



KEY FEATURES

- Intel® 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with H610 chipset
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 64GB (32GB per DIMM)
- 1 x PCIe x16 (Gen4), 2 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 5 x COM, 2 x SATA3
- 1 x Intel Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 1 x LVDS or eDP
- ATX-PWR (24+4-pin)

SPECIFICATIONS

Form Factor

Dimensions(LxWxH)	Mini-ITX (6.7-in x 6.7-in x 1.4-in, 17.0 cm x 17.0 cm x 3.6 cm)
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Processor System

CPU	Intel® 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 65W
Chipset	Intel® H610
Socket	LGA1700
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR4 3200 MHz
Capacity	64 GB (32 GB per DIMM)
Socket	2 x 260-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz (Connector shared with eDP)
eDP	eDP 1.4b Max resolution up to 1920 x 1200@60Hz (Connector shared with LVDS)
MultiDisplay	Triple Display

Expansion Slot

PCIe	1 x PCIe x16 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless

Audio

Interface	Realtek ALC662/ALC897, High Definition Audio. Mic-in, Line-out
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Ethernet

Controller/ Speed	LAN1: Intel® I219V with 10/100/1000 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.0b
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2, 2 x USB 3.2 Gen1
Audio	2 (Mic-in, Line-out)
COM	COM1(RS-232/422/485) COM2, COM3, COM4(RS-232)

Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)
COM	COM5(RS-232)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector share with eDP)
Speaker Header	1

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x4 or SATA3 and USB 2.0
SATA	2 x SATA3 (6Gb/s)

Security

TPM	Intel® PTT
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	ATX-PWR (24+4-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%