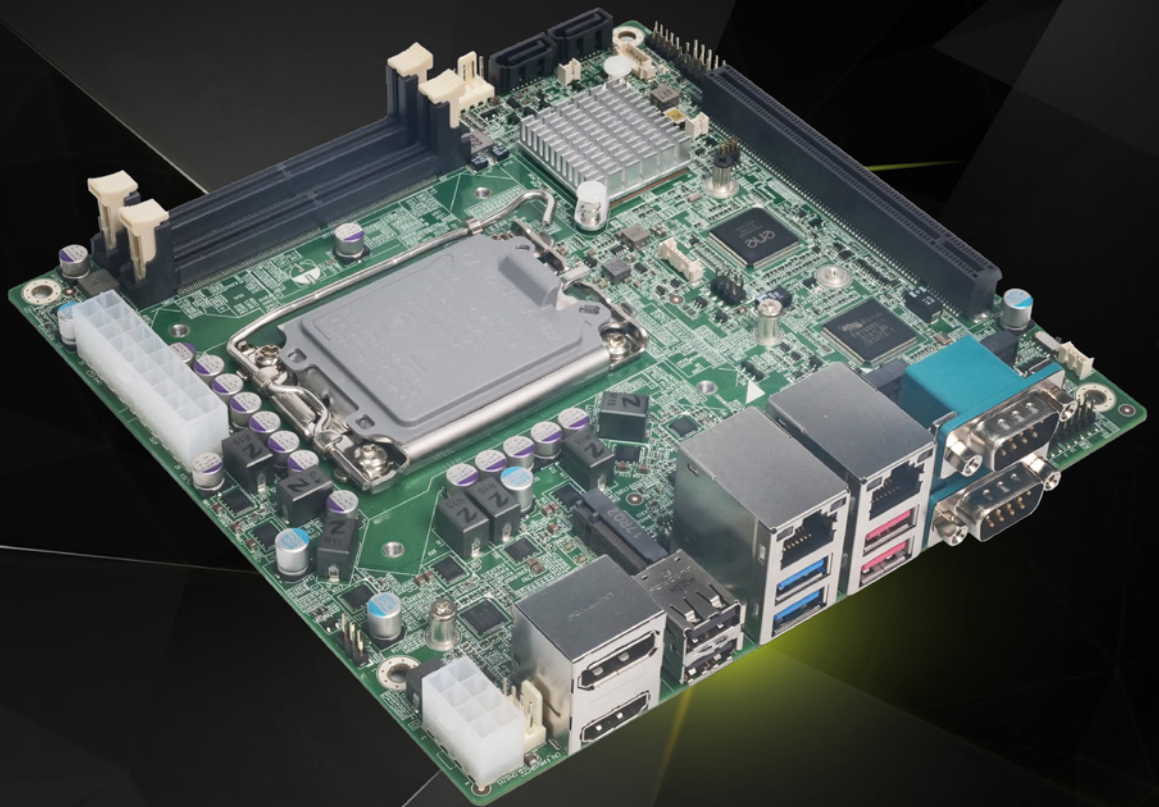


KINO-ADL-H610

Mini-ITX SBC supports LGA1700 Intel® 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor

