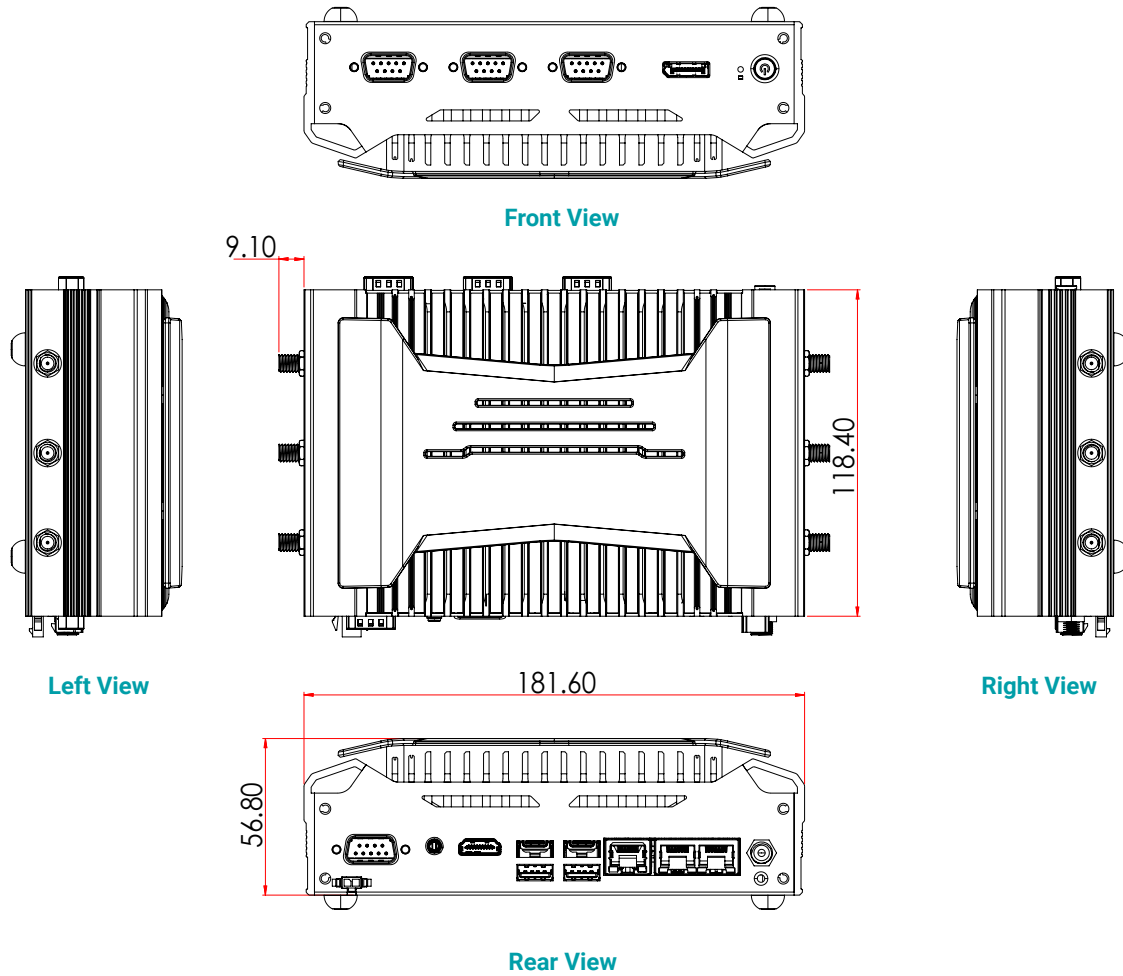
Front View



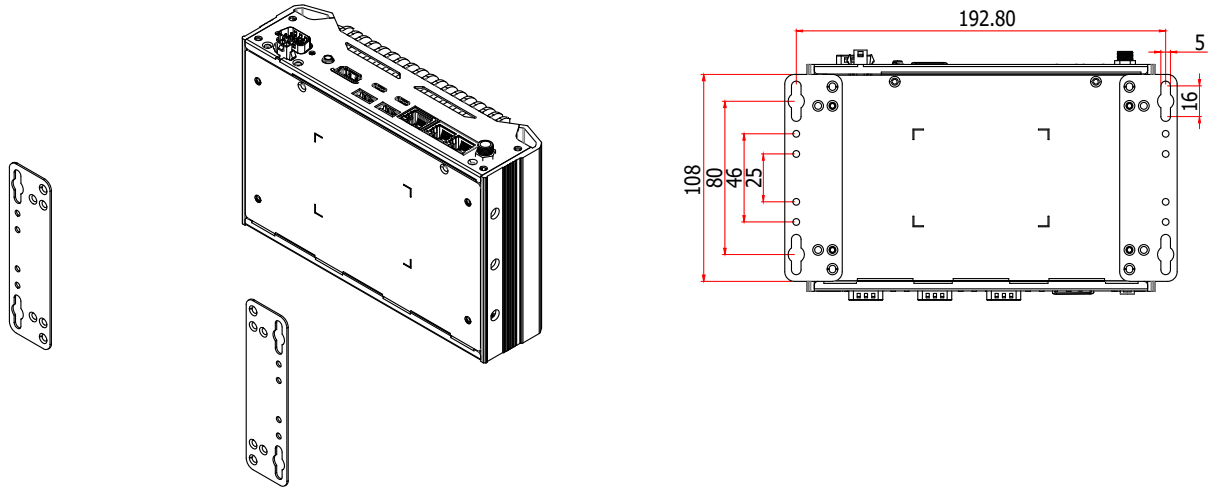
COM 3 Line-out Mic-in USB 3.2 HDMI 2.5G LAN LAN DC-in

