# EBC 420

## AMD Geode™ LX800 CPU Board w/Audio/CRT/TTL LCD/1394a/CF

**NEXCOM**

RoHS Compliant



- TL Panel
- AMD Geode™ Castle Processor
- DIMM
- Power Button
- Alarm Status
- Power Connector
- PS/2
- 1394
- LAN
- LAN
- VGA
- Parallel Port
- Audio
- COM3
- USB x 4
- CMOS Clear
- COM1
- COM2
- LAN LED1
- LAN LED2
- Power and HDD LED
- COM4
- Mini-PCI
- PC/104-Plus

## Main Features

- AMD Geode™ LX800 Processor with 128 KB L2 cache
- One 184-pin DIMM socket, up to 1 GB Non-Registered Non-ECC DDR Memory
- Audio with Speaker-Out on Rear Panel and Internal Audio Connector for Mic-in and Line-in
- On-Board CompactFlash Socket
- Supports CRT and TTL LCD
- Support IEEE 1394a Interface

## Product Overview

EBC 420 is an embedded board supporting an AMD Geode™ LX800 processor with 128 KB L2 cache. The product incorporates the AMD Geode™ CS5536 companion chipset and supports Non-Registered Non-ECC DDR memory up to 1 GB maximum as well as integrated graphics for CRT and TFT LCD support.

The EBC 420 provides a 44-pin IDE connector, CompactFlash socket, four serial ports, four USB 2.0 ports, IEEE 1394a, two Ethernet LAN ports, an audio interface as well as other I/O . The EBC 420's low power consumption AMD Geode LX800 processor with versatile display and I/O port support makes it a great solution for embedded applications.

## Specifications

### CPU Support
- AMD Geode LX800
- 500 MHz
- 64 KB I-cache/64 KB D-cache
- 128 KB L2 cache

### Main Memory
- One 184-pin DIMM socket, supports up to 1 GB Non-Registered Non-ECC DDR SDRAM memory with 64-bit 400 MHz bus speed

### Chipset
- AMD Geode Castle and CS5536 companion chip

### BIOS
- Award system BIOS
- 4 Mbit flash ROM (SST)

### On-board LAN
- 10/100 Ethernet controller x 2 (VIA VT6105)
- Flow control support (IEEE802.3x) / Priority Queuing support (IEEE 802.1p) / Virtual LAN (VLAN) Support (IEEE802.1Q)
- RJ45 w/LED LAN connectors x 2

### Display
- Supports CRT resolutions up to 1920 x 1440 x 32 bpp at 85 Hz
- DB15 CRT VGA Connector x 1
- Supports up to 24-bit, 1600 x 1200 x 32 bpp at 60 Hz for TFT
- DF13, 40-pin connector x 1 for TFT TTL LCD panel output
- Compatible with EBK LVDS66

