

NEX 609

Mini-ITX, 3rd Generaion Intel® Core™ i7/i5/i3 Celeron® with HM76(QM77), Two 48-bit LVDS (Option LVDS2), 2x GbE/ 10x USB/ 6x COM/ mSATA, Dual 12VDC/ 24VDC Input



Main Features

- 3rd generation Intel® Core™ processor family
- Intel® HM76 chipset (QM77 option)
- Two 204-pin SO-DIMM socket supports up to 16GB DDR3 1333/ 1600 MHz SDRAM
- Display: DVI-I/ HDM/ Dual 48bit LVDS (Option LVDS2)
- 1x Mini-PCIe support mSATA or 3G/ SIM, and optionI TPM
- 4x SATA with RAID 0,1,5,10
- 2x Intel Gbe Ethernet
- 10x USB, 4-in/ 4-out GPIO, Mic-in, Line-out
- Serial port: 5 x RS232, 1x RS232/422/485 port
- Support AT/ ATX mode and Dual +12VDC/ +24VDC input
- 1x PCIe x16 slot 2x PCIe1 on edge golden finger

Product Overview

The NEX 609 is a Mini-ITX board with 3rd generation Intel® Core™ processor family, which supports DDR3 1333/ 1600 memory, along with Integrated graphics controller, Intel® HD Graphics 4000, along with integrated graphics for large display application to support Multiple Display. Intel® HM76/QM77 chipset provides Four SATA, Six serial ports, Ten USB 2.0 ports, two Gigabit Ethernet LAN port,One PCIe x16 slot, One Mini-PCIe with 3G/ Wi-Fi / MSATA interface, dual 12V/ 24V input for Kiosk/ digital signage/ ganning/ applications.

Specifications

CPU Support

- 3rd generation Intel® Core™ processor

Main Memory

- Two 204- pin SO- DIMM socket supports up to 16 GB DDR3 1333/1600MHz SDRAM

Chipset

- Intel® HM76/ QM77 chipset (option)

BIOS

- AMI BIOS
- Plug and play support
- Advanced Power Management
- Advanced Configuration & Power Interface

On-board LAN

- 2x Intel® PCI Express Gigabit Ethernet
- Support Boot From LAN (PXE)
- 2x RJ45 with LED

Display

- 3rd generation Intel® Core™ processor integrated Intel® HD Graphics 4000 engine, Intel® HD Graphics integrates high-performance graphics and media processing right on the processor ,delivers sophisticated graphics for large display application, three independent display support.
- DVI-I interface: Analog VGA support

HDMI interface:

- Resolution:
 - Up to 2560 x 1600 @60Hz for 1st display port
 - Up to 1920 x 1600 @60Hz for 2st display port
 - Up to 1920 x 1200 @60Hz for 3st display port

– LVDS1 interface:

48bit LVDS interface, 2x DF13 20-pin LVDS connector for internal connection.

LVDS2 interface (option, Through SDVO w/ CH7308).

48bit LVDS interface, 2x DF13 20-pin LVDS connector for internal connection.

– CCFL interface:

2x CCFL for LCD Panel Backlight Inverter with Analog & PWM dimming control.

