

## Design Without Compromise

The most performance per watt available in the industry today

### Product overview

The AMD Geode™ LX 800@0.9W processor\* and the AMD Geode™ LX 700@0.8W processor\*\* bring x86 power and versatility to applications for entertainment, business, education, and embedded markets. The AMD Geode LX processors' integrated, innovative architecture delivers the most performance per watt available in the industry today, and can lead to longer battery life and enable small form-factor designs.

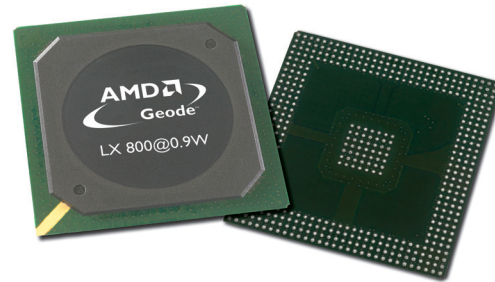
### Design without limits

The AMD Geode LX processor family offers new levels of performance and power versatility in an x86-based embedded processor. The AMD Geode LX 800@0.9W processor operates at a maximum power of 3.9W (TDP) and 1.8W typical at 500MHz, while the AMD Geode LX 700@0.8W consumes a maximum power of 3.1W (TDP) and 1.3W typical at 433MHz. These devices are exceptional for such applications as thin clients, interactive set-top boxes, single board computers, Personal Access Devices (PADs), mobile Internet, and entertainment. Designers can now focus on developing end products that efficiently meet consumer needs with far fewer limits imposed by software porting or compatibility.

The AMD Geode LX processors deliver the low-power x86 performance to design innovative and creative new products without compromise. Coupled with the AMD Geode™ CS5536 companion device, the combined chipset, which operates at 1.9W typical at 433MHz and at 2.4W typical at 500MHz, offers designers a complete set of features that can deliver full desktop functionality to embedded and portable devices.

Capabilities include:

- Natively run all Windows® and Linux based applications
- Full Internet browser experience on portable devices
- No software porting needed – programs run without modification
- Access to the full universe of 32-bit x86 software
- Support for any type of connectivity



CPU	Frequency	Typical Power	TDP
LX700	433MHz	1.3W	3.1W
LX800	500MHz	1.8W	3.9W

### x86 Everywhere: Changing the way developers think about application design

The AMD commitment to the x86 marketplace – with a range of high-performance products like AMD Geode™ LX processors – gives OEMs an easy and effective way to achieve product differentiation and shorten time-to-market cycles.

The AMD Geode LX processors are the next step in helping AMD redefine the way x86 processors address the growing need for versatile power and performance for a variety of consumer devices. It is the latest example of AMD's commitment to make x86-based technology available for a variety of applications – from high-end servers to low-power embedded applications.

### Processor functional blocks

- CPU Core
- GeodeLink™ Control Processor
- GeodeLink Interface Units
- GeodeLink Memory Controller
- Graphics Processor
- Display Controller
- Video Processor
- Video Input Port
- GeodeLink PCI Bridge
- Security Block

\*This processor operates at 500MHz.  
 \*\*This processor operates at 433MHz. Model numbers reflect performance as described here:  
<http://www.amd.com/connectivitysolutions/geodelxbenchmark>.

