

# AIS-2221 Series

Mini-ITX Fanless Box PC Comet Lake H420E  
LGA1200 Intel 10<sup>th</sup> Core i9/i7/i5 CPU, 2LAN  
VGA/HDMI/DP, 4COM, 2USB3/10USB2, DC-IN



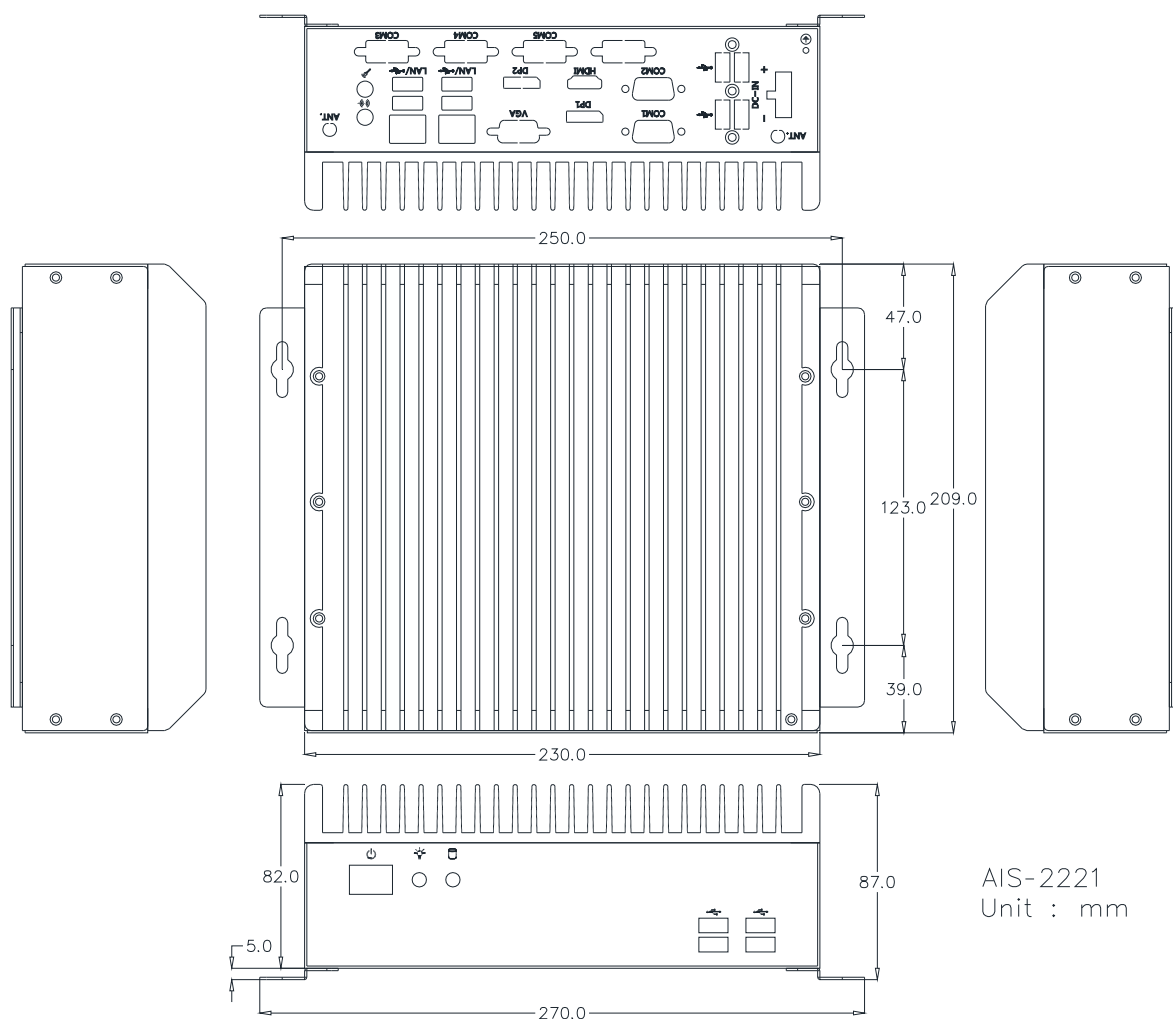
## Features

- Mini-ITX fanless system with Intel H420E Chipset, supports Intel 10<sup>th</sup> Core i9/i7/i5 (Comet Lake) Processors
- Dual Channel DDR4, 2x SO-DIMM up to 64GB system memory
- Dual display VGA/2DP, Dual LAN by Intel I219V, I210
- 2x COM(RS-232/422/485), expansion by M.2 Key E/B/M
- 2x USB 3.2 + 6x USB 2.0 on rear I/O, 4x USB 2.0 on front
- One HDD plate for one 2.5" SATA HDD/SSD
- DC 12V~24V input, option DC12V 60W adapter
- 0°C ~ 50°C harsh operation environment

