NEX 812

Main Features

- 7th/6th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® 14nm LGA1151 socket processor, PCH Q170
- 4 x U-DIMM DDR4 with non-ECC SO-DIMM 2133/1867MHz up to 64GB
- Support multi display DVI-I+HDMI, HDMI+HDMI

- 2 x Intel® GbE LAN ports, 10 x USB 3.0, 4 x USB 2.0, 5 x RS232, 1 x RS232/485/422, 6 x SATA 3.0, HD audio
- 1 x PCIe x16, 1 x PCIe x4, 1 x PCIe x1, 1 x PCI
- 8 bit DIO, TPM (optional)

Product Overview

NEX 812 is a Micro-ATX board. It is equipped with 7th/6th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® 14nm LGA1151 socket processor, and PCH Q170 chipset. It comes with four DDR4 DIMM sockets up to 64GB DDR4 2666MHz with non-ECC support and integrated HD graphic controller. NEX 812 with the Intel® Q170 PCH provides high performance and rich expansion. The SATA 3.0 ports with RAID 0, 1, 5, and 10, provides quick access to data files and data protection. Furthermore, NEX 812 features an integrated Intel® AMT 12 for easy maintenance.

NEX 812 operates at a temperature range from 0℃ to 60℃, it is ideal for embedded applications for outdoor or semi-outdoor environments, such as kiosks, outdoor systems installed in harsh environments, home automation, and thin clients.

Specifications

CPU/Chipset
- 6th/7th Generation Intel® Core™ LGA1151 processor
- Intel® Q170 express chipset

Main Memory
- 4 x DDR4 U-DIMM memory socket with non-ECC support, up to 64 GB 2133/1876MHz

BIOS
- AMI (UEFI)

Display
- Integrated Intel® graphics engine
  - 1 x DVI-I connector (resolution up to 1920 x 1080@60Hz)
  - VGA (resolution up to 1920 x 1080@60Hz)
- 1 x HDMI 1.4 connector (resolution up to 4096 x 2304 x 30MHz)

System
- 1 x PS/2 connector, 10 x USB 3.0, 4 x USB 2.0
- 5 x RS232, 1 x RS232/485/422 & supports 5/12V on RI pin (by COM1)
- Realtek ALC897 5.1 channel HDA codec, Int SPKR
- 1 x Front panel header, 8 bit digital I/O (In/Out programmable), WDT
- Supports onboard TPM (optional)
- 3 x Smart fan connector

Storage
- 6 x SATA 3.0 (6.0Gb/s) ports, support RAID 0/1/5/10

Expansion Slot
- 1 x PCIe 3.0/2.0 x16, 1 x PCIe 3.0/2.0 x4 slot (open edge), 1 x PCIe 3.0/2.0 x1 slot (open edge), 1 x PCI

Rear I/O
- 1 x PS2/2 combo (mouse and keyboard supported)
- 10 x USB 3.0, 2 x USB 2.0
- 1 x DVI-I, 2 x HDMI
- 1 x COM (by COM1)
- 2 x RJ45:
  - LAN 1: Intel® PHY I219-LM Gb LAN (supports iAMT 11.0)
  - LAN 2: Intel® I210-AT Gb LAN
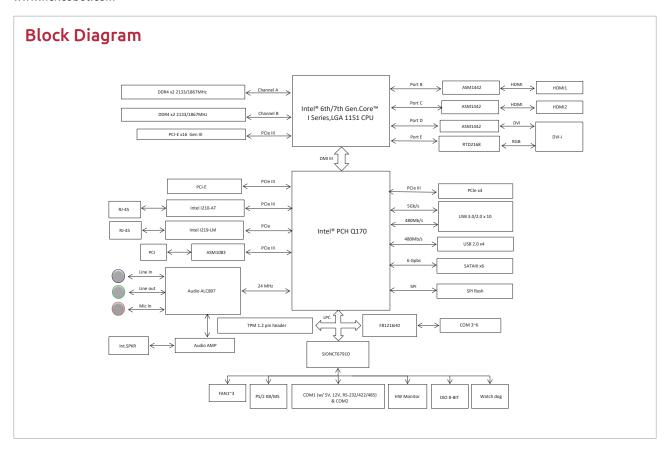- 1 x HD audio connector (1 x Line-out + MIC + Line-in 3.5mm Jack)

Internal I/O
- 4 x USB 2.0
- 5 x RS232
- HD audio:
  - 1 x Audio pin header (speaker header x 1 [Line-out])

Power Requirement
- 1 x 24-pin ATX connect/1 x 8-pin (2 x 4) ATX 12V power connector

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

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nexCOBOT

Block Diagram

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 812 (P/N: 6879G0008120F)**
  Micro-ATX form factor, 6th/7th Generation Intel® Core™ LGA1151 processor, Q170, LGA1151, DDR4 x 4 up to 64GB, 2 x HDMI, 1 x DVI-I, 10 x USB 3.0 , 4 x USB 2.0 ,2 x GbE , 6 x SATA 3.0, 5 x RS232, 1 x RS232/422/485, 1 x PCIe x16, 1 x PCIe x4, 1 x PCI