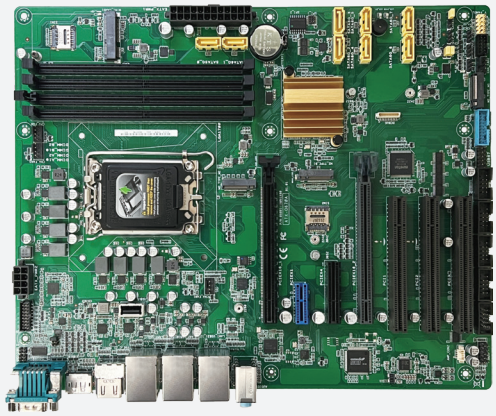
NEX 918

ATX with 14th/13th/12th Gen Intel® Core™
LGA1700 Socket Processor



Main Features

- 14th/13th/12th Gen Intel® Core™, LGA 1700 socket, processor max 125W TDPs, Intel® Q670E PCH
- 4 x U-DIMM DDR5 with non-ECC 4000MHZ up to 128GB
- Support triple display HDMI®, DP, VGA
- 2 x Intel® GbE LAN ports (BOM option: RJ45 x 3), 2 x USB 3.2 (Gen2), 4 x USB 3.2 (Gen1), 2 x USB 2.0, 5 x RS232, 1 x RS232/485/422, 8 x SATA3.0, 8-bit GPIO, HD Audio
- 1 x PCIe x16, 1 x PCIe x1, 1 x PCIe x4, 1 x PCIe x16 (4 lanes), 3 x PCI, 1 x M.2 3042/3052 Key B (PCIe/USB), 1 x mini-PCIe (PCIe/USB), 1 x Micro SIM card and onboard TPM 2.0

Product Overview

The NEX 918 is an ATX board. It is equipped with the 14th/13th/12th Gen Intel® Core™ processors to support up to a maximum of 125W max and Intel® Q670E chipset. It comes with four DDR5 4000 U-DIMM sockets up to 128GB with non-ECC support and an integrated HD graphic controller.

With Intel® Q670E PCH, the NEX 918 provides high performance and rich expansions. The SATA 3.0 ports with RAID 0, 1, 5, and 10, helps to provide quick access to data files and data protection. Furthermore, it also features an integrated Intel® AMT 12 for easier maintenance. NEX 918 is a high-performance system and is suitable for IOT, AI, AOI, AI vision, and logistics, etc.

Specifications

CPU/Chipset

- 14th/13th/12th Gen Intel® Core™ , LGA 1700 socket, processor Max 125W TDPs, Intel® Q670E PCH

Main Memory

- 4 x U-DIMM DDR5 with non-ECC 4000MHZ up to 128GB

BIOS

- 256mb flash ROM, AMI BIOS

Display

- 1 x VGA pin header (resolution up to 1920 x 1200@60Hz)
- 2 x HDMI® 2.0 connector (resolution Up to 4096 x 2160@60 Hz/30Hz, with digital audio)
- 2 x DP 1.4 connector (resolution Up to 4096 x 2160@24 Hz/ 3840 x 2160@60 Hz, with digital Audio)
  - * Multi display: HDMI®+HDMI®+DP+DP, HDMI®+HDMI®+DP+VGA, HDMI®+VGA+DP+DP

System

- 2 x USB 3.2 Gen2, 4 x USB 3.2 Gen1, 1 x USB 3.0 pin header
- 1 x USB 2.0 pin header, 1 x USB 2.0 (vertical) type A
- 5 x RS232, 1 x RS232/485/422 and 5V/12V/RI by COM1
- Realtek ALC897, 6 channel HDA codec
- 1 x Front panel header, 8-bit digital I/O (In/Out programmable), WDT, chassis intrusion
- Supports onboard TPM 2.0
- 4 x Fan connector

Storage

- 8 x SATA 3.0 (6.0Gb/s) ports, support RAID 0/1/5/10
- 1 x M.2 2280 Key M (PCIe 4.0 lanes, Gen4)
- 1 x M.2 2242/80 Key M (PCIe 1.0 lane, Gen3)

