

### Main Features

- ◆ Low Power ETX CPU Module
- ◆ On-Board AMD Geode™ LX 800 with 128 KB L2 Cache
- ◆ Supports Non-registered Non-ECC DDR up to 1 GB
- ◆ Intel 82551ER 10/100 Ethernet Controller
- ◆ Realtek ALC655 CODEC - AC'97 Audio Interface
- ◆ Supports LVDS and TTL LCD Interface
- ◆ Supports on-board 2 x SATA
- ◆ Supports on-board Compact Flash

### Product Overview

The ICES 122 is an ETX CPU module with an AMD Geode™ LX800 processor and AMD Geode™ CS5536 chipset supporting one DDR SO-DIMM socket up to 1 GB Non-ECC Non-Registered DDR SDRAM. The AMD Geode™ CS5536 chipset supports ISA, PCI, IDE, LPT, VGA, LVDS, serial, USB interfaces and others. The on-board provided 2 x Serial ATA and Compact Flash socket and Intel 82551ER 10/100 Ethernet controller and Realtek ALC655 CODEC provide one LAN port and an AC'97 audio interface through the ETX connectors for your external communications.

The ICES 122 follows the ETX standard x 1, x 2, x 3, x 4 connections between the ETX CPU module and I/O carried board, thus it is compatible with the carried board from other brands like Kontron and Advantech. The ICES 122 provides cost effective, versatile functionality and is an ideal ETX module for embedded applications.

### Specifications

#### CPU Support

- ◆ AMD Geode™ LX800
- ◆ 64 KB I-cache/64 KB D-cache
- ◆ 128 KB L2 cache

#### Main Memory

- ◆ 1 x 200-pin SODIMM socket supports up to 1 GB Non-ECC Non-Registered DDR SDRAM

#### Chipset

- ◆ AMD Geode™ CS5536

#### BIOS

- ◆ Award System BIOS
- ◆ Advanced Power Management support
- ◆ 4 Mbit flash ROM

#### On-board LAN

- ◆ Intel 82551ER 10/100 Ethernet.
- ◆ Signals down to I/O Board

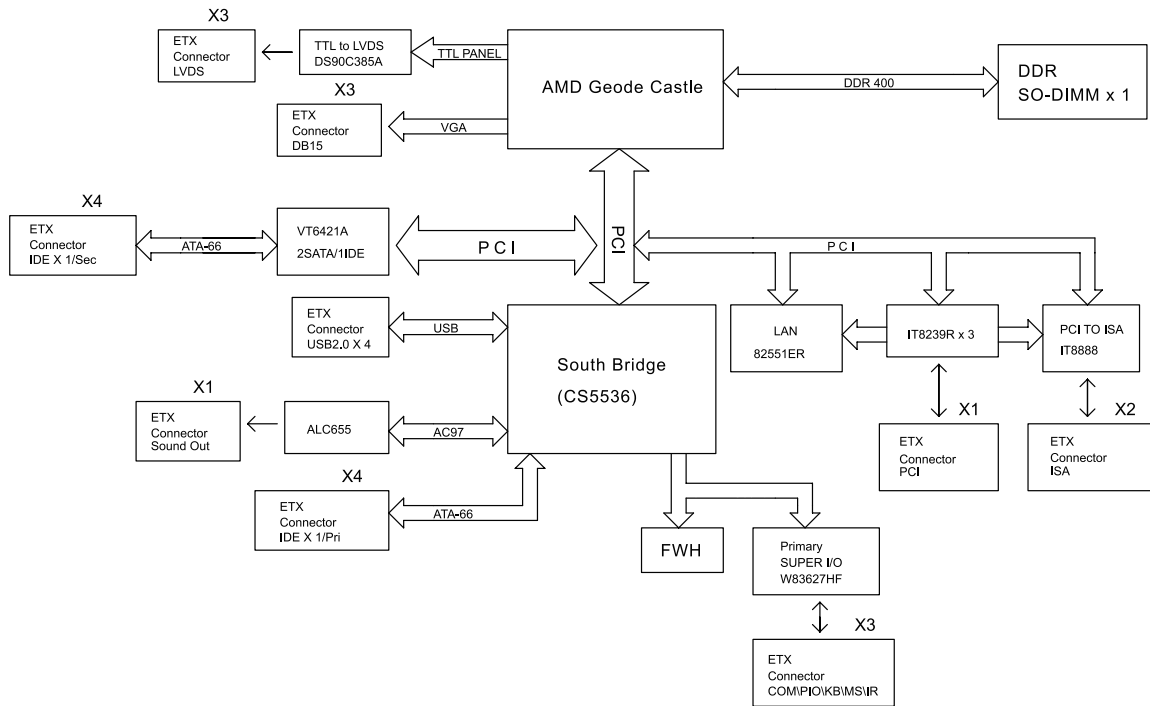
#### Display

- ◆ The Geode™ LX800 with integrated graphics, supports both standard VGA and TFT
- ◆ Supports CRTs up to 1920 x 1440 at 85 Hz
- ◆ 1x DB15 VGA Connector
- ◆ Supports up to 24-bit, 1600 x 1200 at 60 Hz for TFT
- ◆ Reserved 45-pin header for TTL LCD Interface
- ◆ Supports CRT down to the I/O board

#### ETX Connector

- ◆ X1  
4 x 32-bit/33 Mhz PCI  
ALC655 Codec - AC' 97 Audio Interface  
4 x USB 2.0
- ◆ X2  
ISA Interface
- ◆ X3  
1 x VGA  
1 x LVDS  
1 x Parallel port  
1 x KB/Mouse  
COM1 and COM2  
1 x IrDA

## Block Diagram



- X4  
1 x Ethernet (10/100)  
SMBus/I2C  
2 x IDE

### On-board RTC

- On chip RTC with battery back up
- 1 x External Li-ion Battery
- Tolerance less than 2 secs (24 hours) under 25 °C environment

### Power Requirements

- +5 V Power only, follows ETX power and ground pin definitions

### Dimensions

- 95 mm (W) x 114 mm (L) (3.7" x 4.5")

### Environment

- Operating temperature: -25°C to 70°C
- Storage temperature: -30°C to 85°C

- Relative humidity: Non-operating 5% to 95%, non-condensing

### Certifications

- CE approval
- FCC Class A

## Ordering Information

- **ICES 122 (P/N: 10K00012200X0)** RoHS Compliant  
ETX Module AMD Geode™ LX800 and CS5536 with 128 KB L2 cache, VGA/ISA/  
PCI/IDE/LVDS/Audio/COM/LPT/USB 2.0/LAN Interface