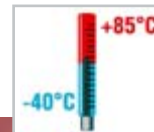


CPB904

Fastwel 
Creating the Future!

ETX Computer-On-Module based on AMD Geode™ LX800



**Best solutions
to fit your demands!**

- AMD Geode™ LX800 166/500 MHz (programmable)
- 10/100 Base-T Fast Ethernet controller
- LCD and CRT displays support with 2D video accelerator
- MiniSD flash card slot
- Soldered flash disk 32 or 64 MB
- Four USB 2.0 ports, three RS-232 ports
- EIDE: ATA-5/ATAPI UDMA100
- IrDA port
- Reserved BIOS
- Operating temperature: -40°C to +85°C



Features

- AMD Geode™ LX800 166/500 MHz (programmable)
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Overview

CPB904 is a highly integrated ETX form factor Computer-On-Module with low overall power consumption and compact size of 114 × 95 mm.

Fastwel CPB904 gives customers benefits of access to the full universe of 32-bit x86 software and high design flexibility at extremely low thermal budget.

The board can serve various embedded applications where low dissipating power and high time-to-market are the most important factors.

CPB904 is based on x86 code compatible low power CPU AMD Geode™ LX800 and AMD Geode™ I/O companion chip (CS5536AC).

The AMD Geode™ LX800 processor operates at maximum power of 3.9 W (TDP) and 1.8 W typically at 500 MHz while highly integrated I/O companion chip AMD CS5536AC operates at 2.4 W typically at 500 MHz.

Integrated floating point unit supports Intel® MMX and AMD 3DNow!™ Technology instruction sets.

Dynamic Memory interface supports 64-bit DDR SDRAM through SODIMM socket and soldered 128 or 256 MB memory bank.

CPB904 provides support for high resolution graphical interfaces (simultaneously) for CRT displays up to 1920×1440 and LCD panels up to 1600×1200.

Peripheral devices can be connected to CPB904 through 4 high-speed USB 2.0 ports, PS/2 port, 3 COM ports, LPT interface and 17 programmable discrete I/O lines.

Additional reliability of CPB904 is provided by reserved CMOS memory and a set of system monitoring features.

Power management system is compliant with Advanced Power Management v1.1 and ACPI (Normal, Sleep and SaveToRAM modes).

The CPU module requires application specific baseboard with ETX standard defined connectors.

CPB904 operates in industrial temperature range (-40°C to +85°C).

Technical Specifications

System

- CPU AMD Geode™ LX800 processor 500 MHz with 64K L1 instruction cache, 64K L1 data cache and 128K L2 cache
- AMD Geode™ I/O companion chip CS5536AC
- Soldered 128 or 256 MB DDR SDRAM
- Up to 512 MB DDR memory through SODIMM socket
- Reserved CMOS memory
- Watchdog timer
- MTBF: 200 000 hours

BIOS

- Fastwel™ Flash BIOS (General Software™ Embedded BIOS)

Graphics

- SVGA video controller with 2D video accelerator
- 24-bit LVDS or VGA interface for LCD panels support (TFT and DSTN) with resolution up to 1600×1200
- Analog display support (CRT) with resolution up to 1920×1440
- TV-out: C,Y, COMP

Storage

- One IDE ATA-5/ATAPI interface with support of PIO Mode 0-4, MDMA Mode 0-2, UDMA Mode 0-5 (including UltraDMA100)
- Accepts two HDD or CD-ROM type storage devices with EIDE (Parallel ATA) interface
- Built-in Fastwel™ Flash Disk (with Fastwel file storage system) 32 or 64 MB of NAND flash memory
- MiniSD flash card slot

Software Support

- Fastwel DOS™ (MS™ DOS compatible)
- Windows XP® Embedded
- QNX® 4.25, 6.3x
- Linux® 2.4
- Windows CE.NET 4.2

I/O Interfaces & Expansion

- 10/100 Base-T Fast Ethernet port
- IrDA 1.0 SIR/ASK-IR/DASK-IR/HP-SIR/UART
- 16-bit ISA (PCI-to-ISA bridge)
- 32-bit PCI 2.2
- Audio ports: Audio Codec AC'97 2.1, Line-In, Line-Out, Mic-In
- Four USB 2.0 ports
- COM1 & COM2: RS-232 (full range of modem signals)
- COM3: RS-232 (only TX and RX signals)
- PS/2 ports for mouse and keyboard
- Parallel port (SPP, EPP and ECP modes) combined with FDD and 17 user programmable discrete I/O lines

Mechanical

- Dimensions: 114×95×11.4 mm (4.5"×3.7"×0.45")
- Weight: ~0.1 kg

Power requirements

- 5 V ±5% DC @ 1.2 A (maximum power consumption)

Environmental Conditions

- Operating temperature: -40°C to +85°C
- Storage temperature: -50°C to +95°C
- Humidity: 0% to 95%, noncondensing
- Shock/Vibration: 50G/5G