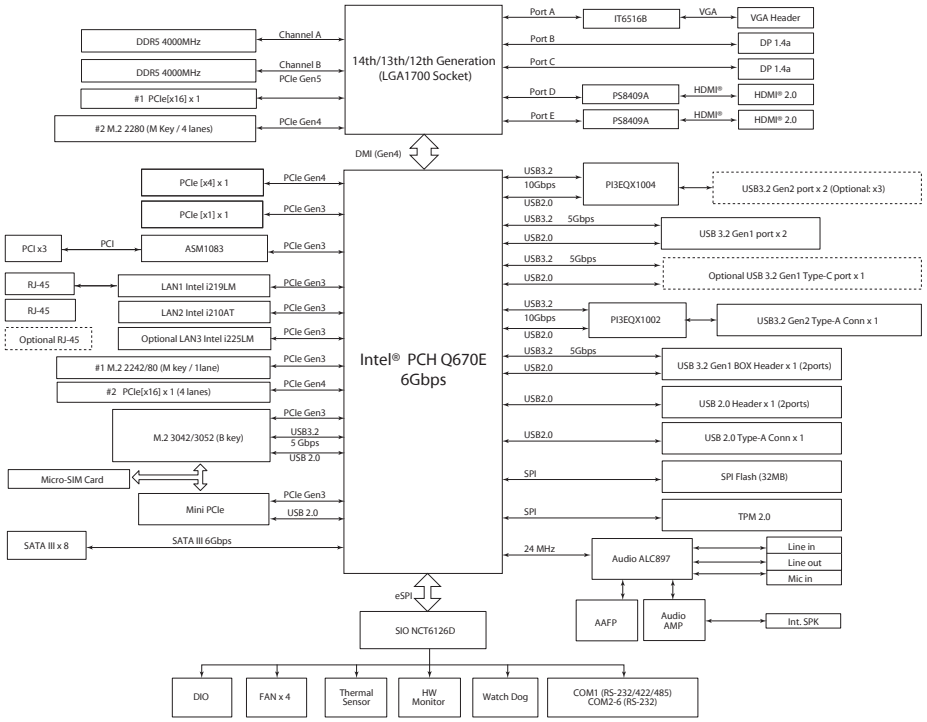
Expansion Slot

- 1 x PCIe x16 (16 lanes, Gen5)
- 1 x PCIe x1 (open slot) (1 lane, Gen3)
- 1 x PCIe x4 slot (open slot) (4 lanes, Gen4)
- 1 x PCIe x16 slot (4 lanes, Gen4)
- 3 x PCI slot
- 1 x M.2 3042/3052 Key B (PCIe 3.0 x1/USB 3.2 Gen1)
- 1 x mini-PCIe slot (PCIe 3.0/USB 2.0)
- 1 x Micro SIM Card slot x1 (either with M.2 Key B or mini-PCIe slot)

Rear I/O

- 2 x HDMI® 2.0 , 2 x DP1.4
- RJ45 x 2 (option: RJ45 x 3, LAN3 with USB 3.2 Gen2 x 1)
  - 1 x Intel® PHY i219LM Giga LAN (supports Intel® AMT 12.0)
  - 1 x Intel® i210AT Giga LAN
  - 1 x Intel® i225LM Giga LAN x 1 (optional)
- 2 x USB 3.2 Gen2 (10Gbps) (option: 3 units if with LAN3 i225LM)
- 2 x USB 3.2 Gen1 (5Gbps) , 1 x Type C (5Gbps, 5V, 1.5A) x 1 (optional) (all ports are bootable, can be deactivated per BIOS function; USB power switchable feature)

Block Diagram



- 1 x RS232/485/422 and 5V/12V/RI by COM1
- 1 x HD audio connector (1 x Line-out + MIC + Line-in 3.5mm Jack)

Internal I/O

- 1 x USB 3.0 box header (2 x 5-pin, p=2.54mm) support 2 USB 3.2 Gen1 ports USB power switchable feature
- 1 x USB 2.0 header (2 x 5-pin, p=2.54mm) support 2 USB 2.0 ports (USB power switchable feature)
- 1 x USB 2.0 vertical type A connector
- 6 x serial ports
  - 5 x RS232, 1 x 8-bit digital I/O interface (In/Out programmable)
- HA audio:
  - 1 x speaker header (Line-out)

Power Requirement

- 1 x 24-pin ATX connector, 1 x 8-pin ATX 12V power connector
- Support both AT and ATX power supply mode

Dimensions

- ATX form factor, 12”x 9.6” (305mm x 244mm)

Environment

- Board level operation temperature: 0°C to 60°C
- Storage temperature: -40˚C to 85˚C
- Operating humidity
  - 0% to 90% (non-condensing)

Certifications

- Meet CE/FCC Class A

Ordering Information

Barebone

- **NEX 918 (P/N: 6879G0009180F)**
  ATX, 14th/13th/12th Gen Intel® Core™, LGA 1700 socket, processor max 125W TDPs, PCH Q670E, 4 x DDR5 U-DIMM, VGA, 2 x HDMI, 2 x DP,
  2 x USB 3.2 (Gen2), 4 x USB 3.2 (Gen1), 2 x USB 2.0, 2 x GbE LAN, 8 x SATA 3.0, 5 x RS232, 1 x RS232/422/485, 2 x PCIe x16, 1 x PCIe x1, 1 x PCIe x4, 3 x M.2, 1 x mPCIe, 1 x SIM card, onboard TPM2.0

- **Packing List**
  - SATA 6G cable (7P, 180; 90, 500mm 2 in1)
  - VGA cable (320mm, 2 x 8P, w/bracket)
  - I/O shield
  - NEX 918 mainboard

- **Optional Accessories**
  - CPU cooler 2U (P/N: 685050200001F)
  - CPU cooler 1U (P/N: 685050200002F)

We reserve the right to change specifications and product descriptions at any time without prior notice.