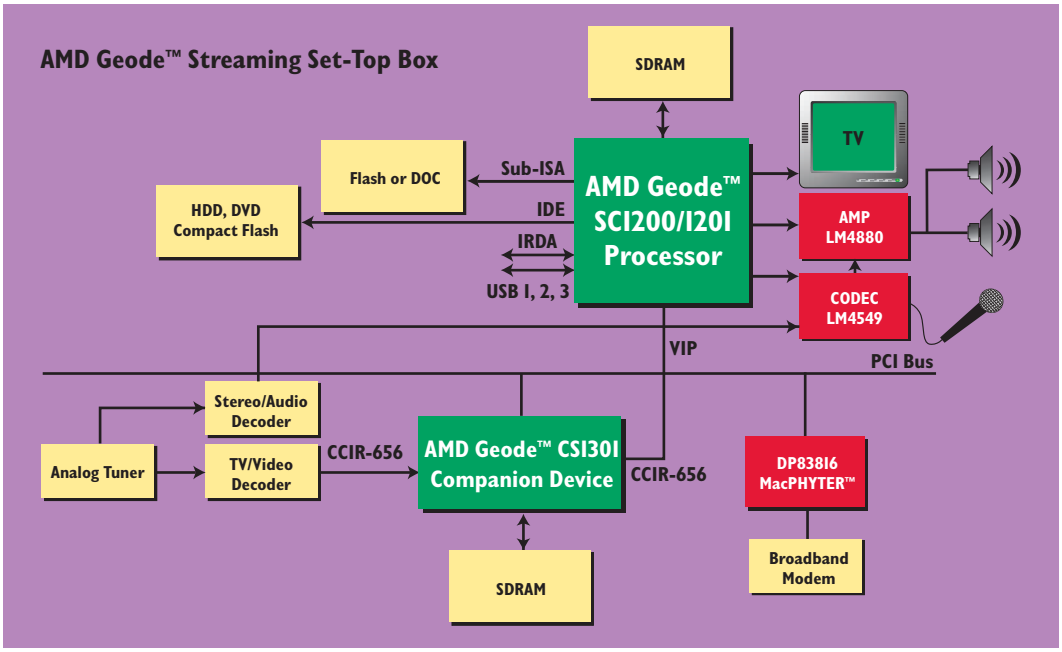
AMD Geode™ Streaming Media Solutions
for Advanced Set-Top Boxes

Distributed Processing Delivers Efficient Streaming Media Performance



Advances in media encoding schemes are enabling a broad array of multimedia information appliances. AMD has teamed up with Philips Semiconductor to deliver the optimal solution to enable these devices. Adding the AMD Geode™ CSI301 companion device (based on Philips) to our AMD Geode™ SCI200 processor enables a compelling streaming media experience optimized for a set-top box.

Balance Solves a Tricky Problem

The promise of streaming media set-top boxes offers a series of implementation challenges. Like all world-class information appliance devices, they must offer the optimal balance of performance, power consumption and cost. Given the high computational power required for encoding or decoding a Microsoft® Windows® Media™ or MPEG stream, achieving this balance is a significant challenge. The PC world approaches this challenge with more megahertz, but this ends up being a costly solution that consumes far too much power to be a suitable solution for information appliances. Using the SCI200 processor and CSI301 companion device results in consumer quality audio and video without using excess power.

The Optimal Solution — Distributed Processing

Rather than throwing more x86 silicon at the challenge, AMD has moved the media processing to a core designed for decoding and encoding of media — the Philips VLIW core. This leaves the Geode processor targeted to those things best managed by an x86 processor, such as running the operating system, browser, network or I/O. From a performance standpoint, the Philips core has the horsepower for the most challenging video and audio tasks. As an example, it enables real-time MPEG-4 encode — something that even a 1.1 GHz x86 processor is unable to perform.

From a power standpoint, the SCI200 processor and the CSI301 companion device can deliver a decoded Windows Media or MPEG-2 or MPEG-4 stream with Web browsing occurring concurrently for under 4 watts — a half-watt less than the other x86 chipsets, which only perform the decoding.

