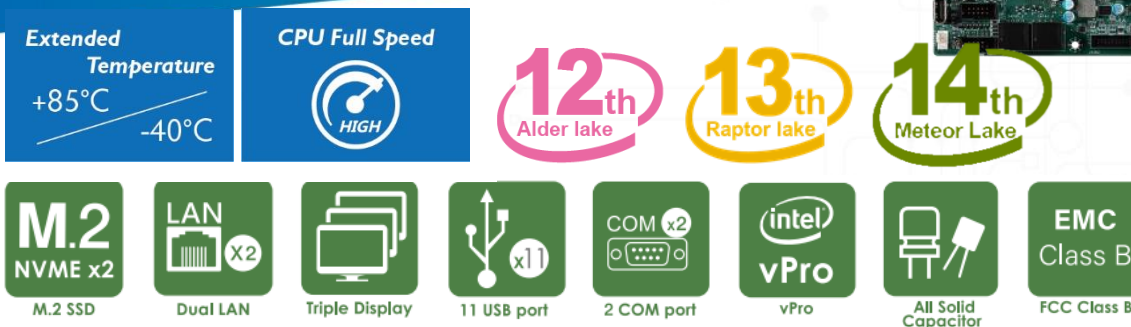


# Micro-ATX Form Factor with 14/13/12th Gen. Intel® Raptor Lake-S & Refresh/ Alder Lake-S, Core™ i9/i7/i5/i3 up to 125W processors



- Intel® 14th/13th/12th Gen Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S Series 125 W processor
- Intel® R680 Chipset
- 4x DDR5 4400 MT/s ECC/non-ECC UDIMM slots up to 128GB
- Quadruple independent displays: 2DP, 2HDMI, eDP
- 4x 2.5GbE LAN with RJ-45
- 1x PCIe x16 (Gen 5) Slot, 2 PCIe x4 (Gen 4), 1 PCIe x4 (Gen 3) slots
- 3x M.2 M key, 4 SATA 3.0 for storage, SATA RAID 0/1/5/10
- 8x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, 4x USB 2.0, 6x COM, GPIO, PS/2, Audio, 3 System FAN
- Onboard TPM 2.0
- SMBus, I2C, PMBus, iAMT 16.x, Chassis Intrusion
- ATX Power
- Operating Temperature : ET : 0°C ~ 60°C ; UT : -20°C ~ 70°C

## Specifications

### SYSTEM

CPU	14th Gen Intel® Raptor Lake-S Refresh i9/i7/i5/i3 Pentium®/ Celeron® IOTG Series Processor, TDP 35W~125W
	13th Gen Intel® Raptor Lake-S i9/i7/i5/i3 Pentium®/ Celeron® IOTG Series Processor, TDP 35W~125W
	12th Gen Intel® Alder Lake-S i9/i7/i5/i3 Pentium®/ Celeron® IOTG Series Processor, TDP 35W~125W
Memory type	4 x DDR5 UDIMM slots (288-pin, vertical), - Up to 4400 MT/s, - Up to 128GB
Chipset	Intel® R680
Ethernet	4x Intel® I226-LM 2.5GbE RJ45 LAN
TPM	TPM 2.0 (on Board)
Watchdog	256-level Watchdog Timer
Smart Fan Control	1 x 4-pin PWM CPU fan connector 3 x 4-pin PWM system fan connector

### EXPANSION SLOT

M.2	1 x M.2 2280/22110 B+M-key (PCIe 4.0 x4 NVMe; Signal from CPU), 1 x M.2 2242/2280 B+M-key (PCIe 4.0 x4 & SATA3.0 Signal from PCH) 1 x M.0 2242/2280 B+M-key (PCIe 3.0 x4 signal from PCH)
PCIe Slot	1 x PCIe 5.0 X16 slot + 2 x PCIe 4.0 X4 + 1 x PCIe 3.0 x4 slots.

### GRAPHIC

Chipset	Intel® UHD Graphics
Display Port	Up to 4K (4096 x 2304) @60 Hz 1 x eDP 1.4b (4096 x 2160 @60 Hz)
Independent modes	DP1 + DP2 + HDMI™1 + HDMI™2 DP1 + DP2 + HDMI™1/2 + eDP DP1/2 + HDMI™1 + HDMI™2 + eDP

### ETHERNET

Chipset	Intel® I226-LM 2.5Giga LAN
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### AUDIO

Codec	Realtek® ALC897 Audio Codec
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## REAR I/O

USB	8 x USB 3.2 Gen 2x1 ports
Display port	2 x DP 1.4a Display Ports 2 x HDMI™ 2.0b ports
Audio	1 x Line-out/Mic-in Jack
LAN	4 x 2.5GbE RJ45 LAN ports

