

AMD 2008 Financial Analyst Day
November 13, 2008
-News in Brief-

During executive presentations at the 2008 AMD Financial Analyst Day, AMD presented roadmaps for platforms that span the most popular usage scenarios for PC customers at work, at home and at play. The company also provided additional details on its manufacturing technology strategy. This document highlights the main news of the day.

Server Platforms:

- AMD today announced widespread availability of its 45 nanometer Quad-Core AMD Opteron™ processor, codenamed **"Shanghai."** The new processor delivers up to 35 percent more performance with up to a 35 percent decrease in power consumption at idle.¹ AMD also detailed widespread and rapid customer adoption of the new processor, with more than 25 server systems expected to be available by year's end from global computer manufacturers.
- AMD provided additional details on its server platform roadmap, planned to advance its trademark approach to platform longevity with maximum flexibility and customer choice.
 - **"Fiorano,"** the first AMD platform to combine AMD server processors and chipsets, is on schedule for mid-2009 introduction based on the planned release of the AMD SR5690 chipset. "Fiorano" is expected to support "Shanghai" and the upcoming six-core **"Istanbul"** processor in 2H09, and significant improvements in I/O and virtualization performance, power efficiency, RAS, and manageability are expected.
 - AMD disclosed more details associated with its next-generation server platform, **"Maranello,"** which remains on track for introduction in 1H10. "Maranello" is a DDR3-based server platform which is expected to offer a new socket infrastructure to support upcoming 8-core **"Sao-Paulo"** and 12-core **"Magny-Cours"** processors.

ATI Stream Commercial Offering:

- AMD announced via a news release the new AMD FireStream™ 9270 compute accelerator and the latest version of its free and open ATI Stream Software Development Kit (SDK), version 1.3. Both are designed to help researchers, technical professionals and IT organizations use mainstream computing platforms to address challenges that once would have required multi-million dollar investments in proprietary hardware and software.

¹ Compared to Quad-Core AMD Opteron™ processor codenamed "Barcelona." Benchmarks published on amd.com as of November 13, 2008, show the following performance gains compared to systems based on "Barcelona": SPECint@_rate2006: 32%; SPECfp@_rate2006: 32%; SPECjbb@2005: 64%. See http://www.amd.com/us-en/Processors/ProductInformation/0,,30_118_8796_8800,00.html. For the latest results, see www.spec.org.

Desktop Platforms:

- AMD offered details on the upcoming platform codenamed "**Dragon**", its second generation enthusiast-class desktop PC platform. AMD confirmed that "Dragon" is set to launch in Q1 2009 and feature its upcoming 45nm **AMD Phenom™ II** X4 quad-core processors, codenamed "Deneb." The AMD Phenom II brand will be introduced with the "Dragon" platform to signal enhanced processor performance and efficiency. At launch the high-performance platform will also consist of acclaimed AMD 790 Series chipsets and award-winning ATI Radeon™ HD 4800 Series graphics. Optimized for gaming, digital media and video processing, the platform also includes DirectX10.1 graphics, ATI Stream, AMD OverDrive™ software,² and the AMD Fusion for Gaming Utility.³
- "**Kodiak**" is scheduled to enhance AMD Business Class platforms in 2H09, with enhanced manageability, power efficiency, and our 45 nm generation of AMD Phenom processors.
- Extending the AMD lead in HD computing on consumer PCs, the 2H09 "**Pisces**" mainstream desktop platform is designed to provide a visibly superior experience for consumers. It will combine AMD Phenom II quad- and triple-core processors with DDR3 memory and upcoming RS880 chipsets.
- "**Maui**" is the new AMD home theater platform that is designed to integrate the devices needed to drive high definition televisions or displays from a nearly limitless variety of sources. It makes extensive use of the extensive features of Microsoft Vista Home Premium or Ultimate editions. The platform includes options for AVR class 7.1, 5.1 and 3.1 audio, HDTV tuning, plus the ability to play DVDs, Blu-ray discs,⁴ CDs, pictures and slide shows, internet content, on line movie rentals,⁵ as well as PC functions to let you work or play games. Maui is planned for introduction in Q408.

Notebook Platforms:

- AMD revealed details on its next-generation mainstream notebook platform, codenamed "**Tigris**." It is set to include new 45nm dual- and single-core mobile processors, code named "**Caspian**," and upcoming RS880M and SB710 mobile chipsets. Expected in 2H09, "Tigris" is expected to offer significant enhancements to the current AMD mainstream notebook platform, including improved HD video, 3D graphics, battery life and overall performance.
- AMD also announced the 2010 mainstream notebook platform code named "**Danube**." This platform will feature the new "**Champlain**" CPU, the first

² AMD's product warranty does not cover damages caused by overclocking, even when overclocking is enabled via AMD OverDrive™ software

³ This utility may disable security/antivirus software, or adversely affect your system. Review accompanying documentation carefully before installing.

⁴ Blu-ray drive and HD monitor required.

⁵ Internet access required.

quad-core processors offered by AMD specifically for the notebook market that also utilize DDR3 memory technology..

