

### Radeon(TM) RX 500 Series: The Most Compelling Graphics Card Upgrade Yet

## Designed with the perfect balance of performance and features for the 9 out of 10 gamers that play on outdated graphics cards

SUNNYVALE, CA -- (Marketwired) -- 04/18/17 -- Today <u>AMD</u> (NASDAQ: AMD) introduced the Radeon<sup>™</sup> RX 500 series, a new line of graphics cards featuring a powerful combination

of improved game performance, higher clock speeds<sup>1</sup>, and a refined 2<sup>nd</sup> generation Polaris architecture, giving PC gamers the best reasons yet to upgrade their graphics. The Radeon RX 500 series was designed specifically for system upgrades, catering to the 9 out of 10 PC gamers today who are hindered by outdated technology and aren't able to enjoy optimal experiences in modern games, smooth VR experiences, or the latest display

technologies.<sup>2,3</sup> Radeon™ RX 500 series graphics cards feature a variety of the most compelling new technologies and features including:

• Optimized DirectX® 12 and Vulkan® gaming -- The Radeon™ RX 500 series was engineered using the 2<sup>nd</sup> generation Polaris architecture. It was specifically designed to perform exceptionally well with low-level, next-generation APIs like DirectX 12 and Vulkan and it supports asynchronous compute for outstanding

game and VR experiences.<sup>3</sup> Radeon RX 500 series GPUs have been further refined with higher clock speeds, improved idle and multi-monitor efficiency, and the fine-grained controls gamers need to fine-tune their hardware

 Improved response times, more efficiency, and cooler operation with Radeon™ Chill -- Radeon Chill is an advanced framerate controller for the Radeon™ RX 500 series that works automatically in the background (when enabled) to dynamically regulate framerates in today's most popular games based on the

speed of mouse movements and the gamer's activity in a scene<sup>4</sup>

 Smooth, stutter-free gaming with Radeon™ FreeSync -- Gamers can enjoy smooth framerates in virtually every game released, without the frustration of screen tearing and input lag using Radeon FreeSync, available on a wide range

of affordable displays.<sup>5</sup> For those that want to get even closer to pixel-perfect gaming, Radeon<sup>M</sup> FreeSync 2 monitors harness low-latency, high-brightness pixels, excellent black levels and a wide color gamut to display high dynamic range (HDR) content, and feature Low Framerate Compensation (LFC) enabling stutter-free gaming when framerates dip below a monitor's refresh rate, all in a completely plug-and-play experience that eliminates the need to tweak settings

in software or on the monitor.<sup>6</sup>

• Awesome streaming, sharing, and gameplay capture with Radeon ReLive -- The Radeon™ RX 500 series supports the industry's most revolutionary solution for capturing, customizing, and sharing gameplay. The Radeon ReLive software suite lets gamers enjoy smooth gaming and recording simultaneously, even on

# entry-level systems, with support for recording at 4K resolution at 30 and 60 FPS using HEVC and H.264 codecs.<sup>7</sup> Radeon ReLive also integrates with the most popular game streaming platforms around the world

"Radeon was built on the promise that all gamers can enjoy the most advanced graphics technologies in their favorite games. Our launch today of the Radeon RX 500 series doubles down on that effort. With higher performance, revolutionary gameplay capture software, latency-reduction technology, Day 0 driver support for game launches, open and affordable standards like Radeon FreeSync, and innovative features like Radeon Chill, we know gamers who have been patiently waiting to upgrade will have more than enough reasons to now," said Scott Herkelman, corporate vice president and general manager, Radeon Technologies Group.

A wide range of Radeon<sup>™</sup> RX 500 Series cards will be available to meet the needs of the overwhelming majority of gamers:

- Radeon<sup>™</sup> RX 580: For smooth 1440p gaming -- The Radeon RX 580 delivers up to an average of 57% better performance compared to the Radeon<sup>™</sup> R9 380X in testing<sup>8</sup>, delivering smooth gaming in leading AAA games and VR experiences for an SEP of US\$229 for the Radeon<sup>™</sup> RX 580 8GB GDDR 5 graphics card, and an SEP of US\$199 for the Radeon<sup>™</sup> RX 580 4GB GDDR5 graphics card
- Radeon™ RX 570: For maximum 1080p gaming -- With 4GB of GDDR5 memory, the Radeon™ RX 570 boasts up to an average of 2.3X better performance compared to the Radeon™ R7 370<sup>9</sup> for an SEP of US\$169
- Radeon™ RX 560: For efficient 1080p gaming -- With 2GB of GDDR5 memory, the Radeon™ RX 560 delivers up to an average 57% higher performance of the Radeon™ R7 360<sup>10</sup> for a fluid and smooth gaming experience in the world's
- most popular games at an SEP of US\$99
  Radeon™ RX 550: The doorway to PC gaming -- Featuring 2GB GDDR5 memory, the Radeon™ RX 550 delivers up to an average 4X higher performance vs. competing integrated graphics, and up to an average of 1.7X the performance of

the Radeon™ R7 250 at an SEP of US\$79.<sup>11</sup> The Radeon™ RX 550 is also ideal for home theater PCs with support for HDMI™ 4K60, 4K playback and HEVC

content.<sup>5</sup> It's also HDR ready, supports Radeon FreeSync 2 technology for smooth, tear-free gaming, and ships in many low-profile designs ideal for small form factor cases<sup>12</sup>

