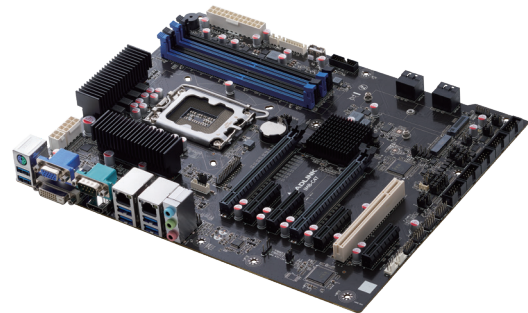


IMB-C47

Industrial ATX Motherboard supporting
 Intel® Core™ Series 2 Processors and 14/13/12th Gen Intel® Core™ Processors

Features

- Value Series Industrial ATX Motherboard supporting Intel® Core™ Series 2 Processors and 14/13/12th Gen Intel® Core™ Processors with Q670 Chipset
- 4x DDR5 4400MHz memory up to 128 GB
- Four independent display: DVI-D, HDMI, VGA, eDP
- Dual GbE ports: 1x 1GbE, 1x 2.5GbE
- Expansion slots: 2x PCIe x16, 4x PCIe x4, 1x PCI, 1x M.2 E-key 2230, 1x M.2 M-key 2242/2280



Ordering Information

PN	Model Name	Chipset	Memory	PCIe x16	PCIe x4	PCI	DVI	HDMI	VGA	eDP	LAN	COM	SATA	M.2	USB2.0	USB3.0 (Gen1)	RAID
95-13019-00	IMB-C47	Q670	Non-ECC DDR4 3200 MHz	2	4	1	1	1	1	1	2	6	4	2	5	8	Yes
95-13019-10	IMB-C47/DDR5	Q670	Non-ECC DDR5 4400 MHz	2	4	1	1	1	1	1	2	6	4	2	5	8	Yes

Packing List

PN	Description	QTY
95-13019-00	IMB-C47	1
N/A	IMB-C47 I/O Shield	1
95-13019-10	IMB-C47/DDR5	1
N/A	IMB-C47/DDR5 I/O Shield	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
92-56102-0010	Windows 11 IoT Ent LTSC 2024 High End PKEA
92-56102-2010	Windows 11 IoT Ent LTSC 2024 Value PKEA
92-56102-4010	Windows 11 IoT Ent LTSC 2024 Entry PKEA

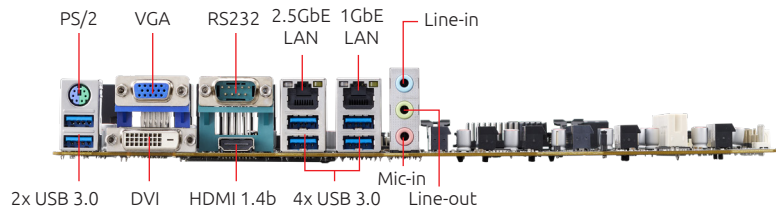
Optional Accessories

PN	Description
32-21041-0000-A0	CPU cooler for 125W CPU
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)
30-25046-0100	USB 3.0 Cable (2 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)