- In 2011, AMD plans to introduce the quad-core "Llano" APU for mainstream notebook and desktop platforms.

ATI Stream Consumer:

- AMD announced via a press release that on Dec. 10, it plans to release a free ATI Catalyst™ driver update that instantly unlocks new ATI Stream acceleration capabilities already built into millions of ATI Radeon™ graphics cards.
- ATI Stream-enabled software titles for entertainment, gaming and productivity are being released or are under development by a growing list of the world's top independent software vendors (ISVs), including Adobe, ArcSoft, CyberLink and Microsoft.
- To give users immediate benefit from ATI Stream, AMD also plans to release on Dec. 10 a free downloadable version of its ATI Avivo™ Video Converter utility.
- This intuitive, easy-to-use application enables transcoding of HD video up to 17 times faster than with the CPU alone, even when using a mainstream ATI Radeon™ HD 4000 series card.⁶
- Rick Bergman, Senior VP and General Manager, Graphics Products Group, demonstrated the free ATI Avivo™ Video Converter utility during his presentation, showing an example of how this free utility can convert video significantly faster than competitive offerings, which offerings must be purchased for use.

Next Generation Technologies for Next Generation Graphics

- AMD confirmed that it plans to transition to 40nm manufacturing process in 2009. Additionally, AMD committed to extend its leadership in Microsoft DirectX technologies, including the anticipated DirectX 11 transition in 2009, thereby ensuring that ATI Radeon™ HD graphics cards will continue to allow gamers and developers to enjoy the latest in graphics technologies.

Manufacturing Technology

- On October 7, AMD and the Advanced Technology Investment Company announced their intention to create a new global enterprise, The Foundry Company, to address the growing global demand for independent, leading-edge semiconductor manufacturing. This announcement was the lynchpin of AMD's Asset Smart plan, and a key initiative designed to enable the company

⁶ The pre-release version of ATI Avivo Video Converter demonstrates that ATI Stream technology allows video conversion that is faster than ever before. ATI Avivo Video Converter using ATI Stream technology converted an HD MPEG2 video at 1920x1080 resolution @ 24fps running 3600 seconds to an MPEG4 video at 320x240 resolution at 24 fps in 12 minutes, while iTunes 8.0.1 with WinQuickTimeMPEG2 pack converted the same source video to the same output specifications in 3 hours and 23 minutes, demonstrating a 17x speed up. System specifications: Intel Core 2 Duo QX9650 3.0 GHz processor, 6GB of Corsair CM2X1024-8500C5D 1066 MHz memory, Windows Vista Ultimate® 64-bit with Service Pack 1, ATI Radeon™ HD 4850 512MB. Performance of ATI Avivo Video Converter will vary based on system configuration, ATI Radeon product, source file and output settings used.

to achieve sustainable profitability. At the 2008 AMD Financial Analyst Day event, AMD provided more details on what its manufacturing operations will look like once the spin-out of The Foundry Company is complete.

- For the Silicon on Insulator (SOI) and bulk manufacturing processes needed to build AMD CPUs and APUs, The Foundry Company plans to offer AMD 65nm, 45nm and 32nm manufacturing capabilities at:
 - Fab 36 (Dresden)
 - Fab 38 (Dresden)
 - Fab 4x (Saratoga County, NY)
- For the bulk manufacturing processes AMD uses to manufacture its chipsets and GPUs, AMD plans to have access to 55nm, 40nm and 32nm manufacturing capabilities at:
 - TSMC/UMC (Taiwan)
 - Fab 38 (Dresden)
 - Fab 4x (Saratoga County, NY)
 - The Foundry Company also provided an update on its progress towards moving to a new 32nm manufacturing process for bulk and SOI production. The company confirmed that it will complete 32nm test chips in Dresden by the end of year, and is on schedule to successfully incorporate High-k Metal Gate within this process node. 32nm technology development will ramp in late 2009 in preparation for 1H 2010 volume production.

New Low Power Mobile Platforms

During the past few quarters, there has been a great deal of interest in the ultraportable notebook and mini-notebook markets, because of the small form factor and lightweight profile such devices offer. To capitalize on the growing interest in these highly mobile form factors, AMD announced new platforms aimed at serving these markets.

- AMD introduced two ultraportable notebook platforms, code named **"Congo"** and **"Yukon"**. "Congo" is based upon the dual-core "Conesus" CPU with the RS780M and SB710 chipset. "Yukon" is based upon a single-core CPU with the RS690E and SB600 chipset. While targeted at the ultra-portable market, these platforms have been designed to address a portion of the mini-notebook market, specifically those people who are dissatisfied with the limited experience offered by mini-notebooks. "Yukon" is planned to be available in 1H09 followed by "Congo" in 2H09.
- AMD also announced the 2010 ultraportable notebook platform code named **"Nile"**. "Nile" will feature the dual-core "Geneva" CPU utilizing DDR3 memory technology.
- In 2011, AMD plans to introduce the dual-core **"Ontario"** APU for ultraportable and mini-notebook platforms.

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