

A New Platform Featuring the AMD 780E Chipset: Pushing Embedded Client Performance to the Max



Product Overview

The new high-performance embedded platform solution featuring the AMD 780E chipset packs quad-core processing, HyperTransport™ 3.0 Technology¹, PCI Express® Generation 2, DirectX® 10 and high definition hardware video decode into a solution targeted at high end embedded client applications such as test and measurement, industrial automation and imaging, high-end digital signage and surveillance systems. The growing demands of embedded applications are served by this new solution through stellar performance, scalability and excellent power efficiency.

Performance

The integrated ATI Radeon™ HD 3200 graphics with ATI Avivo™ HD technology provides excellent graphics performance for most embedded applications. If additional graphics performance is necessary, ATI Hybrid CrossFireX™ technology² can be leveraged to not only upgrade graphics performance but combine the performance of both the integrated ATI Radeon graphics and a discrete ATI Radeon graphics processor to substantially boost graphics performance.

Scalability

Compatible with a range of AMD embedded processors including low power AMD Athlon™ X2 dual-core processors and very low power AMD Athlon single-core processors, this solution enables a single design to support a wide range of performance and power points. For solutions that require more than two independent displays, additional discrete graphics cards can optionally be added to the system to support additional independent displays.

Power Efficiency

Applications can now leverage Cool'nQuiet™ technology and hardware video decode to perform tasks that previously were only available on power hungry solutions. With typical solution power consumption starting below 15 Watts³, even the most power sensitive applications can take advantage of the processing and graphics performance available in this solution.

Primary Features

Processor Support

- For use with Embedded AMD Athlon™ Single and Dual-Core Processors from 8W to 35W
- Designed to also be compatible with Quad-Core AMD Phenom™ Processors

Operating System Support

- Windows Vista®
- Windows® XP and XPe
- Linux®

Memory Support

- Up to 128MB GDDR3 dedicated frame buffer (sideport memory) for optimizations in power savings and video decoding

¹ When used with HyperTransport 3 capable processors.

² Windows Vista operating system required for ATI Hybrid CrossFireX technology.

³ When using the 8W TDP AMD Athlon 2000+ and a single display.

Primary Features, cont.

Integrated Display Interfaces

- Dual Independent Display Support
 - Multiplexed on one PCIe® x8 interface
 - o Dual-link or dual single-link DVI
 - o HDMI
 - o Dual DisplayPort
 - Multiplexed on LVTM Interface
 - o Dual-link DVI
 - o Dual-channel LVDS
- Analog VGA

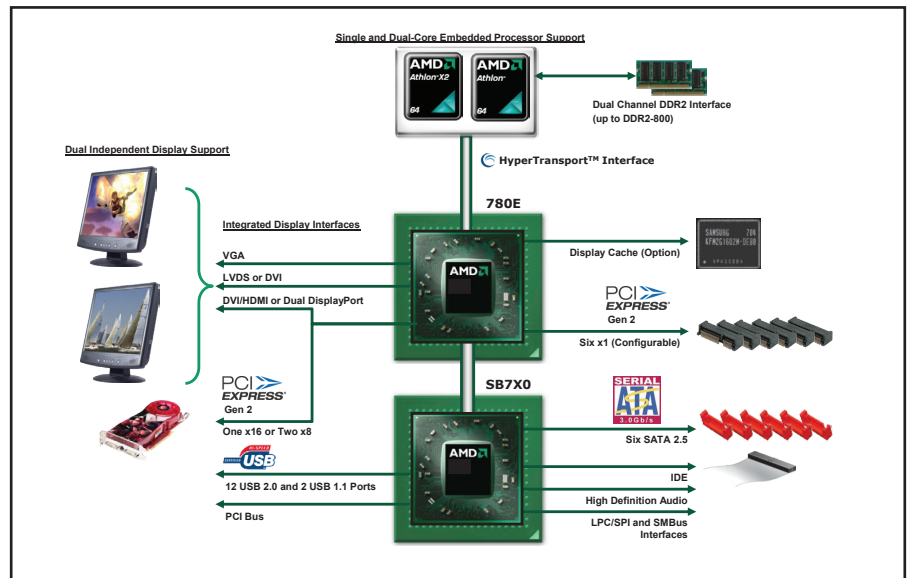
ATI Avivo™ HD Graphics

- DirectX® 10.0
- OpenGL 2.0
- UVD (Universal Video Decoder) 2.0¹
 - o Hardware decode of most common HD codecs (MPEG-2, H.264/AVC MPEG-4 and VC-1)
- HDCP
 - o Copy protection for digital HDMI/DVI
 - o Version 1.3b compliant, up to 1080p
- ATI Hybrid CrossFireX™ Technology
- Video Scaling and Color Space Conversion

I/O

- HyperTransport™ 3 Technology
 - o 14GB/s peak I/O bandwidth
 - o Compatible with HyperTransport 1 processors in HT1 mode
- PCI Express®
 - o One x16 or two x8 configurable
 - o Six x1 configurable as combinations of x1, x2 or x4
- PCI 2.3 Interface
 - o Up to 6 master devices
- Six SATA 2.5 ports
 - o Support for SATA 1.5 and 3.0 compatible devices
 - o Raid 0,1,10
 - o e-SATA
 - o Hyperflash
- USB Ports/Controller
 - o 12 USB 2.0 and 2 USB 1.1
- IDE Interface
 - o Single PATA channel supporting two devices

High Performance Embedded Client Platform



- High Definition Audio
 - o Unified Audio Architecture compatible
 - o Four independent streams
- SMBus 2.0
- LPC Bus
 - o Support for TPM version 1.1/1.2 devices
 - o Supports SPI devices
- Hardware Monitor
 - o Fan control (Voltage, Temp)
 - o Watchdog timer

Power Management

- Dual Dynamic Power Management
 - o Separate power planes for cores and memory controller
- Advanced Configuration and Power Interface (ACPI) 3.0
- AMD PowerNow!™ and Cool'n'Quiet™ Technologies Support

AMD Socket AM2+/780E/SB7X0 Development Board

- Code name "Mahogany"
 - o Model: AM2+ DB780E
 - o Part Number: DBAM2+RS780E-EVAL

¹ The Universal Video Decoder is supported by specific industry standard video players such as CyberLink Power DVD version 7.3 and Corel WinDVD 8.

www.amd.com/embedded

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.

WWW.AMD.COM

One AMD Place
P.O. Box 3453
Sunnyvale, CA 94088-3453, USA
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USA & Canada: 800-222-9323, Opt 2
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USA & Canada E-mail: hw.support@amd.com

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Latin America E-mail (Portuguese):
amdbr@vermont.com.br
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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

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

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