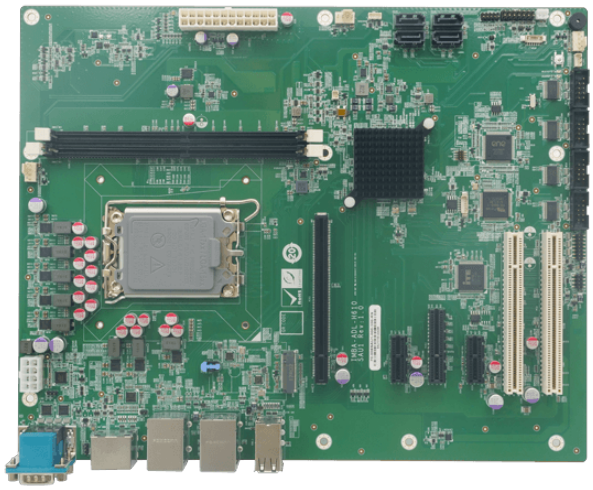
IMBA-ADL-H610

ATX motherboard supports LGA1700 Intel® 12th/13th/14th 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



Features

» Support Intel® H610/H610E chipset

» Support Intel® I225V/I226V 2.5GbE Ethernet controller

» Support triple independent display via HDMI™, DP and iDPM

» Support one PCIe x16, one PCIe x4, two PCIe x1, 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

Specifications

Form Factor	
Form Factor	ATX Motherboard
System	
CPU	LGA1700 socket supports 12th/13th/14th generation Intel® Core™ i9/i7/i5/i3/Pentium®/Celeron® Processor (up to 65W TDP CPU)
Chipset	Intel® H610/H610E
Memory	Two 288-pin Dual-Channel DDR4 (up to 3200 MHz) SDRAM Unbuffered DIMMs supported up to 64GB
Memory Max.	64GB
Cooling method / System Fan	1 x CPU fan connector (1x4 pin)
	2 x System fan connector (1x4 pin)
外觀	
外觀尺寸 (mm)	244mm x 305mm
Net Weight	700g
Storage	
Storage	4 x SATA
I/O Interface	
Display Output	1 x HDMI™ : up to 4096 x 2304 @30Hz
	1 x Display Port : up to 4096 x 2304 @60Hz
	1 x iDPM : support iEi eDP/ LVDS/ VGA module
Ethernet	2 x LAN -
	LAN1: Intel® I219 LM controller
	LAN2: Intel® I225V/I226V 2.5GbE controller
Audio	1 x HD Audio : 1 x iAUDIO supports IEI AC-KIT-888S Audio Kit (2x5 pin)
I/O Interface	2 x External RS-232/422/485 : RS-485 support AFC
	4 x Internal RS-232 : 2x5 pin, P=2.54
	4 x External USB 2.0
	2 x External USB 3.2 Gen1x1 : 5Gb/s (Type A)
	2 x Internal USB 2.0 : 2:x4 pin, P=2.54
	2 x External USB 3.2 Gen2x1 : 10Gb/s (Type A)
Expansion	1 x PCIe x16 : Gen4 slot with x16 Signal

	(**Intel® recommends that Alder Lake-S CPU PCIe ports are only used for discrete graphics and storage devices)
	1 x PCIe x4 : Gen3 open-end
	2 x PCIe x1 : Gen3
	2 x PCI Slot
電源	
電源功耗	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)
Power Supply	ATX/AT power supply
	Support AT/ATX mode
	ErP/EuP Compliant
環境	
操作溫度	-10°C~60°C
存儲溫度	-30°C~70°C
濕度	5% ~95%, non-condensing

Ordering Information

IMBA-ADL-H610-R11	ATX motherboard supports LGA1700 Intel® 12th/13th/14th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR4, Triple independent displays, dual LAN, USB 3.2, SATA 6Gb/s and RoHS