Radeon RX 580 and 570 graphics cards from major AIB partners are available from retailers and etailers around the world starting today\*, and the Radeon RX 550 graphics card is expected to be available April 20th. Radeon RX 560 graphics cards are planned for release in May. For more information on where to buy, visit <u>https://www.amd.com/en/where-to-buy/radeon-rx500</u>.

#### Supporting Resources

- Read up on all the Radeon<sup>™</sup> RX 500 Series excitement on Radeon.com <u>here</u>
- Watch the Radeon™ RX 580 launch video on YouTube <u>here</u>
- Read about the new Radeon™ RX 500 Series contest <u>here</u>
- Become a fan of <u>AMD</u> and <u>Radeon</u> on Facebook
- Follow <u>@Radeon</u>, <u>@AMDRyzen</u> and <u>@AMDGaming</u> on Twitter

- Follow <u>@WeAreRadeon</u> on Instagram
- For more product and technology information, please go to <u>www.radeon.com</u>

#### About AMD

For more than 45 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies -- the building blocks for gaming, immersive platforms, and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) website, blog, Facebook and Twitter pages.

#### **Cautionary Statement**

This press release contains forward-looking statements concerning Advanced Micro Devices, Inc. (AMD) including the features, functionality, availability, timing, expected benefits of AMD future products including AMD's Radeon RX 500 Series graphics products, which are made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on current expectations and beliefs and involve numerous risks and uncertainties that could cause actual results to differ materially from expectations. Forward-looking statements are commonly identified by words such as "would," "intends," "believes," "expects," "may," "will," "should," "seeks," "intends," "plans," "pro forma," "estimates," "anticipates," or the negative of these words and phrases, other variations of these words and phrases or comparable terminology. Investors are cautioned that the forward-looking statements in this press release are based on current beliefs, assumptions and expectations, speak only as of the date of this press release and involve risks and uncertainties that could cause actual results to differ materially from current expectations. Material factors that could cause actual results to differ materially from current expectations include, without limitation, the following: Intel Corporation's dominance of the microprocessor market and its aggressive business practices may limit AMD's ability to compete effectively; AMD has a wafer supply agreement with GLOBALFOUNDRIES (GF) with obligations to purchase all of our microprocessor and APU product requirements, and a certain portion of its GPU product requirements, from GF with limited exceptions. If GF is not able to satisfy AMD's manufacturing requirements, its business could be adversely impacted; AMD relies on third parties to manufacture its products, and if they are unable to do so on a timely basis in sufficient quantities and using competitive technologies, AMD's business could be materially adversely affected; failure to achieve expected manufacturing yields for AMD's products could negatively impact its financial results; the success of AMD's business is dependent upon its ability to introduce products on a timely basis with features and performance levels that provide value to its customers while supporting and coinciding with significant industry transitions; if AMD cannot generate sufficient revenue and operating cash flow or obtain external financing, it may face a cash shortfall and be unable to make all of its planned investments in research and development or other strategic investments; the loss of a significant customer may have a material adverse effect on AMD; AMD's receipt of revenue from its semi-custom SoC products is dependent upon its technology being designed into third-party products and the success of those products; global economic uncertainty may adversely impact AMD's business and operating results; the markets in which AMD's products are sold are highly competitive; AMD may not be able to generate sufficient cash to service its debt obligations or meet its working capital requirements; AMD has a substantial amount of indebtedness which could adversely affect its financial position and prevent it from implementing its strategy or fulfilling its contractual obligations; the

agreements governing AMD's notes and the secured revolving line of credit impose restrictions on AMD that may adversely affect its ability to operate its business; uncertainties involving the ordering and shipment of AMD's products could materially adversely affect it; the demand for AMD's products depends in part on the market conditions in the industries into which they are sold. Fluctuations in demand for AMD's products or a market decline in any of these industries could have a material adverse effect on its results of operations; AMD's ability to design and introduce new products in a timely manner is dependent upon third-party intellectual property: AMD depends on third-party companies for the design. manufacture and supply of motherboards, software and other computer platform components to support its business; if AMD loses Microsoft Corporation's support for its products or other software vendors do not design and develop software to run on AMD's products, its ability to sell its products could be materially adversely affected; AMD's reliance on third-party distributors and AIB partners subjects it to certain risks. Investors are urged to review in detail the risks and uncertainties in AMD's Securities and Exchange Commission filings, including but not limited to AMD's Annual Report on Form 10-K for the year ended December 31, 2016.AMD, the AMD logo, Radeon, and FreeSync are trademarks of Advanced Micro Devices, Inc. DirectX is a registered trademark of Microsoft Corporation in the US and other jurisdictions. Vulkan and the Vulkan logo are registered trademarks of Khronos Group, Inc. HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and other countries.

