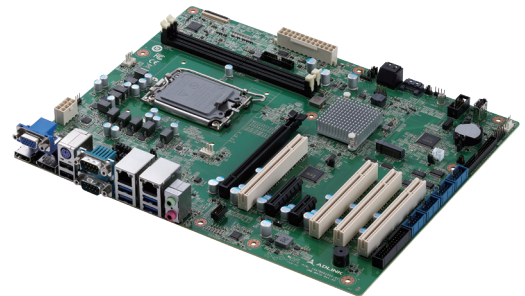


# IMB-M47H

Industrial ATX Motherboard for  
 12/13/14th Gen Intel® Core™ i9/i7/i5/i3 Processors

## Features

- Supports 12/13/14th Gen Intel® Core™ i9/i7/i5/i3 CPU
- Intel® H610E Chipset
- Dual-channel DDR5 4800MHz memory up to 64GB
- Triple independent display: 1x DP1.4a, 1x VGA, 1x HDMI 2.0b
- Dual GbE ports: 1x 1GbE (Intel® I219-LM), 1x 2.5GbE (Intel® I225-V)
- Expansion slots: 1x PCIe x16 Gen5, 1x PCIe x4 Gen3, 1x PCIe x1 Gen3, 4x PCI
- TPM 2.0 onboard



## Ordering Information

PN	Model Name	Chipset	Memory	PCIe x16	PCIe x4	PCIe x1	PCI	HDMI	DP	VGA	LAN	COM	SATA	M.2	USB2.0	USB3.0	TPM2.0
95-13014-10	IMB-M47H	H610E	DDR5 4800 MHz	1	1	1	4	1	1	1	2	6	3	1	5	4	Support

## Packing List

Description	QTY
IMB-M47H motherboard	1
IMB-M47H I/O shield	1
M.2 screw kit	1

## Embedded OS

PN	Description
92-56094-0010	Windows 10 IoT Ent LTSC 2021 High End PKEA
92-56094-2010	Windows 10 IoT Ent LTSC 2021 Value PKEA
92-56094-4010	Windows 10 IoT Ent LTSC 2021 Entry PKEA
92-56101-0010	Windows 11 IoT Ent 2022 High End PKEA
92-56101-2010	Windows 11 IoT Ent 2022 Value PKEA
92-56101-4010	Windows 11 IoT Ent 2022 Entry PKEA

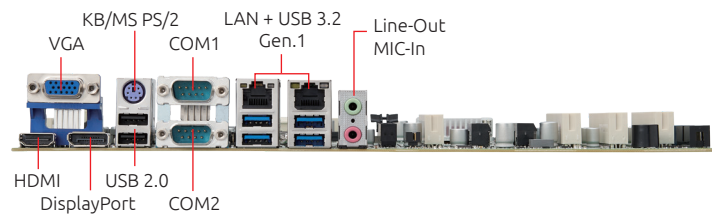
## Optional Accessories

PN	Description
32-20976-0000-A0	CPU cooler for 65W CPU
32-21041-0000-A0	CPU cooler for 125W CPU
30-10057-7000	SATA port cable (7-pin)
30-25010-3010	2-port USB 2.0 cable with bracket
30-25019-2000	1-port LPT cable with bracket
30-25003-3000	2-port COM cable with bracket
30-01016-2000	Y cable for PS/2 KB & mouse