Compliance

- ETX 2.5 Specification

List of Deliverables

- CPB904 module
- CD with documentation and service SW

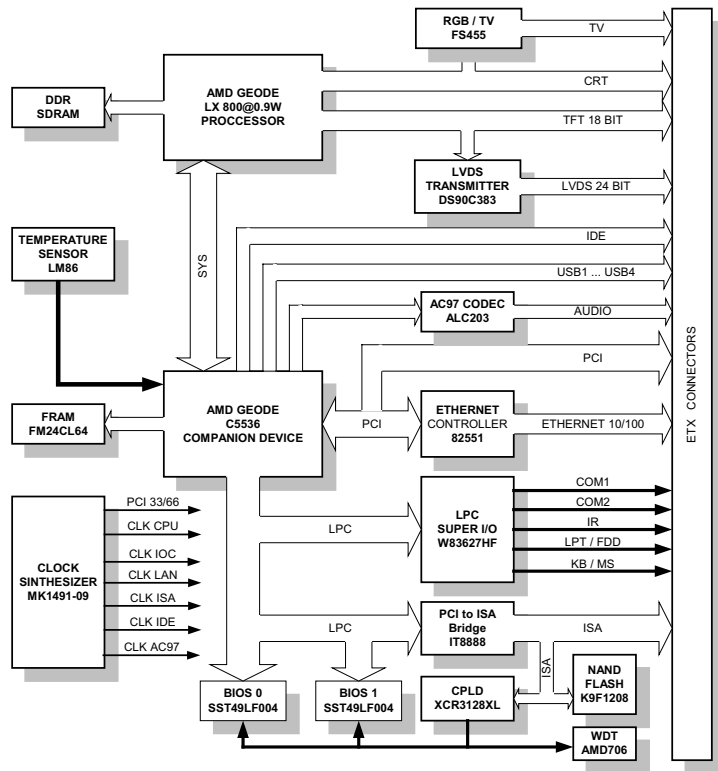
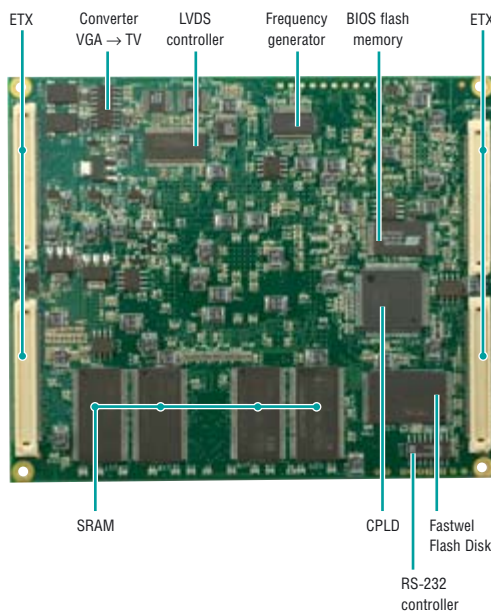
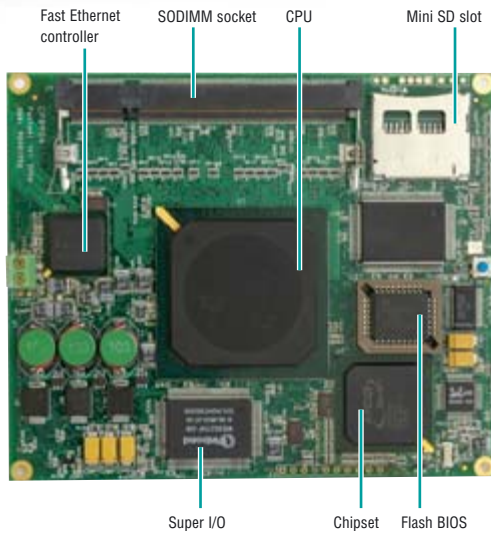
Warranty

- 3 years for parts and labor

CPB904

ETX Computer-On-Module based on AMD Geode™ LX800

Board Layout



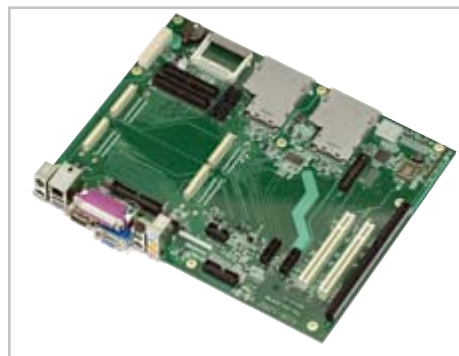
KIB1282

ATX form-factor compliant carrier board for ETX/XTX computer modules.

Interfaces

VGA, S-Video, LVDS, 1xFastEthernet 10/100-BaseT, 2x1 PCI Express, 2xPCI, 1xISA (16-bit) 4xUSB2.0, IDE UltraATA, 4xSATA, CF Type I/II socket with IDE interface, 2xCOM232, LPT, FDD, PS/2, 2xExpress™ Card slots, Audio line-in/out AC'97 HD (5+1 out) Audio Codec, 2xMIC, IrDA, LPC interface, SMBUS, PLCC, fan connector, control&signalling interfaces and LEDs, ATX power supply.

Please read User manual for complete product description.



CPB904

ETX Computer-On-Module based on AMD Geode™ LX800

Ordering Information

CPB904 Configuration

CPB904 - 01 \Options

Device Type

CPB904 ETX AMD Geode™ LX800 Module, AMD Geode™ I/O Companion (CS5536AC), Fast Ethernet, LVDS, 4 USB

Configurations

01 512 MB DDR SDRAM soldered memory
02 256 MB DDR SDRAM soldered memory
03 SODIMM socket for DDR SDRAM

Operating System

FDOS Fastwel DOS presetting

Options

\xxx Choose available options from the table

CPB904 Available Options

Coating	
\COATED	Protective coating

Other configurations and options are available upon request.

Example

CPB904-01\COATED

ETX AMD Geode™ LX800 Module, AMD Geode™ I/O Companion (CS5536AC), 512 MB soldered memory, Fast Ethernet, LVDS, 4xUSB
Protective coating

Ver. 1.1 2008

Product specifications are subject to change without notice

Applications



Mobile



Industrial Automation



Communications



Embedded

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