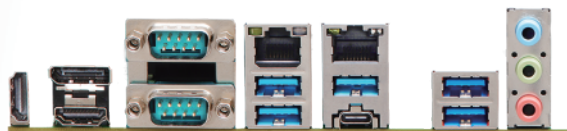
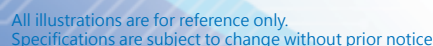


ATX Motherboard



► BLOCK DIAGRAM ◄



SPECIFICATION

Processor System

CPU	● Intel® Core™ processors (Arrow Lake-S), up to 125W
Chipset	● Intel® Q870
Socket	● LGA1851
BIOS	● AMI SPI 256 Mbit

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)

Memory

Technology	● Dual Channel DDR5 6400/5600 MHz ● *1DPC 6400MHz (Ultra 9/7/5K), 5600MHz (Ultra 5 non-K) / 2DPC 1R 5600MHz / 2DPC 2R 4400MHz
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Capacity	● 256GB (64GB per DIMM)
Socket	● 4 x 288-pin Long-DIMM

Graphics

Controller	● Intel® Xe 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) ● 2 x PCIe x4 (Gen4) ● 2 x PCIe x1 (Gen4) ● Supports ASRock Rack PAUL Card (IPMI function)
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, High Definition Audio. Line-in, Line-out, Mic-in

Ethernet

Controller/ Speed	• LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro • LAN2: Intel® I210AT with 10/100/1000 Mbps
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Connector • 2 x RJ-45

Rear I/O

HDMI	● 2 x HDMI 2.1 TMDs
DisplayPort	● 1 x DP 1.4a++
Ethernet	● 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

COM • COM1, COM2 (RS-232/422/485)

Internal Connector

USB	● 2 x USB 3.2 Gen1 (1 x USB 3.2 header) ● 1 x USB 3.2 Gen2 vertical Con ● 2 x USB2.0 (1 x USB2 header) ● 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) ● * For Thunderbolt support, please refer to support list.
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COM

- COM4, COM5, COM6 (RS-232)

Parallel

GPIO • 8 x GPI, 8 x GPO (sh

Thunder

Security

TPM

Storage

M.2

	• 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	• 4 x SATA3 (6Gb/s)

RAID

- **supported by identical interface (PCIe or SATA)
- PCIe interface: M.2 Key B + M.2 Key M
- SATA interface: SATA port

Watchdog Timer

- From Super I/O to drag RESETCON#

Interval

Power Requirements

Input PWR

- 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% (non-condensing)
Storage Humidity	● 5% ~ 90% (non-condensing)