



## 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 USB3.0, 4 x USB2.0, 5 x RS232, 1x RS232/485/422, 6 x SATAIII, HD Audio
- 1 x PCIe x16, 1 x PCiex4, 1 x PClex1, 1 x PCI
- 8 Bit DIO, TPM (optional)

## Product Overview

NEX812 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. NEX812 with the Intel® Q170 PCH provides high performance and rich expansion. The SATA3.0 ports with RAID 0, 1, 5, and 10, provides quick access to data files and data protection. Furthermore, NEX812-NCB features an integrated Intel® AMT 12 for easy maintenance.

NEX812 operates at a temperature range from 0°C to 60°C, 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 graphic engine
  - 1 x DVI-I connector (resolution up to 1920x1080@60Hz)
  - VGA (resolution up to 1920x1080@60Hz)
- 1 x HDMI1.4 connector (resolution up to 4096x2304x30MHz)

### System

- 1 x PS/2 connector, 10 x USB3.0, 4 x USB2.0
- 5 x RS232, 1 x RS232/485/422 & supports 5/12V on RI pin (by COM1)
- Realtek ALC887 5.1 Channel HDA Codec, Int SPKR
- 1 x Front panel header, 8 bit digital I/O (In/Out programmable), WDT
- Supports on board TPM (optional)
- 3 x Smart Fan connector

### Storage

- 6 x SATA III (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), 1x PCI

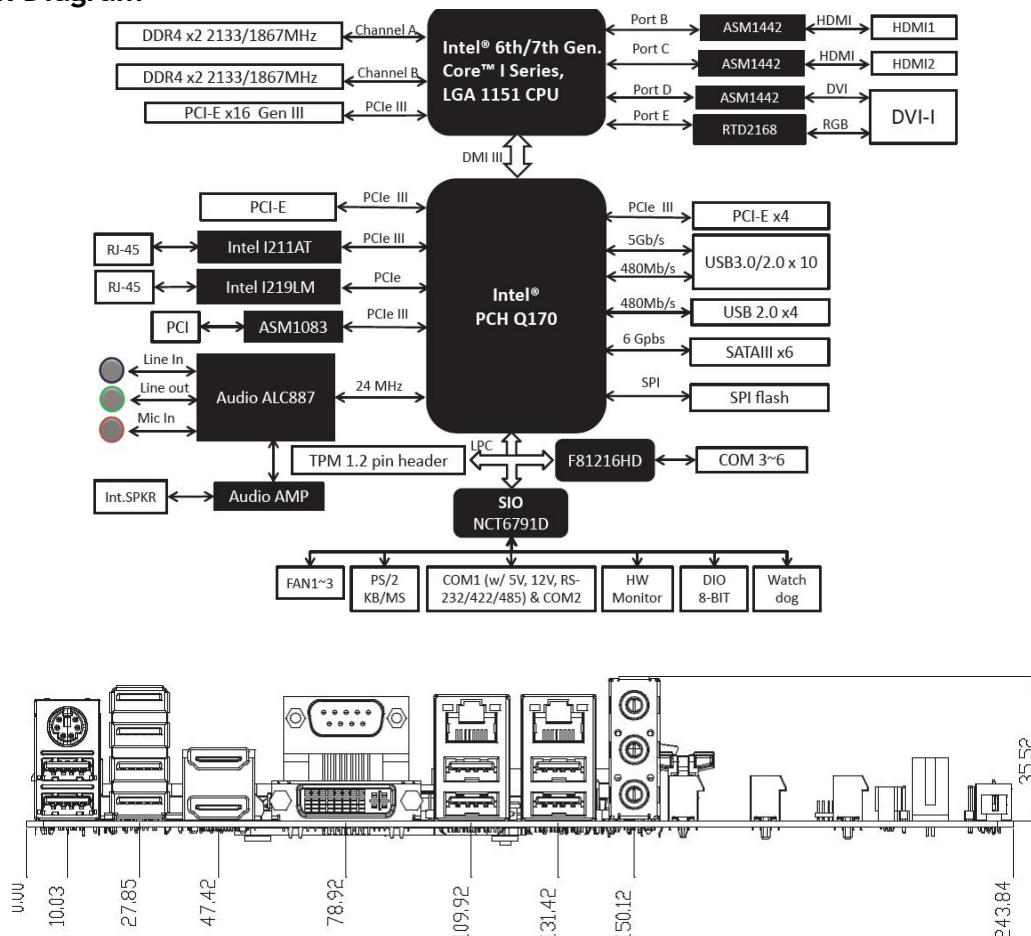
### Rear I/O

- 1 x PS2/2 Combo (Mouse and Keyboard Supported)
- 10x USB3.0, 2 x USB 2.0
- 1 x DVI-I, 2 x HDMI
- 1 x COM (by COM1)
- 2 x RJ45:
  - LAN 1: Intel® PHY i219LM Gb LAN (supports iAMT 11.0)
  - LAN 2: Intel® i211AT 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])

## Black Diagram



### Power Requirement

- 1 x 24-pin ATX connect/1 x 8-pin (2x4) ATX 12V Power connector

### Dimensions

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

### 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

- NEX812 (P/N: 6879G0008120F)**

Micro-ATX Form Factor, 6th/7th Generation Intel® Core™ LGA1151 Processor, Q170, LGA1151, DDR4 x4 up to 64GB, 2 x HDMI, 1 x DVI-I, 10 x USB3.0, 4 x USB2.0, 2 x GbE, 6 x SATAIII, 5 x RS232, 1 x RS232/422/485, 1x PClex16, 1 x PCIe x4, 1 x PCI

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