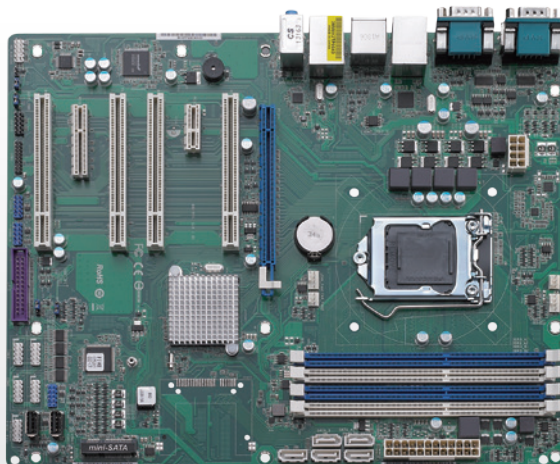


NEX 981

ATX, Socket LGA1150 4th Generation Intel® Core™ i7/i5/i3, Q87
4x DDR3, DP/ HDMI/ VGA, PCIe16/ PCIe4/ 4PCI/ PCIe1, mSATA



Main Features

- Support Socket LGA 1150 for 4th Generation Intel® Core™ i7/i5/i3/ Pentium®/ Celeron® Processors
- 4x DDR3 DIMM Socket up to 32 GB
- Support DisplayPort/ HDMI/ VGA dual displays
- 2x Intel® GbE, 5x SATA3.0, mSATA, 12x USB3.0/ 2.0, 6x COM, 8x GPIO
- 1x PCIe16(Gen. 3.0), 1x PCIe4, 1x PCIe1, 4x PCI (v2.3)
- Support AT/ ATX mode by ATX Power Input

Product Overview

NEX 981 is an industrial motherboard with Standard ATX form factor, which support 4th generation Intel® Core™ i7/i5/i3/ Pentium®/ Celeron® processors. NEX 981 support dual channel DDR3 1600/ 1333/ 1066MHz memory in four long DIMMs up to 32GB system memory and PCIe16 (Gen. 3.0). The Q87 PCH supports three Independent displays, by three DDI (digital display interfaces) for HDMI/ DP ports as well as legacy VGA. Intel Q87 PCH manages up to 5x SATA 3.0 with software RAID 0/1/5/10 supported and performs up to 12x USB (4x USB3.0/ 8x USB2.0) ports. NEX 981 support PCIe16(Gen. 3.0), PCIe4, PCIe1, legacy 4x PCI slots, dual Intel GbE ports and up to 6x COM incl. 2x RS232/422/485. NEX 981 could be integrated into 1U/ 2U/ 4U rack mounted chassis or Desktop Towers as completed system solution for widely industrial applications in the new era of digital infrastructure with NEXCOM.

Specifications

CPU Support

- Socket LGA1150, 4th generation Intel® Core™ i7/i5/i3/ Pentium®/ Celeron® processors

Main Memory

- 4x 240-pin dual channel long DIMMs support DDR3 1066/ 1333/ 1600MHz up to 32GB system memory

Chipset

- Intel® Q87 Platform Controller Hub

BIOS

- AMI BIOS UEFI
- Plug and play support

On-board LAN

- 1x Intel® I217LM PHY for AMT 9.0
- 1x Intel® I210 PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LEDs

Display

- 4th generation Intel® Core™ socket LGA1150 processors Integrated HD graphics
- 1x HDMI
- 1x DisplayPort
- 1x VGA