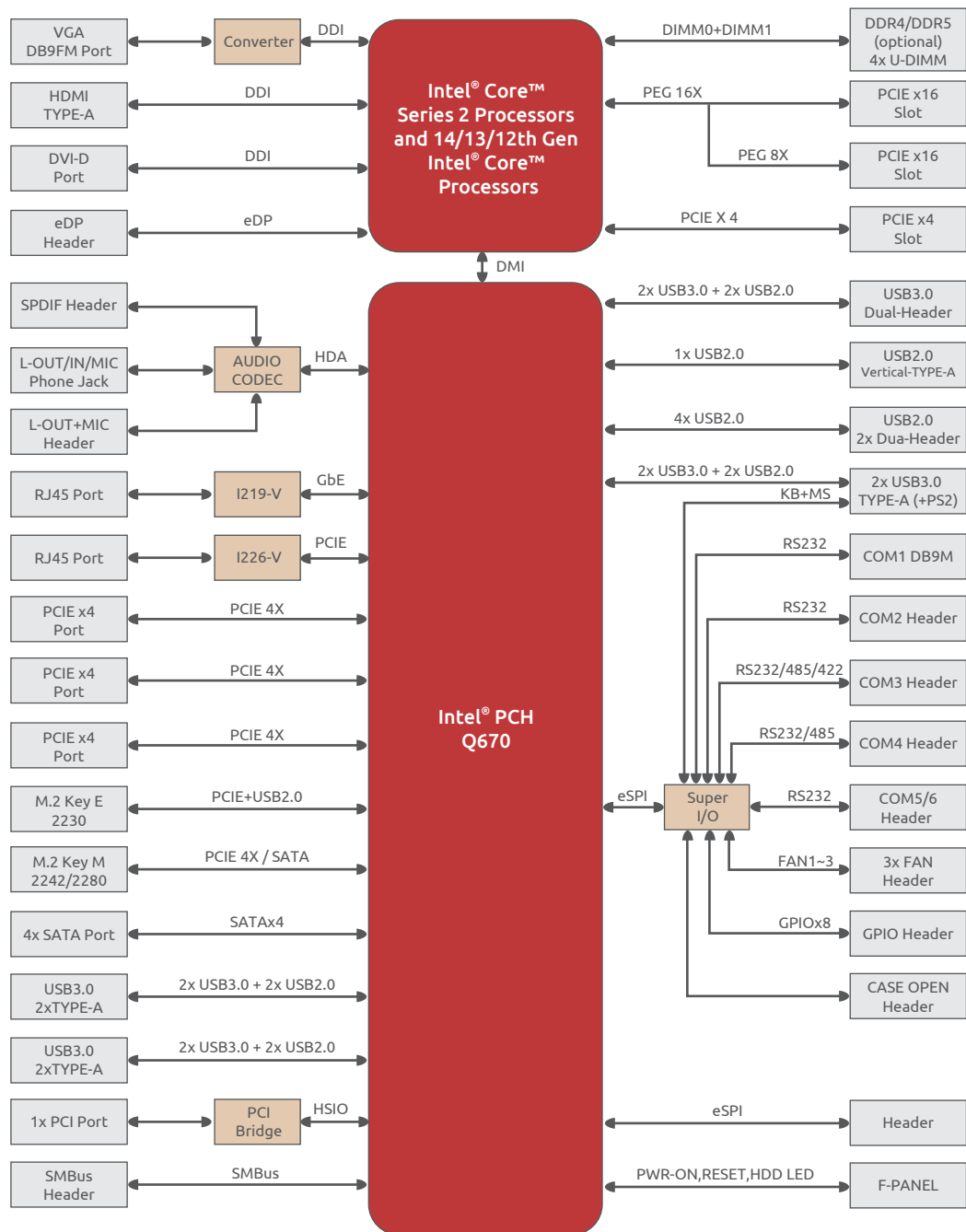
Specifications

Model	IMB-C47		IMB-C47/DDR5
Processor System			
CPU	Intel® Core™ Series 2 Processors and 14/13/12th Gen Intel® Core™ Processors, LGA1700, up to 125W		
Chipset	Intel® Q670 Chipset		
Memory	4x 288-pin non-ECC U-DIMM sockets, Dual-channel DDR4 3200MHz, up to 128GB	4x 288-pin non-ECC U-DIMM sockets, Dual-channel DDR5 4400MHz, up to 192GB	
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	1x RS-232/422/485 (via header) 1x RS-232/485 (via header) 4x RS-232 (COM1 by DB9/M, others via headers)		
Ethernet	1x Intel® I226-V, 2.5GbE 1x Intel® I219-V, 1GbE		
SATA	4x SATA3.0 connectors Intel® Software RAID support 0/1/5/10		
USB	6x USB 3.0 (rear I/O) 2x USB 3.0 (via header) 4x USB 2.0 (via header) 1x USB 2.0 (vertical TypeA, internal)		
Expansion Slots	2x PCIe x16 (Support PCIe Gen4 x8 signal)	2x PCIe x16 (Support 2x PCIe Gen4 x8 or 1x PCIe Gen4 x16 signal)	
	4x PCIe x4 (Support 3x PCIe Gen4 x4 and 1x PCIe Gen3 x4 signal) 1x PCI 1x M.2 E-key 2230 (PCIe Gen3 x1, USB 2.0, CNVi) for Wi-Fi/Bluetooth Module 1x M.2 M-key 2242/2280 (PCIe Gen4 x4 NVMe/SATA Auto Detect) for 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	Four 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		
eDP	1x eDP (via header), max resolution up to 4096x2304 @ 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
Bartlett Lake-S	273PQE	12	3.4 GHz	36MB	125	2.01.10
Bartlett Lake-S	273PE	12	2.3GHz	36MB	65	2.01.10
Bartlett Lake-S	273PTE	12	1.4GHz	36MB	45	2.01.10
Bartlett Lake-S	253PQE	10	3.5 GHz	33MB	125	2.01.10
Bartlett Lake-S	253PE	10	2.5GHz	33MB	65	2.01.10
Bartlett Lake-S	253PTE	10	1.8GHz	33MB	45	2.01.10
Bartlett Lake-S	223PQE	8	4.0GHz	24MB	125	2.01.10
Bartlett Lake-S	223PE	8	2.9GHz	24MB	65	2.01.10
Bartlett Lake-S	223PTE	8	2.3GHz	24MB	45	2.01.10
Bartlett Lake-S	213PE	8	2.7GHz	24MB	65	2.01.10
Bartlett Lake-S	213PTE	8	2.1GHz	24MB	45	2.01.10
Bartlett Lake-S	251E	24	2.1 GHz	36MB	65	2.00.10
Bartlett Lake-S	251TE	24	1.4 GHz	36MB	45	2.00.10
Bartlett Lake-S	221E	14	2.7 GHz	24MB	65	2.00.10
Bartlett Lake-S	221TE	14	1.8 GHz	24MB	45	2.00.10
Bartlett Lake-S	211E	10	2.7 GHz	20MB	65	2.00.10