- Analog VGA interface: 1x DB15 VGA port, support up to 2048 x 1563 @ 60Hz

- LVDS interface: support single 18/ 24-bit LVDS channel

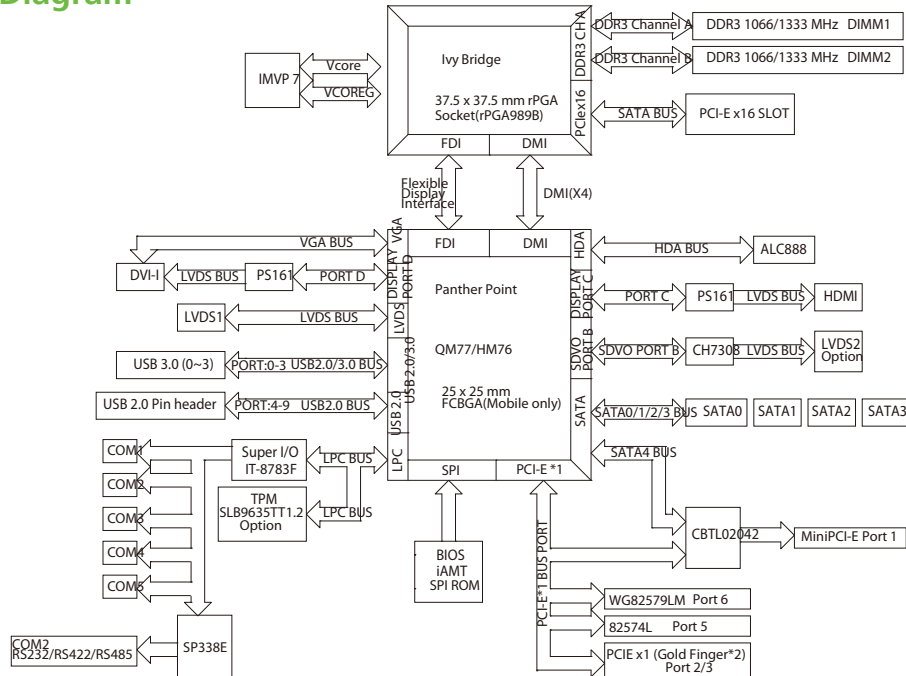
Audio

- Realtek ALC886 CODEC for High Definition
 - 1x Phone Jack for Mic-In
 - 1x Phone Jack for Line out
 - 1x phone jack for Line In
 - 1x 5 pin 2.0 pitch pin header for speak-out

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Block Diagram



Expansion

- 1x Mini-PCIe
- 1x PCIe x16
- 2x PCIe x1 golden finger

I/O Interface

- Serial port: 6 port
COM1,6: RS232 DB-9 male connector on edge I/O
COM2: RS232/422/485 DB-9 male connector on edge I/O
COM3,4,5: RS232 1x 6 2.0mm JST connector
- USB 2.0/ 3.0: 10 ports
USB 3.0 x4 ports edge connector
USB 2.0 x6 ports by 2.0mm pin connector
- 8 GPIO lines via header (GPI 0 ~ 3 and GPO 0 ~ 3) TTL Level (0/ 5 V)
- Onboard Power LED and HDD Active LED Pin Header
- 1x 4-pin fan connector (for CPU)
- 1x 3-pin fan connector (for System)
- 1x Keyboard/Mouse pin header
- On board Buzzer/ SMBus2.0/ Reset SW/ On & Off switch button

Edge I/O Interface

- 1x dual stack DB9 male + DB9 male for COM1 & COM2
- 1x HDMI
- 1x DVI-I + DB9 male FOR COM6
- 2x RJ45 + dual stack USB
- 1x Line-Out/ MIC-in/ Line-in

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

- 4x SATA port with RAID 0,1,5,10 function. (option)

System Monitor

- Monitoring of 4 voltages and 2 temperatures and 2 Fans speed detection

- 4 Voltage (Vcore, +12V, +3.3V, 5V)
- 2 Temperatures (CPU, System)
- 2 Fan Speed detection

On-board RTC

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

Power Input

- Support AT and ATX mode

Power Requirements

- Power requirement: Dual +12V & 24V DC Input
- One 4-pin power connector

Dimensions

- Mini-ITX M/B form factor
- 170mm (L) x 170mm(W)

Environment

- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications

- CE approval
- FCC Class A

Ordering Information

- **NEX 609 (P/N: 10G00060900X0) RoHS Compliant**
Mini ITX, Intel® 3rd generation Intel® Core™ processor family with DVI-I/ HDMI / Two 48-bit LVDS interface/ 2x Gigabit LAN/ 10x USB/ 6x COMs/ TPM (option)/ MSATA/ Dual 12 & 24 Power input)

- **CPU Cooler For NEX 609 (P/N: 5050300544X00)**

Optional CPU cooler for NEX 609 rPGA 988 socket

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660