

AES-2120

**Intel Alder Lake-P 12th Gen CPU Core i7/i5/i3
Fanless Industrial Computers Triple Display
HDMI/eDP/T-C, 3USB3.2/6USB2, 2COM, DC-IN**



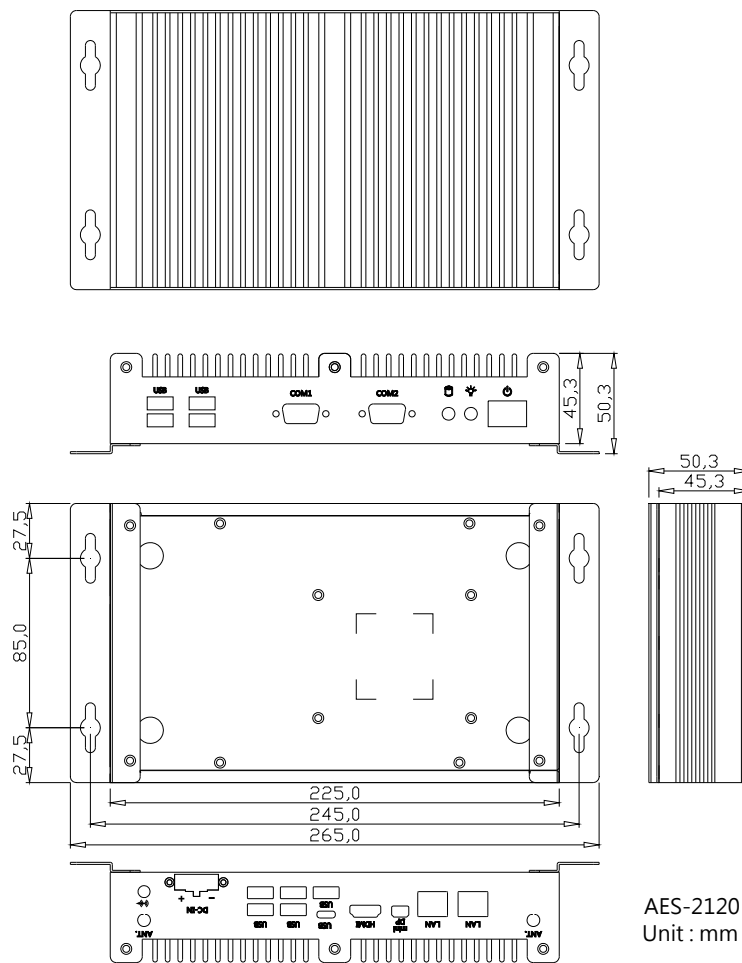
Features

- Intel 12th Alder Lake CPU i7-1265UE/i5-1245UE/i3-1215UE
- Supports DDR5 4800MHz, 2xSO-DIMM, up to 64GB system memory
- 1xHDMI, 1xminiDP, 1xType-C, Triple display
- 2 x Intel 2.5GbE LAN, 2 x COM, COM1/2 by RS-485/422/232
- Onboard M.2 B-Key, Nano SIM card slot, support TPM 2.0
- 1x M.2 2280 Gen4x4 for AI Acceleration Module
- 1x M.2 2242 Gen3x2 for PCIE NVME storage
- DC 9~36V input, option 60W(12V/5A) power adapter
- Supports Microsoft Windows 10 IoT 21H2 64bit LTSC
- Designed for extreme operating environment as outdoor applications

