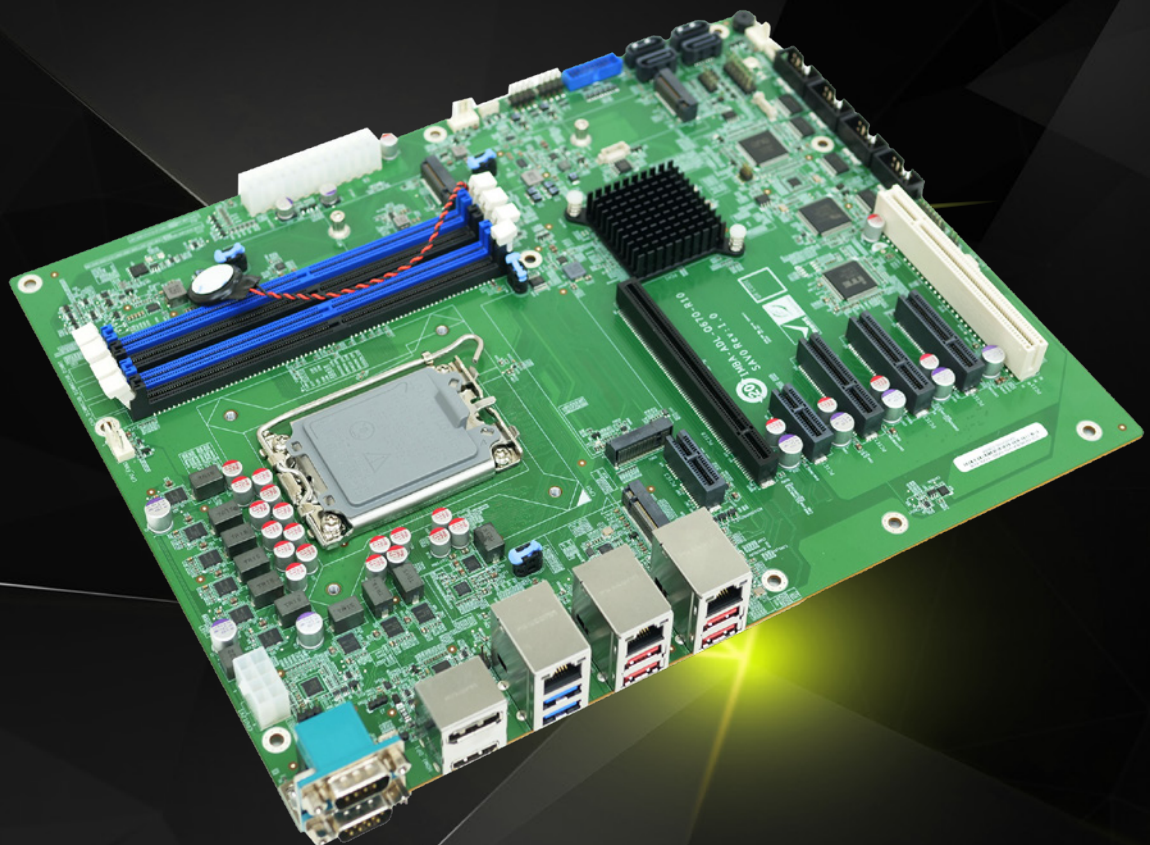


# IMBA-ADL-Q670

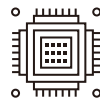
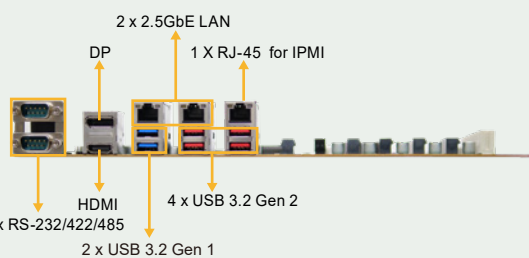
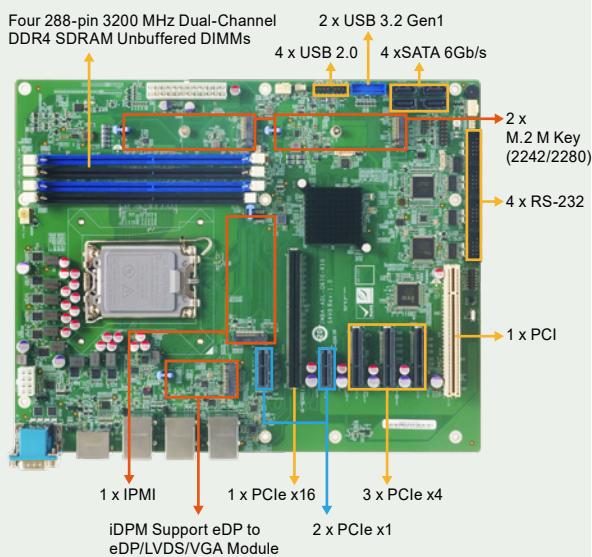
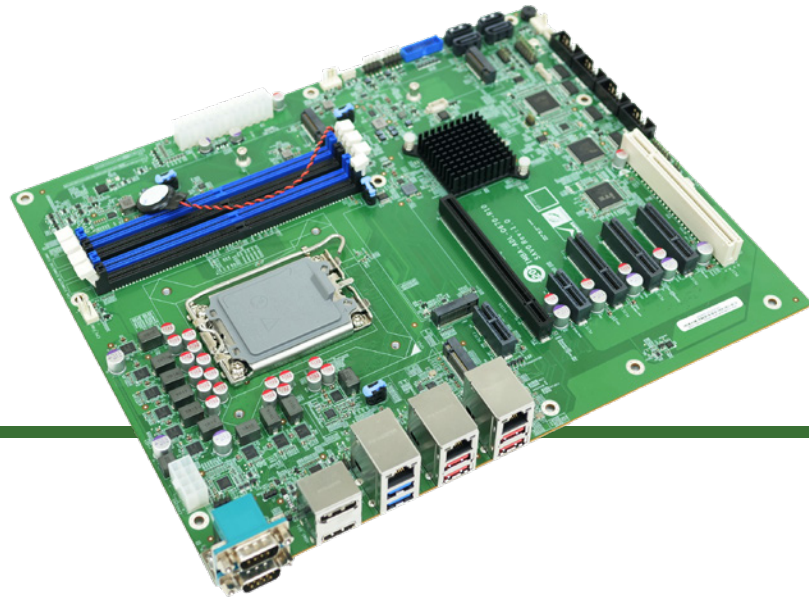
**ATX motherboard supports LGA1700 Intel® 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor**

- LGA1700 Intel® 12th/13th Generation Core i9/i7/i5/i3, Pentium and Celeron processor ((up to 125W))
- Dual-channel DDR4 3200MHz
- Support DisplayPort 1.4a, HDMI&iDPM module
- Support two M.2 M keys for storage
- Support one PCIe x16, three PCIe x4, two PCIe x1, one PCI for expansions



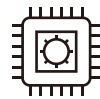
# IMBA-ADL-Q670

ATX motherboard supports LGA1700 Intel® 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR4, Triple independent displays, dual 2.5GbE LAN, M.2, USB 3.2, SATA 6Gb/s, IPMI, HD Audio and RoHS



## Support 12th/13th Gen Intel® Core™ CPU

Support LGA1700 socket 12th/13th generation Alder Lake-S/Raptor Lake-S Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 125W TDP CPU), up to 16cores/24threads for outstanding Multi Threaded performance



## Support Intel® I225V 2.5GbE Ethernet Controller

Support two RJ45 network interface via Intel® I225v 2.5GbE network controller to achieve up to 2.5GbE network transmission



## Rich Expansion I/O

It includes one PCIe x16, three PCIe x4, two PCIe x1 and one PCI slots for functional expansions like graphics cards, LAN cards or motion control cards