## Specifications

AIS-2221 Series Key Features		AIS-2221-9E-M0H00P0	AIS-2221-7E-M0-H00P0	AIS-2221-5E-M0-H00P0
Processor System	CPU	i9-10900TE	i7-10700TE	i5-10500TE
	Cache / Core	20MB / 10-Core	16MB / 8-Core	12MB / 6-Core
	Frequency	1.9GHz	2.4GHz	2.1GHz
	TDP	35W		
Expansion Slot	Chipset	Intel H420E		
	M.2 (KEY M)	1 x M.2 (2242/2260/2280) with PCIe x2 (NVMe) and shared with SATA3 for SSD		
	M.2 (KEY E)	1 x M.2 (2230) with PCIe x1 and USB 2.0 for Wireless		
Memory	M.2 (KEY B)	1 x M.2 (3042) with PCIe x1 / USB 3.0 / USB 2.0 and SIM for 4G / 5G		
	Specification (SO-DIMM)	2 x Dual Channel DDR4-2666 MHz		DDR4-2400 MHz
	Max. Capacity	Up to 64 GB system memory		
Graphics	Memory	option	option	option
	VGA	1x VGA, supports resolution up to 1920x1200 @ 60Hz		
Ethernet	DisplayPort	2x DP, support resolution up to 4096x2304 @ 60Hz		
	Interface Controller	Dual Intel GbE, 1x Intel I210, 1x Intel I219V		
SATA	Connector	2 x RJ-45		
	SATA 3	4 x SATA3 (One of SATA3 shared with M.2(KEY M))		
System Rear I/O	VGA	1 x VGA(DB15)		
	HDMI	1 x HDMI		
	DisplayPort	1 x DP (1 x HDMI and 2 x DP option by AIS-2221D)		
	Ethernet	2 x RJ45		
	USB (IMB I/O shield)	2 x USB3.2 + 6 x USB 2.0		
	Serial (IMB I/O shield)	2 x COM, COM1/COM2 (RS-232/422/485 are selectable by BIOS)		
	DB9	Option 2 x DB9(COM3/COM4, RS-232)		
	Audio	1 x Audio ports (Mic-in, Line-out)		
System Storage	DC-IN	1 x 2-Pin Phoenix Connector		
	HDD Driver Bay	1 x HDD space for one 2.5" SATA HDD/SSD		
Optional Features on Rear I/O	M.2 (KEY M)	1 x M.2 (2242/2260/2280) with PCIe x2 (NVMe) and shared with SATA3		
	HDMI/2DP	1 x HDMI, 2 x DP by AIS-2221D		
	COM3/COM4	1 x COM3 (RS-232), 1 x COM4 (RS-232)		
	GPIO	1 x DB-9 for 4 x GPI + 4 x GPO		
System Front Bezel	3W Speaker Output	1 x DB-9 for 3W speaker output by two 2-pin connectors, L+/L-, R+/R-		
	Power On-Off Switch	1 x Soft switch		
	Power LED	1x LED for system power status		
	HDD LED	1x LED for HDD data access status		
System Power	USB 2.0	4 x USB 2.0		
	DC Input	1 x 2-pin DC 12V ~ 24V		
Environment	Operating Temperature	0 ~ 50°C ( 32 ~ 122°F )		
	Air Flow Condition	45 ~ 50°C ( 113 ~ 122°F )		
	Storage Temperature	-40 ~ 85°C ( -40 ~ 185°F )		
Physical Size	Dimensions	230mm(W) x 209mm(D) x 82mm(H)		
Packing Size	Dimensions	310mm(W) x 310mm(D) x 160mm(H)		
Weight	N.W. / G.W.	3.5 Kg / 4.0Kg		
Certifications	EMC	N/A		

## Dimension Drawing



## Ordering Information

Part Number	CPU	VGA	HDMI	DP	GbE	UBS3.2	USB2.0	M.2(PCIex2)	M.2(SATA)	DRAM	DC Input
AIS-2221-9E-M0-H00P0	i9-10900TE	1	1	1	2	2	10	Option	Option	Option	12~24V
AIS-2221-7E-M0-H00P0	i7-10700TE	1	1	1	2	2	10	Option	Option	Option	12~24V
AIS-2221-5E-M0-H00P0	i5-10500TE	1	1	1	2	2	10	Option	Option	Option	12~24V
AIS-2221D-5E-M0H00P0	i5-10500TE	0	1	2	2	2	10	Option	Option	Option	12~24V

## Optional Items

Part Number	Description
SODIMM-DDR4 4GB / 8GB	4GB / 8GB 204-Pin SODIMM DDR4 2666 MHz
SSD-S64L/S12L/S25L; S12D/S25D/S51D	2.5" SATA3 SSD MLC, 64GB/128GB/256GB; SATA3 SSD 3D-TLC, 128GB/256GB/512GB
M2-G12D/G25D/G51D	M.2 2280 PCIex4 NVMe 3D-TLC 128GB/256GB/512GB
M2-M64L(2242)/N12L(2280)	M.2 SATA3 2242 64GB MLC/ M.2 2280 128GB MLC (M-KEY)
M2-M64D(2242)/N12D(2280)	M.2 SATA3 2242 64GB 3D-TLC / M.2 2280 128GB 3D-TLC (M-KEY)
AC-9260	M.2 2230 (E-KEY) Wi-Fi Module, Intel AC9260 802.11abgn + Bluetooth 5.0, dual band 2T2R
AIS-WM-BK	AIS Chassis Wall Mount Bracket Kits, Black, with Screws L=178mm
DHAN3-60W-2P	AC-DC 12V@5A 60W Adapter, with 2-pin Terminal Block