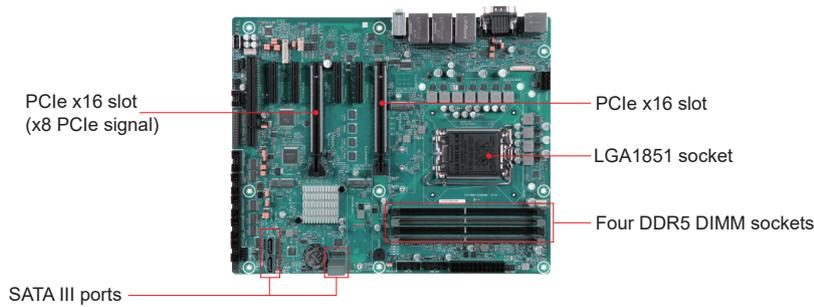


RUBY-D814-Q870

Support Desktop Intel® Core™ Ultra Processors (Series 2) in ATX Form Factor with DDR5 Long-DIMM up to 192GB, VGA, DP, HDMI, Triple GbE LAN, Six COM Ports



RUBY-D814-Q870 is a robust ATX industrial motherboard featuring Intel® Core™ Ultra processors (Series 2), DDR5 support, rich I/O, triple Ethernet, versatile display options, and PCIe Gen 5—ideal for high-performance edge computing and automation.

FEATURES

- Intel® Core™ Ultra Processors (Series 2)
- Four Long-DIMM support DDR5 Non-ECC DRAM up to 192GB
- Support triple Ethernet, 6x COM ports, 11x USB 3.2 ports, 4x SATA III ports and Audio
- Two PCIe x16 (1 x16 signal / 2 x8 signal), four PCIe x4 (2x PCIe x4 signal, 2x PCIe x2 signal), one PCI slot, two M.2 M Key (1x type 2242/2260/2280 and 1x type 2280), and one M.2 E Key type 2230

REAR I/O



Ordering Guide

AB1-3U19 (R) RUBY-D814-Q870.ATX.IMB.LGA1851.CPU.Q870.w/DDR5/DP/HDMI/Triple GbE/COM/Audio/USB

PACKING LIST

One RUBY-D814- Q870 main board
One I/O shield
One SATA cable

General

Processor	Intel® Core™ Ultra Processors (Series 2) in LGA1851 package
Chipset	Intel® Q870
BIOS	AMI uEFI BIOS
Memory	Support up to 192GB DDR5 up to 5600MHz Non-ECC on four Long-DIMM sockets
Storage Devices	4x SATAIII ports, supports RAID 0, 1, 5, 10
Watchdog Timer	Programmable watchdog timer, time out period from 1 sec to 255 secs
Hardware Monitoring	System monitor (Voltage, Fan Speed and Temperature)
Expansion Interface	- 2x PCIe 5.0 x16 slots (1 x16 signal / 2 x8 signal) - 2x PCIe 4.0 x4 slots (x4 signal, open slot) - 2x PCIe 4.0 x4 slots (x2 signal, open slot) - 1x PCI slot - 1x M.2 (Type M), type 2242/2260/2280 (PCIe 5.0 x4), supports NVMe - 1x M.2 (Type M), type 2280 (PCIe 4.0 x4), supports NVMe - 1x M.2 (Type E), type 2230, only supports Intel® CNVi

Rear I/O

Audio	- Realtek ALC897 audio controller - Audio Jack on rear I/O with Line-in / Line-out / Mic-in
Ethernet	- Intel® i210AT, i226V, i226LM (i226LM support Intel® vPro) Ethernet controller - 3x RJ45 connectors on rear I/O
Serial Port	- 1x RS232/422/485 port on rear I/O - 1x RS232/422/485, 4x RS232 on pin header
USB	- 6x USB3.2 (Gen2) (Type A) on rear I/O - 1x USB3.2 (Gen2x2) (Type-C) on rear I/O (colay with DP1.4)
GPIO	8-bit configurable controlled by embedded controller

Display

Graphic Controller	Intel® Xe LPG Graphic
Display Interface	- DP: Two DP 1.4 ports on rear I/O, resolution up to 3840x2160 at 60Hz One DP 1.4 on rear I/O, colay with USB3.2 Gen2x2 Type-C - HDMI: One HDMI 2.1 connector on rear I/O, resolution up to 4096x2160 at 60Hz - VGA: One VGA port on rear I/O resolution up to 1920x1200 (additional cable is required)

Mechanical/Environment

Dimension	304.8mm(L) x 243.8mm(W) x 1.6mm(H)
Power Supply	ATX power input
Environment	- Operation Temperature: 0°C to 60°C - Storage Temperature: -40°C to 85°C - Relative Humidity: 5% to 95%, non-condensing
MTBF	Over 100,000 hours at 40°C



Windows 11