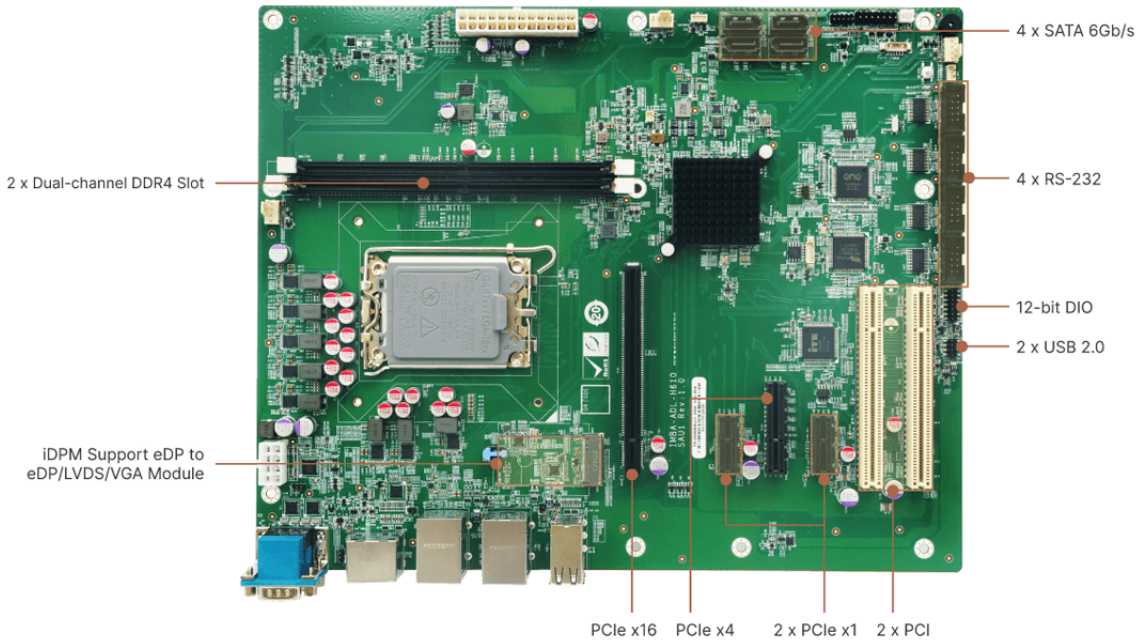
Packing List

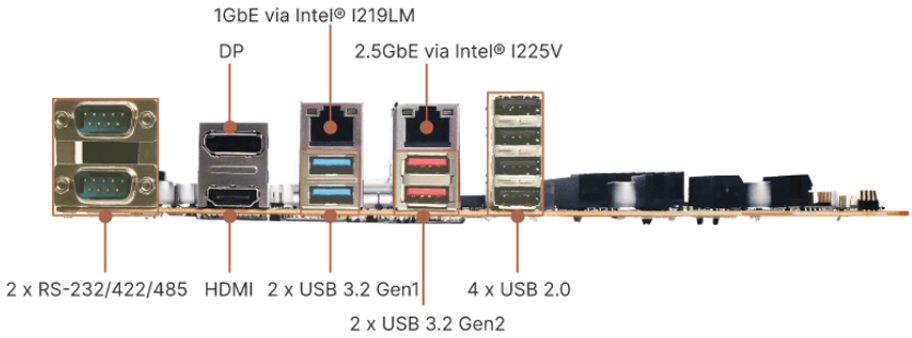
1 x IMBA-ADL-H610 single board computer	2 x SATA cable
1 x I/O shielding	1 x QIG

New Advanced Industrial ATX Motherboard

IMBA-ADL-H610 is IEI's cost-effective ATX industrial motherboard. It is able to support both 12th and 13th Gen Intel® Core™ processors and equipped one PCIe Gen4 x16 to deploy and run your AI projects in retail, transportation and surveillance efficiently. It drives a New Era in AIoT Solution.

