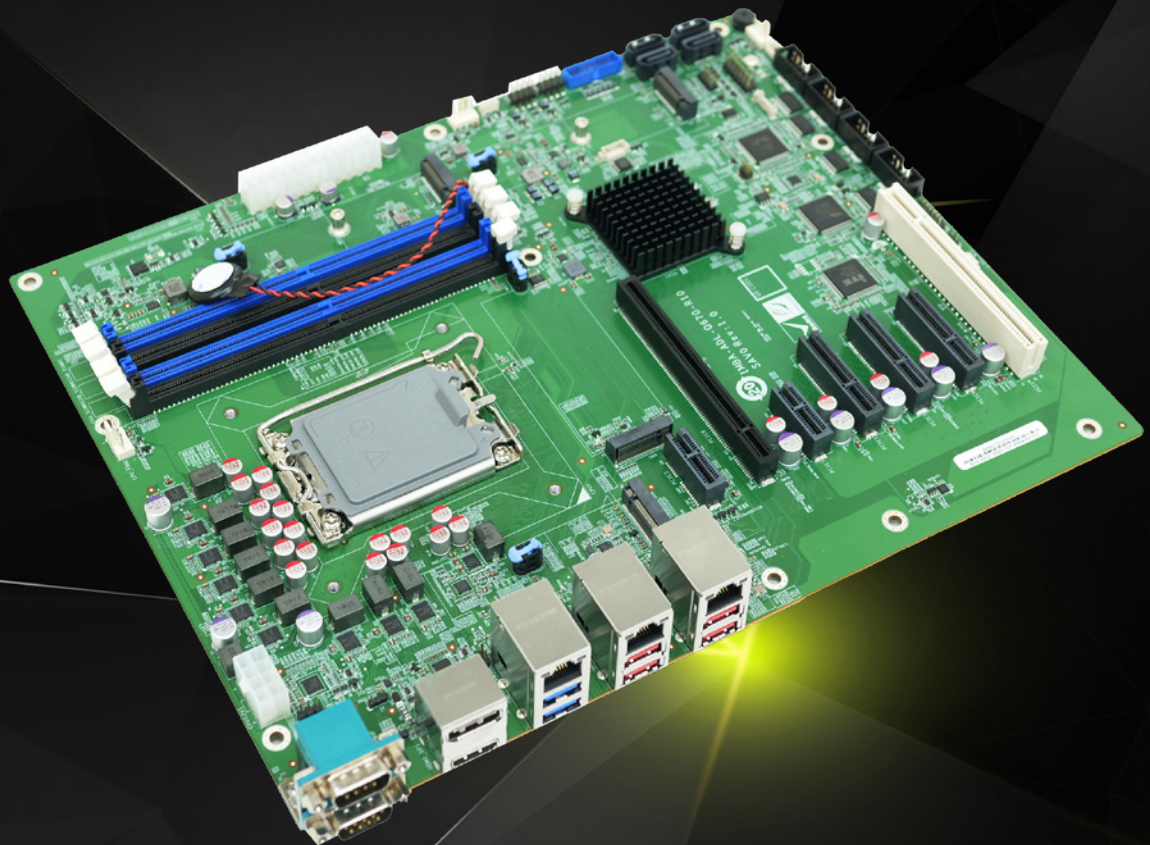


# IMBA-ADL-Q670

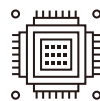
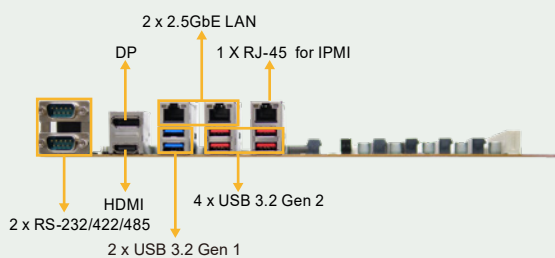
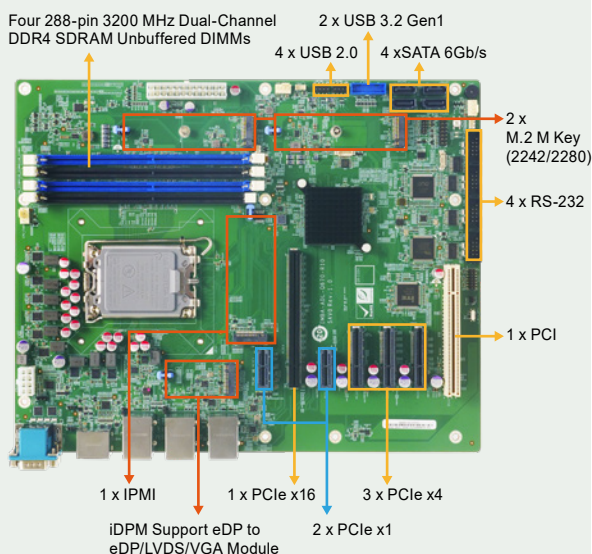
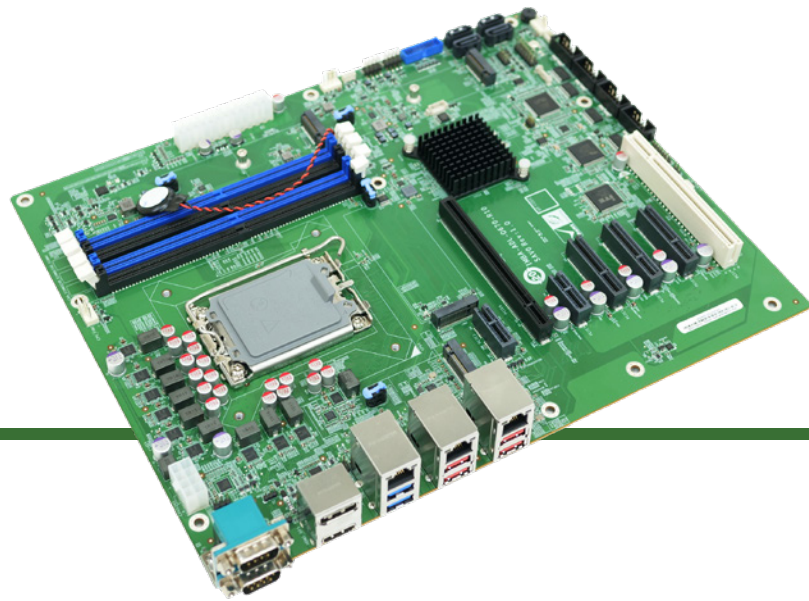
ATX motherboard supports LGA1700 Intel® 12th/13th/14th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor

- LGA1700 Intel® 12th/13th/14th Generation Core i9/i7/i5/i3, Pentium and Celeron processor
- 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



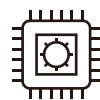
# IMBA-ADL-Q670

ATX motherboard supports LGA1700 Intel® 12th/13th/14th 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/14th Gen Intel® Core™ CPU

Support LGA1700 socket 12th/13th/14th generation Alder Lake-S/Raptor Lake-S Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 125W TDP CPU), up to 24cores/32threads for outstanding Multi Threaded performanc



## Support Intel® I225V/I226V 2.5GbE Ethernet Controller

Support two RJ45 network interface via Intel® I225V/I226V 2.5GbE network controller to achieve up to 2.5GbE network transmissio