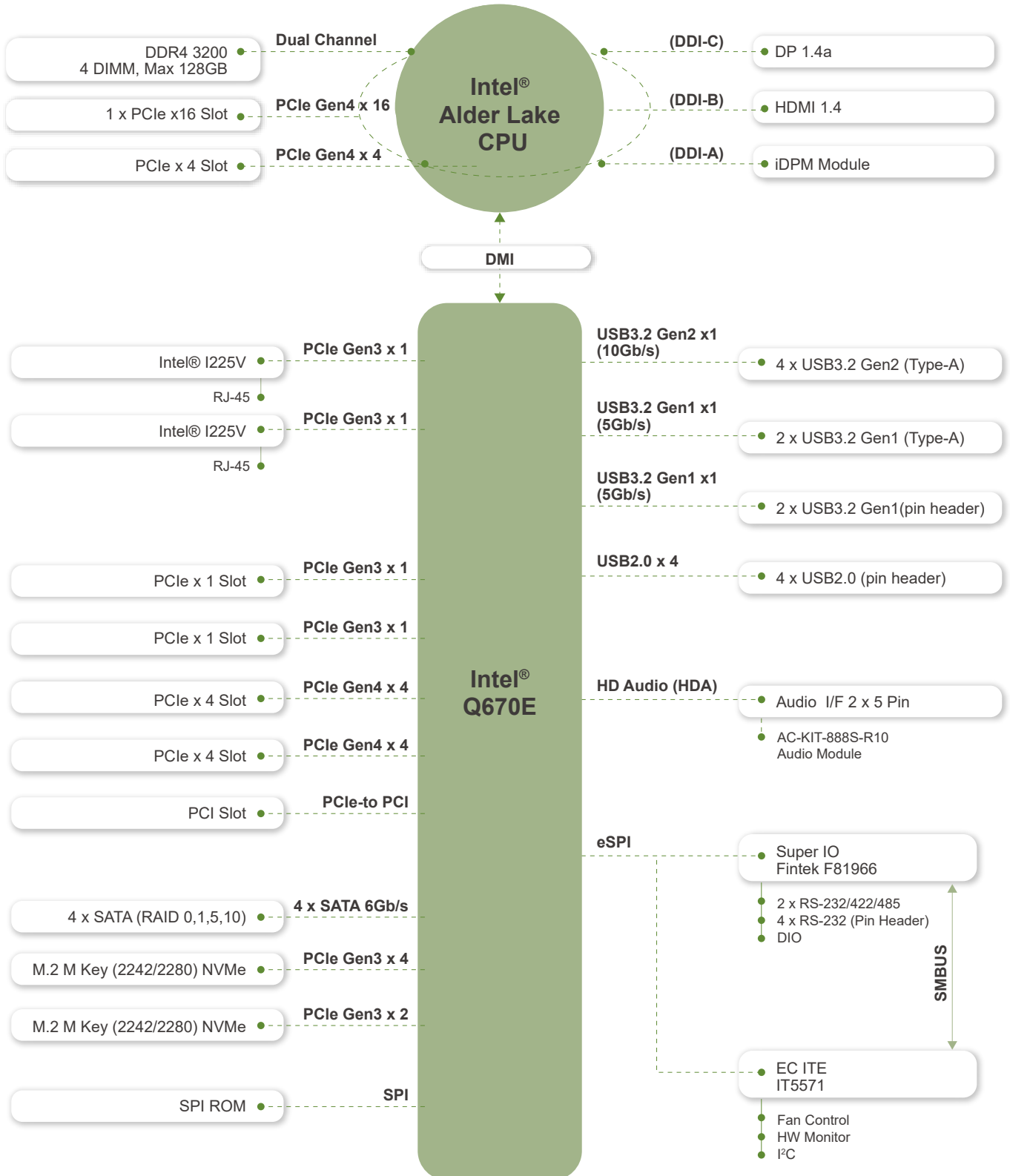


## Support Four SATA for Storage

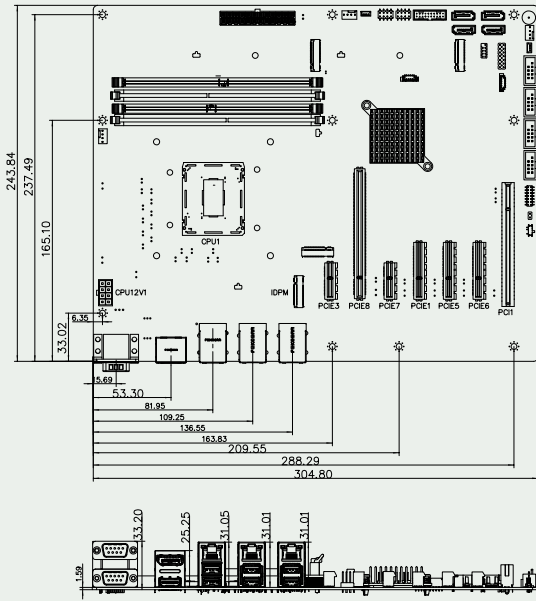
It supports 4 x SATA 6Gb/s, and RAID 0/1/5/10 supported. Otherwise, there are 2 x M.2 M key with PCIe signal support NVMe storage



