EC0-1830

ATX Structure Motherboard

EC0-1830 motherboard follows the standard ATX specification and utilizes the Intel® Q870/W880 chipset. It supports Intel® Core™ Ultra 9/7/5 LGA1851 socket series processors with a maximum TDP of 125W and vPro functionality. It provides 4 x DDR5 UDIMM memory slots, expandable up to 256 GB. The motherboard supports high-speed USB 3.2 Gen2 ports with a bandwidth rate of 10 Gb/s, full PCIe expansion, multiple serial ports, and multiple USB ports, along with AMT remote management. This product can be widely applied in fields such as industrial automation, machine vision, deep learning, security monitoring, intelligent transportation, environmental protection, and communications.



Product Features

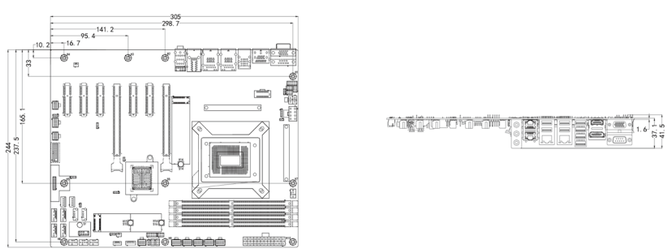
High-speed USB interface with up to 10Gb/s transfer rate

Supports up to 4 x RJ45 Ethernet ports

Supports up to 2 x M.2 Key-M slots

4 x DDR5 memory slots, maximum expandable up to 256GB

Product Dimensions Drawing



(Please refer to the user manual to check detailed specifications and dimensions) (unit: MM)

Product Specifications

Item	Description
Processor	Supports Intel® Core™ Ultra 9/7/5 LGA1851 socket series processors with a maximum TDP of 125W.
Chipset	Intel®Q870/W880
System Memory	4 x DDR5 288-pin UDIMM slots, single slot supports up to 64GB, motherboard supports up to 256GB. Note: W880 platform motherboard supports ECC memory, while Q870 motherboard does not support ECC memory.
Storage Configuration	4 x SATA3.0 ports, supporting RAID 0, 1, 5, 10. Q870: 1 x M.2 (M-Key, PCIe 5.0 x4, 2280). W880: 1 x M.2 (M-Key, PCIe 5.0 x4, 2280); 1 x M.2 (M-Key, PCIe 4.0 x2, 2242/2280).
Display Ports	1 x HDMI, maximum resolution 3840 x 2160 @60 Hz 1 x DP, maximum resolution 4096 x 2304 @60 Hz 1 x VGA, maximum resolution 1920 x 1200 @60 Hz 1 x EDP (with one built-in EDP port supporting quad display)
USB Ports	Onboard: 2 x USB3.2Gen2, 2 x USB3.2 Gen1. 4 x USB2.0 Motherboard built-in: 2 x USB3.2 Gen1, 2 x USB2.0, 2 x USB2.0 TYPE-A
LAN Configuration	Max: 4 x RJ45, LAN3 & LAN4 support 2.5Gbps speed rate
Audio Configuration	Onboard: 1 group of audio port, MIC-IN/ LINE-IN/LINE-OUT Onboard audio pin header
SIO Ports	6 x COM ports, among which COM1/COM2 support RS-232/422/485 selection. COM1 onboard, COM2-6 built-in 1 x LPC, support expanding 4 x COM by installing LPC adapter card 1 x TPM, 1 x PS/2 built-in
Hardware Monitoring	Monitors system status, voltages, temperatures, fan speeds, etc.
Digital I/O	8-channel digital I/O：4-channel input, 4-channel output
Bus Expansion	2 x PCIe 5.0 x16 (one X16 or two X8 link) 4 x PCIe 4.0 x4 1 x PCIe 4.0 x4 (X2 signal)
Power Supply	ATX power supply.
Environmental Requirements	Motherboard operating temp.: -10°C to 60°C, storage temperature: -40°C to 85°C, PC operating temp: 0-40°C(with HDD or GPU); 0-50°C(withSSD); 0-35°C(with 2 x high power GPU), Motherboard constant moist heat: 40°C, 95% RH (non-condensing), PC storage temp: -20°C - 60°C
Operating System	Support operating systems: Windows 10 (21H1 and later versions), Windows 11, Windows Server 2019/2022. Support: high-kernel-version Linux systems(12th gen CPU requires version above 5.15, 13th gen CPU requires version above 5.19, 14th gen CPU requires version above6.2).

Product Configuration

Model	Description
EC0-1830-01	ATX structure motherboard / Q870 chipset / supports Intel® Core™ Ultra 9/7/5 LGA1851 125W processors / Provides 4 x DDR5 (Non-ECC)UDIMM memory slots, expandable up to 256GB / VGA + DP + HDMI +eDP/ 4 x SATA 3.0 / 1 x M.2 key-M / 2 x Gigabit Ethernet ports / 14 x USB ports / 6 x COM ports / 1 group of audio / 1 x 8-channel GPIO Expansion: 2 x PCIe 5.0 x16 (one X16 or dualX8 link), 4 x PCIe 4.0 x4, 1 x PCIe 4.0 x4 (X2 link)
EC0-1830-02	ATX structure motherboard / W880 chipset / supports Intel® Core™ Ultra 9/7/5 LGA1851 125W processors / Provides 4 x DDR5 (Non-ECC/ ECC) UDIMM memory slots, expandable up to 256GB / VGA + DP + HDMI +eDP/ 4 x SATA 3.0 / 2 x M.2 key-M / 2 x Gigabit Ethernet ports / 14 x USB ports / 6 x COM ports / 1 group of audio / 1 x 8-channel GPIO Expansion: 2 x PCIe 5.0 x16 (one X16 or dual X8 link), 4 x PCIe 4.0 x4, 1 x PCIe 4.0 x4 (X2 link)
EC0-1830-03	ATX structure motherboard / W880 chipset / supports Intel® Core™ Ultra 9/7/5 LGA1851 125W processors / Provides 4 x DDR5 (Non-ECC/ ECC) UDIMM memory slots, expandable up to 256GB / VGA + DP + HDMI+eDP / 4 x SATA 3.0 / 2 x M.2 key-M / 4 x Gigabit Ethernet ports / 14 x USB ports / 6 x COM ports / 1 group of audio / 1 x 8-channel GPIO Expansion: 2 x PCIe 5.0 x16 (one X16 or dual X8 link), 4 x PCIe 4.0 x4, 1 x PCIe 4.0 x4 (X2 link)

Note: EVOC Intelligent reserves the right to final interpretation of product specifications and ordering information etc.