

# AES-1020

Intel Elkhart Lake Atom x6425E/x6211E CPU  
Wide-Temp Fanless Compact Computers  
DP/mDP, 2LAN, USB3.1/USB2, 2COM, DC-IN



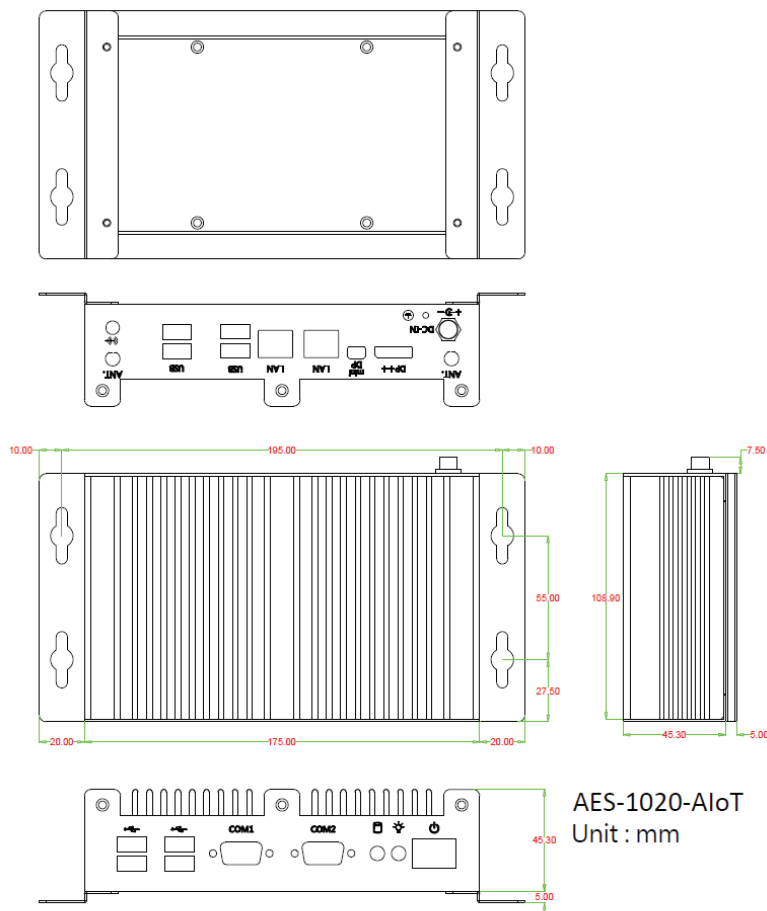
## Features

- Support wide temperature -40°C ~ +60°C application with Intel 11th Elkhart Lake Atom x6425E QC, x6211E DC CPU
- Supports DDR4 3200MHz, 1xSO-DIMM, up to 32GB system memory
- 1x DP++/mDP Port, 2x Intel 2.5GbE LAN, 1x USB 3.1, 7x USB 2.0
- 2x COM, COM1/COM2 by RS-485/422/232
- Onboard M.2 B/E-Key, Nano SIM card slot, option TPM 2.0
- DC 12V input with 60W(12V/5A) power adapter
- Supports Microsoft Windows 10 IoT 64bit (Ent 2019 LTSC)
- Designed for extreme operating environment as outdoor applications

## Specifications

AES-2360 Series Key Features		AES-1020M-M0M00P0	AES-1020L-M0M00P0
Processor System	CPU Max. Speed	Up 3.0GHz/2.0GHz	Up 3.0GHz/1.3GHz
	L2 Cache / Core	1.5MB, 4-Core	1.5MB, 2-Core
	CPU/ TDP	Atom x6425E / 12W	Atom x6211E / 6W
	BIOS	AMI SPI 256Mbit, XQ2.0	
Security	Graphics Processor	Intel UHD Graphics	
	TPM	fTPM(default), dTPM2.0(option)	
Expansion Slot	M.2 B-Key	1 x M.2 B-Key 2242/3042/2280 (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 E-Key	1 x M.2 E-Key 2230(PCIe x1/USB 2.0) for Wireless	
Memory	Specification (SO-DIMM)	1 x DDR4 3200MHz SO-DIMM 8GB wide temperature (option up to 32GB)	
	System Max. Capacity	32GB	
Graphics	DP	2 x DP++, resolution up to 4096x2160 @ 60Hz	
Ethernet	LAN Gigabit Controller	2 x 2.5GbE LAN (Intel I225-LM / Intel I226-LM)	
Storage	M.2 B-Key	1 x M.2 B-Key 2280 128GB wide temperature (SATA 3.0)	
	2.5" SATA Driver	1 x 2.5" SATA HDD/SSD (option)	
System Rear I/O	DP	1 x DP++	
	mDP	1 x mini-DP	
	Ethernet	2 x RJ45	
	USB Type A	1 x USB 3.2(Gen 2), 3 x USB 2.0	
	Audio	1 x Audio port (Line-out)	
	System Power Input	1 x DC-in Jack 12Vdc Input (+/-10% DC)	
	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-485/422/232)	
	USB Type A	4 x USB 2.0	
	Customized LVDS Port	Customized LVDS feature for open frame LCD display by request	
Operation System	Windows 64-bit	Win 10 IoT 64-bit	
	Linux 64-bit	Ubuntu 19.04 / 20.04; Fedora 30; RHEL 7.6/8.0/8.2; SUSE Leap/SLES	
Watchdog Timer	Output and Interval	System reset, programmable 1 ~ 255 sec/min; 1 sec. or 1min. /step	
Power Requirement	DC Input	12Vdc 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 and by x6211E CPU	
	Storage Temperature	-40 ~ 85°C ( -40°F ~ 185°F)	
Physical Size	Dimensions	225mm(W) x 140mm(D) x 45mm(H)	
	Packing Size	300mm(W) x 270mm(D) x 130mm(H)	
Weight	N.W / G.W.	Single packed: 2.5Kg / 3Kg	
Certifications	EMC	CE, FCC Class B	

## Dimensions Outlook



## Ordering Information

Part Number	CPU	DP	2.5GbE	USB 3.1	USB 2.0	COM	DDR4 RAM	M.2 B-Key	60W PSU
AES-2020L-M8M00P0	x6211E	2	2	1	7	2	8GB	Option	Option
AES-2020M-M8M00P0	x6425E	2	2	1	7	2	8GB	Option	Option
AES-2020L-M0M00P1	x6211E	2	2	1	7	2	Option	Option	12V/5A
AES-2020M-M0M00P1	x6425E	2	2	1	7	2	Option	Option	12V/5A
AES-2020L-M0M00P0	X6211E	2	2	1	7	2	Option	Option	Option
AES-2020M-M0M00P0	X6425E	2	2	1	7	2	Option	Option	Option

## Optional Items

Part Number	Description
SODIMM-DDR4	204-Pin SODIMM DDR4-2133 8GB
M2-N64DWT(2280)	M.2 SATA3 2280 64GB 3D-TLC wide temperature by B-KEY (has been certified for -40°C ~ +85°C operation)
M2-N12DWT(2280)	M.2 SATA3 2280 128GB 3D-TLC wide temperature by B-KEY (has been certified for -40°C ~ +85°C operation)
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 phoneix connector
AES-WM-BK	AES Wall Mount Kits with Screws