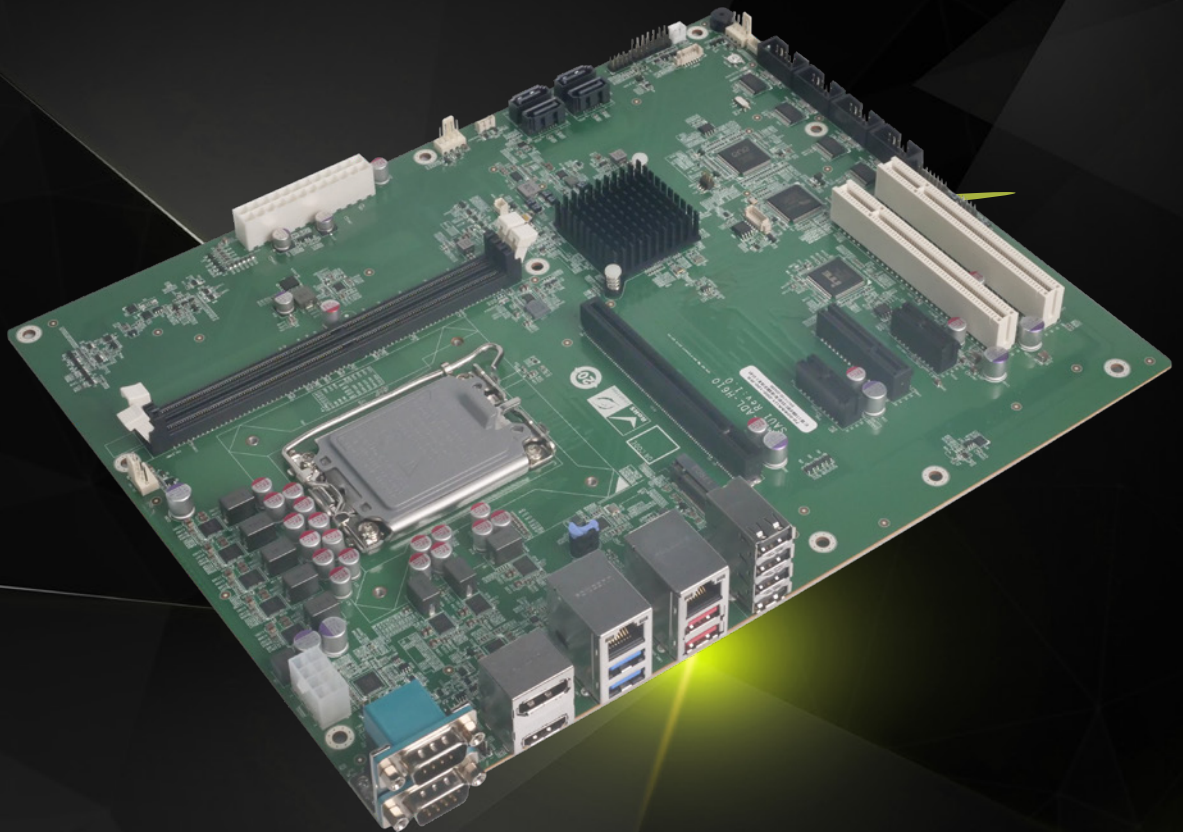


# IMBA-ADL-H610

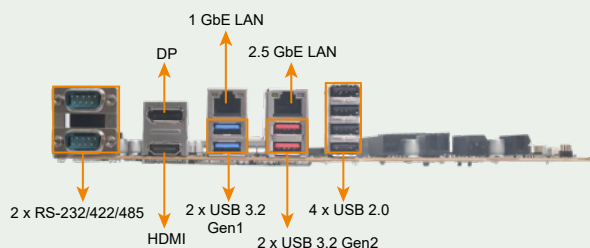
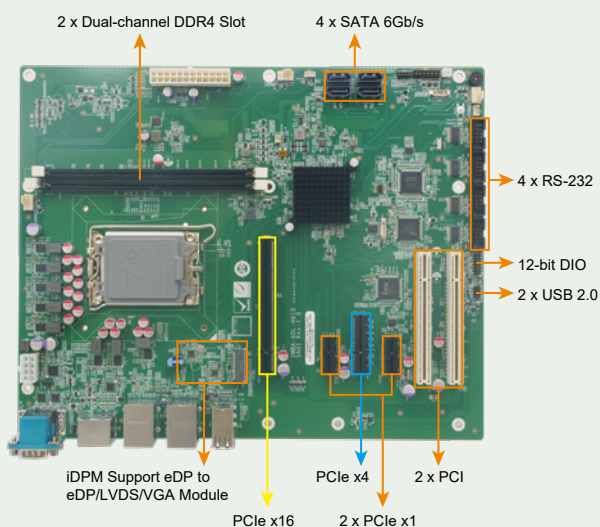
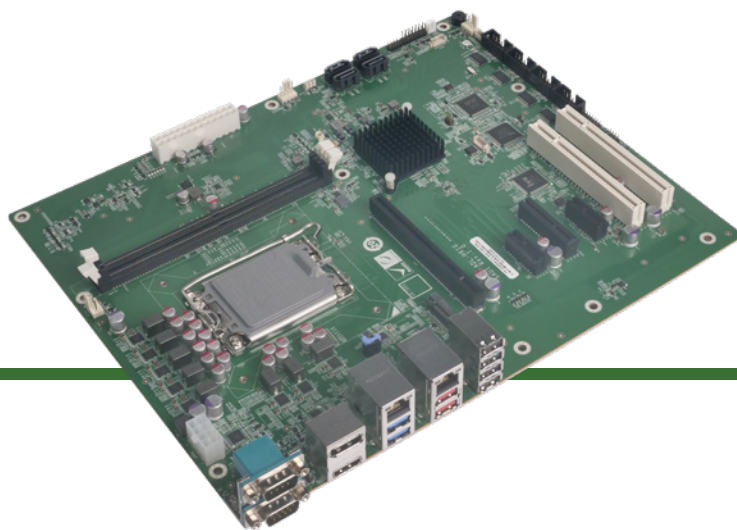
**ATX industrial motherboard supporting 10th/11th  
Intel® Core™ i9/i7/i5/i3, Celeron®, Pentium® processors**

- Support Intel® H610/H610E chipset
- Support one Intel® I225V 2.5GbE and one Intel® I219LM 1GbE Ethernet controllers
- Support triple independent display via HDMI, DP and iDPM
- Support one PCIe x16, one PCIe x4, two PCI expansions
- Support two USB 3.2 Gen 2, two USB 3.2 Gen 1, six USB 2.0, with up to 10Gb/s transfer speed
- Support two RS-232/422/485 , four RS-232 and four SATA ports



# IMBA-ADL-H610

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



## Support LGA1700 socket 12th/13th Generation Intel® Processor

Supports 12th/13th generation Alder Lake-S/Raptor Lake-S Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 65W TDP CPU)