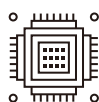
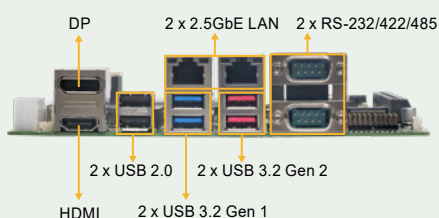
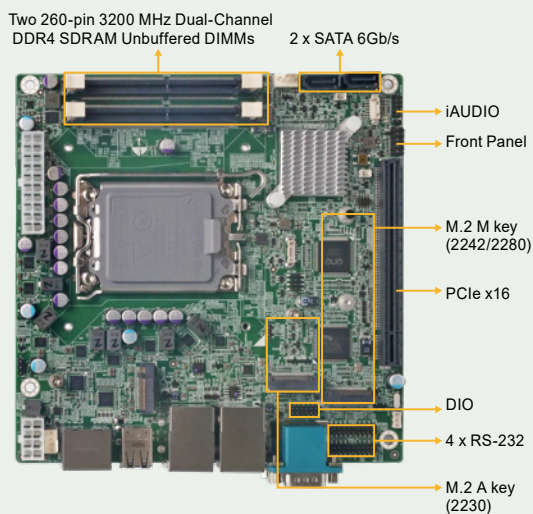
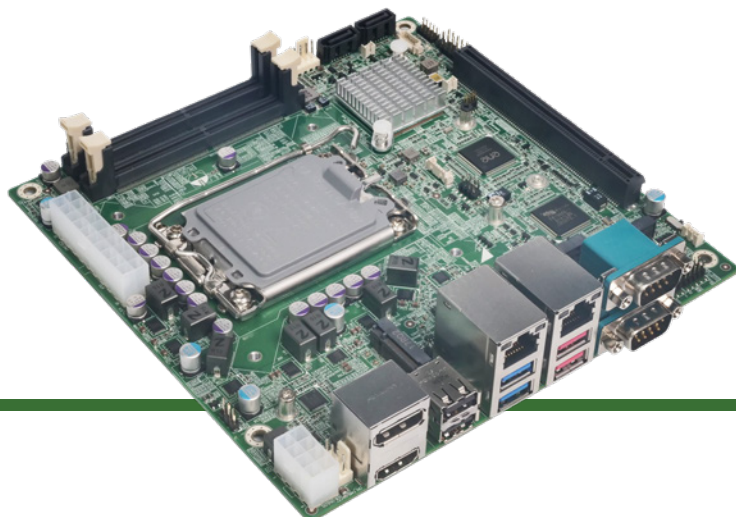
- Support dual-channel 3200MHz DDR4 SO-DIMM
- Triple independent display: DP 1.4a, HDMI 2.0b & iDPM slot for eDP/ LVDS/VGA module
- Support dual Intel® I225V/I226V 2.5GbE controllers
- Support PCIE X16 Gen4, M.2 M key, and M.2 A key expansion



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KINO-ADL-H610

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



Support Intel® Alder Lake-S/ Raptor Lake-S Processor

Equipped with 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor (up to 65W TDP CPU).



Support Intel® I225V/I226V 2.5GbE Network Controller

Two Gigabit RJ45 network ports are provided via Intel® I225V/I226V 2.5GbE network controller to achieve up to 2.5GbE network transmission rate.