## 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

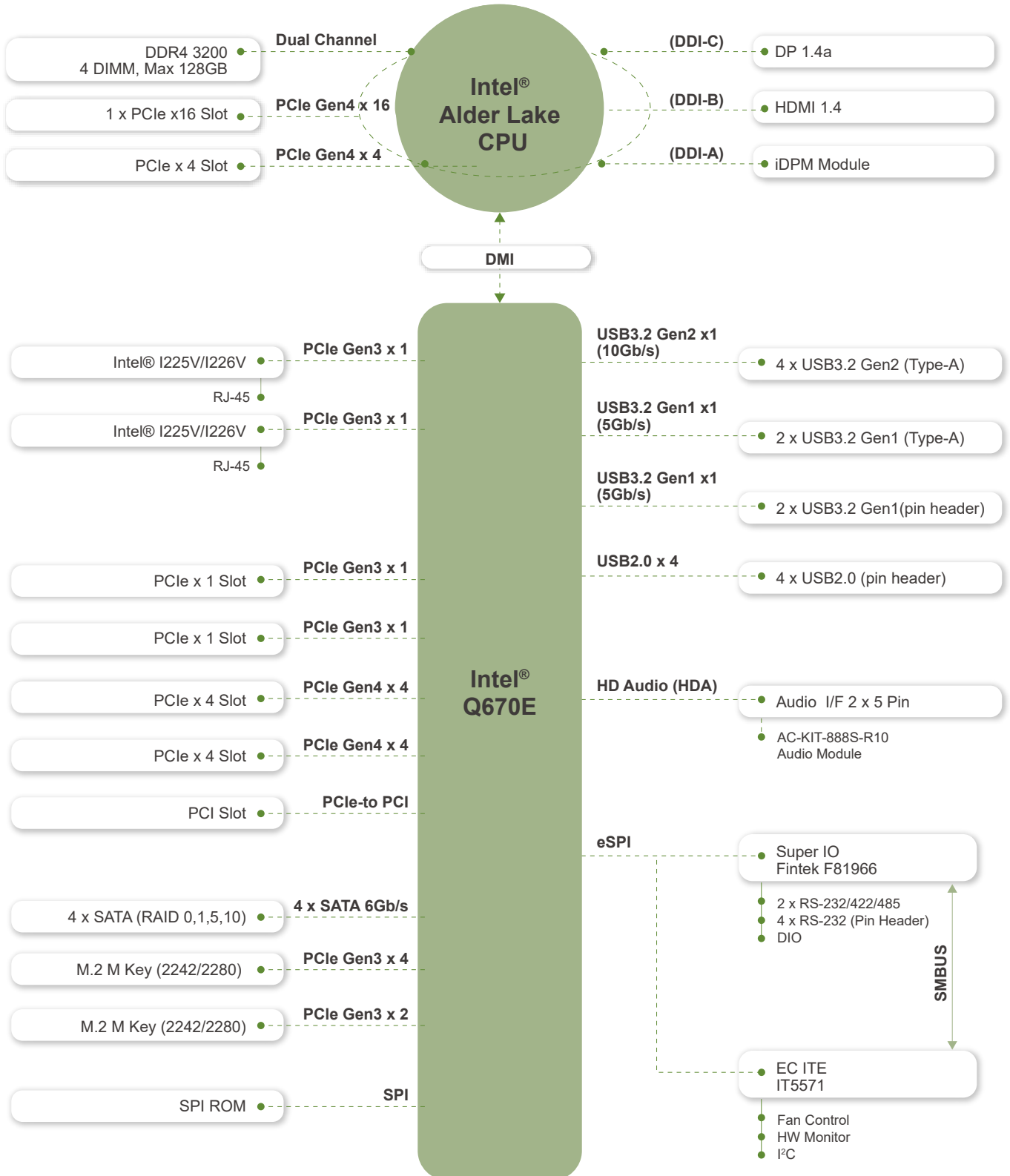


## Support Four SATA for Storage

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

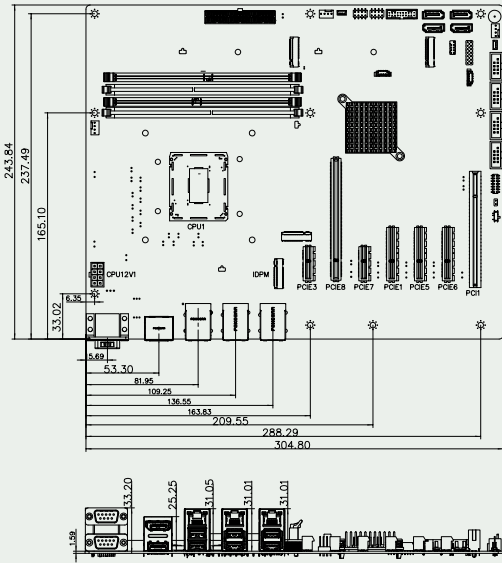


# IMBA-ADL-Q670 Block Diagram





### Dimensions



### Optional accessories

|                            |                            |
|----------------------------|----------------------------|
|                            |                            |
| <b>19800-003100-100-RS</b> | <b>19800-010500-200-RS</b> |
|                            |                            |
| <b>32102-000100-200-RS</b> | <b>32205-000702-200-RS</b> |
|                            |                            |
| <b>AC-KIT-888S-R10</b>     | <b>19100-000319-00-RS</b>  |
|                            |                            |
| <b>19100-000323-00-RS</b>  | <b>19100-000327-00-RS</b>  |
|                            |                            |
| <b>19100-000326-00-RS</b>  | <b>iDPM-LVDS-R10</b>       |
|                            |                            |
| <b>iDPM-eDP-R10</b>        | <b>iDPM-VBO-R10</b>        |
|                            |                            |
| <b>iDPM-VGA-R10</b>        | <b>iDPM-DP-R10</b>         |

### Specifications

|                        |   |
|------------------------|---|
| Model                  | IMBA-ADL-Q670   |
| CPU                    | LGA1700 socket supports 12th/13th/14th 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<br>1 x DP 1.4a (up to 4096 x 2304 @60Hz)<br>1 x HDMI 1.4 (up to 4096 x 2304 @30Hz)<br>1 x IDPM support IEI eDP/ LVDS/ VGA module   |
| Ethernet               | LAN1: Intel® I225V/I226V 2.5GbE controller (CO-LAY I225LM/I226LM support vPro)<br>LAN2: Intel® I225V/I226V 2.5GbE controller (CO-LAY I225LM/I226LM support vPro)  |