Internal I/O

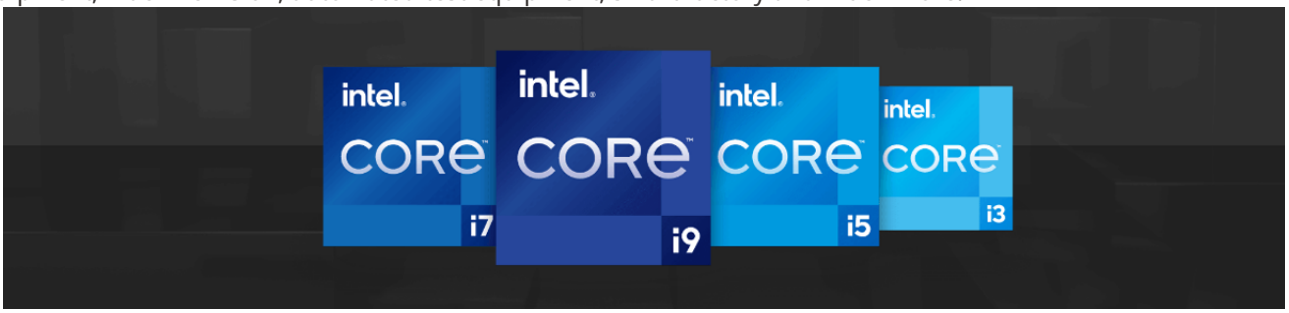


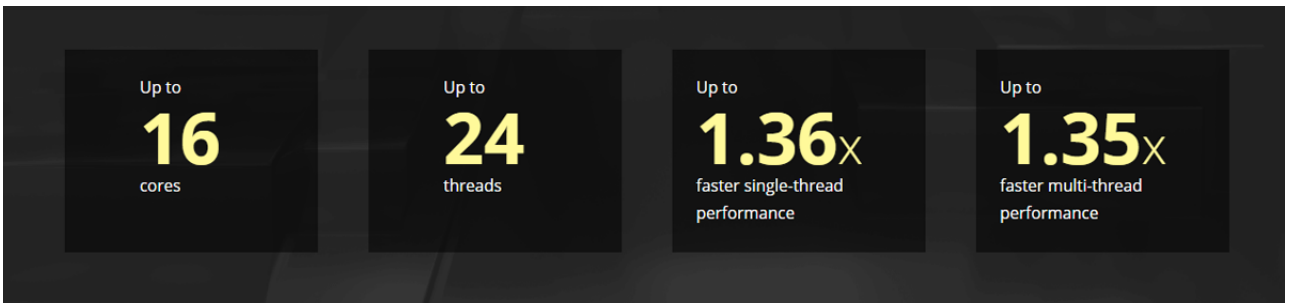


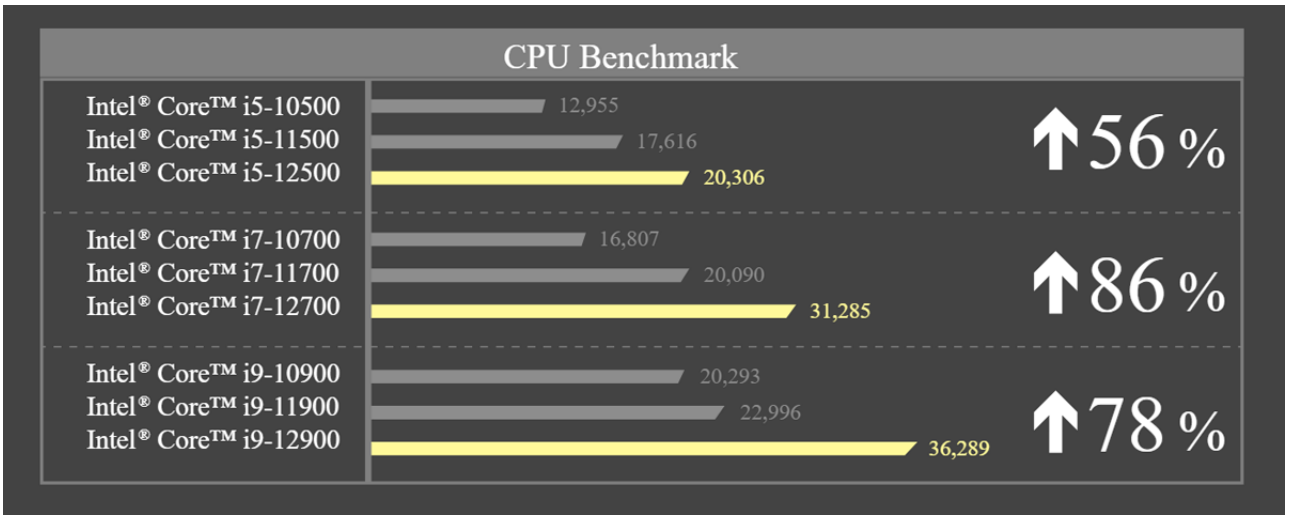
Improved Efficiency and Performance with 12th/13th Gen Intel® Processors

