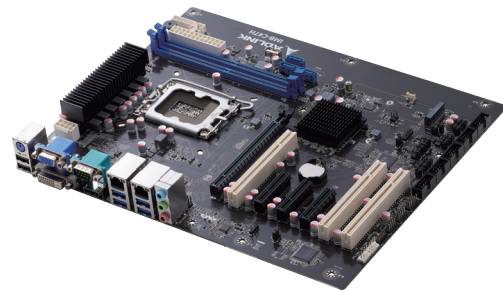


IMB-C47H

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

Features

- 14/13/12th Gen Intel® Core™ i9/i7/i5/i3 processors with H610 chipset
- 2x DDR4 3200 MHz memory up to 64GB
- Three independent displays: DVI-D, HDMI, VGA
- Dual GbE ports: 2x 1GbE
- Expansion slots: PCIe x16, PCIe x4, PCI, M.2 M-key 2242/2280



Ordering Information

PN	Model Name	Chipset	Memory	PCIe x16	PCIe x4	PCI	DVI	HDMI	VGA	LAN	COM	SATA	M.2	USB2.0	USB3.0 (Gen1)	RAID
95-13020-0000	IMB-C47H	H610	Non-ECC DDR4 3200 MHz	1	3	3	1	1	1	2	6	3	1 (SATA)	6	4	No
95-13020-1000	IMB-C47H/NVMe	H610	Non-ECC DDR4 3200 MHz	1	2	3	1	1	1	2	6	4	1 (NVMe)	6	4	No

Packing List

PN	Description	QTY
95-13020-0000	IMB-C47H	1
N/A	I/O bracket	1
95-13020-1000	IMB-C47H/NVMe	1
N/A	I/O bracket	1

Optional Accessories

PN	Description
32-20976-0000-A0	CPU cooler for 65W CPU
30-25010-3010	USB 2.0 Cable (2 ports)
30-25009-3000	USB 2.0 Cable (4 ports)
30-10057-7000	SATA Cable
30-25003-3000	COM Cable (2 ports, L=450mm)
30-25003-5000-A0	COM Cable (2 ports, L=600mm)

