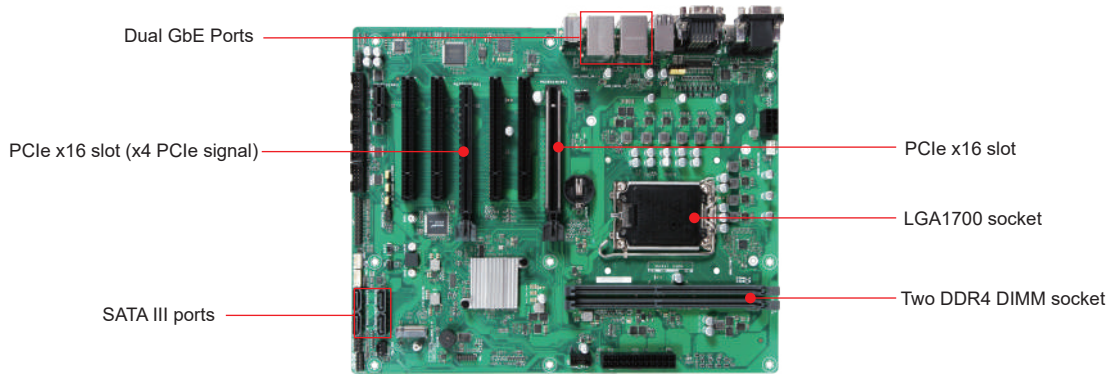# RUBY-D813-H610E

Support Desktop Intel® 12th/13th/14th Gen Core™ Processors ATX with DDR4 Long-DIMM up to 64Gb,VGA,DP,HDMI,Dual GbE LAN, Six COM Ports

- Dual GbE Ports
- PCIe x16 slot (x4 PCIe signal)
- SATA III ports
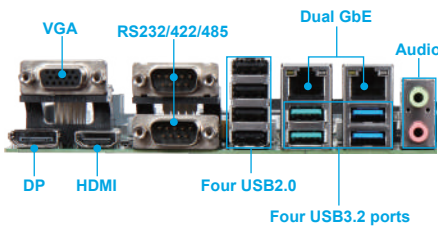- PCIe x16 slot
- LGA1700 socket
- Two DDR4 DIMM socket

RUBY-D813 is based on Intel® H610E chipset and Desktop processors including Intel® 12th/13th/14th Gen Core™ i3/i5/i7/i9 Sku.This board supports DDR4, PCIe, and SATAIII. Those features help you to build high performance and stabile system

FEATURES

- Intel® 12th/13th/14th Gen Core™ Processors support
- Two Long-DIMM support DDR4 Non-ECC DRAM up to 64GB
- Support dual Ethernet, 6x COM Ports, 4x USB 3.2 Ports, 4x SATA III Ports and Audio
- Two PCIe x16 (1x PCIe x4 signal), one PCIe x1 slot, four PCI slots and one M.2 (Type M) type 2242/2260/2280

REAR I/O

- VGA
- RS232/422/485
- Dual GbE
- Audio
- DP
- HDMI
- Four USB2.0
- Four USB3.2 ports

ORDERING GUIDE

AB1-3P61	(R).RUBY-D813-H610E.ATX IMB.LGA1700 H610E. w/DDR4/VGA/DP/HDMI/Dual GbE /COM/Audio/USB

PACKING LIST

One RUBY-D813-H610E Main board
One I/O shield
One SATA cable
One CPU coolor bracket

GENERAL

Processor	Intel® 12th/13th/14th Gen Core™ Processors CPU in LGA1700 package
Chipset	Intel® H610E
BIOS	AMI uEFI BIOS
Memory	Support up to 64GB DDR4 up to 3200MHz Non-ECC on two Long-DIMM socket
Storage Devices	4x SATAIII ports
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 x16 (1x PCIe x4 signal) - 1x PCIe x1 slot - 4x PCI slots - 1x M.2 (Type M) type 2242/2260/2280 (SATA/PCIe x1 mode)

I/O INTERFACE

Super I/O	NCT6126D
Audio	Audio Jack on rear I/O with Line-out / Mic-in with Realtek ALC897 Audio controller
Ethernet	Intel® I219V and Intel® I210AT Ethernet controller 2x RJ45 connectors on rear I/O
Serial Port	- 2x RS232/422/485 port one on REAR I/O, one on board header - 4x RS232 port on pin header
USB	- 4x USB3.2 (Gen2) and 4x USB 2.0 ports on rear I/O - 2x USB2.0 on pin header
GPIO	8-bit configurable controlled by embedded controller

DISPLAY

Graphic Controller	Intel® graphic UHD 630 supports DirectX 12, OpenGL 4.5
Display Interface	- DP:DP port on rear I/O, resolution up to 4096x2160 - VGA:One VGA port on rear I/O resolution up to 1920x1200 - HDMI:One HDMI connector on rear I/O, resolution up to 4096x2160

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: -20°C to 80°C - Relative Humidity: 5% to 95%, non-condensing
MTBF	Over 100,000 hours at 40°C

AMI BIOS · USB 3.0 · Watch DOG · H/W Monitor · 2 GbE · M2 · VGA · SATA 6Gb · I/O GPIO · DP · Core™ i7/i5/i3

14th GEN · i3 · i5 · i7 · i9

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