

Micro-ATX Form Factor Intel® 13/12th Gen. Core™ i9/i7/i5/i3 up to 125W processors



Extended Temperature +85°C -40°C	CPU Full Speed 	12th Alder lake	13th Raptor lake
M.2 NVME x2 <small>M.2 SSD</small>	LAN X2 <small>Dual LAN</small>	 <small>Triple Display</small>	 x11 <small>11 USB port</small>
 x2 <small>2 COM port</small>	 vPro	 All Solid Capacitor	EMC Class B <small>FCC Class B</small>

- Intel® Raptor Lake-S 13th/Alder Lake-S 12th i9/i7/i5/i3 125 W processor
- Intel® Q670 Chipset
- Intel® vPro technology support (Q670)
- 4x DDR4 U-DIMM up to 128GB
- 1 x PCIe X16 slot, 2 x PCIe X8 slot (x4 Lanes), 2 x M.2 2280/2210 M-key (NVME)
- Support triple display for 3 x DisplayPort
- Up to 6 x SATAIII (support RAID 0, 1, 5, 10)
- Up to 2 x Intel® Gigabit Ethernet
- Up to 7 x USB 3.2 Gen1, 4 x USB 2.0, 2 x COM ports
- ATX power input
- Operating Temperature : ET : -20°C ~ 70°C ; UT : -40°C ~ 85°C

Specifications

SYSTEM

CPU	13th/12th Gen Intel® Raptor Lake-S/Alder Lake-S LGA1700 Socket Processor / Core i9/i7/i5/i3 Processor / TDP 125W
Memory type	4 x 288-pin U-DIMM / DDR4 3200 MHz / Max. 128 GB (Non-ECC)
Chipset	Intel® H610 / Q670
Ethernet	Intel® I219-LM Giga LAN + Intel® I225V 2.5 Giga LAN
I/O Chipset	Nuvoton NCT6796D-E
TPM	TPM Header (support optional TPM module)
H/W Monitor	Temperature Monitor / Voltage Monitor / Fan Monitor
Watchdog	1-255 sec. or 1-255 min. software programmable and can be generate system reset
Smart Fan Control	CPU Fan / System Fan

EXPANSION SLOT

M.2	Q670 : M.2 2280 / 22110 M key(PCIe X4)/ M.2 2280 / 22110 M key (PCIe X2) H610 : M.2 2280 / 22110 M key(PCIe X2)
PCIe Slot	Q670 : PCIe 3.0 X16 slot/ 2 x PCIe 3.0 X8 slot (X4 Lanes) H610 : PCIe 3.0 X16 slot/ 1 x PCIe 3.0 X8 slot (X4 Lanes)

GRAPHIC

Chipset	Intel® UHD Graphics 770
Display Port	Up to 4K (4096 x 2304) @60 Hz

ETHERNET

Chipset	Intel® I219-LM Giga LAN + 2 x Intel® I210-AT Giga LAN
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AUDIO

Codec	Realtek® ALC888-VR
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REAR I/O

USB	Q670 : 4 x USB 3.1 / 2 x USB 2.0 H610 : 2 x USB 3.1 / 4 x USB 2.0
Display port	3 x DisplayPort 1.2
Audio	1 x 6-stack Audio Jack
LAN	2 x RJ45(1 x GbE ; 1 x 2.5GbE)

INTERNAL I/O

INS8267A

SATAIII	Q670 :6 x SATAIII H610 :4 x SATAIII
USB	Q670 : 2 x USB 3.1 / 1 x USB3.1 TypeA / 2 x USB 2.0 H610 : 2 x USB 3.1 / 1 x USB2.0 TypeA / 2 x USB 2.0
Audio	1 x Front Audio
GPIO	1 x MiAPI Header
Serial	2 x RS232
Fan	1 x 4-pin CPU Fan Header / 3 x 4-pin system Fan Header
Power	1 x ATX 8pin / 1 x ATX 24pin
Others	1 x CMOSJumper / 1 x FIO header / 1 x SPI TPM header