IEI's IMBA-ADL-H610 motherboard supports both 12th and 13th Gen Intel® Core™ processors, and the performance boosts up to 1.36x times faster in single-thread performance and up to 1.35x times faster in multi-thread performance than 10th Gen Intel® Core™ Processors. The 12th Gen Intel® Core™ platform supports up to 16 cores and 24 threads, enhanced AI, and Intel® UHD Graphics 770 driven by Intel® Xe Architecture. It also features innovative high-performance chip design, enhanced graphics performance, fast AI with hardware acceleration and real-time capabilities to help expand your IoT potential. With increased I/O capacity and the latest PCIe 4.0 support, these processors deliver the performance required to consolidate industrial multiple workloads.

Because of the above features, the IMBA-ADL-H610 is suitable for edge computing, industrial automation, medical equipment, machine vision, automated test equipment, smart factory and much more.

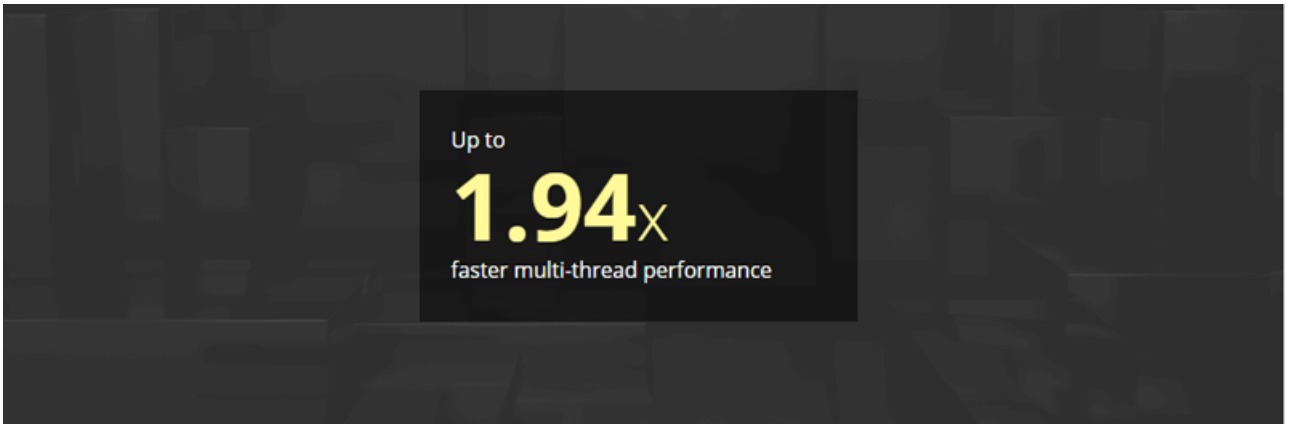






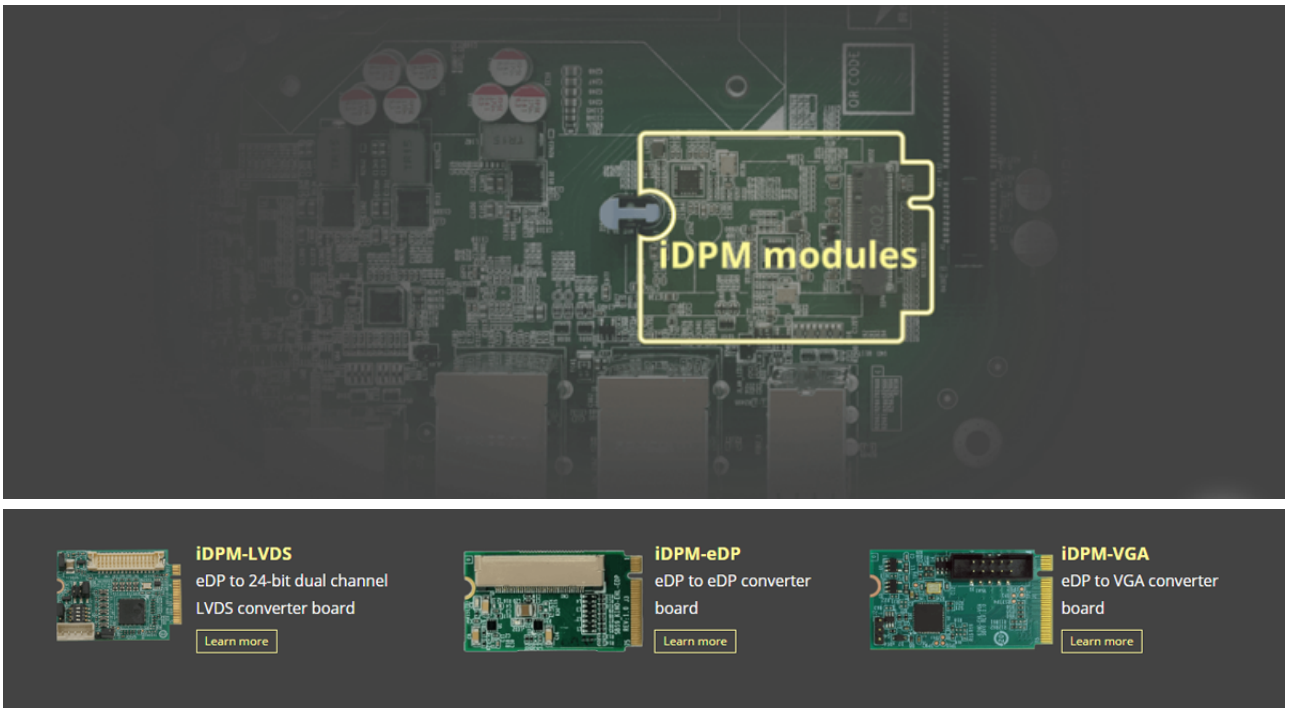
Triple Display with Stunning 4K Resolution

The Intel® 12th generation processors is integrated with Intel® UHD Graphics 770, which offers up to 32 EUs to drive a maximum resolution of 4kp60. Equipped with one HDMI™ 1.4 (up to 4096 x 2160@30Hz), one DP 1.4 (up to 4096 x 2160 @60Hz) and the option to use the iDPM 3040 slot (only for IEI eDP/LVDS/VGA module) to support triple independent displays, the ATX motherboard brings more possibilities to upgrade IoT devices at the edge.



Free to choose display connections with iDPM modules

More display I/Os are supported via IEI iDPM connector. The iDPM display converter boards allow theIMBA-ADL-H610 to meet customers' diverse display interface requirements such as the legacy display port, VGA and LVDS, or eDP for TFT LCD connection.