AMD Geode™ Streaming Media Solutions

From an efficiency standpoint, the SCI200 processor and CSI301 companion device come in at a fraction of the silicon real estate of other x86 chipsets, without relying upon costly, inefficient megahertz-focused solutions.

Flexibility to Handle the Numerous and Evolving Media Formats

AMD chose Philips as its multi-media companion because of its flexibility to handle the broad range of media formats required by information appliances. Required formats include: MPEG-2, MPEG-4, and Windows Media Technology. AMD will support these media formats on the operating systems of importance to set-top box designers: Linux, Microsoft Windows CE and Embedded XP. Additionally through the network of independent Philips developers, AMD will support a growing number of future CODECs, including capability in areas like video conferencing and MPEG-2 and MPEG-4 audio and video encoding for personal video recording.

Enabling Entertainment on Demand Set-Top Boxes

As the company that pioneered information appliances, AMD is proud to enable high-quality, cost-effective set-top boxes.

SCI200 processor and CSI301 companion device applications include:

- Streaming set-top boxes for full-screen MPEG-2, MPEG-4 and Windows Media decoding
- DVD playback integrated into a set-top box
- Audio and video encoding for analog PVR
- Multimedia routers sending encoded video and audio over a home network

Protecting High Value Content

Availability of broadband IP enables high-quality digital content to be easily copied and shared unless protected and controlled. Content protection is an important technology for content owners and service providers. To ensure that content providers will supply premium content to service providers, a strong and proven content protection system is essential.

- **Irdeto -** Irdeto Access CypherCast for IPTV is an end-to-end solution for protecting pay-media content delivered on IP Networks. CypherCast for IPTV is designed to prevent unauthorized access or theft of content through AES encryption, dynamic frequent key cycling, hardware smartcard-based authentication, as well as PVR and file encryption.
- **Microsoft -** The need for strong digital rights management (DRM) technology has increased due to vast improvements in streaming media and compression technology. High-quality audio and video are now a reality. Top labels, artists and movie studios are making premium content that has been protected with Microsoft Windows Media DRM technology available to consumers to enjoy.
- **Nagravision -** The enhanced security features of the AMD Geode™ Solutions and the protection of the Nagravision smart card provide a highly secure platform to customers deploying securely high value content. NagraIP, Nagravision's DRM solution for broadband networks offers a complete security platform for interactive applications.
- **NDS -** VideoGuard's IP content protection uses encryption and a proven highly secure key management system to protect content at all stages through its broadband delivery to the set-top box. Once content is received inside the set-top box, NDS VideoGuard protects valuable digital content from digital piracy if it is consumed immediately or stored on a PVR hard disk. VideoGuard is the secure heart of NDS's DRM solution.

About AMD

Founded in 1969 and based in Sunnyvale, California, AMD (NYSE: AMD) is a global supplier of integrated circuits for the personal and networked computer and communications markets with manufacturing facilities in the United States, Europe, Japan and Asia. AMD, a Standard & Poor's 500 company, produces microprocessors, Flash memory devices and silicon-based solutions for communications and networking applications.

AMD

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

RECYCLED & RECYCLABLE

30814A

Technical Support

USA & Canada: 800-222-9323 or 408-749-5703
USA & Canada PC Microprocessor: 408-749-3060
USA & Canada Email: hw.support@amd.com

Latin America Email: latinamerica.support@amd.com

Europe & UK: +44–0-1276-803299
Europe & UK Fax: +44–0-1276-803298
France: 0800-908-621
Germany: +49–089-450-53199
Italy: 800-877224
Europe Email: euro.tech@amd.com

Far East Fax: 852-2956-0588

Japan Fax: 81-3-3346-7848

Literature Ordering

On the Web: www.amd.com/support/literature.html
USA & Canada: 800-222-9323
Europe Email: euro.lit@amd.com
Far East Fax: 852-2956-0588
Japan Fax: 03-3346-9628