# IMBA-ADL-Q670 Block Diagram



Dimensions



Optional accessories



Specifications

Model	IMBA-ADL-Q670
CPU	LGA1700 socket supports 12th/13th generation Alder Lake-S/Raptor Lake-S Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 125W TDP CPU)
Chipset	Intel® Q670/Q670E
BIOS	AMI UEFI BIOS
Memory	Four 288-pin 3200 MHz Dual-Channel DDR4 SDRAM Unbuffered DIMMs supported up to 128GB
Graphics Engine	Intel® UHD Graphics
Display Output	Triple independent display 1 x DP 1.4a (up to 4096 x 2304 @60Hz) 1 x HDMI 1.4 (up to 4096 x 2304 @30Hz) 1 x IDPM support IEI eDP/ LVDS/ VGA module
Ethernet	LAN1: Intel® I225V 2.5GbE controller (CO-LAY I225-LM support vPro) LAN2: Intel® I225V 2.5GbE controller (CO-LAY I225-LM support vPro)
External I/O Interface	4 x USB 3.2 Gen2 (Type-A) (10Gb/s) 2 x USB 3.2 Gen1 (Type-A) (5Gb/s) 2 x RS-232/422/485 (RS-485 support AFC)
Internal I/O Interface	4 x SATA 6Gb/s (RAID 0/1/5/10 supported) 4 x USB 2.0 (2x4 pin, P=2.54) 2 x USB 3.2 Gen1 (2 x 10pin P=2.00 pin wafer ) (5Gb/s) 4 x RS-232 (2x5 pin, P=2.54)
SMBus	1 x SMBus (1x4 pin)
I <sup>2</sup> C	1 x I <sup>2</sup> C (1x4 pin)
Audio	1 x IAUDIO, support IEI AC-KIT-888S Audio Module (2x5 pin)
Front Panel	1 x Front Panel (2x7 pin, Power LED, HDD LED, Speaker, Power Button, Reset Button)
LAN LED	2 x LAN LED (1x2 pin)
Expansion	**1 x PCIe Gen4 x16 slot **1 x PCIe Gen4 x4 open-end slot 2 x PCIe Gen4 x4 open-end slot 2 x PCIe Gen3 x1 slot 1 x PCI slot 1 x M.2 M Key (2242/2280, PCIe x4 ) NVMe support 1 x M.2 M Key (2242/2280, PCIe x2 for SSD) NVMe support
Digital I/O	1 x 12-bit digital I/O (2x7 pin)
TPM	Intel® PTT
IPMI	1 x IPMI slot support Intelligent platform management
FAN connector	1 x CPU fan connector (1x4 pin) 2 x System fan connector (1x4 pin)
Chassis Open	1 x Chassis intrusion (1x2 pin)
Power supply	ATX/AT power supply Support AT/ATX mode ErP/EuP Compliant
Watchdog Timer	Software Programmable support 1~255 sec. System reset
Power Consumption	3.3V@1.04A, 5V@10.38A, 12V@5.76A, 5VSB@0.39A (Intel® Core™ i9-12900E CPU with 8 GB 3200 MHz DDR4 memory, EuP mode enabled)
Operating Temperature	0°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Dimensions	244mm x 305mm
Weight	GW:1200g / NW:700g

\*\*Intel® recommends that Alder Lake-S CPU PCIe ports are only used for discrete graphics and storage devices

Packing List

1 x IMBA-ADL-Q670 single board computer	2 x SATA cable
1 x I/O shielding	1 x QIG

Ordering Information

IMBA-ADL-Q670-R10	ATX motherboard supports LGA1700 Intel® 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR4, Triple independent displays, dual 2.5GbE LAN, M.2, USB 3.2, SATA 6Gb/s, IPMI, HD Audio and RoHS
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Optional Accessories

19800-003100-100-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0 cable 450mm with bracket
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-000702-200-RS	RS-232 cable, 230mm, P=2.54
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS
iDPM-eDP-R10	eDP to eDP DisplayPort converter board (for IEI iDPM connector)
iDPM-VGA-R10	eDP to VGA Connector converter board (For IEI Display Module)
19100-000323-00-RS	High-performance LGA1700 cooler: 65W, 72*70*25.5mm
19100-000319-00-RS	High-performanc 1 U LGA1700 cooler, 65W, 95*90*27.45mm
19100-000333-00-RS	High-performance LGA1700 cooler, 80W, 72*48.5*73.5mm
19100-000326-00-RS	High-performance LGA1700 cooler, 125W, 87.8*66.5*75mm
19100-000327-00-RS	High-performance LGA1700 cooler, 125W, 96.5*91.4*119.5mm
19100-000328-00-RS	High-performance LGA1700 cooler, 125W, 92*92*25mm