NEX 620

AMD Geode™ LX800 with 2 x LAN/ On-board CF/ Mini-PCI

Labels on board image:
- CF
- PCI
- Mini PCI
- Touch panel Con.(optional)
- SATA
- IDE
- AMD CS5536
- AMD Geode™ LX800
- DIMM, Max 1 GB
- Line in / Line Out / Mic In
- LAN1(Top)
- 2 x USB 2.0 (Bottom)
- LAN2 (Top)
- 2 x USB 2.0 (Bottom)
- LVDS (SPWG)
- LVDS (OpenLDI)
- VGA (Bottom)
- PIO
- COM 1 (Bottom)
- PS/2

Main Features

- AMD Geode™ LX800 Processor with 128 KB L2 Cache
- AMD CS5536 Integrated Chipset
- 1 x 184-pin DIMM Socket, Up to 1GB Non-ECC/ Non-registered DDR SDRAM
- 2 x VIA VT6105 Ethernet Controller
- Supports VGA/LVDS
- On-board CF Socket / Mini PCI / SATA Interface

Product Overview

The NEX 620 is a standard mini-ITX platform featuring AMD LX-800 processor with 500 MHz frequency and 128 KB L2 cache. The NEX 620 features Geode™ LX 800 processor with CS5536 chipset, which supports non-registered non-ECC DDR with maximum memory size up to 1GB and integrated graphics with CRT, LVDS functions and optional touch screen solutions.

Furthermore, the NEX 620 provides 44-pin IDE connector, SATA connector, CompactFlash socket, and versatile I/O ports such as printer port, three serial ports, four USB 2.0 ports, two Ethernet LAN port, standard audio interface and so on. The Geode™ LX 800 with CS5536 chipset is a low power consuming (2.4W typical at 500MHz) and cost effective solution, which can deliver full desktop PC functionality for embedded and mobile computer platform.

Specifications

CPU Support
- AMD Geode™ LX 800 Processor
- 500 MHz

Main Memory
- 1 x 184-pin DIMM, Support Non-ECC / Non-Register up to 1 GB

Chipset
- AMD Geode™ LX 800@0.9W
- AMD Geode™ CS5536 companion

BIOS
- Award System BIOS
- 4M-bit flash ROM
- Supports Soft off, Wake on LAN, RTC Alarm Power On and Power on after power failure

Watchdog Timer
- Watchdog Timer is programmable by software from 1 second to 255 seconds (Tolerance 15% under room temperature 25°C)

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

On-board LAN
- 2 x VIA VT6105 10/100 Fast Ethernet Controller
- LAN 1 & LAN2 Supports Boot from LAN (PXE) and Wake on LAN (When 5Vsb power available)
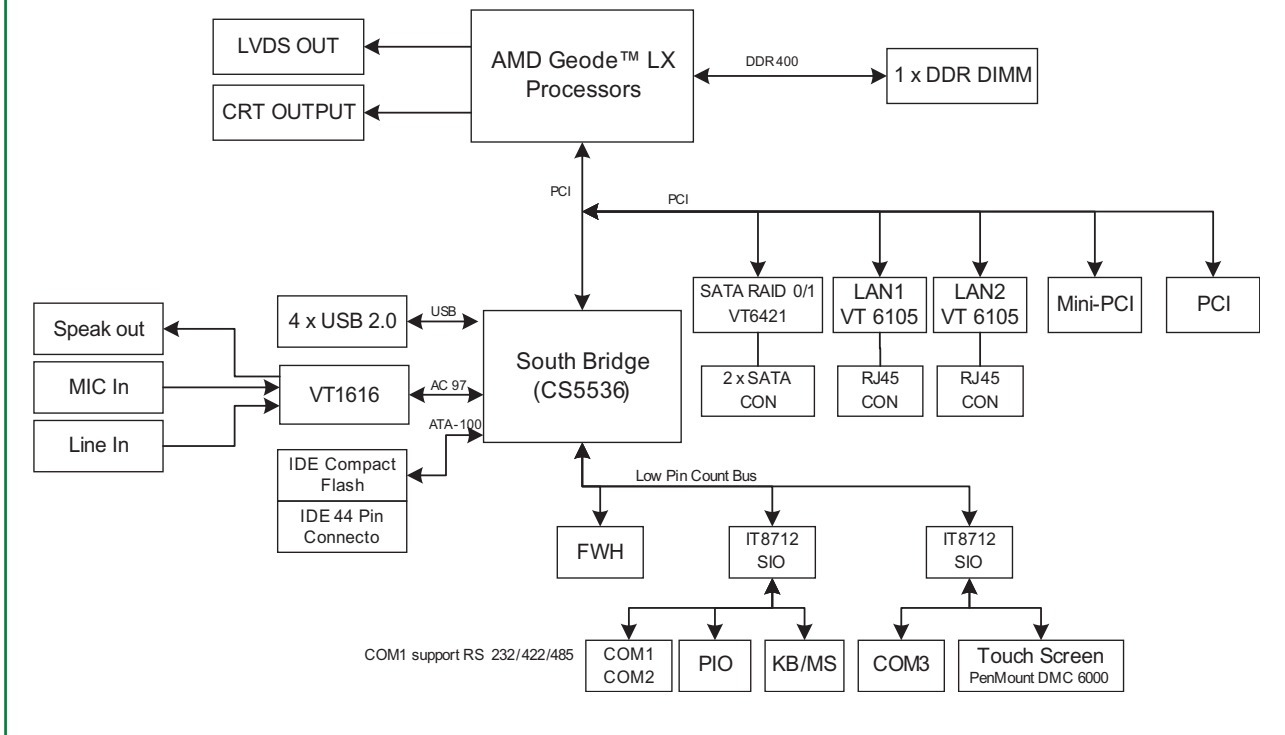- 2 x RJ-45 Jack with LED

