



KEY FEATURES

- Intel® Core™ processors (Arrow Lake-S) with W880 chipset
- 4 x 288-pin ECC/non-ECC CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz, up to 192GB (48GB per DIMM)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 3 x PCIe x4 (Gen4), 2 x PCIe x1 (Gen4), 2 x USB4/Thunderbolt™4, 6 x USB 3.2 Gen2, 4 x USB 3.2 Gen1, 1 x M.2 Key B, 1 x M.2 Key E, 2 x M.2 Key M, 6 x COM, 4 x SATA3
- 2 x Intel 1 Gigabit LAN, 1 x Marvell 10 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1 TMDS, 2 x DP 2.1 (2 from Type-C), 1 x DP 1.4a
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+8+24 Pin)

SPECIFICATIONS

Form Factor

Dimensions	ATX (12-in x 9.6-in x 1.81-in, 30.5 cm x 24.4 cm x 4.61 cm)
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Processor System

CPU	Intel® Core™ processors (Arrow Lake-S), up to 125W
Chipset	W880
Socket	LGA1851
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel ECC/non-ECC DDR5 6400/5600 MHz
Capacity	192GB (48GB per DIMM)
Socket	4 x 288-pin Long-DIMM

Graphics

Controller	Intel® X® LPG Graphics
HDMI	HDMI 2.1 TMDS Max resolution up to 7680x4320@60Hz
DisplayPort	DisplayPort 2.1/1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad display (Included 2 output from Type-C)

Expansion Slot

PCIe	2 x PCIe Gen5 Slots (PCIe1/PCIe5: single at x16 (PCIe1); dual at x8 (PCIe1) / x8 (PCIe5)) (PCIe1: Support Riser card x8/x8) 3 x PCIe x4 (Gen4) 2 x PCIe x1 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 2.0

Audio

Interface	Realtek ALC897 HD, High Definition Audio. Line-In, Line-Out, Mic-In
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Ethernet

Controller/ Speed	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I210AT with 10/100/1000 Mbps LAN3: Marvell AQc113 with 10/100/1000/2500/5000/10000 Mbps
Connector	3 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.1 TMDS
DisplayPort	1 x DP 1.4a++
Ethernet	1 x 10 Gigabit LAN 2 x 1 Gigabit LAN
USB	5 x USB 3.2 Gen2 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
Audio	3 (Line-In/Line-Out/Mic-In)
COM	COM1, COM2 (RS-232/422/485)

Internal Connector

USB	4 x USB 3.2 Gen1 (2 x USB 3.2 header) 1 x USB 3.2 Gen2 vertical Con 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
COM	COM3 (RS-232/TTL 5V/ccTalk, switch by Jumper setting) COM4, COM5, COM6 (RS-232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)

Storage

M.2	1 x M.2 (Key M, 2242/2280/22110/25110) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	4 x SATA3 (6Gb/s)
RAID	Intel® VMD RAID 0/1/5/10 **supported by identical interface (PCIe or SATA) PCIe interface: 2 x M.2 Key M SATA interface: SATA port

Security

TPM	TPM 2.0 onboard IC
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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+8+8-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%