## Support Intel® I225V 2.5GbE Ethernet Controller

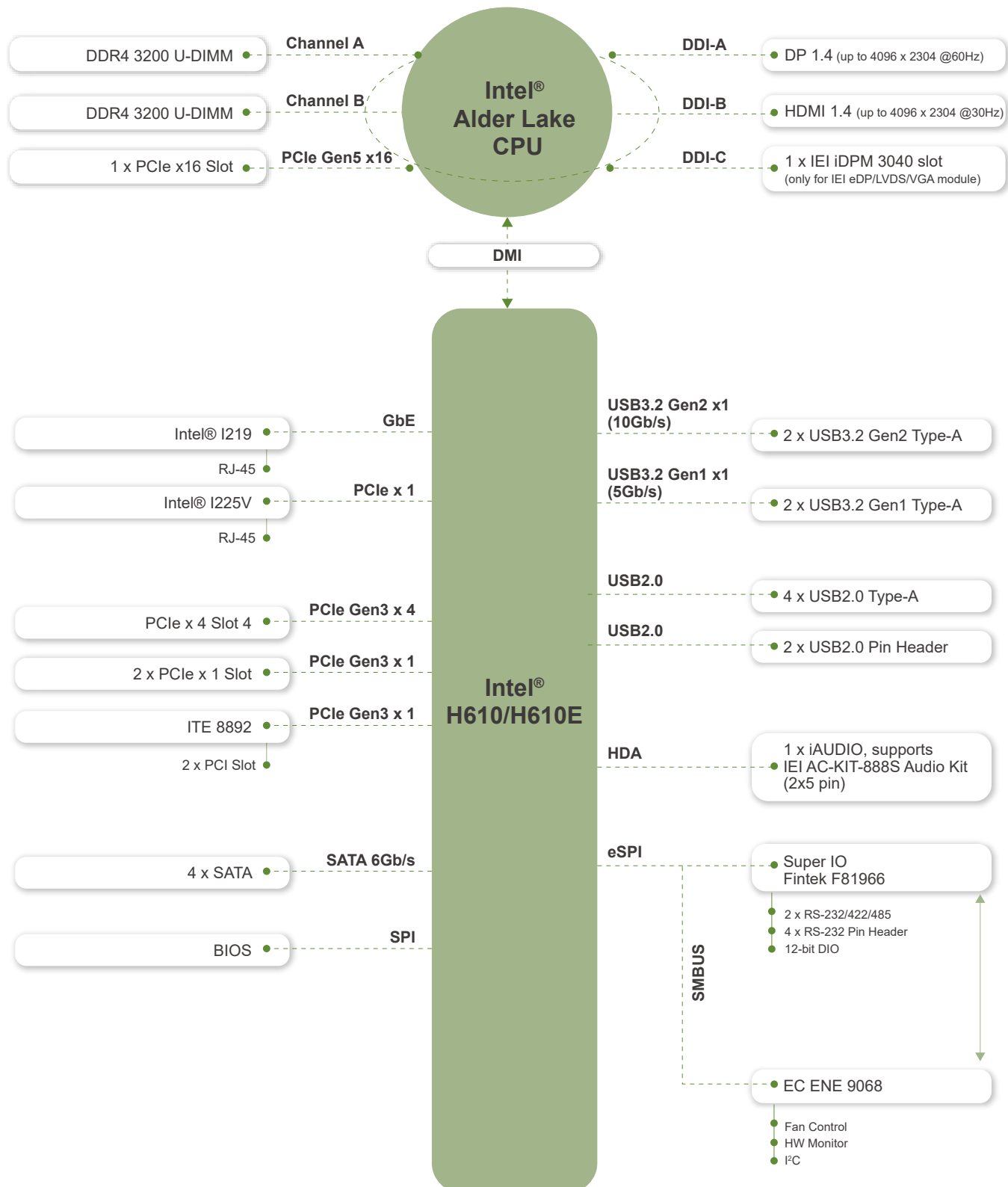
Support RJ45 network interface via Intel® I225v 2.5GbE network controller to achieve up to 2.5GbE network transmission rate.