Makes adequate AIoT application in practice

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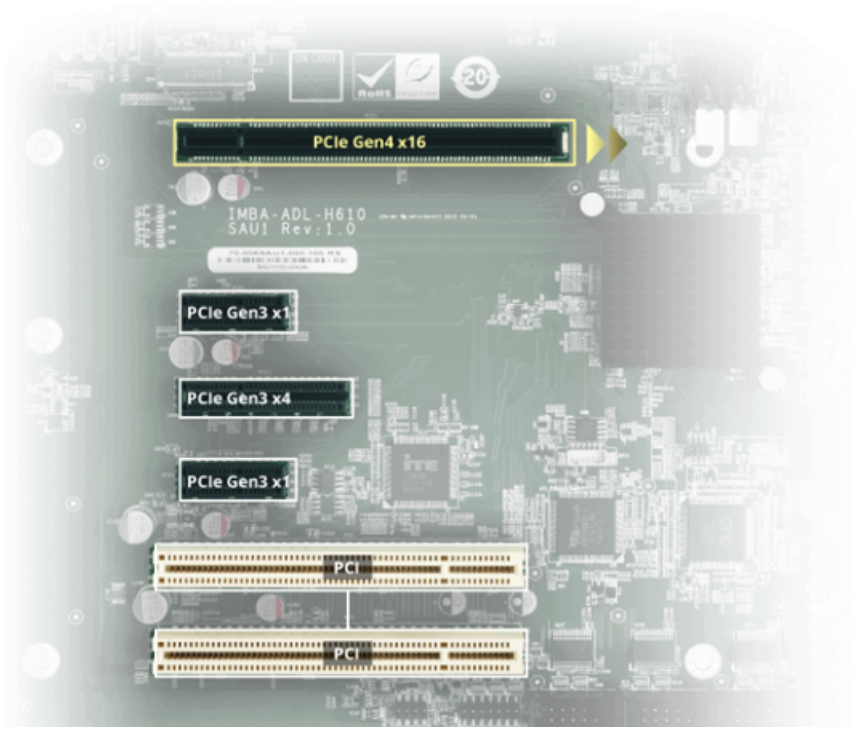
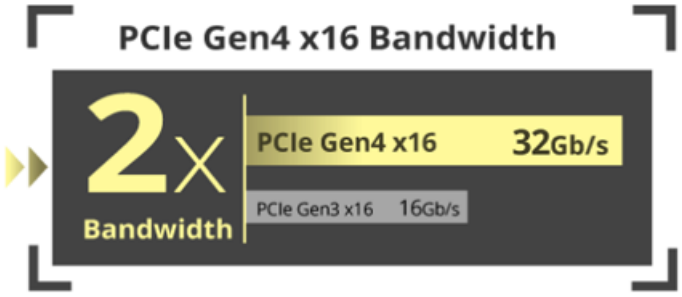
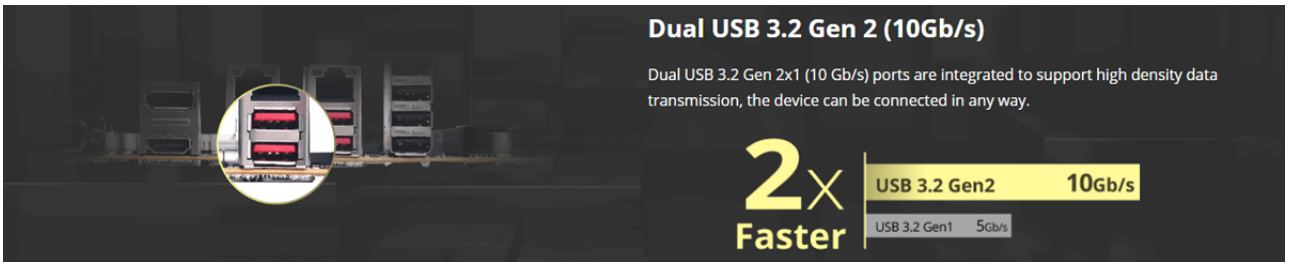
Support PCIe Gen4, Also Has PCI to Work with Legacy Systems