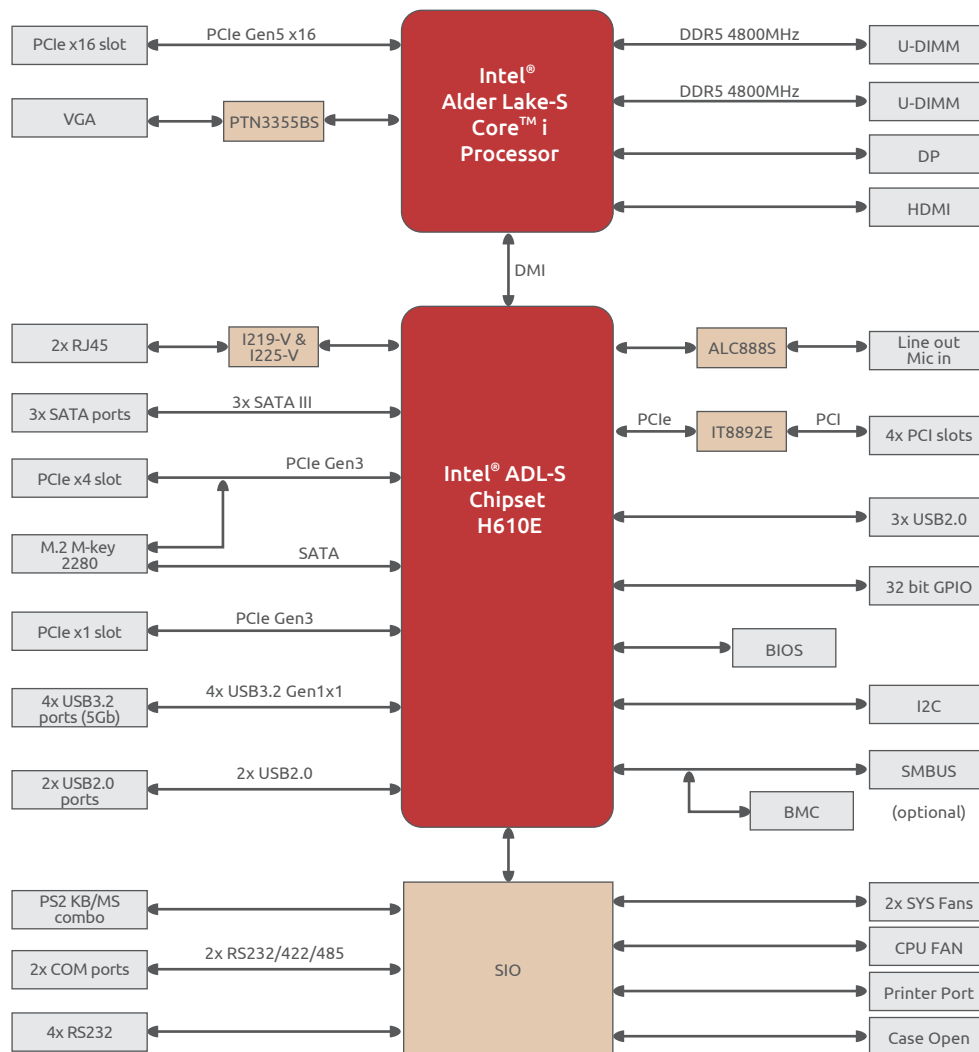
## Specifications

Model	IMB-M47H
<b>Processor System</b>	
CPU	Intel® 12/13/14th Gen Core™ i9/i7/i5/i3 Processors, up to 65W
Chipset	H610E
Memory	2x DDR5 UDIMMs 4800MHz, up to 64 GB, non-ECC
OS Support	Windows® 10/11 (64bit) Ubuntu LTS 20.04 (32/64bit)
<b>Display</b>	
VGA	1
HDMI	1
DisplayPort	1
No. of Displays	3
<b>Ethernet</b>	
Gbe Port	2
Controller/ Frequency	1x Intel® I219-V, 1Gbps 1x Intel® I225-V, 2.5Gps
<b>Storage</b>	
SATA	3x SATA 6Gb/s ports
RAID	-
<b>I/O Interfaces</b>	
USB	4x USB 3.2 Gen 1x1 ports (5Gbps) (rear I/O) 2x USB 2.0 ports (rear I/O) 1x USB 2.0 vertical type A ports for internal dongles 2x USB 2.0 via headers
COM	2x RS-232/422/485 (rear I/O) 4x RS-232 (pin header)
PS/2	1 (rear I/O)
Audio	Realtek ALC888S
LPT	1 (pin header)
GPIO	32x GPIO
TPM	Yes (TPM 2.0)
<b>Expansion Slots</b>	
PCIe	1x PCIe x16 Gen5 1x PCIe x4 Gen3 1x PCIe x1 Gen3
PCI	4
M.2	1x M.2 B/M-key, 2280 (support PCIe gen3 x 4, SATA)
<b>Mechanical and Environmental</b>	
Dimension	ATX (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
<b>Certification</b>	
	CE & FCC Class B