Rear View

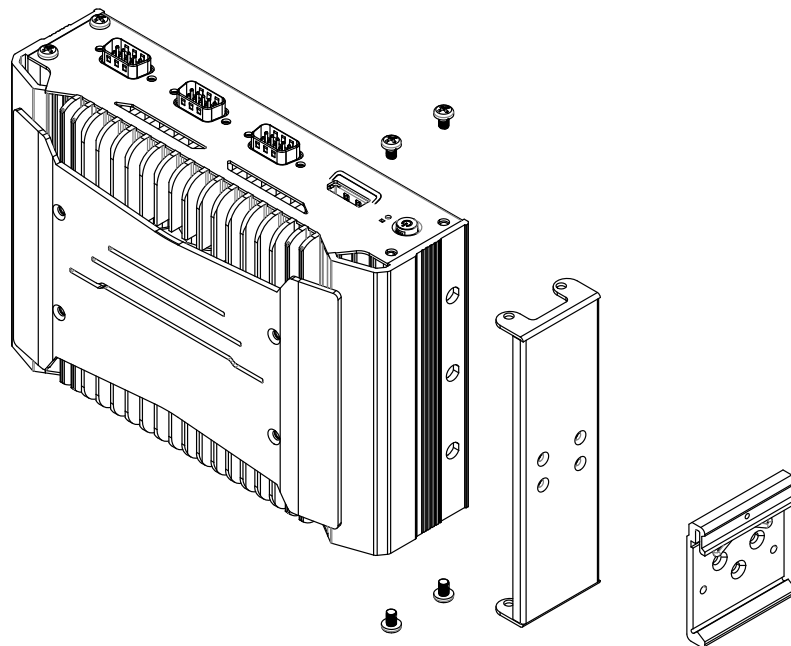
**DIMENSIONS**



## WALL MOUNTING



## DIN RAIL MOUNTING



## SPECIFICATION

|                              |  |   |  |
|------------------------------|--|---|--|
| SYSTEM                       | Processor                                    | 12th Gen Intel® Core™ Processors, BGA 1744<br>(Alder Lake-P, 15W for Fanless model, 28W for with Fan model)<br>Intel® Core™ i7-1265UE Processor, 10C12T, 12M Cache, 1.7GHz (4.7GHz)<br>Intel® Core™ i5-1245UE Processor, 10C12T, 12M Cache, 1.5GHz (4.4GHz)<br>Intel® Core™ i3-1215UE Processor, 6C8T, 10M Cache, 1.2GHz (4.4GHz) |  |
|                              | Memory                                       | 8GB On-board memory & one SO-DIMM DDR4 up to 32GB<br>Dual Channel DDR4 3200MHz  |  |
|                              | BIOS   | AMI SPI 256Mbit   |  |
| GRAPHICS                     | Controller                                   | Intel® Iris® Xe Graphics for i7/i5 Processors<br>Intel® UHD Graphics for i3 Processors  |  |
|                              | Feature                                      | DirectX 12, Open GL 4.6, Vulkan 1.2<br>HW Decode: AV1, AVC/H.264, MJPEG, HEVC/H.265, VP9, SCC<br>HW Encode: MJPEG, AVC/H.264, HEVC/H.265, VP9, SCC  |  |
|                              | Display                                      | 1 x HDMI<br>1 x DP  | HDMI: resolution up to 4096x2160 @30Hz<br>DP: resolution up to 4096x2304 @60Hz |
|                              | Multiple Displays                            | HDMI + DP + 2 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 3042/3052 (USB3.0/USB2.0/PCIex1), 1 x SIM slot for 4G/5G<br>1 x M.2 E Key 2230 (PCIex1/USB2.0)  |  |
| AUDIO                        | Audio Codec                                  | Realtek ALC888 5.1-channel  |  |
| ETHERNET                     | Controller                                   | 1 x Intel® I225LM/IT (10/100/1000/2500Mbps)<br>2 x Intel® I225LM/IT (10/100/1000Mbps)<br>(Only Core i7/i5 supports iAMT)  |  |
