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AMD Unveils 6th Generation A-Series Processor Bringing Unprecedented HD Streaming, Online Gaming, and Innovative Computing Experiences to Notebooks and All-in-Ones

World's First High-Performance Accelerated Processing Unit in a System-on-Chip Design Redefines the Notebook Processor, Delivering up to 2x the Battery Life Than Before(1) and 2x the Gaming Performance of Competing Platforms(2)

SUNNYVALE, CA -- (Marketwired) -- 06/02/15 -- AMD (NASDAQ: AMD) today announced its 6th Generation A-Series Processor, the world's first high-performance Accelerated Processing Unit (APU) in a System-on-Chip (SoC) design. Previously codenamed "Carrizo," the 6th Generation AMD A-Series Processor takes advantage of extensive AMD processor and graphics IP enabling exceptional computing experiences not possible before. The 6th Generation AMD A-Series Processor is the most versatile notebook processor ever produced, built to excel at today's and tomorrow's consumer and business applications, delivering premium streaming entertainment, unmatched smooth online gaming, and innovative computing experiences, with all day unplugged performance.[3]

The world's first high-performance Accelerated Processing Unit in a SoC design marks a number of technology firsts: the world's first High Efficiency Video Coding (HEVC) hardware decode support for notebooks, the first Heterogeneous Systems Architecture (HSA) 1.0-compliant design, and the first ARM® TrustZone®-capable high-performance APU. The new processor harnesses up to 12 Compute Cores -- 4 CPU + 8 GPU* -- leveraging AMD "Excavator" cores and the third generation of AMD's award-winning Graphics Core Next (GCN) architecture. The result is a groundbreaking processor that boasts more than twice the battery life of its predecessor, up to 2x faster gaming performance than competitive processors, innovative computing experiences enabled through HSA, and a premium Microsoft® Windows® 10 experience with support for DirectX® 12, adding up to an extraordinary experience for consumers.

"The notebook remains the ideal, versatile, connected hub in people's lives -- the one device that does it all and does it well, and today's consumer shouldn't have to pay a premium to enjoy high quality streaming video, superior online gaming, and powerful content management as mainstays of today's computing experience," said Matt Skynner, corporate VP and general manager, Products at AMD. "That changes today with the 6th Generation AMD A-Series Processor, designed to deliver exceptional experiences never before seen in a mainstream notebook, truly making innovation available to everyone. Our partners have

plans to introduce our 6th-generation APU in many of today's most innovative notebook platforms, demonstrating the full potential of the APU's capabilities."

"AMD and Microsoft continue to innovate in personal computing with advancements in Windows® 10 and DirectX® 12 and the introduction today of AMD 6th Generation A-Series processors," said Roanne Sones, general manager, Operating Systems Group, Microsoft Corp. "Consumers will enjoy the most compelling features of Windows® 10, enabling a great notebook experience."

Superior Streaming Entertainment

- 6th Generation AMD A-Series Processors bring HEVC/H.265 to the notebook for the first time, enabling consumers to benefit from higher quality, lower bandwidth streaming video playback versus traditional H.264 videos.
- Enjoy superb visual quality for entertainment including support for Ultra HD resolution videos using AMD Perfect Picture with Steady Video technology.[4]
- Benefit from energy-efficient playback that allows for almost 2x more viewing on a single battery charge than its predecessor.[5]
- Power through media conversion faster with up to 5x accelerated encoding performance compared to CPU-only processing.[6]

Smooth Online Gaming

- 6th Generation AMD A-Series Processors come with discrete-class graphics built in, harnessing AMD Radeon™ Graphics Core Next (GCN) Architecture to deliver up to 2x the gaming performance of competitive processors.
- Enjoy true, playable HD notebook gaming with the most popular online titles including *DoTA 2*, *League of Legends*, and *Counter Strike: Global Offensive*, among others.
- Play for hours unplugged on the latest eSports titles, almost twice the duration of its predecessor.[7]
- Benefit from AMD Dual Graphics combining 6th Generation AMD Notebook Processors with select AMD Radeon™ R7 Mobile graphics to boost frame rates in games by up to 42 percent.[8]
- Enjoy smooth, stutter- and tear-free gaming with AMD FreeSync™ technology.[9]
- Be ready for the future with support for multi-threaded APIs including DirectX™ 12, Vulkan™ and AMD's Mantle that enable the most advanced gaming technologies designed to improve performance and visual fidelity.