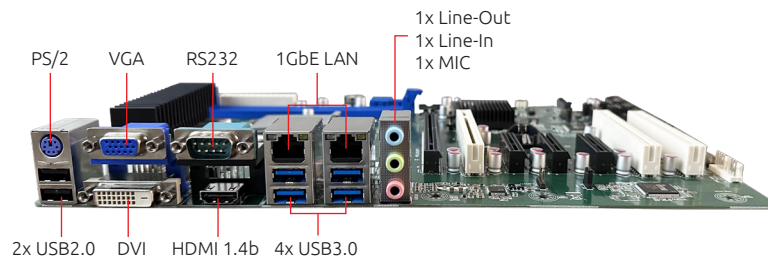
Embedded OS

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

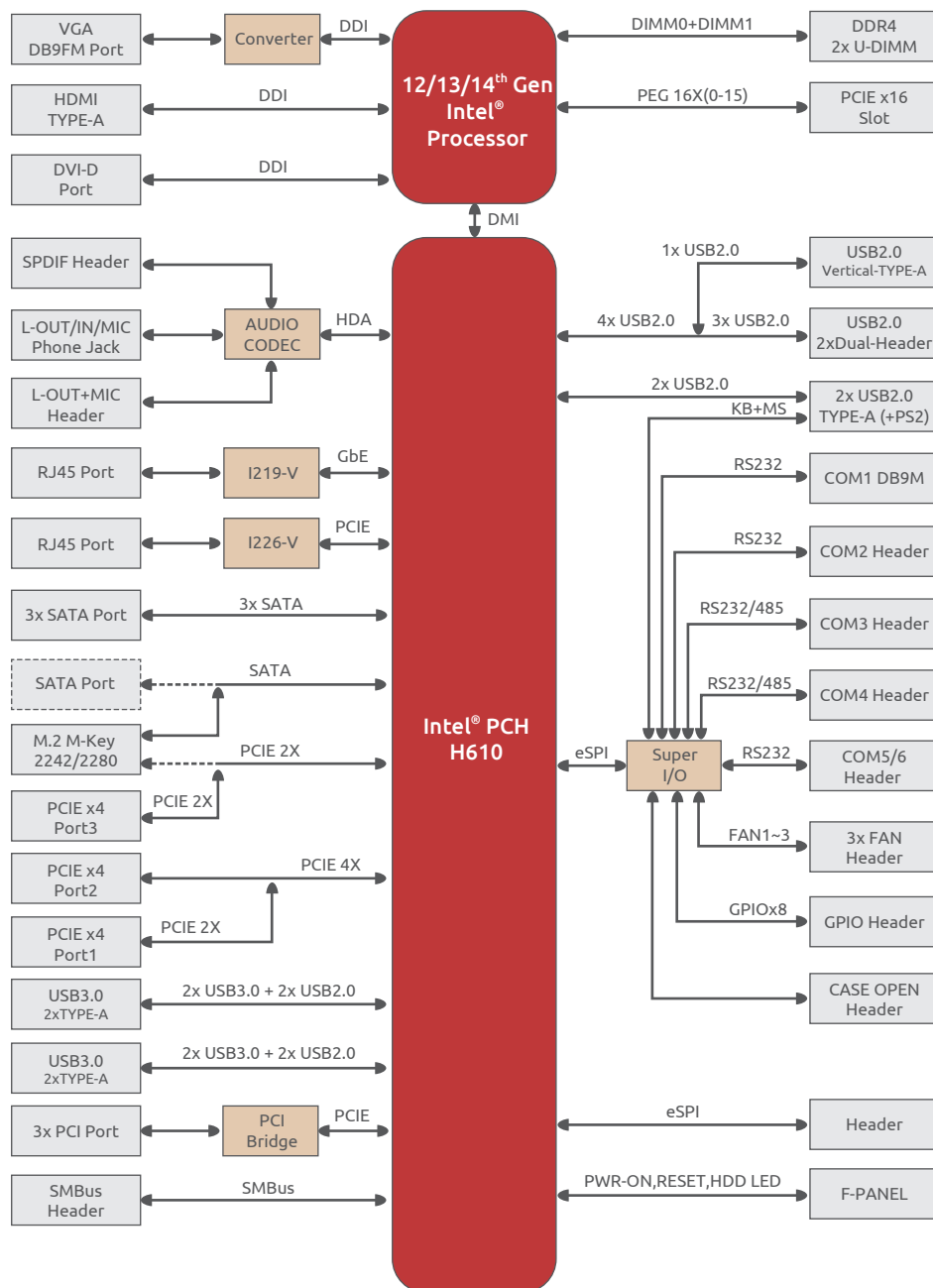
Specifications

Model	IMB-C47H
Processor System	
CPU	14/13/12th Generation Intel® Core™ i9/i7/i5/i3 LGA1700 CPU, up to 65W
Chipset	Intel® H610 Chipset
Memory	2x 288-pin non-ECC U-DIMM sockets Dual-channel DDR4 3200 MHz, up to 64 GB
BIOS	BIOS AMI® UEFI BIOS, 256Mb SPI Flash Memory
Hardware Monitor	CPU voltage +3.3 V voltage +5 V voltage +12 V voltage CPU temperature System temperature CPU fan speed System fan speed
Operating Systems	Microsoft® Windows® 10/11 64-bit
I/O Interfaces	
Serial Ports	2x RS-232/485 by pin header 4x RS-232 (COM1 by DB9/M, others via headers)
Ethernet	1x Intel® I226-V, 1GbE 1x Intel® I219-V, 1GbE
SATA	4x SATA signal (SATA1 colay with M.2 M-key 2242/2280, BOM selection) • IMB-C47H: 3x SATA3.0 connectors • IMB-C47H/NVMe: 4x SATA3.0 connectors
USB	4x USB 3.0 (rear I/O) 2x USB 2.0 (rear I/O) 4x USB 2.0 (via headers, 1x colay with vertical typeA)
Expansion Slots	3x PCI 1x PCIe Gen4 x16 3x PCIe x4 (Support PCIe Gen3 x2 signal, slot3 co-lay with M.2 M-key 2242/2280, BOM selection) • IMB-C47H: 3x PCIe x4 slot • IMB-C47H/NVMe: 2x PCIe x4 slot 1x M.2 M-key 2242/2280 (Support SATA/NVMe SSD, BOM selection) • IMB-C47H: Support SATA SSD • IMB-C47H/NVMe: Support NVMe SSD
DIO	8-bit GPIO
PS/2	1x PS/2 keyboard & mouse pin header
Audio	
Audio Codec	Realtek ALC897
Interface	1x Line-out, 1x Line-in, and 1x Mic-in connector (rear I/O)
Graphics	
Multiple Display	Three Displays
DVI	1x DVI-D (DVI-I), max resolution up to 1920x1200@60Hz
HDMI	1x HDMI 1.4b, max resolution up to 4096x2160@30Hz
VGA	1x VGA, max resolution up to 1920x1200@60Hz
Mechanical and Environmental	
Form Factor	ATX
Dimensions	305 mm x 244 mm (W x L)
Operating Temperature	0°C to 60°C
Storage Temperature	-20°C to 75°C
Relative Humidity	
	60°C @ 95% RH, Non-condensing
Certification	
	CE & FCC Class A