| LED                          | Indicators                                   | 1 x Power LED<br>1 x HDD LED  |  |
| FRONT I/O                    | Serial                                       | 2 x RS-232/422/485 (DB-9, COM 1~2)<br>1 x RS232 (DB9, COM 4)  |  |
|                              | Display                                      | 1 x DP (optional VGA by request)  |  |
|                              | Buttons                                      | 1 x Power button<br>1 x Reset button  |  |
| REAR I/O                     | Ethernet                                     | 1 x 2.5GHz (RJ-45) + 2 x GbE (RJ-45)  |  |
|                              | Serial                                       | 1 x RS-232 or 8bit DIO (DB-9, COM 3, default is RS232, 8bit DIO can set by jumper setting)  |  |
|                              | USB  | 4 x USB 3.2   |  |
|                              |  | <b>EC70A-ADP4043/EC70A-ADP4043F:</b><br>4 x Type A connector<br><b>EC70A-ADP4022TC3/EC70A-4022TC3F:</b><br>2 x Type C + 2 x Type A connector  |  |
|                              | Display                                      | 1 x HDMI<br>2 x Type-C DP Alt. Mode(for EC70A-ADP4022TC3 & EC70A-ADP4022TC3F)   |  |
| Audio                        | 1 x Audio Combo Phone Jack (Line-out/Mic-in) |   |  |
| WATCHDOG TIMER               | Output & Interval                            | System Reset, Programmable via Software from 1 to 255 Seconds   |  |
| SECURITY                     | TPM  | TPM2.0  |  |
| POWER                        | Type   | Wide range 9~36V  |  |
|                              | Connector                                    | DC Jack   |  |
| OS SUPPORT                   | Microsoft                                    | Windows 10 IoT Enterprise 64-bit  |  |
|                              | 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   |  |
| STANDARDS AND CERTIFICATIONS | 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)   |  |
|                              | 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   |  |