Abundant Expansion Slots

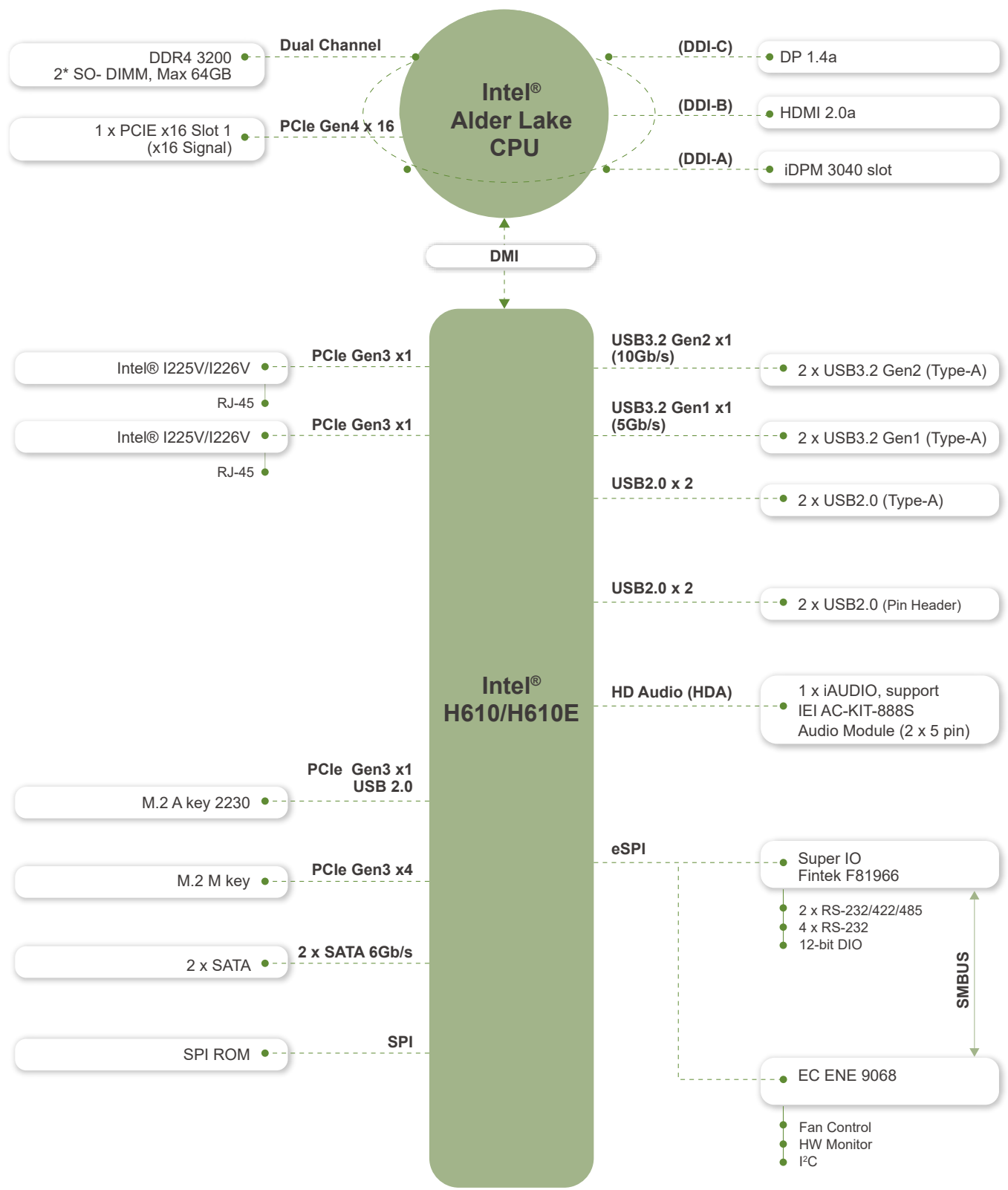
The KINO-ADL-H610 provides PCIe x16 (Gen 4) for expansion, M.2 A key for Bluetooth and Wi-Fi modules, M.2 M key for NVME storage.



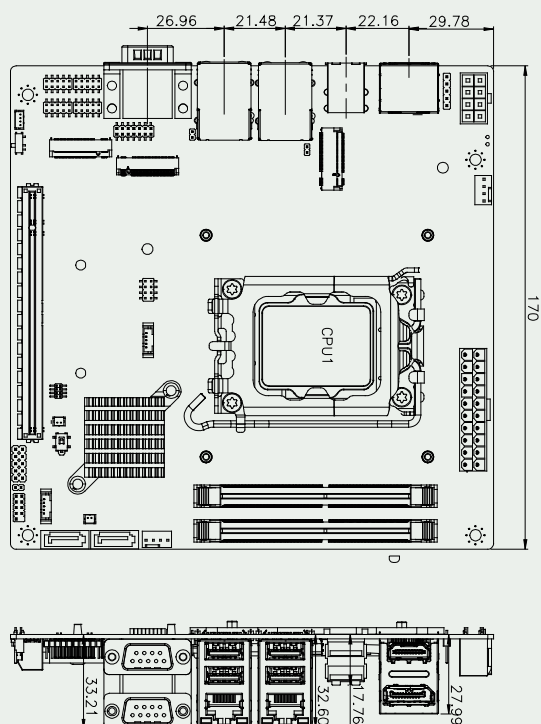
IEI-specific iDPM Interface

IEI uniquely designs a iDPM interface that can connect to display modules, enabling users to add LVDS/eDP/VGA display interface upon requirements.