Specifications

AES-2120 Series Key Features		AES-2120P-M0M00P0	AES-2120M-M0M00P0	AES-2120V-M0M00P0
Processor System	CPU Max. Speed	Up 4.7GHz/3.5GHz	Up 4.4GHz/3.3GHz	Up 4.4GHz/3.3GHz
	L2 Cache/ Core/ Thread	12MB, 10-Core, 12-T	12MB, 10-Core	10MB, 6-Core, 8-T
	CPU/ TDP	i7-1265UE/ 15W	i5-1245UE/ 15W	i3-1215UE, 15W
	BIOS	UEFI, AMI SPI 256Mbit		
Security	Graphics Processor	Intel UHD Graphics		
	TPM	TPM2.0		
Expansion Slot	M.2 B-Key	1 x M.2 B-Key 2242/3042 (PCIe x1/SATA 3.0/USB 2.0 and LTE module) Slot		
		1 x Nano SIM socket (connected to M.2 B key)		
	M.2 M-Key	1 x M.2 M-Key 2242(Gen3 PCIe x 2 NVMe)		
	M.2 M-Key	1 x M.2 M-Key 2280(Gen4 PCIe x 4 NVMe), on soldering side		
Memory	M.2 E-Key	1 x M.2 E-Key 2230(PCIe x1/USB 2.0) for Wireless, on soldering side		
	Specification (SO-DIMM)	2 x DDR5 3200MHz SO-DIMM		
Graphics	System Max. Capacity	64GB		
	HDMI/miniDP	1 x HDMI 1.4, 1 x miniDP		
Ethernet	LAN Gigabit Controller	2 x 2.5GbE LAN (Intel I225-LM / Intel I226-LM)		
		1 x M.2 B-Key 2280 SATA 3.0, 1 x M.2 M-Key PCIe x1 NVMe		
Storage	2.5" SATA Driver	1 x 2.5" SATA HDD/SSD (option)		
	HDMI	1 x HDMI 1.4 (resolution up to 4096 x 2160 @ 24Hz)		
System Rear I/O	MiniDP	1 x MiniDP (resolution up to 3840 x 2160 @ 30Hz)		
	USB Type C	1 x USB Type-C (DP1.4a, resolution up to 4096 x 2304 @ 60Hz)		
	USB Type A	3 x USB 3.2(Gen 2), 2 x USB 2.0		
	Ethernet	2 x 2.5GbE(RJ-45)		
	System Power Input	1 x DC-IN 9V~36V by 2-pin connector (+/-10% DC)		
	Audio	1 x Audio port (Line-out)		
	Antenna	2 x Antenna holes (options)		
System Front Bezel	Power-On Button	1 x Moment button switch to turn-on system		
	System Power LED	1 x LED for system power status		
	HDD LED	1 x LED for SSD data access status		
	COM1 / COM2 Port	2 x DB-9 (RS-232/422/485)		
	USB Type A	4 x USB 2.0		
Operation System	Windows 64-bit	Win 10 IoT 64-bit		
	Linux 64-bit	Ubuntu 19.04 / 20.04		
Watchdog Timer	Output and Interval	System reset, programmable 1 ~ 255 sec/min; 1 sec. or 1min. /step		
Power Requirement	DC Input	Wide Voltage 9~36Vdc input (option DC12V/5A 60W adapter)		
Environment	Operating Temperature	-40°C ~ 55°C(-40°F ~ 131°F)		
	Air Flow condition	55°C ~ 60°C (131°F ~ 140°F) w/0.5m/s air flow		
	Storage Temperature	-40 ~ 85°C (-40°F ~ 185°F)		
Physical Size	Dimensions	225mm(W) x 140mm(D) x 45mm(H)		
Packing Size	Dimensions	300mm(W) x 270mm(D) x 130mm(H)		
Weight	N.W / G.W.	Single packed: 2.5Kg / 3Kg		
Certifications	EMC	CE, FCC Class A		

Dimensions Outlook



AES-2120
Unit : mm

Ordering Information

Part Number	CPU	DP/mDP	2.5G LAN	USB 3.1	USB 2.0	COM	DDR5 RAM	M.2 M-Key(2242)	60W PSU
AES-2120P-M0M00P0	i7-1265UE	1/1	2	3/1	6	2	Option	Option	Option
AES-2120M-M0M00P0	i5-1245UE	1/1	2	3/1	6	2	Option	Option	Option
AES-2120V-M0M00P0	i3-1215UE	1/1	2	3/1	6	2	Option	Option	Option
AES-2120M-M8P4AP0	i5-1245UE	1/1	2	3/1	6	2	8GB	128GB Gen3x4 TLC	Option
AES-2120V-M8S4AP0	i3-1215UE	1/1	2	3/1	6	2	8GB	128GB SATA3 TLC	Option
AES-2120V-M8S4AP1	i3-1215UE	1/1	2	3/1	6	2	8GB	128GB SATA3 TLC	12V/5A

Optional Items

Part Number	Description
SODIMM-DDR5	204-Pin SODIMM DDR5-4800 8GB
M2-P8A(2280)	M.2 2280 128GB Gen4x4 3D-TLC by M-KEY (on soldering side)
M2-P4A(2242)	M.2 2242 128GB Gen3x2 3D-TLC by M-KEY
M2-S4A(2242)	M.2 2242 128GB SATA3 3D-TLC by B-KEY
AC-9260	M.2 2230 (E-KEY) Wi-Fi Module, Intel AC9260 802.11abgn + Bluetooth 5.0, dual band 2T2R
DHAN3-60W-2P	AC-DC 60W Adapter, 90V-264Vac input by C14 socket, DC 12V@5A output with 2-pin phoenix connector
AES-WM-BK	AES Wall Mount Kits with Screws