### SYSTEM MODULES

| Model Name                | Part Number     | CPU       | CPU TDP | Video          | Audio                               | COM | USB 3.1 | Type-C | LAN | TPM             | Fanless |
|---------------------------|-----------------|-----------|---------|----------------|-------------------------------------|-----|---------|--------|-----|-----------------|---------|
| EC70A-ADP4043-i315UE8     | 750-EC70A3-000G | i3-1215UE | 15W     | 1 HDMI<br>1 DP | 1<br>(Line-out & Mic-in by Y-cable) | 4   | 4       | 0      | 3   | Yes<br>(TPM2.0) | Yes     |
| EC70A-ADP4043-i545UE8     | 750-EC70A3-100G | i5-1245UE |         |                |                                     |     |         |        |     |                 |         |
| EC70A-ADP4043-i765UE8     | 750-EC70A3-200G | i7-1265UE |         |                |                                     |     |         |        |     |                 |         |
| EC70A-ADP4043F-i765UE8    | 750-EC70A3-300G | i7-1265UE | 28W     |                |                                     |     |         |        |     |                 |         |
| EC70A-ADP4022TC3-i315UE8  | 750-EC70A3-400G | i3-1215UE | 15W     |                |                                     |     |         |        |     |                 |         |
| EC70A-ADP4022TC3-i545UE8  | 750-EC70A3-500G | i5-1245UE |         |                |                                     |     |         |        |     |                 |         |
| EC70A-ADP4022TC3-i765UE8  | 750-EC70A3-600G | i7-1265UE |         |                |                                     |     |         |        |     |                 |         |
| EC70A-ADP4022TC3F-i765UE8 | 750-EC70A3-700G | i7-1265UE |         |                |                                     |     | 28W     |        |     |                 |         |
|                           |                 |           |         |                |                                     |     | 2       | 2      |     |                 | Yes     |
|                           |                 |           |         |                |                                     |     |         |        |     |                 | No      |

### ORDERING INFORMATION

| Model Name                | Part Number     | Description   |
|---------------------------|-----------------|---|
| EC70A-ADP4043-i315UE8     | 750-EC70A3-000G | EC70A-ADP: EC70A-ADP4043-i315UE8, Fanless, i3-1215UE, 8GB memory, 4 COM, 4 USB, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS              |
| EC70A-ADP4043-i545UE8     | 750-EC70A3-100G | EC70A-ADP: EC70A-ADP4043-i545UE8, Fanless, i5-1245UE, 8GB memory, 4 COM, 4 USB, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS              |
| EC70A-ADP4043-i765UE8     | 750-EC70A3-200G | EC70A-ADP: EC70A-ADP4043-i765UE8, Fanless, i7-1265UE, 8GB memory, 4 COM, 4 USB, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS              |
| EC70A-ADP4043F-i765UE8    | 750-EC70A3-300G | EC70A-ADP: EC70A-ADP4043F-i765UE8, w/Fan, i7-1265UE, 8GB memory, 4 COM, 4 USB, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS               |
| EC70A-ADP4022TC3-i315UE8  | 750-EC70A3-400G | EC70A-ADP: EC70A-ADP4022TC3-i315UE8, Fanless, i3-1215UE, 8GB memory, 4 COM, 2 USB, 2 Type-C, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS |
| EC70A-ADP4022TC3-i545UE8  | 750-EC70A3-500G | EC70A-ADP: EC70A-ADP4022TC3-i545UE8, Fanless, i5-1245UE, 8GB memory, 4 COM, 2 USB, 2 Type-C, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS |
| EC70A-ADP4022TC3-i765UE8  | 750-EC70A3-600G | EC70A-ADP: EC70A-ADP4043-i765UE8, Fanless, i7-1265UE, 8GB memory, 4 COM, 2 USB, 2 Type-C, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS    |
| EC70A-ADP4022TC3F-i765UE8 | 750-EC70A3-700G | EC70A-ADP: EC70A-ADP4043F-i765UE8, w/Fan, i7-1265UE, 8GB memory, 4 COM, 2 USB, 2 Type-C, 1 HDMI, 1 DP, 3 LAN, 1 audio port, DC 9~36V input, TPM2.0, F/G SYSTEM RoHS     |

### PACKING LIST

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

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660