## INTERNAL I/O

SATAIII	4 x SATA3.0 6Gb/s ports Support RAID 0/1/5/10, AHCI mode
USB	1 x USB3.2 Gen 1 connector 1 x USB2.0 connector 2 x USB2.0 Type-A connectors
Audio	1 x Front Audio connector
Panel	1 x Front Panel connector 1 x Front LAN LED connector 1 x Front Audio connector (Lin-out & Mic-in)
Display	1 x eDP connector
Serial	6 x COM ports connectors
GPIO	2 x GPIO connectors(5V, 16-bit 8x GPU/GPO)
Fan	1 x 4-pin PWM CPU Fan connector 3 x 4-pin PWM system Fan connectors
Power	1 x 8-pin ATX 12V power connector 1 x 24-pin ATX power connector
Others	1 x CMOS battery header 1 x Parallel port(LPT) header 1 x JCASE Chassis intrusion header 1 x S/PDIF connector 1 x JKBMS PS/2 keyboard & Mouse connector 1 x PMBus connector (3.3V) 1 x SMBus connector (5V) 1 x I2C connector 1 x FIO header / 1 x SPI TPM header
Jumpers	6 x COM voltage select jumpers 1 x Clear CMOS jumper 1 x ME jumper (for iAMT BIOS flash)

1 x AT/ ATX mode select jumper  
1 x eDP Power Select Jumper

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**MECHANICAL AND ENVIRONMENTAL**

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Form Factor	Micro ATX
Power Type	ATX 8-pin + ATX 24-pin
Dimension	244mm x 244mm x 1.6mm (9.6" x 9.6")
Operating Temperature	ET : 0°C ~ 60°C UT : -20°C ~ 70°C
Storage Temperature	-40°C ~ 85°C
Relative humidity	10% to 95%, non-condensing

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**STANDARD COMPLIANCE**

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Standard Compliance	CE/FCC Class B, BSMI
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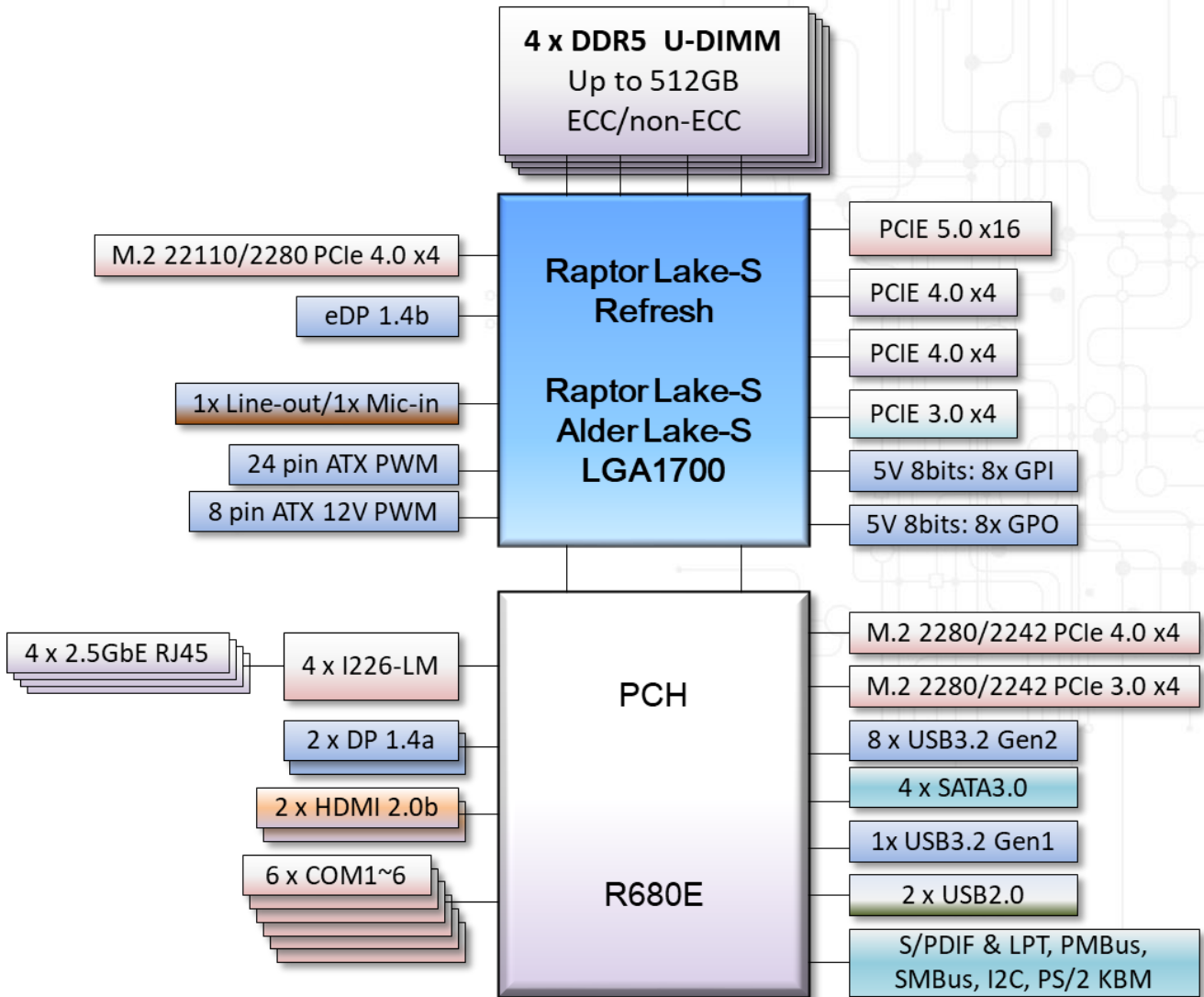
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**OS**

