

Main Features

- 8th/9th Generation (Coffee Lake-S, Coffee Lake-S refresh) Intel® Core™ i9/i7/i5/i3, Pentium® 14nm LGA 1151 socket processor, max. 95W, PCH Q370
- 4 x U-DIMM DDR4 with non-ECC 2666MHz up to 128GB
- Support triple display 2 x HDMI, 1 x DP, 1 x VGA
- 2 x Intel® GbE LAN ports, 6 x USB 3.2 (Gen2), 4 x USB 3.2 (Gen1), 3 x USB 2.0, 5 x RS232, 1 x RS232/485/422, 4 x SATA 3.0, HD audio
- 1 x PCIe x16, 2 x PCIe x4, 1 x PCIe x1, 1 x M.2 (2230 Key E), 1 x M.2 (2280 Key M)
- Onboard TPM 2.0

Product Overview

The NEX 813 is an Micro ATX board. It is equipped with 8/9th Intel® Generation Core™ i9/i7/i5/i3/Pentium® processors to support 95W max and Intel® Q370 chipset. It comes with four DDR4 DIMM sockets up to 128GB DDR4 U-DIMM 2666MHz with non-ECC support and integrated HD graphic controller. The NEX 813 with Intel® Q370 PCH provides high performance and rich expansion. The SATA 3.0 ports with RAID 0, 1, 5, and 10, helps to provide quick access to data files and data protection. Furthermore, it also features an integrated Intel® AMT 12 for easier maintenance.

NEX 813 operates at a temperature range from 0°C to 60°C, this design is ideal for embedded applications that run in outdoor or semi-outdoor environments, such as kiosks, outdoor systems installed in harsh environments, home automation, and thin clients.

Specifications

CPU Support

- 8/9th Generation (Coffee Lake-S, Coffee Lake-S Refresh) Intel® Core™ i9/i7/i5/i3/Pentium® LGA 1151 socket processor, max. 95W
- Intel® Q370 express chipset

Main Memory

- 4 x DDR4 U-DIMM memory socket with non-ECC support, up to 128GB 2666MHz

BIOS

- 256Mbit Flash ROM, AMI BIOS

Display

- 2 x HDMI 1.4b connector (resolution up to 4096 x 2160@24 Hz/ 2560 x 1600@60 Hz, with digital audio)
- 1 x DP connector (resolution up to 4096 x 2160@24 Hz/ 3840 x 2160@60 Hz, with digital audio)
- 1 x VGA connector (resolution up to 1920 x 1200@60Hz)
- * Tip: Multiple Display : (HDMI + VGA + DP, HDMI + HDMI + VGA, HDMI + HDMI + DP).

System

- 1 x PS/2 combo, 6 x USB 3.2 (Gen2), 4 x USB 3.2 (Gen1)

- 5 x RS232, 1 x RS232/485/422 & (by COM1)
- Realtek ALC897 6 channel HDA codec
- 1 x Front panel header, 8-bit digital I/O (In/Out programmable), WDT, chassis intrusion.
- 3 x Fan connector. Nuvoton NPCT750 TPM2.0 onboard

Storage

- 4 x SATA 3.0 (6.0Gb/s) ports, support RAID 0/1/5/10
- 1 x M.2 2280 Key M (PCIe x4/SATA3)