Block Diagram



Dimensions



Optional accessories



Specifications

Model	KINO-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 260-pin 3200 MHz Dual-Channel DDR4 SDRAM Unbuffered DIMMs supported up to 64GB
Graphics Engine	Intel® UHD Graphics
Display Output	Triple independent display 1 x DP 1.4a (up to 4096 x 2304 @60Hz) 1 x HDMI 2.0b (up to 4096 x 2304 @60Hz) 1 x iDPM 3040 slot (only for IEI eDP/LVDS/VGA module)
Ethernet	LAN1: Intel® I225V/I226V 2.5GbE controller LAN2: Intel® I225V/I226V 2.5GbE controller
External I/O Interface	2 x USB 3.2 Gen2 (Type-A) (10Gb/s) 2 x USB 3.2 Gen1 (Type-A) (5Gb/s) 2 x USB 2.0 (Type-A) 2 x RS-232/422/485 (RS-485 support AFC) 2 x SATA 6Gb/s
Internal I/O Interface	2 x USB 2.0 (2x4 pin, P=2.0) 4 x RS-232 (2x5 pin, P=2.0)
I2C/SMBUS	1 x I2C/SMBUS (1x4 pin, P=1.25)
Audio	1 x iAUDIO, supports IEI AC-KIT-888S Audio Kit (2x5 pin)
Front Panel	1 x Front Panel (2 x 5 pin, P=2.54, Power LED, HDD LED, Speaker, Power Button, Reset Button)
LAN LED	2 x LAN LED (1x2 pin)
Expansion	**1 x PCIe x16 (Slot1) with x16 Signal Gen4 1 x M.2 M key 2242/2280 (PCIe Gen3 x4) 1 x M.2 A Key 2230 (PCIe Gen3 x1&USB 2.0)
Digital I/O	1 x 12-bit digital I/O (2x7 pin, P=2.0)
TPM	PTT function supported
FAN connector	1 x CPU fan connector (1x4 pin) 1 x System fan connector (1x4 pin)
Chassis Open	1 x Chassis intrusion (1x2 pin)
Power supply	Support AT/ATX mode ErP/EuP Compliant
Watchdog Timer	Software Programmable support 1~255 sec. System reset
Power Consumption	3.3V@0.96A, 5V@6.49A, 12V@5.95A, 5VSB@1.05A (Intel® Core™ i9-12900E CPU with two 16 GB 3200 MHz DDR4 memory, max. loading, EuP mode enabled)
Operating Temperature	0°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Dimension	170mm x 170mm
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 KINO-ADL-H610 single board computer	1 x I/O shielding (PN:45014-0099C0-00-HF)
1 x SATA with power cable kit (PN:32801-012500-100-RS)	1 x QIG

Ordering Information

KINO-ADL-H610-R10	Mini-ITX SBC supports LGA1700 Intel® 12th/13th Generation Core™ i9/i7/i5/i3, Pentium® and Celeron® processor, DDR4, Triple independent displays, dual 2.5GbE LAN, USB 3.2, SATA 6Gb/s and RoHS
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Optional Accessories

AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS
CB-USB02A-RS	Dual-port USB cable with bracket, 300mm, p=2.0
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-002700-200-RS	RS-232/422/485 cable, 200 mm, 2*5pin, p=2.0 mm
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)
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)
iDPM-VGA-R10	eDP to VGA Connector converter board (For IEI Display Module)
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)