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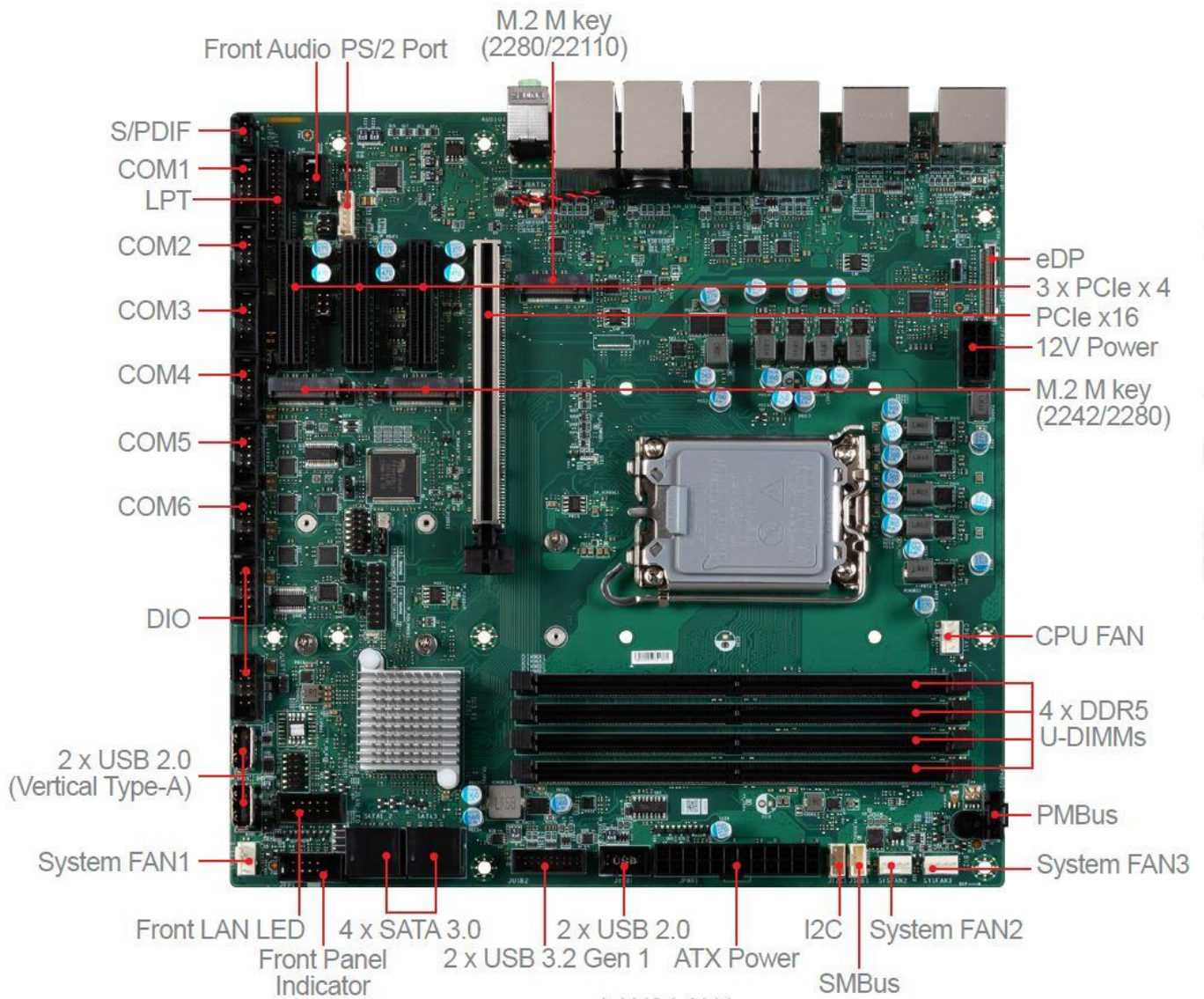
OS Support	Windows 10 IoT Enterprise 2021 LTSC (64-bit) Windows 11 IoT Enterprise LTSC 24H2 (64-bit) Linux Kernel 5.xx, Ubuntu 22.04 LTS Pre-scan
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## Block Diagram