MECHANICAL AND ENVIRONMENTAL

Form Factor	Micro ATX
Power Type	ATX 8-pin + ATX 24-pin
Dimension	244mm x 244mm(9.6" x 9.6")
Operating Temperature	ET : -20°C ~ 70°C UT : -40°C ~ 85°C
Storage Temperature	-40°C ~ 85°C
Relative humidity	10% to 95%, non-condensing

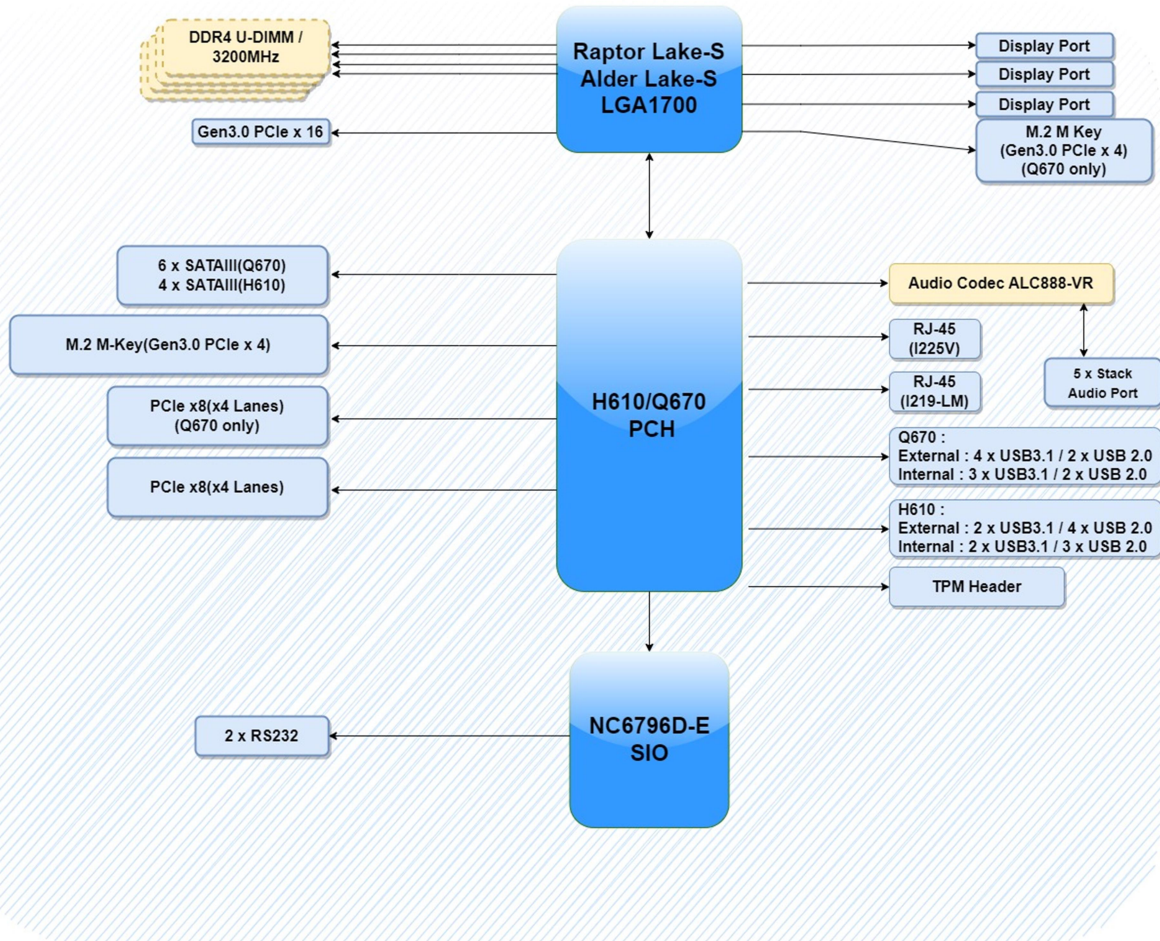
STANDARD COMPLIANCE

Standard Compliance	CE/FCC Class B
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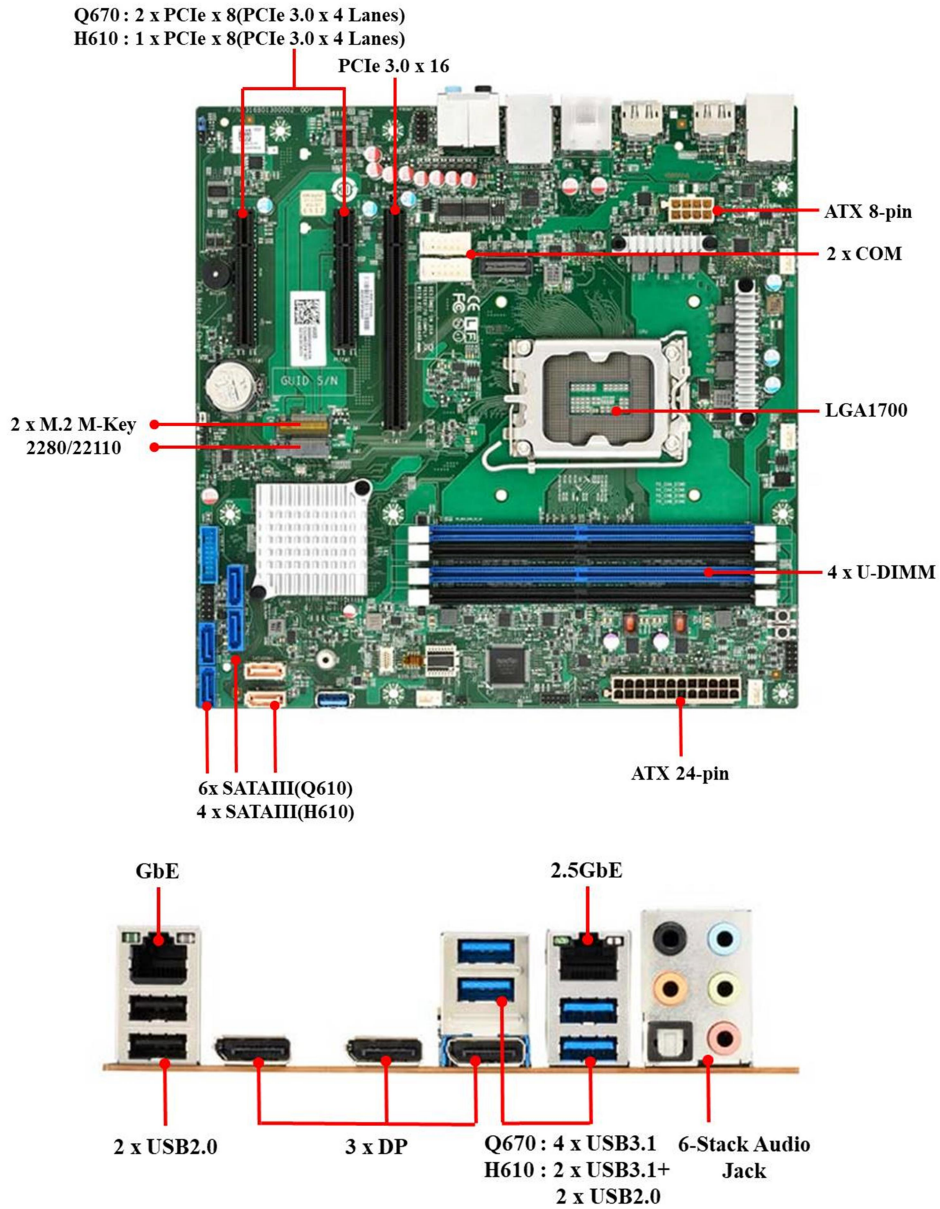
OS

OS Support	Windows® 10/11 64-bit Linux(Support by request)
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Block Diagram



Board Placement



Ordering Information

Model	CPU	PCH	PCIe x16/ PCIe x8(x4 Lanes)/ M.2 M-Key	USB3.1/ USB2.0	DP	SATAIII/ COM	LAN	System Power Input	Operation Temp.
INS8267A-01ET	13/12 th LGA 1700 (Up to 125W)	H610	1/1/2	4/7	1	4/2	2	ATX Power	-20 to 70°C
INS8267A-01UT									-40 to 85°C
INS8267A-02ET		Q670	1/2/2	7/4		6/2			-20 to 70°C
INS8267A-02UT									-40 to 85°C