



# IMB-1221-L/IMB-1221-D

## Mini-ITX Motherboard



### KEY FEATURES

- Intel® 10<sup>th</sup> Gen (Comet lake-S) Core™ Processors with H420E chipset
- 2 x 260-pin SO-DIMM Support Dual Channel DDR4 2933 (i9/i7 CPU) / 2666 (i5/i3 CPU) / 2400 (Pentium/ Celeron CPU), up to 64GB
- 1 x PCIe x16 Gen3, 4 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 4 x COM, 4 x SATA3
- 1 x Intel 1 Gigabit LAN
- 1 x Intel 2.5 Gigabit LAN
- Support Dual display, 1 x DP1.2, 1 x VGA, 1 x LVDS. 1 x HDMI 2.0a (IMB-1221-L)
- Support Dual display, 2 x DP1.2, 1 x eDP, 1 x HDMI 2.0a (IMB-1221-D)
- ATX-PWR (24+4-pin)



IMB-1221-L



IMB-1221-D

### SPECIFICATIONS

Form Factor	IMB-1221-L	IMB-1221-D
Dimensions(LxWxH)	Mini-ITX (6.7-in x 6.7-in x 1.5-in)	
<b>Processor System</b>		
CPU	Intel® 10 <sup>th</sup> Gen (Cometlake-S) Core™ Processors, up to 80W <small>*The performance of CPUs over 80W will be limited due to power design</small>	
Chipset	Intel® H420E	
Socket	LGA1200	
BIOS	AMI SPI 256 Mbit	
<b>Memory</b>		
Technology	Dual Channel DDR4 2933/2666/2400 MHz - Intel Core i9/i7 CPUs support DDR4 up to 2933 MHz - Intel Core i5/i3 CPUs support DDR4 up to 2666 MHz - Intel Pentium/Celeron CPU support DDR4 up to 2400 MHz	
Capacity	64GB (32 GB per DIMM)	
Socket	2 x 260-pin SO-DIMM	
<b>Graphics</b>		
Controller	Intel® UHD Graphics	
HDMI	HDMI 2.0a Max resolution up to 4096x2160 @60Hz	
DisplayPort	DisplayPort 1.2, DP++ Max resolution up to 4096x2160@60Hz	
VGA	Max resolution up to 1920x1200@60Hz	N/A
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz	N/A
eDP	N/A	eDP 1.4 Max resolution up to 4096x2304@60Hz
DVI	N/A	
MultiDisplay	Dual Display	
<b>Expansion Slot</b>		
PCIe	1 x PCIe x16 (Gen3)	
PCI	N/A	
Mini-PCIe	N/A	
M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 for Wireless 1 x M.2 (Key B, 3042) with PCIe x1/USB 3.0/USB2.0 and SIM for 4G/5G	
SIM Socket	1x SIM socket connected to M.2 key B	
<b>Audio</b>		
Interface	Realtek ALC887/ALC897 HD, High Definition Audio. Line-out/Mic-in	
<b>Ethernet</b>		
Controller/ Speed	LAN1: Intel® I225LM with 10/100/1000/2500 Mbps LAN2: Intel® I219V with 10/100/1000 Mbps	
Connector	2 x RJ-45	

Rear I/O	IMB-1221-L	IMB-1221-D
HDMI	1 x HDMI 2.0a	
DisplayPort	1 x DP 1.2	2 x DP 1.2
VGA	1	N/A
DVI	N/A	
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	
USB	2 x USB 3.2 (Gen1), 2 x USB 2.0	
Audio	2 (Mic-in, Line-out)	
COM	2 x COM (RS-232/422/485)	
PS2	N/A	

### Internal Connector

USB	2 x USB 3.2 Gen1 (1 x USB 3.2 Gen1 header) 2 x USB 2.0 (1 x 2.54 pitch header)	
COM	2 x COM (RS-232)	
Parallel	N/A	
GPIO	4 x GPI, 4 x GPO	
TPM	TPM Header	
LVDS	1	N/A
eDP	N/A	1
VGA	N/A	
SATA PWR Output	1	
Speaker Header	1	

### Storage

M.2	1 x M.2 (Key M, 2242/2260/2280) with PCIe x2 and shared with SATA3 by switch IC (Default M.2)
mSATA	N/A
SATA	4 x SATA3 (6Gb/s), SATA3_1 shared with M.2 key M (Default M.2)
eMMC	N/A

### Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

### Power Requirements

Input PWR	ATX PWR 4pin+24 Pin
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

### Environment

Operating Temp	0°C ~ 60°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%