

High-Performance, Low-Power PC/I04 Solution



EPIC design gets you to market quickly with industry-standard form factor

Product Overview

The AMD Geode™ LX EPIC Reference Design Kit (RDK) gives you a complete system design so you can get to market quickly with high-performance, low-power systems for x86 embedded applications. This RDK helps you respond quickly to high-growth markets and develop/design highly efficient products that leverage PC/I04 standards.

EPIC stands for Embedded Platform for Industrial Computing – which provides a complete computer built on a single circuit board that has multiple I/O options and plug-and-play adaptability for hundreds of PC/I04, PC/I04-Plus, and PCI/I04 cards.

Small Form Factor with Rich Features

The EPIC is a small but feature-rich form factor, and is a widely accepted standard that delivers design flexibility, compatibility with all PC/I04 modules, and multiple I/O options. Board complexity is reduced by the high integration of the Geode LX and CS5536 I/O Companion along with optimized memory design. This allows for a full-feature 6-layer EPIC design on a single card with dimensions measuring 115mm x 165mm.

The AMD Geode LX EPIC RDK is powered by an AMD Geode™ LX processor that provides full compatibility with available x86 instruction sets and multiple operating systems. The Single Board Computer is complemented by the AMD Geode CS5536 companion device, which provides general I/O support including USB 2.0, audio, and ATA I00.



Complete Lead-Free Design, Six-Layer Technology

The AMD Geode LX EPIC RDK is designed and produced to meet the latest international standards for lead-free components, so you can leverage the design with confidence that it is future proof.

The AMD Commitment to Low-Power x86

All Geode RDKs and other advanced development tools demonstrate the AMD commitment to low-power, customer-focused solutions for the ever-growing x86 marketplace. AMD strives to develop technologies and products that enable you to shorten design cycles and move to market quickly with high-performance embedded x86 products.

Application Markets

This RDK solution is a ready-to-go design for:

- Single Board Computers
- Rugged Industrial Applications
- Data Acquisition
- Video Processing
- Telecommunications
- Edge Communication Devices
- Instrumentation
- Point-of-Sale

AMD Geode™ LX EPIC Reference Design Kit

Primary Product Features

- CPU – Geode™ LX 800@0.9W* or LX 700@0.8W** Processor
- AMD Geode CS5536 Companion Device
- EPIC Form Factor
 - 115mm x 165mm (4.5" x 6.5")
 - 6-layer board design
- 64-bit DDR SDRAM
 - 1x SODIMM slot (2GB max)
 - DDR400 or DDR333
 - Power saving unterminated topology
- Display
 - VGA (up to 1920x1440@85Hz)
 - LVDS (up to 1600x1200@60Hz)
- Hard Disk Drive
 - Standard IDE ATA 100 interface
- One Mini-PCI Slot
- High-Speed Data Port
 - Utilize VIP port for isochronous capture
- System ROM
 - 8MB SPI Flash
- USB 2.0 High-Speed
 - 4x USB 2.0 ports
 - 1x USB port configurable as client
- PC/I/O and PC/I/O-Plus Stackable Expansion Connectors
 - 3.3v PCI bus
 - ISA bus
 - PCI/ISA bridge support
- Dual I/O/Ethernet (RJ45)
 - PCI power management
 - Wake on LAN
- Audio
 - 2-channel
 - 3.5mm input and output
- Super I/O
 - RS232 serial interface
 - IEEE1284 parallel interface
 - PS2 keyboard and mouse
 - Digital PWM
 - 5V Digital I/O (8 bits)
 - Analog I/O (6-channel)
 - SPI Flash interface
- RS422/RS485
- 3V PWM and Digital I/O
- Hardware Watchdog Timer
- JTAG Debug Interface (FS2 compatible)
- Power
 - 10-pin mini-ATX power connector
 - 3.3v PCI bus for PCI/I/O
 - Advanced Power Management
 - Battery support
 - Onboard coin battery for RTC
 - 3rd-party power supply with built-in DC-DC and battery
- OS Support
 - Microsoft® Windows® XP and XPe
 - Microsoft Windows CE 5.0
 - Linux 2.6

Product Support

This complete solution includes schematics, layout, and full documentation. Full integration with AMD Geode Solutions technologies, low-power requirements, and design flexibility help reduce costly time-to-market and enable more effective, efficient embedded designs.

*This processor operates at 500MHz. Model numbers reflect performance as described here:
<http://www.amd.com/connectivitysolutions/geodelxbenchmark>.

**This processor operates at 433MHz. Model numbers reflect performance as described here:
<http://www.amd.com/connectivitysolutions/geodelxbenchmark>.

About AMD

AMD (NYSE:AMD) designs and produces innovative microprocessors and low-power processor solutions for the computer, communications, and consumer electronics

industries. AMD is dedicated to delivering standards-based, customer-focused solutions for technology users, ranging from enterprises and governments to individual consumers.

For more information visit www.amd.com.

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