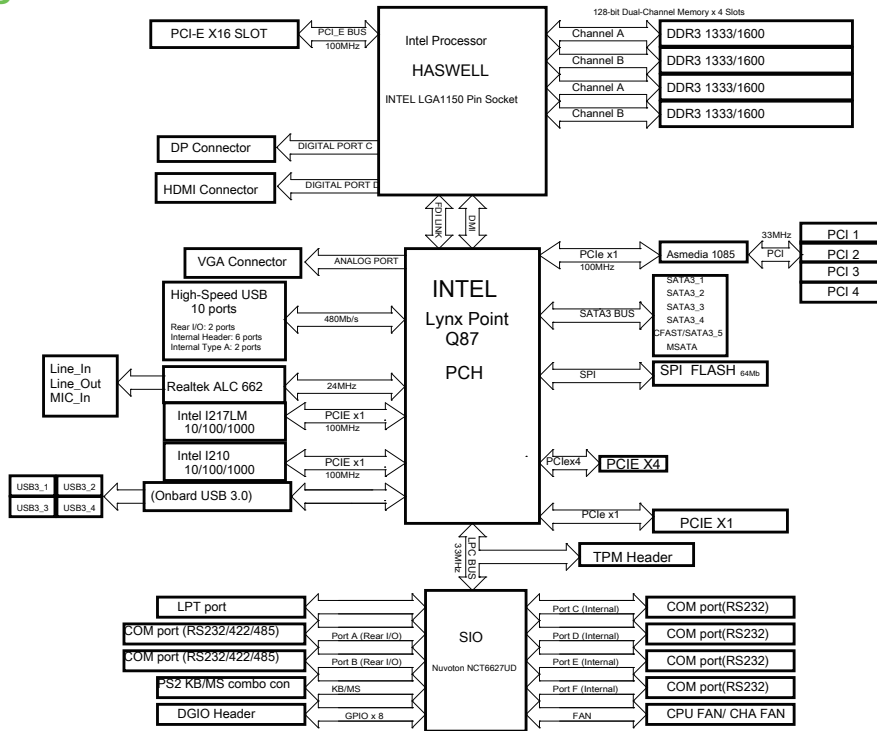
Expansion

- 1x PCIe16 (Gen. 3.0)
- 1x PCIe4
- 1x PCIe1
- 4x PCI (v2.3)

Edge I/O Interfaces

- 1x Combo for PS2 KB/ MS
- 2x stack DB9 for COM1 & COM2
- 1x DisplayPort
- 1x HDMI with dual stack USB 2.0 (black)
- 1x VGA
- 2x RJ45 with dual stack USB 3.0 (blue) connectors
- Line-In/ Line-Out/ MIC phone jack

Block Diagram



I/O Interfaces

- Serial port : 6 ports
- COM1/2 : RS232/422/485 with DB9 male connector on edge I/O
- COM3/4/5/6 : RS232 2x5/ 2.54mm box header
- USB 2.0/ 3.0 : 12 ports
- 4x USB 3.0 ports by edge connectors
- 2x USB 2.0 ports by edge connectors, 4x USB 2.0 ports by 2x 5-pin header pitch 2.54mm, 2x Vertical Type A USB Connectors
- GPIO : Support 4 x GPI and 4 x GPO with TTL level(0/5V)
- 1x 3-pin and 1x 4-pin fan connectors for CPU
- 1x 3-pin and 1x 4-pin fan connectors for System
- 1x 18-pin header for TPM
- 1x 26-pin header for Parallel port
- 1x Onboard buzzer
- Power LDE/ Power On/ Reset/ HDD LED pin header

Watchdog Timer

- Watchdog timeout can be programmable by Software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)

Storage

- 5x SATA3.0 ports with RAID 0,1,5,10 function.
- 1x mSATA

System Monitor

- 4 voltages (Vcore, +12V, +3.3V, 5V)
- 2 temperatures (CPU and System)
- 4 fan speed detection

On-board RTC

- On-chip RTC with battery backup
- 1x External Li-Ion battery

System Monitor

- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (CPU and System)
- 4 FAN speed monitors (2 for CPU and 2 for System)

Power Input

- Support AT/ ATX mode
- Standard ATX 24-pin connector for +12V/ +5V/ +3.3V/ +5VSB/ -12V
- ATX 4-pin connector for +12V

Dimensions

- ATX
- Dimension: Lx W, 305mm x 244mm; 12"x 9.6"

Environment

- Board level operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: 10% to 90%, (Non-condensing)

Certifications

- CE approval
- FCC Class A

Ordering Information

◆ NEX 981-10PBK (P/N : 10G00098100X0)

Bulk-Packed 10 x pcs ATX, LGA1150 of 4th Generation Intel® Core™ i7/i5/i3/ Pentium®/ Celeron® processors, Q87 with 4x DDR3/ DIMM, HDMI/ DP/ VGA, PCIe x16/ PCIe x4/ PCIe x1/ 4PCI/ 5x SATA3.0, 4x USB3.0/ 8x USB 2.0, 2x GbE, 6x COM, mSATA, and ATX Power Input