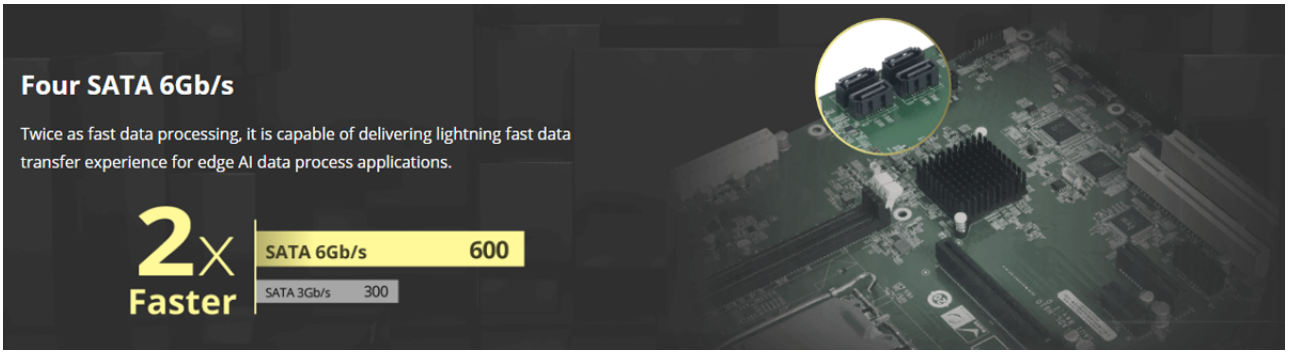


The IMBA-ADL-H610 equips one PCIe Gen4 x16, one PCIe Gen3 x4 (open-end), two PCIe Gen3 x1, and two PCI expansion slots, providing not only high-level PCI Express connectivity, but also PCI to work with legacy systems. This ATX motherboard is AI edge ready, and supports IEI's AI accelerators, Mustang series. IEI Mustang AI accelerators can bring much larger and computationally-intensive neural networks to the edge, and they are ideal for deep learning inference computing to help you get faster, deeper insights for your customers and your business.

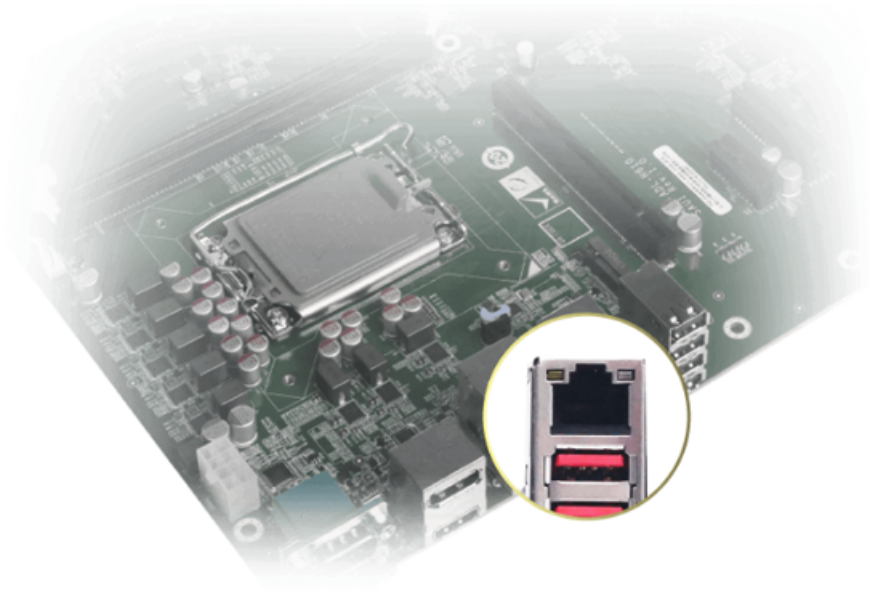


High Speed Transmission



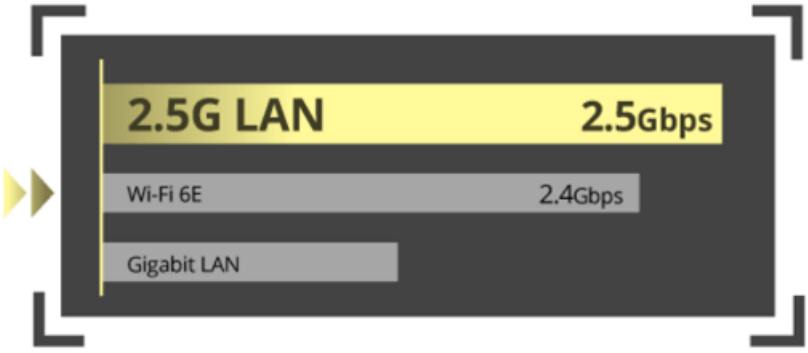


Networking



Delivers Low-Latency 2.5G LAN Powered by Intel

The on-board Intel® I225V 2.5GbE controller enable the IMBA-ADL-H610 to meet the bandwidth-intensive requirements such as large file transfers and high-resolution video streaming applications.



Dimensions