### I/O Interface
- SIO x 4, with 4 x 16C550 UARTs, Two 9-pin 2.0 mm Pin Header and Two DB9 connectors (RS-232 Only)

- USB 2.0 connector x 4
- One 6-pin Mini-Din for PS/2 Keyboard/Mouse
- Box header near rear panel for optional cable connection
- HDD: Support for IDE with 44-pin connector × 1
- Internal CompactFlash socket x 1
  Supports One Type I & II CompactFlash Card
- On-board buzzer
- On-board Power On/Off Switch
- 8 GPIO lines via header (4 in, 4 out)
- Digital I/O: 4-bit TTL input, 4-bit TTL output (TTL Level: 0 ~ 5 V)
- 2 GPIO connect to front alarm and status LEDs
- Power /HDD
- LAN 1 ~ 2 LEDs: ACT/LNK x 2; Speed x 2
- User Interface Utility of Windows XP, XPe and Linux to configure the Alarm
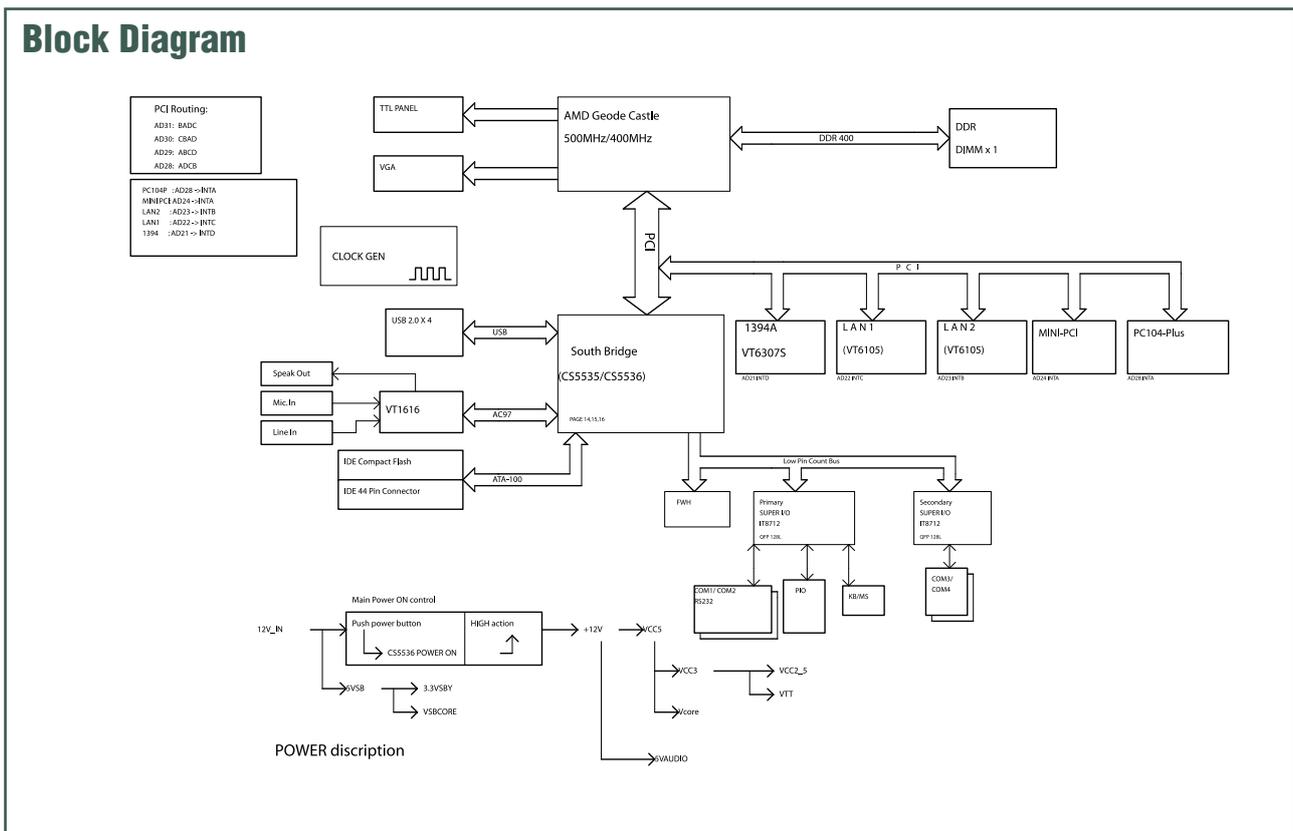- Status of thermal and fan status on the Front LEDs, Firewire IEEE 1394a x 1

### On-board RTC
- On chip RTC with battery back up
- External Li-Ion Battery x 1 (Socket type, field replaceable)

### System Monitor
- Derived from Super I/O to support system Voltage, fan speed, temperature monitoring
- Watchdog Timer: Watchdog timeout can be programmed by Software from 1 Sec/Min to 256 Sec/Min  (Tolerance 10% under room temperature 25°C)

**Embedded  CPU Boards**

**NEXCOM**

## Block Diagram



## Power Input

- Supports AT Mode Only for Wake-up on Ring
- On-board DC to DC circuit supports DC Voltage +12 V ± 5% Input
- Reserved Mini-Din 4-pin and 2-pin Power Input connector

## Dimensions

- 165 mm (L) x 142 mm (W)

## Environment

- Operating temperatures: 0°C to 65°C
- Storage temperatures: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing; non-operating 5% to 95%, non-condensing

## Certifications

- CE approval
- FCC Class A

## Ordering information

- **EBC 420-LX8 (P/N: 1E00042001X0)** RoHS Compliant
  Low Power Embedded Board AMD Geode LX800 with 128 KB L2 cache and VGA/Audio/COM/USB 2.0 /Dual LAN
- **12V Power Adapter for EBC 420 (P/N:7410050001X0)**
  Power Adapter 50 W, 12 V/4.2 A, EDAC, PB FREE

**Embedded CPU Boards**

NEXCOM may make changes to specifications and product descriptions at any time, without notice.