

### 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

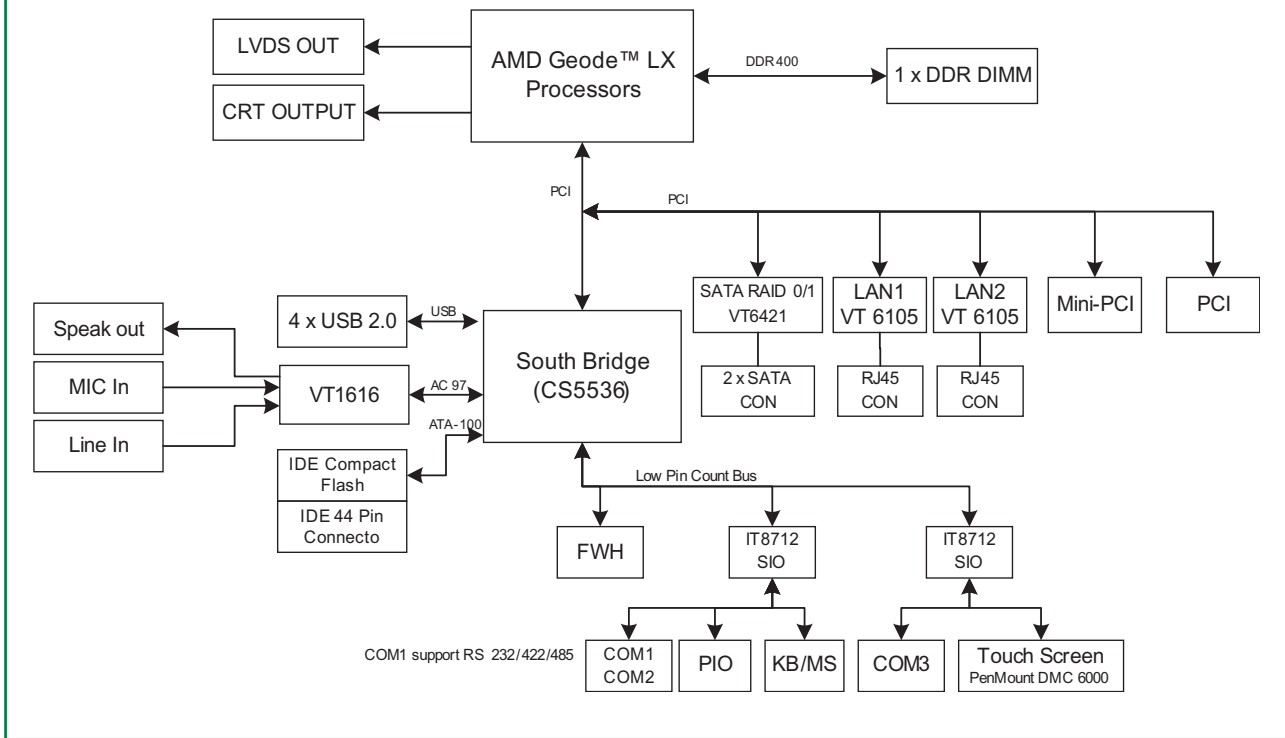
#### System Monitor

- ◆ 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