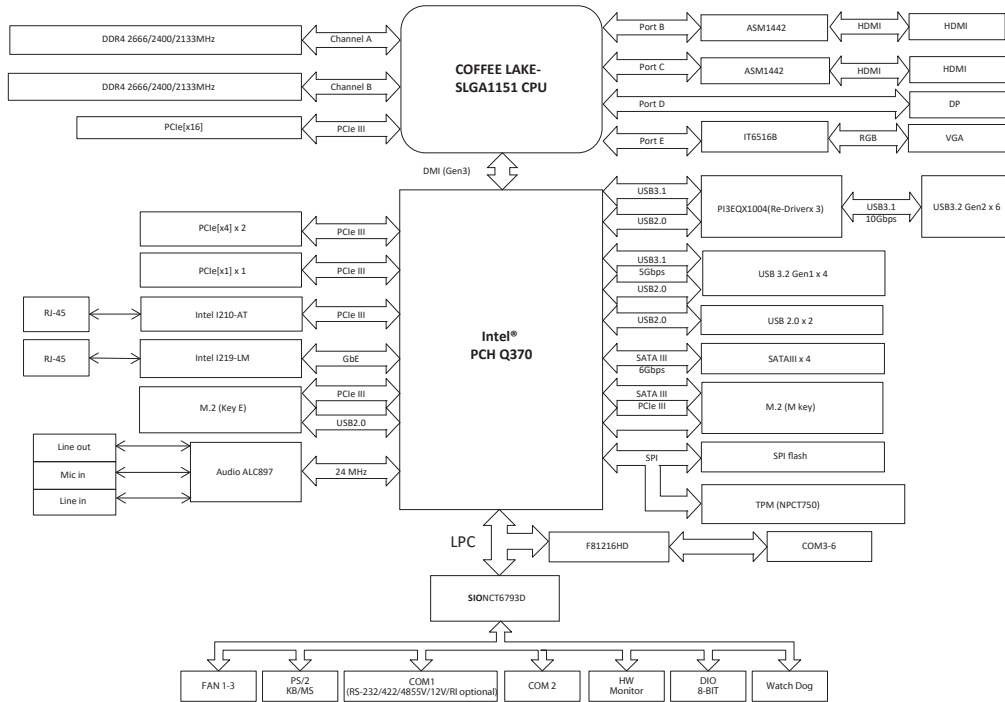
Expansion Slot

- 1 x PCIe x16, 2 x PCIe x4 (open edge), 2 x PCIe x1 (open edge),
- 1 x M.2 2230 Key E (PCIe x1/USB 2.0)

Edge I/O

- 1 x PS/2 combo
- 6 x USB 3.2 (Gen2), 4 x USB 3.2 (Gen1)
- 2 x HDMI, 1 x DP, 1 x VGA
- 2 x RJ45
 - Intel® PHY I219-LM GbE LAN x 1 (supports Intel® AMT 12.0)
 - Intel® I210-AT GbE LAN x 1
- 1 x 3 ports HD Audio Jack (Line, Mic-in, Line-out).

Block Diagram



Internal I/O

- 2 x USB 2.0 (2 x 5 2.54mm pin header)
- 6 x Serial ports
 - 5 x RS232, 1 x RS232/485/422
- 1 x 8-bit digital I/O
- HA audio:
 - 1 x speaker header (Line-out)

Power Requirement

- 1 x 24-pin ATX connector x 1, 8-pin (2 x 4) ATX 12V power connector
- Support both AT and ATX power supply mode

Dimensions

- Micro-ATX form factor, 9.6" x 9.6" (244 mm x 244 mm)

Environment

- Board level operation temperature: 0°C to 60°C
- Storage temperature: -40°C to 85°C
- Relative humidity:
 - 10% to 95% (operating, non-condensing)
 - 5% to 95% (non-operating, non-condensing)

Certifications

- Meet CE/FCC Class A

Ordering Information

Barebone

• NEX 813 (P/N: 6879G0008130F)

Micro-ATX form factor, 8th/9th Generation (Coffee Lake) Intel® Core™ I (up to 95W), Q370, LGA1151, 4 x DDR4 U-DIMM, 2 x HDMI, 1 x DP, 1 x VGA, 4 x USB 3.2 (Gen2), 2 x USB 3.2 (Gen1), 4 x USB 2.0, 3 x GbE LAN, 4 x SATA 3.0, 5 x RS232, 1 x RS232/422/485, 1 x PCIe x16, 2 x PCIe x4, 2 x PCIe x1, 2 x PCI slots, 2 x M.2, onboard TPM.

Packing list

- 2 x SATA cable
- 1 x COM port cable
- I/O shield
- NEX 813

Optional Accessories

- LGA115X CPU cooler (P/N: 5050200022X00)
- SATA cable (P/N: 60233ATA48X00)
- COM cable (P/N: TBD)