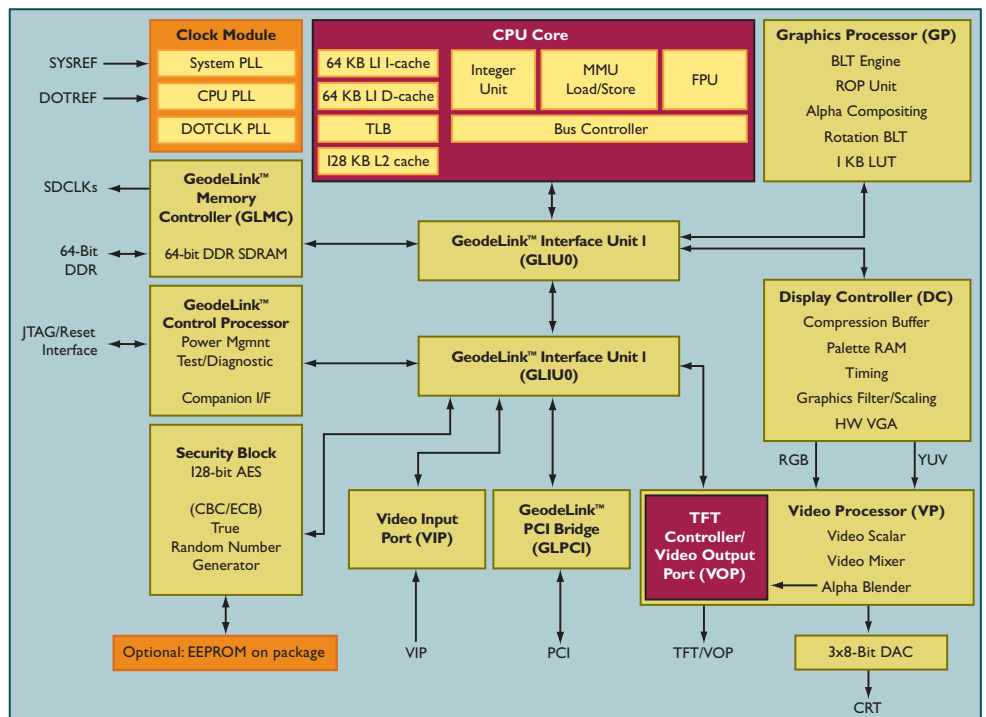
# AMD Geode™ LX Processor Family

## Technical specifications

- x86/x87-compatible core
- Processor Frequency
  - LX 800, up to 500MHz
  - LX 700, up to 433MHz
- 64K I/64K D L1 cache and I28K L2 cache
- Split I/D cache/TLB (Translation Look-Aside Buffer)
- 64-bit DDR Memory interface up to 400MHz (LX 800), up to 333MHz (LX 700)
- Integrated FPU that supports the Intel MMX® and AMD 3DNow!™ Technology instruction sets
- 9 GB/s internal GeodeLink™ Interface Unit (GLIU)
- Security Block
  - I28-bit AES (CBC/ECB)
  - True Random Number Generator
- High-resolution CRT and TFT outputs (simultaneous operation)
  - Support for High Definition (HD) and Standard Definition (SD) standards
  - Support 1920x1440 in CRT mode and 1600x1200 in TFT mode
- VESA 1.1 and 2.0 VIP/VDA support
- 0.13 micron process
- 481-terminal PBGA (Plastic Ball Grid Array) with internal heatspreader

## Power management

- 1.8W Typical (3.9W TDP) @ 500MHz



- 1.3W Typical (3.1W TDP) @ 433MHz
- GeodeLink active hardware power management
- Hardware support for standard ACPI software power management
- I/O companion SUSP#/SUSPA# power controls
- Lower power I/O
- Wakeup on SMI/INTR
- Optional In-package 2KBit EEPROM

## Ordering information

- OPN: ALXC800EETJCVC  
ALXC800EETJCVD  
ALXD800EEXJ2VC  
ALXD800EEXJ2VD  
ALXC700EETHCVC  
ALXC700EETHCVD  
ALXC700EETH2VC  
ALXC700EETH2VD

## About AMD

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.

For more information visit [www.amd.com](http://www.amd.com).

For more information, please visit [www.amd.com/geodelx800](http://www.amd.com/geodelx800)



[www.amd.com](http://www.amd.com)

One AMD Place  
P.O. Box 3453  
Sunnyvale, CA 94088-3453, USA  
Tel: 408-749-4000 or 800-538-8450  
TWX: 910-339-9280  
TELEX: 34-6306

Technical Support  
USA & Canada: 800-222-9323, Opt 2 or 408-749-5703  
USA & Canada PC Processors Only: 408-749-3060  
USA & Canada E-mail: [hw.support@amd.com](mailto:hw.support@amd.com)

Latin America E-mail (Spanish): [amdsp@vermont.com.br](mailto:amdsp@vermont.com.br)  
Latin America E-mail (Portuguese): [amdb@vermont.com.br](mailto:amdb@vermont.com.br)  
Argentina: 0800-333-0219  
Brazil: 0800-557686  
Chile: 123-00-209-110  
Mexico: 01-800-123-4709

Europe & UK: +44-0-1276-803299  
Europe & UK Fax: +44-0-1276-803298  
France: 0800-908-621  
Germany: +49-89-450-53199  
Italy: 800-877224  
Europe E-mail: [euro.tech@amd.com](mailto:euro.tech@amd.com)

China Fax: 86-10-8518-1777  
Hong Kong Fax: 852-2956-0588  
Japan Fax: 81-3-3346-7848  
Korea Fax: 82-2-3468-2601  
Taiwan Fax: 886-2-2655-7855

Asia E-mail: [asia.support@amd.com](mailto:asia.support@amd.com)

Literature Ordering  
On the Web: [www.amd.com/support/literature.html](http://www.amd.com/support/literature.html)  
USA & Canada: 800-222-9323, Opt 1  
USA & Canada E-mail: [amd.literature@comac.com](mailto:amd.literature@comac.com)  
Europe E-mail: [euro.lit@amd.com](mailto:euro.lit@amd.com)

China Fax: 86-10-8518-1777  
Hong Kong Fax: 852-2956-0588  
Japan Fax: 81-3-3346-7848  
Taiwan Fax: 886-2-2655-7855

©2006 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD Arrow Logo, Geode, and combinations thereof, and GeodeLink and 3DNow! are trademarks of Advanced Micro Devices, Inc. Windows is a registered trademark of Microsoft Corporation in the United States and/or other jurisdictions. MMX is a registered trademark of Intel Corporation in the United States and/or other jurisdictions. Other names are for informational purposes only and may be trademarks of their respective owners.

