NEX 910

Main Features

- Support socket LGA1150 for 4th generation Intel® Core™ i7/i5/i3 processors and Intel® Celeron® processors
- 4 x DDR3 DIMM socket up to 32GB
- Support dual/triple independent display: 2 x HDMI/VGA/DVI-D
- 2 x Intel® GbE, 6 x SATA3.0/2.0, 14 x USB3.0/2.0, 6 x COM, 4-in/4-out GPIO, HD Audio
- 1 x PCIe x16, 1 x PCIe x4, 5 x PCI
- TPM supported
- Support AT/ATX mode by ATX power input

Product Overview

NEX 910 is an industrial motherboard with standard ATX form factor, which support 4th generation Intel® Core™ i7/i5/i3 processors and Intel® Celeron® processors. NEX 910 supports dual channel DDR3 1600/1333MHz memory in four long DIMM slots up to 32GB system memory and PCIe x16 (gen. 3.0).

The Q87 PCH supports multiple displays by three DDI (digital display interfaces) using among two HDMI, one VGA and one DVI-D ports. Intel® Q87 PCH manages up to 6 x SATA 3.0 and performs up to 14 x USB (4 x USB 3.0/ 10 x USB 2.0) ports, dual Intel® GbE ports and up to 6 Series ports including 1 x RS-232/422/485 and 5 x RS-232. NEX 910 supports PCIe x4 and 5 x PCI slots; and TPM function is as optional. NEX 910 could be integrated into 1U/ 2U/ 4U rack mounted chassis or Desktop Tower as completed system solution for widely industrial applications in the new era of digital infrastructure with NEXCOM.

Specifications

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

Main Memory
- 4 x 240-pin dual channel long DIMMs support DDR3 1600/1333MH up to 32GB, non-ECC, un-buffered system memory

Chipset
- Intel® Q87 PCH

BIOS
- AMI system BIOS
- Plug and play support

On-board LAN
- 2 x RJ45 connectors with LED
- LAN1: Intel® PHY I217LM GbE LAN (support AMT 9.0)
- LAN2: Intel® I211AT GbE LAN
- Support PXE boot from LAN, wake on LAN function

Display
- 2 x HDMI 1.4 connector (resolution up to 4096 x 2160@240Hz)
- 1 x DVI-D (resolution up to 1920 x 1200@60Hz)
- 1 x Internal VGA pin-header (resolution up to 1920 x 1200@60Hz)

Expansion Slot
- 1 x PCIe x16 (gen. 3.0)

- 1 x PCIe x4
- 5 x PCI

Edge I/O Interfaces
- 2 x HDMI
- 1 x DVI-D
- 2 x RJ45 with dual stack USB 3.0 (blue) connectors
- 1 x Dual stack USB 2.0 (black)
- 1 x RS-232/422/485 DB-9 connector (COM1, supports 5/12V on RI pin)
- 1 x combo PS/2 KB and MS
- 1 x Audio Jack: Line-in/Line-out/Mic-in