Innovative Computing Experiences

- 6th Generation AMD A-Series Processors punch above their weight, harnessing up to 12 Compute Cores (4 CPU + 8 GPU)* to realize up to twice the performance of competitive solutions in compute-heavy workloads.[10]
- AMD Gesture Control is available on mainstream notebooks, allowing users to navigate and control their notebook with a simple wave of the hand without added costs.[11]
- For the most complete Microsoft Windows® 10 experience, 6th Generation AMD A-Series Processors accelerate video playback on the forthcoming operating system with native HEVC decode supported, and enable the latest Windows® 10 features with

Secure boot and resume, Trusted Platform Module (TPM 2.0), and Drive Key Encryption using the first AMD Secure Processor for performance APUs.

Notebooks featuring the 6th Generation AMD A-Series Processor will be available from top OEMs starting in June.

Supporting Resources

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About AMD

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*Learn more at www.amd.com/computecores

1. All performance tests by internal AMD benchmark labs using Windows® 8.1 64bit and 256GB SSD drives. AMD FX-8800P with 2x4GB DDR3-1600, 256GB SSD, Driver 15.10 beta measured an average of 3.7W in idle -- or 813 minutes -- using a 50 Whr battery. AMD FX 7600P with 2x4GB DDR3-1600, 256GB SSD, Driver 14.501 beta measured an average of 8.6W in idle -- or 348.8 minutes -- using a 50Whr battery. CZN-56
2. Testing by AMD Performance Labs using an AMD FX-8800P with AMD Radeon™ R7 graphics, 2x4 DDR3-2133, 256 GB SSD, Windows 8.1 64bit, driver 15.10 scored 2753 in 3DMark 11 performance. Core™ i7 5500U with HD 5500 graphics, DDR3-1600, 256 SSD, Windows 8.1 64bit, driver 4156 scored 1350 in 3DMark 11 Performance. CZN-58
3. "All day battery life" defined as > 8hrs idle battery life. AMD battery life data based on reference platform information around a AMD FX-8800P platform, 2x4GB DDR3-1600, 256GB SSD, Driver 15.10 beta measured average of 3.69W in idle -- or 813 minutes using a 50 Whr battery. AMD FX 7600P with 2x4GB DDR3-1600, 256GB SSD, Driver 15.10 beta measured an average of 8.6W or 348.8 minutes using a 50Whr battery. Core i5-5200u, 2x4GB DDR3-1600, driver 4156 measured an average of 4.8W or 626 minutes using a 50Whr battery. CZN-56
4. Additional hardware (e.g. HD or 4K monitor, USB, 3.0 ports, wirelessly enabled HDTV) and/or software (e.g. multimedia applications and/or Wi-Fi access) are required for the full enablement of some features. HD/4K Video display requires an HD/4K video source. Not all features may be supported on all components or systems -- check with your component or system manufacturer for specific model capabilities and supported technologies. For more information visit http://www.amd.com/en-us/innovations/software-technologies/perfect-picture.
5. All performance tests by internal AMD benchmark labs using Windows 8.1 64bit and 256GB SSD drives using Windows Media player to watch 1080p h.264 video on a 13x7 eDP panel of a 3min Big Buck Bunny clip. AMD FX-8800P (15W) with DDR3-1600, Radeon™ R7 graphics, Driver 15.10 beta which averaged 6.01 W or 8.3 hrs using a 50Whr battery. AMD FX-7600 (35W) using 2x4GB DDR3-1600, Driver 14.501 which averaged 14.96 W or 3.3hrs using a 50Whr battery. CZN-46
6. AMD FX-8800P with AMD Radeon™ R7 Graphics, 2x4 GB DDR3-800, 256 GB SSD,

