NEX 980

Main Features

- Support Socket LGA 1155 for 3rd/ 2nd Generation Intel® Core™ i7/i5/i3, Celeron Processors
- 4x DDR3 DIMM Socket up to 32 GB
- Support DisplayPort/ HDMI/ VGA dual displays

- 2x Intel® GbE, 4x SATA3.0/ 2.0, mSATA, CFast, 12x USB3.0/ 2.0, 6x COM, 8x GPIO
- 1x PCIe x16, 1x PCIe x4, 1x PCIe x1, 1x mPCIe, 4x PCI (v2.3)
- Support AT/ ATX mode by ATX Power Input

Product Overview

NEX 980 is an industrial motherboard with Standard ATX form factor, which support 3rd and 2nd generation Intel® Core™ i7/i5/i3 Celeron® processors. NEX 980 support dual channel DDR3 2133/1600/1333/1066MHz memory in four long DIMMs up to 32GB system memory and PCIex16 (3.0/ 2.0 by CPU)

The Q77 PCH support multiple displays by three DDI (digital display interfaces) by HDMI/ DP ports as well as legacy VGA. Intel Q77 PCH manages up to 2x SATA 3.0/ 2x SATA 2.0 with software RAID 0/ 1/ 5/ 10 supported and performs up to 12x USB (4x USB3.0/ 8x USB2.0) ports. NEX 980 support PCIe x4, PCIe x1, mPCIe, legacy 4x PCI slots, dual Intel GbE ports and up to 6x COM incl. 2x RS232/422/485. NEX 980 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 LGA1155, 3rd or 2nd Generation Intel® Core™ i7/ i5/ i3, Celeron® processors

Main Memory
- 4x 240-pin dual channel long DIMMs support DDR3 1066/1333/1600/2133Mhz up to 32GB system memory

Chipset
- Intel® Q77 Platform Controller Hub

BIOS
- AMI BIOS UEFI
- Plug and play support

On-board LAN
- 1x Intel® 82579V/ LM PHY for AMT 8.0
- 1x Intel® 82583V PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2x RJ45 with LEDs

Display
- 3rd or 2nd generation Intel® Core™ socket LGA1155 processors Integrated HD graphics
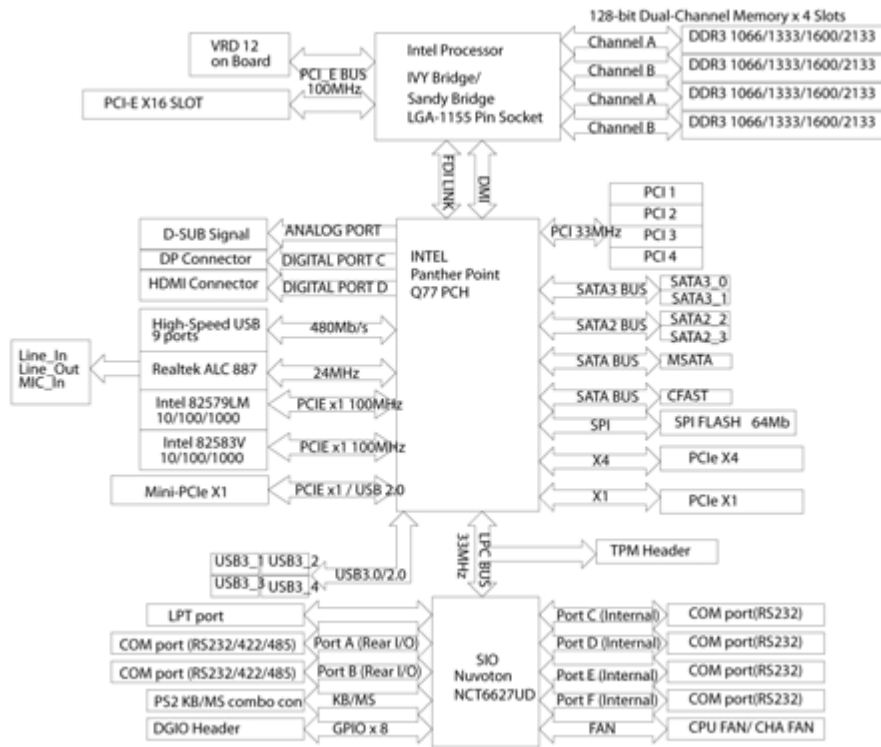- 1x HDMI
- 1x DisplayPort
- 1x VGA

