

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)

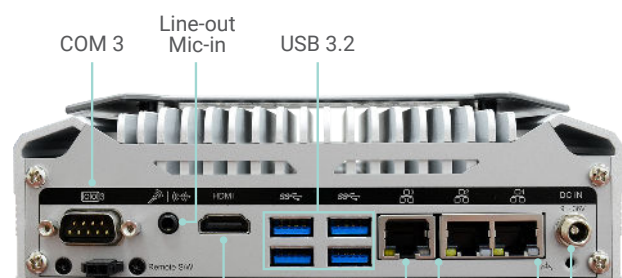


PANEL



Power Button DP++ COM 4 COM 1/2

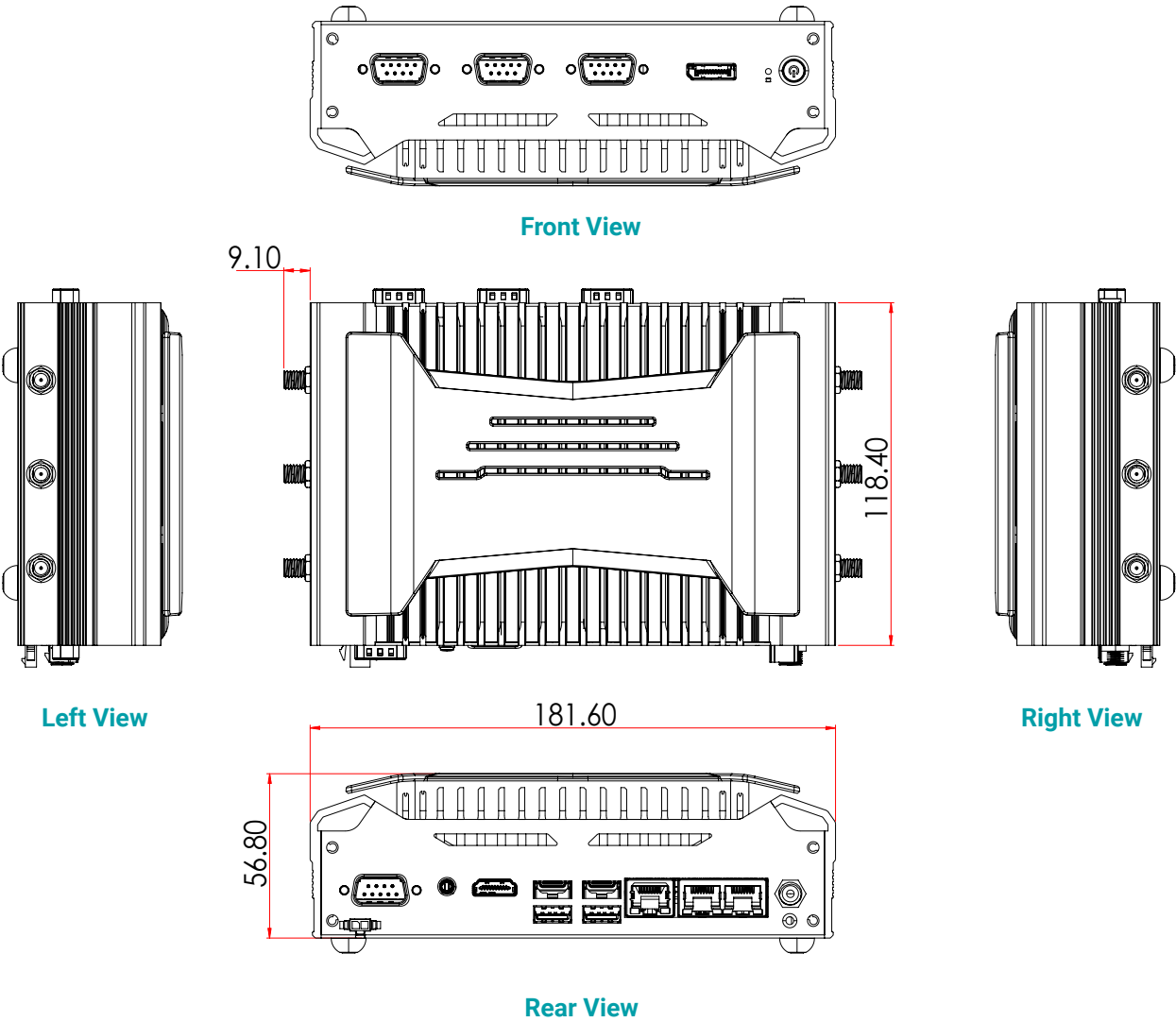
Front View



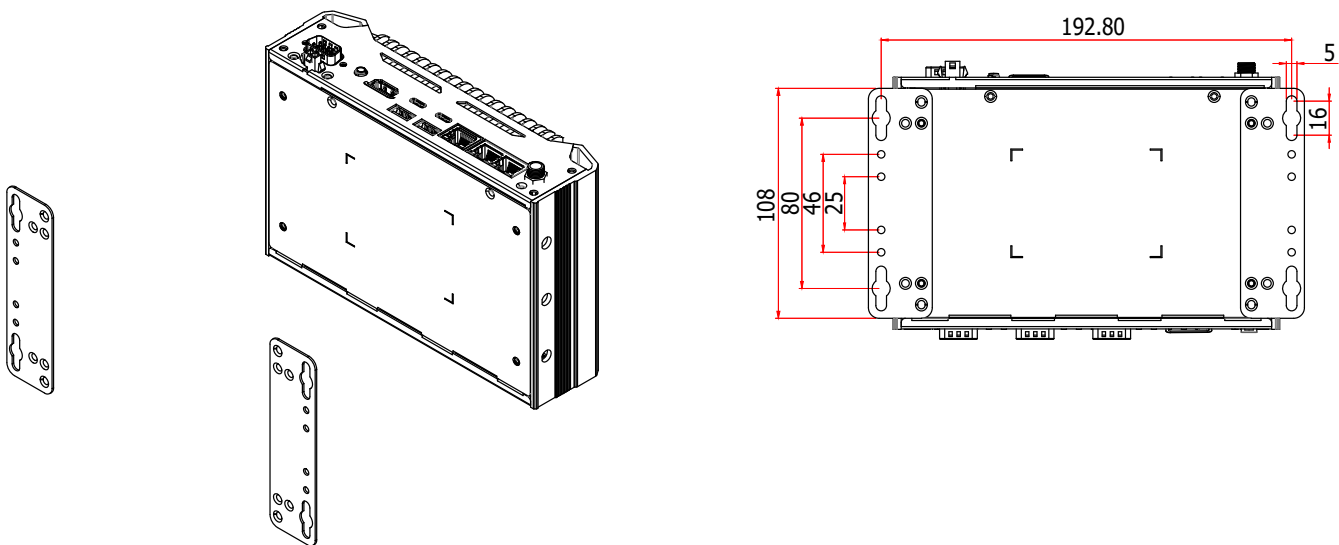
COM 3 Line-out Mic-in USB 3.2 HDMI 2.5G LAN LAN DC-in