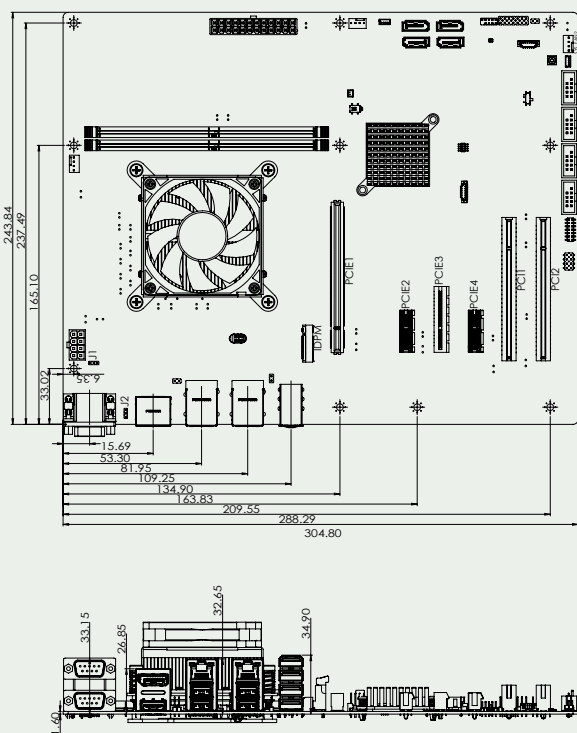
## Rich Expansion I/O

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

# IMBA-ADL-H610 Block Diagram



## Dimensions



## Optional accessories



## Specifications

| Model                  | IMBA-ADL-H610                                                                                                                                                 |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                    | LGA1700 socket supports 12th/13th generation Alder Lake-S/Raptor Lake-S Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 65W TDP CPU)              |
| Chipset                | Intel® H610/H610E                                                                                                                                             |
| BIOS                   | AMI UEFI BIOS                                                                                                                                                 |
| Memory                 | Two 288-pin 3200 MHz Dual-Channel DDR4 SDRAM Unbuffered DIMMs supported up to 64GB                                                                            |
| Graphics Engine        | New Intel® Xe Graphics architecture with SRIOV, Genlock                                                                                                       |
| Display Output         | Triple independent display<br>1 x DP (up to 4096 x 2304 @60Hz)<br>1 x HDMI (up to 4096 x 2304 @30Hz)<br>1 x iDPM 3040 slot (only for IEI eDP/LVDS/VGA module) |
| Ethernet               | LAN1: Intel® i219 LM controller<br>LAN2: Intel® I225V 2.5GbE controller                                                                                       |
| External I/O Interface | 2 x USB 3.2 Gen2 x1 (Type-A) (10Gb/s)<br>2 x USB 3.2 Gen1 x1 (Type-A) (5Gb/s)<br>4 x USB 2.0 (Type-A)<br>2 x RS-232/422/485 (RS-485 support AFC)              |
| Internal I/O Interface | 4 x SATA 6Gb/s<br>2 x USB 2.0 (2x4 pin, P=2.54)<br>4 x RS-232 (2x5 pin, P=2.54)                                                                               |
| SMBus                  | 1 x SMBus (1x4 pin)                                                                                                                                           |
| I2C                    | 1 x I2C (1x4 pin)                                                                                                                                             |
| Audio                  | 1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2x5 pin, P=2.0)                                                                                             |
| Front Panel            | 1 x Front Panel (2x7 pin, power LED, HDD LED, power button, reset button)                                                                                     |
| LAN LED                | 2 x LAN LED (1x2 pin)                                                                                                                                         |
| Expansion              | **1 x PCIe Gen5 x16<br>1 x PCIe Gen3 x4 open-end<br>2 x PCIe Gen3 x1<br>2 x PCI                                                                               |
| Digital I/O            | 1 x 12bit-DIO (2x7 pin)                                                                                                                                       |
| TPM                    | Intel® PTT                                                                                                                                                    |
| FAN connector          | 1 x CPU fan connector (1x4 pin)<br>1 x System fan connector (1x4 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@0.36A, 5V@7.04A, 12V@5.62A, 5VSB@0.7A (Intel® Core™ i7-12700E CPU with two 32 GB 2933 MHz DDR4 memory, EuP mode enabled)                                 |
| Operating Temperature  | 0°C ~ 60°C                                                                                                                                                    |
| Storage Temperature    | -30°C ~ 70°C                                                                                                                                                  |
| Operating Humidity     | 5% ~95%, non-condensing                                                                                                                                       |
| Dimension              | 244mm x 305mm                                                                                                                                                 |
| Weight                 | GW:900g / NW:400g                                                                                                                                             |
| 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-H610 single board computer | 1 x I/O shielding |
| 2 x SATA cable                          | 1 x QIG           |

## Ordering Information

|                   |                                                                                                                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IMBA-ADL-H610-R10 | ATX motherboard supports LGA1700 Intel® 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR4, Triple independent displays, dual LAN, USB 3.2, SATA 6Gb/s and RoHS |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Optional Accessories

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| CB-USB02A-RS        | Dual port USB cable with bracket, 300mm, P=2.0                   |
| 32205-000702-100-RS | RS-232 cable, 230mm, P=2.54                                      |
| AC-KIT-888S-R10     | Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS      |
| 32102-000100-200-RS | SATA power cable, MOLEX 5264-4P to SATA15P                       |
| 19100-000323-00-RS  | High-performance LGA1700 cooler: 65W                             |
| iDPM-eDP-R10        | eDP to eDP DisplayPort converter board (for IEI iDPM connector)  |
| iDPM-LVDS-R10       | eDP to LVDS DisplayPort converter board (for IEI iDPM connector) |