Expansion
- 1x PCIe x16 (Gen. 3.0/ 2.0 by CPU)
- 1x PCIe x4
- 1x PCIe x1
- 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) and dual stack USB 2.0 (black) connectors
- Line-In/ Line-Out/ MIC phone jack

Block Diagram

128-bit Dual-Channel Memory x 4 Slots

Channel A	DDR3 1066/1333/1600/2133
Channel B	DDR3 1066/1333/1600/2133
Channel A	DDR3 1066/1333/1600/2133
Channel B	DDR3 1066/1333/1600/2133

VRD 12 on Board — PCI-E BUS 100MHz — Intel Processor IVY Bridge/ Sandy Bridge LGA-1155 Pin Socket

PCI-E X16 SLOT

FDI LINK — DMI

D-SUB Signal — ANALOG PORT
DP Connector — DIGITAL PORT C
HDMI Connector — DIGITAL PORT D

INTEL Panther Point Q77 PCH

PCI 33MHz:
PCI 1
PCI 2
PCI 3
PCI 4

High-Speed USB 9 ports — 480Mb/s

Line_In / Line_Out / MIC_In — Realtek ALC 887 — 24MHz

Intel 82579LM 10/100/1000 — PCIE x1 100MHz
Intel 82583V 10/100/1000 — PCIE x1 100MHz

Mini-PCIe X1 — PCIE x1 / USB 2.0

SATA3 BUS — SATA3_0 / SATA3_1
SATA2 BUS — SATA2_2 / SATA2_3
SATA BUS — MSATA
SATA BUS — CFAST
SPI — SPI FLASH 64Mb
X4 — PCIe X4
X1 — PCIe X1

LPC BUS 33MHz — TPM Header

USB3_1 USB3_2 / USB3_3 USB3_4 — USB3.0/2.0

LPT port
COM port (RS232/422/485) — Port A (Rear I/O)
COM port (RS232/422/485) — Port B (Rear I/O)
PS2 KB/MS combo con — KB/MS
DGIO Header — GPIO x 8

SIO Nuvoton NCT6627UD

Port C (Internal) — COM port(RS232)
Port D (Internal) — COM port(RS232)
Port E (Internal) — COM port(RS232)
Port F (Internal) — COM port(RS232)
FAN — CPU FAN/ CHA FAN

I/O Interface

- USB 3.0: 4 ports (2x USB3.0 on edge I/O, 2x internal box-header)
- USB 2.0: 8 ports (4x USB2.0 on edge I/O, 4x internal box-header)
- Serial: 6 ports (default 2x RS232 pre-selected RS422/485 in BIOS, 4x RS232 by internal pins-header)
- SATA HDD: 4 ports, port 0, 1 support SATA 3.0, port 2, 3 support SATA 2.0, dual SATA Power by 2 x 4xpins
- Support Software RAID 0/ 1/ 5/ 10 and Intel® Matrix Storage
- GPIO: Supports 4x GPI and 4x GPO with TTL level (5V or 12V by Jumper)

Interface:

- Onboard buzzer x1
- 9x pins system header for Power LED/ Power On/ Reset/ HDD LED
- 1x 4-pin fan connector (for CPU); 1x 3-pin fan connectors (for CPU or System)
- On-chip RTC with battery/ CR2032 backup holder onboard

System Monitor

- 4 Voltages (+3.3V, +5V, +12V, Vcore)
- 2 Temperatures (For CPU and System)
- 3 FAN speed monitors (1 for CPU and 2 for Chassis Fan/ 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

- Micro 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

- Meet CE
- Meet FCC

Ordering Information

- **NEX 980-10PBK (P/N : 10G00098001X0)**

  Bulk-Packed 10 x pcs ATX, LGA1155 of 3rd/ 2nd Generation Intel® Core™ i7/ i5/ i3, Celeron processors, Q77 with 4x DDR3/ DIMM , HDMI/ DP/ VGA, PCIe x16/ PCIe x4/ PCIe x1/ 4PCI/ mPCIe, 2x SATA3.0/ 2x SATA 2.0, 4x USB3.0/ 8x USB 2.0, 2x GbE, 6x COM, mSATA, CFast and ATX Power Input