Product Illustration



Block Diagram



CPU Support List

Family	Number	CPU Core	Frequency (GHz)	Cache (MB)	Power	Since BIOS
Raptor Lake-S Refresh	i9-14900T	24	1.1GHz	36MB	35	1.00.10
Raptor Lake-S Refresh	i9-14900	24	2.0GHz	36MB	65	1.00.10
Raptor Lake-S Refresh	i7-14700T	20	1.3GHz	33MB	35	1.00.10
Raptor Lake-S Refresh	i7-14700	20	2.1GHz	33MB	65	1.00.10
Raptor Lake-S Refresh	i5-14500T	14	1.7GHz	24MB	35	1.00.10
Raptor Lake-S Refresh	i5-14500	14	2.6GHz	24MB	65	1.00.10
Raptor Lake-S Refresh	i5-14400	10	2.5GHz	20MB	65	1.00.10
Raptor Lake-S Refresh	i3-14100T	4	2.7GHz	12MB	35	1.00.10
Raptor Lake-S Refresh	i3-14100	4	3.5GHz	12MB	60	1.00.10
Raptor Lake-S	i9-13900E	24	1.8GHz	36MB	65	1.00.10
Raptor Lake-S	i9-13900	24	2.0GHz	36MB	65	1.00.10
Raptor Lake-S	i7-13700E	16	1.9GHz	30MB	65	1.00.10
Raptor Lake-S	i7-13700	16	2.1GHz	30MB	65	1.00.10
Raptor Lake-S	i7-13700TE	16	1.1GHz	30MB	35	1.00.10
Raptor Lake-S	i7-13700T	16	1.4GHz	30MB	35	1.00.10
Raptor Lake-S	i5-13600	14	2.0GHz	24MB	65	1.00.10
Raptor Lake-S	i5-13500E	14	2.4GHz	24MB	65	1.00.10
Raptor Lake-S	i5-13500	14	2.5GHz	24MB	65	1.00.10
Raptor Lake-S	i5-13500T	14	1.6GHz	24MB	35	1.00.10
Raptor Lake-S	i5-13400	10	1.8GHz	20MB	65	1.00.10
Raptor Lake-S	i3-13100E	4	3.3GHz	12MB	60	1.00.10
Raptor Lake-S	i3-13100	4	3.4GHz	12MB	60	1.00.10
Raptor Lake-S	i3-13100T	4	2.5GHz	12MB	35	1.00.10
Alder Lake-S	i9-12900E	16	2.3GHz	30MB	65	1.00.10
Alder Lake-S	i9-12900	16	2.4GHz	30MB	65	1.00.10
Alder Lake-S	i7-12700E	12	2.1GHz	25MB	65	1.00.10
Alder Lake-S	i7-12700	12	1.6GHz	25MB	65	1.00.10
Alder Lake-S	i7-12700TE	12	1.4GHz	25MB	35	1.00.10
Alder Lake-S	i5-12500	6	3.0GHz	18MB	65	1.00.10
Alder Lake-S	i5-12500E	6	2.9GHz	18MB	65	1.00.10
Alder Lake-S	i5-12400	6	2.5GHz	18MB	65	1.00.10
Alder Lake-S	i3-12100E	4	3.2GHz	12MB	60	1.00.10
Alder Lake-S	i3-12100	4	3.3GHz	12MB	60	1.00.10
Alder Lake-S	i3-12100TE	4	2.1GHz	12MB	35	1.00.10
Alder Lake-S	G7400TE	2	3.0GHz	6MB	35	1.00.10