System Monitor
- 5 voltage (For +3.3V, +5V, +12V, Vcore, +5V standby)
- 2 Temperatures (CPU, external Temperature Sensor)
- 2 FANs speed (CPU and System FAN)

Display
- AMD Geode™ LX Integrated
- CRT: 1 x DB15 VGA port
  Supports up to 1920x1440 at 85 Hz
- LVDS: With two 20pin DF13 connector (one for SPWG / one for OpenLDI)
  Single pixel (18bit) LVDS panel support resolution up to 1600x1200 (UXGA panel)

Block Diagram

- Display Touch screen (optional)
- PenMount 6500 (COM)
- With 1x9-pin JST (2.0 mm)
- Can be selected to support 4/5/8-wired touch screen

Audio
- VIA, VT1616 CODEC for AC97 v. 2.0
- MIC-in, Line out, Line in with phone jacks

I/O Interface
- USB 2.0: 4 ports
- Serial port: 3 ports, with 1 x DB9 connector support RS 232/422/485 and 2 x 9-pin header support RS-232 only
- Parallel port:1 port, with DB25 connector, Bi-directional, EPP/ECP
- PS/2: 2 x Mini-Din keyboard / Mouse
- GPIO: Support 8 general purpose I/O each with TTL level (0V/5V) interface
- FAN : 2 x fan JST (1x for CPU cooler, 1 x for System)
- 1 x 5-pin header for IrDA Tx / Rx
- 1 x on-board buzzer
- 1 x 2-pin power on switch
- 1 x 2-pin header for reset
- 1 x 3-pin header for power LED
- 1 x 2-pin header for HDD LED

Storage
- SATA: 2 ports, support RAID 0,1
- IDE: 1 x 44-pin IDE connector, support Ultra ATA100/66/33

Expansion
- 1 x PCI slot
- 1 x Mini-PCI socket

Dimensions
- Mini-ITX
  170 mm (L) x 170mm (W) (6.7" x 6.7")

Power Input
- Supports 20 pin ATX power input connector

CPU: AMD LX800 500MHz	+12 V	+5 V	3.3V
Full-Loading Mode	0.09 A	1.21 A	0.34 A
Light-Loading Mode	0.06 A	1.04 A	0.34 A

NOTE:
1. 5VSB is depending on stand by power inquire.
2. Full Loading: Utilize CPU 100% with Burn-in test running
3. Light Loading: Utilize CPU loading below 5% without data or application running.

Environment
- Board level operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity:
  Operating 10%~90%, non-condensing
  Non-operating 5%~95%, non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

- **NEX 620-LX8 (P/N: 10G00062000X0)** RoHS Compliant
  Mini-ITX Embedded Board with AMD LX800 CPU on board w/ PCI / Mini PCI / COM / USB2.0 / LVDS / LAN