Windows® 8.1 64bit. Driver 15.10 beta transcoded at 31 fps using the default CPU code path, and 162 fps using the VCE codepath. Handbrake version beta May 13, 2015 tested using a 10Mbps h.264 file convert to 5Mbps h.264. CZN-52
7. All performance tests by internal AMD benchmark labs using Windows 8.1 64bit and 256GB SSD drives using DOTA2 at 13x7, high settings running a replay file.. AMD FX-8800P with DDR3-1600, Radeon™ R7 graphics, Driver 15.10 beta which averaged 38 fps and used an average of 24.81W or 120.9 minutes using a 50Whr battery. AMD FX-7600 using 2x4GB DDR3-2133, averaged 33.5 fps and drew 40.42W or 74.26 minutes on a 50Whr battery. CZN-51
8. AMD FX-8800P with AMD Radeon™ R7 M365, 2x4 DDR3-2133, Windows® 8.1. Catalyst 15.10 beta with dual graphics enabled and disabled. In StarCraft II, 1920x1080 max settings, using a timed demo, the AMD Radeon™ R7 M365 scored 28fps with dual graphics disabled, and 40fps with dual graphics enabled. See http://www.amd.com/dualgraphics for more information on AMD Radeon™ Dual Graphics. AMD Dual Graphics AMD Radeon™ Dual Graphics requires one of select AMD A-Series APUs plus one of select AMD Radeon™ discrete graphics cards and is available on Windows® 7 or later. Linux OS supports manual switching which requires restart of X-Server to engage and/or disengage the discrete graphics processor for dual graphics capabilities. With AMD Radeon™ Dual Graphics, full enablement of all discrete graphics video and display features may not be supported on all systems and may depend on the master device to which the display is connected. Check with your component or system manufacturer for specific mode capabilities and supported technologies. CZN-50
9. FreeSync is an AMD technology designed to eliminate stuttering and/or tearing in games and videos by locking a display's refresh rate to the framerate of the graphics card. Requires Monitor, AMD Radeon™ graphics and/or AMD A-Series APU compliant with DisplayPort™ Adaptive-Sync 1.2 (or newer). AMD Catalyst™ driver 15.2 Beta (or newer) required. Adaptive refresh rates vary by display; check with your monitor manufacturer for specific capabilities. Only select AMD Radeon GPUs and A-Series APUs supported; see www.amd.com/freesync for full details
10. System configs: AMD FX-8800P (15W) with AMD Radeon™ R7 graphics, 2x4 DDR3-1600, 256 GB SSD, Windows 8.1 64bit, Driver 15.10. Intel Core i7 5500u (15W) with 2x4 GB DD3-1600, 256 GB SSD, Windows 8.1 64 bit Driver 4156. Adobe Premiere Pro CC test using Time to transcode Black Magic_Baseline.prproj. AMD FX-8800P took 51.74s while Core i7 took 62.86s. in Adobe Photoshop Path Blur test. AMD FX-8800P took 9s, while Core i7 took 11.52s. Blender OpenCL test took 6 seconds on AMD FX-8800P vs 7 seconds on Core i7. Libre Office Calc Demo01 took 225.75 ms on AMD FX-8800P and 538.28ms on Core i7. CZN-48
11. AMD Gesture Control is designed to enable gesture recognition as a tool for controlling certain applications on your PC. Available on 6th generation AMD FX, A10 and A8 APUs codenamed "Carrizo" and upcoming A8 and A6 APUs codenamed "Carrizo-L." Requires a web camera, and will only operate on PCs running Windows 8 or Windows 10 operating system. Supported Windows desktop apps include: Windows Media Player, Windows Photo Viewer, Microsoft PowerPoint and Adobe Acrobat Reader. Supported Windows Store apps include: Microsoft Photos, Microsoft Music, Microsoft Reader and Kindle. Performance may be degraded in low lighting or intensely-focused lighting. For more information visit http://www.amd.com/en-gb/innovations/software-technologies/gesture-control.
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