Rear View

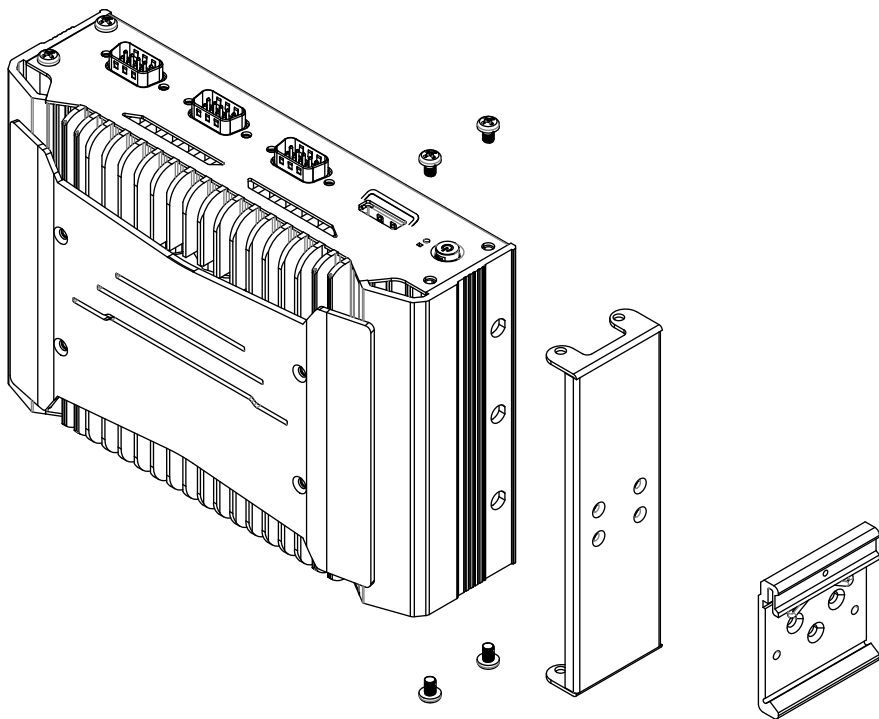
DIMENSIONS



WALL MOUNTING



DIN RAIL MOUNTING



SPECIFICATION

SYSTEM	Processor	12th Gen Intel® Core™ Processors, BGA 1744 (Alder Lake-P, 15W for Fanless model, 28W for with Fan model) Intel® Core™ i7-1265UE Processor, 10C12T, 12M Cache, 1.7GHz (4.7GHz) Intel® Core™ i5-1245UE Processor, 10C12T, 12M Cache, 1.5GHz (4.4GHz) Intel® Core™ i3-1215UE Processor, 6C8T, 10M Cache, 1.2GHz (4.4GHz)	
	Memory	8GB On-board memory & one SO-DIMM DDR4 up to 32GB Dual Channel DDR4 3200MHz	
	BIOS	AMI SPI 256Mbit	
GRAPHICS	Controller	Intel® Iris® Xe Graphics for i7/i5 Processors Intel® UHD Graphics for i3 Processors	
	Feature	DirectX 12, Open GL 4.6, Vulkan 1.2 HW Decode: AV1, AVC/H.264, MJPEG, HEVC/H.265, VP9, SCC HW Encode: MJPEG, AVC/H.264, HEVC/H.265, VP9, SCC	
	Display	1 x HDMI 1 x DP	HDMI: resolution up to 4096x2160 @30Hz 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) 1 x M.2 B Key 3042/3052 (USB3.0/USB2.0/PCIex1), 1 x SIM slot for 4G/5G 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) 2 x Intel® I225LM/IT (10/100/1000Mbps) (Only Core i7/i5 supports iAMT)	
LED	Indicators	1 x Power LED 1 x HDD LED	
FRONT I/O	Serial	2 x RS-232/422/485 (DB-9, COM 1~2) 1 x RS232 (DB9, COM 4)	
	Display	1 x DP (optional VGA by request)	
	Buttons	1 x Power button 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 EC70A-ADP4043/EC70A-ADP4043F: 4 x Type A connector EC70A-ADP4022TC3/EC70A-4022TC3F: 2 x Type C + 2 x Type A connector	
	Display	1 x HDMI 2 x Type-C DP Alt. Mode(for EC70A-ADP4022TC3 & EC70A-ADP4022TC3F)	
	Audio	1 x Audio Combo Phone Jack (Line-out/Mic-in)	
	Watchdog	System Reset, Programmable via Software from 1 to 255 Seconds	
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): -20 to 60°C (wide-temp SSD)	W/Fan(CPU TDP 28W): -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: IEC 60068-2-27 Test Ea: Shock Test Half-Sine, 3G @ 11ms, 18 Shock ±X, ±Y, ±Z (each axis 3 times)	
	Vibration	Operating: IEC 60068-2-64 Test Fh: Vibration Board-Band Random Test Random, 1Grms @ 5~500 Hz, 30min Non-Operating: IEC 60068-2-6 Test Fc: Vibration Sinusoidal Test 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 1 DP	1 (Line-out & Mic-in by Y-cable)	4	4	0	3	Yes (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				2	2			No									
EC70A-ADP4022TC3-i315UE8	750-EC70A3-400G	i3-1215UE	15W								Yes									
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			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 slot screws
4 Foot screws & Rubber Foot
1 Grounding screw
1 Remote switch cable