I/O Interface
- USB 2.0: 8 ports internal pin-header
- Serial: 5 ports RS232 internal pin-header
- SATA HDD: 6 ports SATA 6.0Gb/s, supports RAID 0/1/5/10
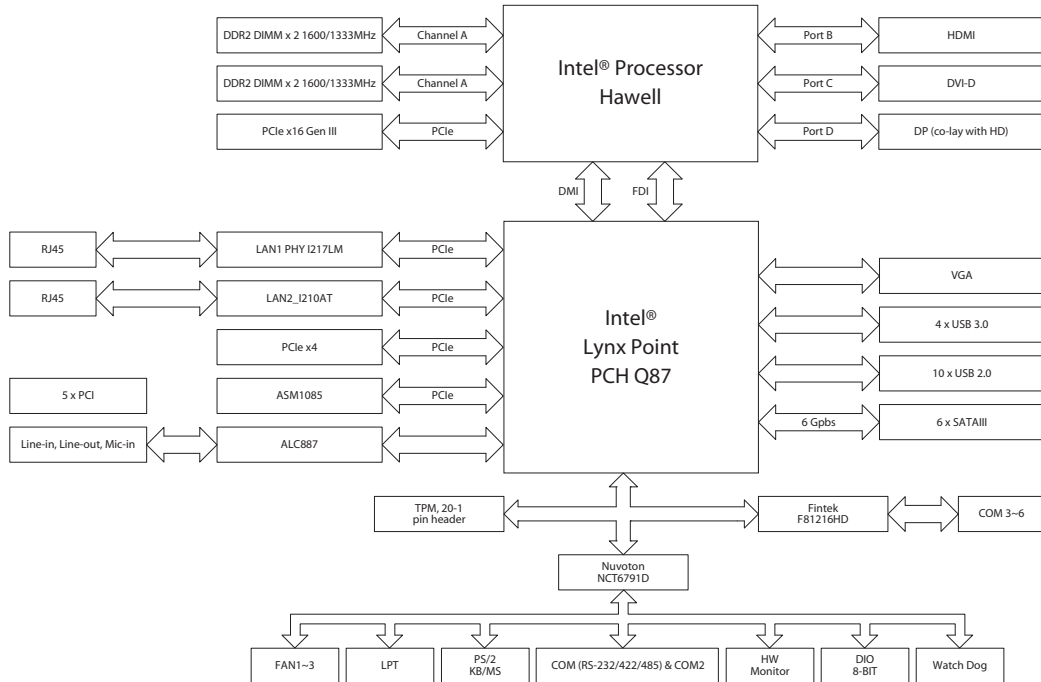- GPIO: supports 4 x GPI and 4 x GPO

Interface:
- 1 x LPT connector
- 1 x 20-1 pin header for TPM1.2/FW3.19
- 1 x 4-pin CPU fan connector; 2 x 4-pin chassis fan connector
- 1 x Front panel header; 1 x clear CMOS jumper
- 1 x BIOS flash header (2x4P, P=1.27mm)

System Monitor
- 3 voltage (for +5V, +12V, Vcore)

Indutrial Mother Board

NEXCOM

NEXCOM

Block Diagram

Block diagram showing Intel® Processor Haswell connected to DDR2 DIMM x 2 1600/1333MHz (Channel A), DDR2 DIMM x 2 1600/1333MHz (Channel A), PCIe x16 Gen III (PCIe), and Port B to HDMI, Port C to DVI-D, Port D to DP (co-lay with HD). DMI and FDI connect to Intel® Lynx Point PCH Q87. LAN1 PHY I217LM (PCIe) to RJ45, LAN2_I210AT (PCIe) to RJ45, PCIe x4 (PCIe), ASM1085 (PCIe) to 5 x PCI, ALC887 to Line-in, Line-out, Mic-in. VGA, 4 x USB 3.0, 10 x USB 2.0, 6 x SATAIII (6 Gpbs). TPM, 20-1 pin header, Fintek F81216HD to COM 3~6. Nuvoton NCT6791D to FAN1~3, LPT, PS/2 KB/MS, COM (RS-232/422/485) & COM2, HW Monitor, DIO 8-BIT, Watch Dog.

- 2 temperatures (CPU, system temperatures)
- 2 fans speed (CPU and system fans)

Power Requirements
- 1 x 24-pin ATX connector
- 1 x 8-pin ATX 12V power connector

Dimensions
- ATX
- Dimension: 305mm (L) x 244mm (W) (12" x 9.6")

Environment
- Board level operating temperatures: 0°C to 60°C
- Storage temperatures: -40°C to 85°C
- Relative humidity:
  - 0% to 90% (operating, non-condensing)
  - 5% to 95% (non-operating, non-condensing)

Certifications
- Meet CE/ FCC Class A

Ordering Information

- **NEX 910 (P/N: 10G00091000X0)**
  ATX, socket LGA1150 4th gen. Intel® Core™ & Celeron® processor product family with Q87, 4 x DDR3, VGA/2 x HDMI/DVI-D, PCIe x16/ PCIe x4/5 x PCI, 2 x GbE /14 x USB/6 x COM

NEXCOM

Indutrial Mother Board

IPC2U www.ipc2u.ru www.ipc2u.de www.sovio.com Date: 03/2017 Rev.01