

Low-Power, High-Performance Development Tool

for Embedded and Industrial Applications

Product Overview

The AMD Geode™ GX SOM-I44 Reference Design Kit (RDK) is a low-power, high-performance System-On-Module (SOM) tool designed to help developers create the next generation of small, embedded and industrial computing products. The SOM-I44 is a full-function, manufacture-ready reference design platform that leverages the AMD philosophy of delivering low total cost of ownership to deliver high value throughout the product development cycle.

Small form factor for flexible system design

Based on Advantech's SOM-I44 System-On-Module form factor, the AMD Geode GX SOM-I44 RDK is ideal for applications that require a small form factor and where low power usage, performance, and reliability are important.

The SOM-I44 RDK gives system designers enhanced flexibility, versatility and creative capabilities – all in a small, industry-standard package. Approximate dimensions are 100mm x 68mm. An onboard AMD Geode GX 533@1.1W processor* gives designers the powerful options of the x86 instruction set and the option of running all popular operating systems.

Low-power, x86 solutions for real-world needs

The AMD Geode GX SOM-I44 RDK, and other AMD advanced development tools, represents the AMD commitment to low-power, customer-centric solutions for the x86 and industrial computing market. The SOM-I44 RDK contains a full suite of tools and features to enable designers to quickly and efficiently move embedded computing appliance solutions to market.

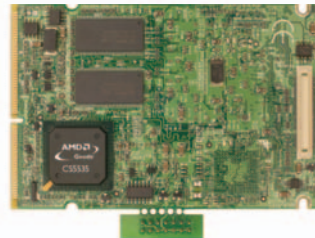
System Design

The SOM-I44 module provides standard functions (CPU, I/O, PCI Bus, etc.) in a high-density form factor. Using this module as the basis for a custom product eliminates the need to design, build, debug, and test a complex printed circuit board with high-speed buses, power distribution, and other critical layout constraints.

Overall, this simplifies the design, reduces risk, and aids in time-to-market for new products. A custom baseboard can be designed to support a wide range of products using the SOM-I44 Design Specification available from Advantech and on the AMD Alchemy™ and Geode Developer Support website <http://www.amd.com/embedded/developer>.



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Bottom

Primary Product Features

- CPU power to process multiple applications locally
- Industry-standard form factor – SOM-I44, approximately 100mm x 68mm
- Supports CRT or TFT**
- Supports standard buses
 - USB 1.1 (x4)
 - IDE ATA 66
 - AC'97 v2.1
 - Analog RGB (CRT version) or LCD interface (TFT version)
 - LPC, PCI, SMB
- Support for multiple operating systems
 - Microsoft® Windows® CE
 - Microsoft Windows XP Embedded
 - Linux

Product Benefits

- System Design Package – simplified design and engineering reduces time-to-market
- Cost-Optimized – facilitates low total cost of ownership in design/market cycle
- Low-Power System Design – allows smaller form factor designs and reduced heat
- Small Form Factor – minimizes enclosure space

*This processor operates at 400MHz. Model numbers reflect performance as described here: <http://www.amd.com/connectivitysolutions/geodegxbenchmark>.

**CRT or TFT operation is dependent upon stuffing options including CPU choice.

AMD Geode™ GX SOM-I44 Reference Design Kit

Additional Features

- Full schematics and documentation
- Complete software driver package for supported OS
- Stuffing option for CRT or TFT support
- Stuffing option for I/O Ethernet and LPC SIO

Application Markets

The AMD Geode GX SOM-I44 RDK features a flexible design that can address a broad range of embedded devices:

- Embedded controllers
- Point-of-sale terminals
- Education applications
- Information appliances
- Kiosks

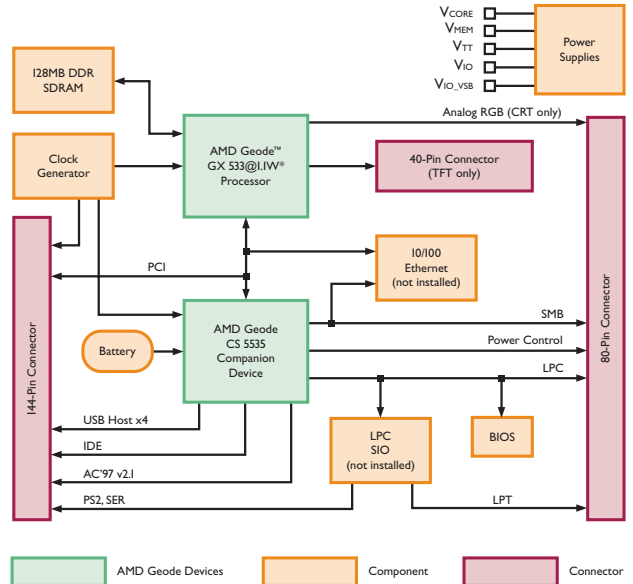
Product Support

The AMD Geode GX SOM-I44 RDK is a complete design-enabling solution, including schematics and full documentation. Full integration with AMD Geode Solutions technologies, including low power requirements and design flexibility help to simplify the time-to-market cycle and enable more effective, efficient embedded designs.

Technical Specifications

Processor, Chipset and Supporting Hardware

- AMD Geode GX 533@1.1W* processor
- AMD Geode CS5535 companion device
- 128MB Double Data Rate (DDR) SDRAM
- 2Mbit firmware hub boot Flash ROM in 32-pin PLCC socket



- System clock generator
- Onboard regulators for GX 533@1.1W and CS5535 core, V_{MEM} and V_{REF}
- RTC battery
- Support for Suspend-to-RAM
- 2-wire serial remote diode CPU temperature measurement

*This processor operates at 400MHz. Model numbers reflect performance as described here: <http://www.amd.com/connectivitysolutions/geodegxbenchmark>.

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AMD (NYSE:AMD) designs and produces innovative microprocessors, Flash memory devices 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.

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