Bartlett Lake-S	211TE	10	1.7 GHz	20MB	45	2.00.10
Bartlett Lake-S	201E	4	3.6 GHz	12MB	60	2.00.10
Bartlett Lake-S	201TE	4	2.9 GHz	12MB	45	2.00.10
Raptor Lake-S Refresh	i9-14900K	24	3.2GHz	36MB	125	1.00.10
Raptor Lake-S Refresh	i9-14900	24	2.0GHz	36MB	65	1.00.10
Raptor Lake-S Refresh	i9-14900T	24	1.1GHz	36MB	35	1.00.10
Raptor Lake-S Refresh	i7-14700K	20	3.4GHz	33MB	125	1.00.10
Raptor Lake-S Refresh	i7-14700	20	2.1GHz	33MB	65	1.00.10
Raptor Lake-S Refresh	i7-14700T	20	1.3GHz	33MB	35	1.00.10
Raptor Lake-S Refresh	i5-14600K	14	3.5GHz	24MB	125	1.00.10
Raptor Lake-S Refresh	i5-14500	14	2.6GHz	24MB	65	1.00.10
Raptor Lake-S Refresh	i5-14500T	14	1.7GHz	24MB	35	1.00.10
Raptor Lake-S Refresh	i5-14400	10	2.5GHz	20MB	65	1.00.10
Raptor Lake-S Refresh	i3-14100	4	3.5GHz	12MB	60	1.00.10
Raptor Lake-S Refresh	i3-14100T	4	2.7GHz	12MB	35	1.00.10
Raptor Lake-S Refresh	300	2	3.9GHz	6MB	46	1.00.10
Raptor Lake-S Refresh	300T	2	3.4GHz	6MB	35	1.00.10
Raptor Lake-S	i9-13900K	24	3.0GHz	36MB	125	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	i9-13900TE	24	1.0GHz	36MB	35	1.00.10
Raptor Lake-S	i7-13700K	16	2.5GHz	30MB	125	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	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	i5-13500TE	14	1.3GHz	24MB	35	1.00.10
Raptor Lake-S	i5-13400E	10	2.4GHz	20MB	65	1.00.10
Raptor Lake-S	i5-13400	10	2.5GHz	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	i3-13100TE	4	2.4GHz	12MB	35	1.00.10

CPU Support List

Family	Number	CPU Core	Frequency (GHz)	Cache (MB)	Power	Since BIOS
Alder Lake-S	i9-12900K	16	2.4GHz	30MB	125	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	i9-12900TE	16	1.1GHz	30MB	35	1.00.10
Alder Lake-S	i7-12700K	12	2.7GHz	25MB	125	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	i5-12500E	6	2.9GHz	18MB	65	1.00.10
Alder Lake-S	i5-12500	6	3.0GHz	18MB	65	1.00.10
Alder Lake-S	i5-12500TE	6	1.9GHz	18MB	35	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	G7400E	2	3.6GHz	6MB	46	1.00.10
Alder Lake-S	G7400TE	2	3.0GHz	6MB	35	1.00.10
Alder Lake-S	G6900E	2	3.0GHZ	4MB	46	1.00.10
Alder Lake-S	G6900TE	2	2.4GHz	4MB	35	1.00.10