## Product Illustration



## Block Diagram



## CPU Support List

Family	Number	CPU Core	Frequency	Cache	Processor Base Power	Since BIOS
Raptor Lake-S Refresh	i9-14900	24 Core	5.8 GHz	36 MB	65 W	2.02.10
Raptor Lake-S Refresh	i9-14900T	24 Core	5.5 GHz	36 MB	35 W	2.02.10
Raptor Lake-S Refresh	i7-14700T	20 Core	5.2 GHz	33 MB	35 W	2.02.10
Raptor Lake-S Refresh	i7-14700	20 Core	5.4 GHz	33 MB	65 W	2.02.10
Raptor Lake-S Refresh	i5-14400	10 Core	4.7 GHz	20 MB	65 W	2.02.10
Raptor Lake-S Refresh	i5-14400T	10 Core	4.5 GHz	20 MB	35 W	2.02.10
Raptor Lake-S Refresh	i5-14500	14 Core	5.0 GHz	24 MB	65 W	2.02.10
Raptor Lake-S Refresh	i5-14500T	14 Core	4.8 GHz	24 MB	35 W	2.02.10
Raptor Lake-S Refresh	i3-14100T	4 Core	4.4 GHz	12 MB	35 W	2.02.10
Raptor Lake-S Refresh	i3-14100	4 Core	4.7 GHz	12 MB	65 W	2.02.10
Raptor Lake	i9-13900E	24 Cores	5.2 GHz	36 MB	65 W	2.02.10
Raptor Lake	i9-13900TE	24 Cores	5.0 GHz	36 MB	35 W	2.02.10
Raptor Lake	i9-13900	24 Cores	5.6 GHz	36 MB	65 W	2.02.10
Raptor Lake	i7-13700E	16 Cores	5.1 GHz	30 MB	65 W	2.02.10
Raptor Lake	i7-13700TE	16 Cores	4.8 GHz	30 MB	35 W	2.02.10
Raptor Lake	i7-13700	16 Cores	5.2 GHz	30 MB	65 W	2.02.10
Raptor Lake	i7-13700T	16 Cores	4.9 GHz	30 MB	35 W	2.02.10
Raptor Lake	i5-13500E	14 Cores	4.6 GHz	24 MB	65 W	2.02.10
Raptor Lake	i5-13500TE	14 Cores	4.5 GHz	24 MB	35 W	2.02.10
Raptor Lake	i5-13500	14 Cores	4.8 GHz	24 MB	65 W	2.02.10
Raptor Lake	i5-13500T	14 Cores	4.6 GHz	24 MB	35 W	2.02.10
Raptor Lake	i5-13400E	10 Cores	4.6 GHz	20 MB	65 W	2.02.10
Raptor Lake	i3-13100E	4 Cores	4.4 GHz	12 MB	65 W	2.02.10
Raptor Lake	i3-13100TE	4 Cores	4.1 GHz	12 MB	35 W	2.02.10
Raptor Lake	i3-13100	4 Cores	4.5 GHz	12 MB	60 W	2.02.10
Raptor Lake	i3-13100T	4 Cores	4.2 GHz	12 MB	35 W	2.02.10
Alder Lake	i9-12900E	16 Cores	5.0 GHz	30 MB	65 W	2.02.10
Alder Lake	i9-12900TE	16 Cores	4.8 GHz	30 MB	35 W	2.02.10
Alder Lake	i7-12700E	12 Cores	4.8 GHz	25 MB	65 W	2.02.10
Alder Lake	i7-12700TE	12 Cores	4.7 GHz	25 MB	35 W	2.02.10
Alder Lake	i7-12700	12 Cores	4.9 GHz	25 MB	65 W	2.02.10
Alder Lake	i5-12500E	6 Cores	4.5 GHz	18 MB	65 W	2.02.10
Alder Lake	i5-12500TE	6 Cores	4.3 GHz	18 MB	35 W	2.02.10
Alder Lake	i5-12500	6 Cores	4.6 GHz	18 MB	65 W	2.02.10
Alder Lake	i5-12400	6 Cores	4.4 GHz	18 MB	65 W	2.02.10
Alder Lake	i3-12100E	4 Cores	4.2 GHz	12 MB	65 W	2.02.10
Alder Lake	i3-12100TE	4 Cores	4.0 GHz	12 MB	35 W	2.02.10
Alder Lake	G7400E	2 Cores	3.6 GHz	6 MB	46 W	2.02.10
Alder Lake	G7400TE	2 Cores	3.0 GHz	6 MB	35 W	2.02.10
Alder Lake	G6900E	2 Cores	3.0 GHz	4 MB	46 W	2.02.10
Alder Lake	G6900TE	2 Cores	2.4 GHz	4 MB	35 W	2.02.10