| External I/O Interface | 4 x USB 3.2 Gen2 (Type-A) (10Gb/s)<br>2 x USB 3.2 Gen1 (Type-A) (5Gb/s)<br>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)<br>4 x USB 2.0 (2x4 pin, P=2.54)<br>2 x USB 3.2 Gen1 (2 x 10pin P=2.00 pin wafer ) (5Gb/s)<br>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<br>**1 x PCIe Gen4 x4 open-end slot<br>2 x PCIe Gen4 x4 open-end slot<br>2 x PCIe Gen3 x1 slot<br>1 x PCI slot<br>1 x M.2 M key 2242/80 (PCIe Gen3 x4)<br>1 x M.2 M key 2242/80 (PCIe Gen3 x2) |
| 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)<br>2 x System fan connector (1x4 pin)   |
| Chassis Open           | 1 x Chassis intrusion (1x2 pin)   |
| Power supply           | ATX/AT power supply<br>Support AT/ATX mode<br>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  |
| Certification          | CE/FCC compliant  |

\*\*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 (PN: 32801-012500-100-RS) |
| 1 x I/O shielding (PN: 45014-0100C0-00-HF) | 1 x QIG                                  |

### Ordering Information

|                   |  |
|-------------------|--|
| IMBA-ADL-Q670-R10 | ATX motherboard supports LGA1700 Intel® 12th/13th/14th 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 |
|-------------------|--|

### 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       |
| 19100-000323-00-RS  | High-performance LGA1700 cooler, 65W (72 x 70 x 25.5 mm)         |
| 19100-000319-00-RS  | High-performanc 1 U LGA1700 cooler, 65W (95 x 90 x 27.45 mm)     |
| 19100-000333-00-RS  | High-performance LGA1700 cooler, 80W (72 x 48.5 x 73.5 mm)       |
| 19100-000326-00-RS  | High-performance LGA1700 cooler, 125W (87.8 x 66.5 x 75 mm)      |
| 19100-000327-00-RS  | High-performance LGA1700 cooler, 125W (96.5 x 91.4 x 119.5 mm)   |
| iDPM-eDP-R10        | eDP to eDP DisplayPort converter board (for IEI iDPM connector)  |
| iDPM-VGA-R10        | eDP to VGA Connetor converter board (for IEI Display Module)     |
| iDPM-LVDS-R10       | eDP to LVDS DisplayPort converter board (for IEI iDPM connector) |
| iDPM-VBO-R10        | eDP to VBO DisplayPort converter board (for IEI iDPM connector)  |
| iDPM-DP-R10         | eDP to DP DisplayPort converter board (for IEI iDPM connector)   |