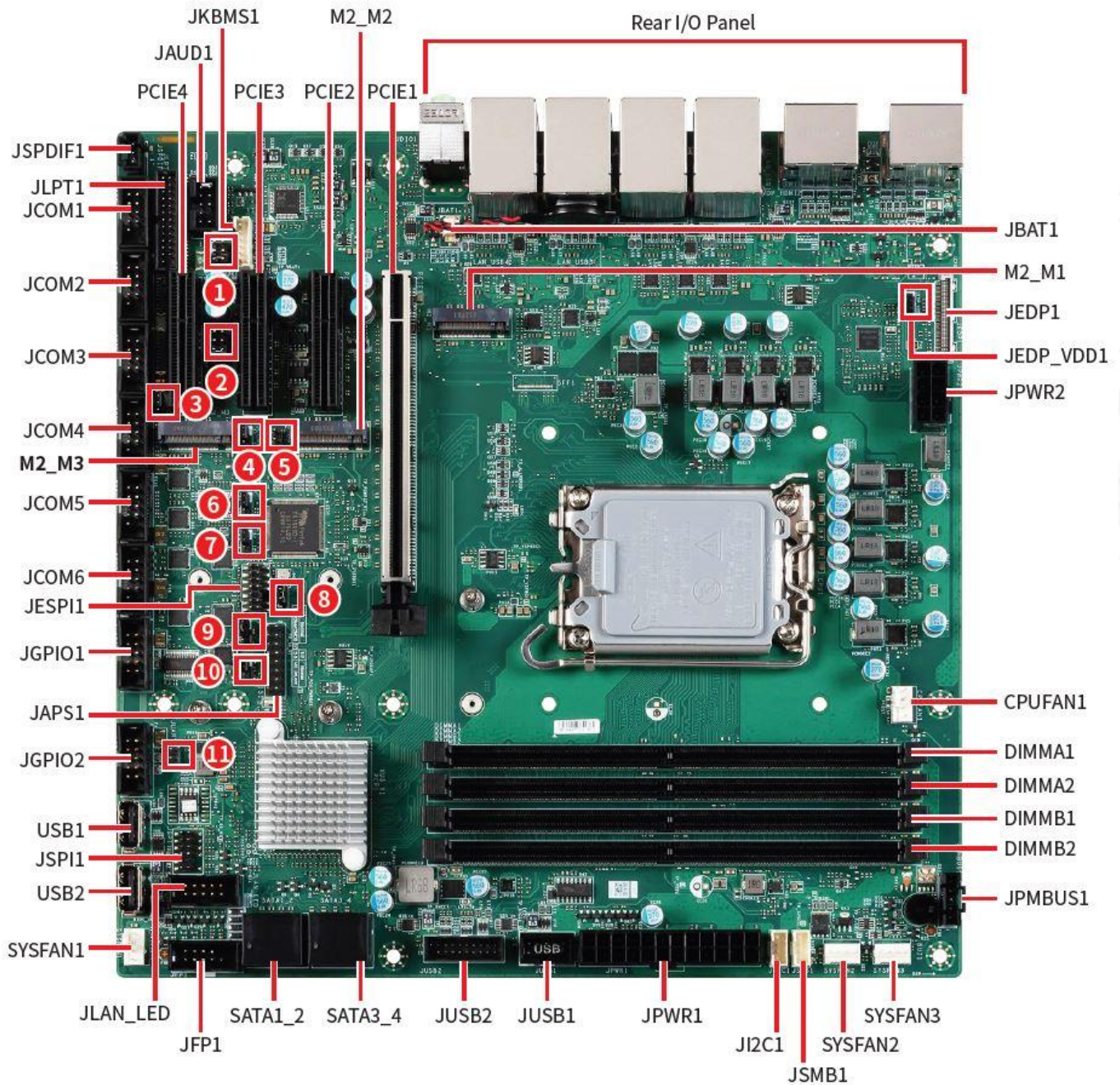




## Board Placement



## Jumper placement



- |            |               |
|------------|---------------|
| (1) JCOMP1 | (7) JCOMP6    |
| (2) JCOMP2 | (8) JATX1     |
| (3) JCOMP3 | (9) JCMO S1   |
| (4) JCOMP4 | (10) JME_DIS1 |
| (5) JCASE1 | (11) JUART1   |
| (6) JCOMP5 |               |



## 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.
INS8267B	14 <sup>th</sup> LGA 1700 (Up to 125W)	R680	1/2/1	8/2	2	4/6	2	ATX Power	-0 to 60°C