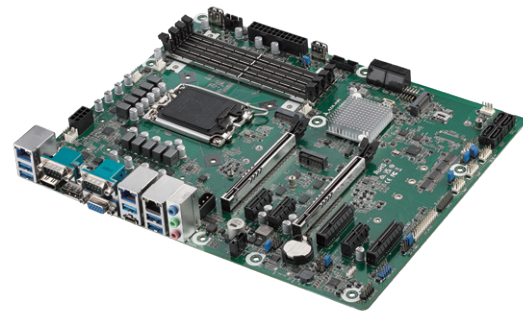


# IMB-M47

Industrial ATX Motherboard with  
 12/13th Gen Intel® Core™ i9/i7/i5/i3  
 Processor



## Features

- Intel® 13th Gen (Raptor Lake-S) and 12th Gen (Alder Lake-S) Core™ Processors with Q670 chipset
- 4x 288-pin Long-DIMM DDR5 4800 MHz , up to 128GB (32GB per DIMM)
- 1x PCIe x16 (Gen5), 1x PCIe x8 (Gen5), 2x PCIe x4 (Gen4), 3x PCIe x1 (Gen3), 1x USB 3.2 Gen2x2 Type C
- 5x USB 3.2 Gen2, 4x USB 2.0, 1x M.2 Key B, 1x M.2 Key E, 1x M.2 Key M, 6x COM, 8x SATA3
- 3x Intel® 2.5 Gigabit LAN
- Supports Triple display, 1x HDMI 2.0b, 1x DP1.4a, 1x VGA
- TPM 2.0 onboard IC
- Supports Intel® vPro, AMT, VMD RAID 0/1/5/10
- ATX PWR (8+24 Pin)

## Ordering Information

- IMB-M47  
 ATX industrial motherboard with 12/13th Intel® Core™  
 i9/i7/i5/i3  
 Note: CPU, memory module, and cooler kit are not included

## Packing Lists

- IMB-M47 motherboard
- IMB-M47 I/O shield
- M.2 screw kit

## Optional Accessories

- |                             |                  |
|-----------------------------|------------------|
| • CPU cooler for 65W CPU    | 32-20976-0000-A0 |
| • CPU cooler for 125W CPU   | TBD              |
| • 2-port USB 2.0 port cable | 30-25010-3010    |
| • 2-port USB 3.0 port cable | 30-25046-0100    |
| • 1-port LPT port cable     | 30-25019-2000    |
| • 2-port COM port cable     | 30-25116 0000-A0 |

## Specifications

Processor System	CPU	Intel® 13th Gen (Raptor Lake-S) and 12th Gen (Alder Lake-S) Core™ Processors, up to 125W	
	Chipset	Intel® Q670	
	Memory	4x 288-pin Dual Channel DDR5 Data transfer rates up to 4800 MHz, 2DPC (speed depends on CPU and DRAM) 2DPC-1DIMM up to 4400 MHz, 2DPC-2DIMM up to 4000/3600 MHz by DRAM (1R/2R)	
	Socket	LGA1700	
	BIOS	AMI SPI 256 Mbit	
	Operating Systems	Windows 10 IoT Enterprise (64-bit)	
	I/O Interfaces	Serial Ports	2x RS-232/422/485 (rear I/O) 4x RS-232 pin headers
Ethernet		3x 2.5 Gigabit LAN	
LAN LEDs		LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I226LM with 10/100/1000/2500 Mbps, supports AMT/vPro LAN3: Intel® I226V with 10/100/1000/2500 Mbps	
SATA		8x SATA3 (6Gb/s)	
USB		5x USB 3.2 Gen2 1x USB 3.2 Gen2x2 (Connector type: Type C) 2x USB 3.1 via header 2x USB 2.0 via header 2x vertical USB 2.0 connectors	
Expansion Slots		2x PCIe x16 slots (Gen5, single x16 card in PCIe1, or two x8 cards in PCIe1 and PCIe4, PCIe1 supports riser card x8/x8) 2x PCIe x4 (Gen4) 3x PCIe x1 (Gen3)	
M.2 Connector		1x M.2 (Key M, up to 25110) with PCIe Gen4 x4 1x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi 1x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.2 Gen1, USB 2.0 and SIM	
SIM Socket		1x SIM socket connected to M.2 Key B	
DIO		8x GPI, 8x GPO (shared with LPT header)	
Parallel Port		1x LPT pin header	
PS/2		1x PS2 header	
TPM		TPM 2.0 onboard IC	
Audio		Audio	Realtek ALC897
		Interface	High Definition Audio. Line-in, Line-out, and Mic-in
Graphics		Controller	Intel® UHD Graphics
	VGA	1x VGA connector (rear I/O), resolution up to 1920 x 1200@60Hz	
	DP1.4a	1x DP++ connector (rear I/O), resolution up to 4096 x 2160@60Hz	
	HDMI 2.0b	1x HDMI connector (rear I/O), resolution up to 4096 x 2160@60Hz	
	MultiDisplay	Triple Display	

## Specifications

Power Requirements	Input PWR	ATX PWR (8+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
Watchdog Timer	Output	From Super I/O to drag RESETCON#
	Interval	256 Segments, 0, 1, 2, ...255sec
Mechanical and Environmental	Form Factor	ATX
	Dimension	305 mm x 244 mm (W x L)
	Operating Temperature	0 °C to 60 °C
	Storage Temperature	-40°C to 85°C
Relative Humidity	60 °C @ 90% RH, non-condensing	
Certification	CE & FCC Class B	