\* Not all models available in all countries -- check with your retailer.

<sup>1.</sup> Improved performance and higher clock speeds compared with comparable Radeon RX 400 Series graphics cards.

<sup>2.</sup> PC gamer segmentation based on Steam Hardware Survey Feb 2017. Gamer upgrade estimate based on Steam peak daily users. 88% of users (approximately 9 out of 10 gamers), are gaming on Radeon R9 380X class GPUs or lower resulting in not being able to keep up in the latest games at 2560x1440 resolution including Battlefield 1, Call of Duty: Infinite Warfare, For Honor, Doom, and Resident Evil resulting in tearing or being forced to move to lower settings; are unable to drive VR experiences by scoring higher than 6.0 on the SteamVR test; and are missing out on the latest display technologies including 160 FreeSync<sup>™</sup> monitors, HDR, DisplayPort and HDMI advances, and game streaming in real-time at 4K resolution.

<sup>3.</sup> Select Radeon RX 500 products are VR capable. Check with your PC or system manufacturer to confirm VR capabilities.

<sup>4.</sup> Radeon Chill is compatible with Radeon<sup>™</sup> consumer graphics products in supported DirectX®9 and DirectX®11 games for Windows®7/8.1/10. For more details and a whitelist of supported games, see <u>http://www.amd.com/en-us/innovations/software-technologies/radeon-software/gaming/radeon-chill</u>. GD-115

<sup>5.</sup> AMD FreeSync<sup>™</sup> technology is 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. Check with your component or system manufacturer for specific capabilities. AMD FreeSync<sup>™</sup> technology compatible monitor, AMD Radeon<sup>™</sup> Graphics and/or AMD A-series APU compliant with DisplayPort<sup>™</sup> Adaptive-Sync required. AMD Catalyst<sup>™</sup> 15.2 Beta (or newer) required. Adaptive refresh rates vary by display; check with your monitor manufacturer for specific capabilities. A list of supported hardware and compatible monitors is available at <a href="https://www.amd.com/freesync">www.amd.com/freesync</a>. GRT-2

<sup>6.</sup> Radeon<sup>™</sup> FreeSync 2 does not require HDR capable monitors; driver can set monitor in native mode when FreeSync 2 supported HDR content is detected. Otherwise, HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support. GD-105

<sup>7.</sup> HEVC acceleration is subject to inclusion/installation of compatible HEVC players. GD-81

<sup>8.</sup> Testing done by AMD Performance Labs March 15 2017 using an Intel Core i7 5960X (<u>@3.0GHz</u>), 16GB DDR4-2666 MHz memory, AMD display driver 17.10, and Windows 10 (64bit). PC manufacturers may vary configurations yielding different results. The following games were tested at 1440p: Battlefield 1 (Ultra Presets, DX12), Overwatch (Ultra Preset, DX11), Resident Evil 7 (Ultra Presets, DX11), DOOM (Ultra Presets, Vulkan), and Hitman (Ultra Presets, DX11). The MSI Radeon™ RX 580 (8GB) scored 69.4, 80.7, 76.4, 77.5 and 66 fps respectively. The Radeon RX 380X scored 46.4, 47.5, 47.1, 52.2, and 42 respectively. All scores in average FPS and are an average of 3 runs with the same settings. Performance may vary based on use of latest drivers. RX-111

9. Testing done by AMD Performance Labs March 9 2017 using an Intel Core i7 5960X (<u>@3.0GHz</u>), 16GB DDR4-2666 MHz memory, AMD display driver 17.10 and Windows 10 (64bit). PC manufacturers may vary configurations yielding different results. The following games were tested at 1080p: DOOM (Ultra Presets, Vulkan), Resident Evil 7 (Ultra Presets, DX11), Battlefield 1 (Ultra Presets, DX12), Call of Duty: Infinite Warfare (High Quality, DX11), and Sniper Elite 4 (High Presets, DX12).The RadeonTM RX 570 (4GB) scored 92.4, 102.9, 79.5, 81.6 and 68.5 respectively. The RadeonTM R7 370 (4GB) scored 39.9, 37.6, 42.4, 37.5 and 28.4 respectively. All scores in average FPS and are an average of 3 runs with the same settings. Performance may vary based on use of latest drivers. RX-95

<sup>10.</sup> Testing done by AMD Performance Labs March 9 2017 using an Intel Core i7 6700K (@4.0GHz), 2x4GB DDR4-2667 MHz memory, AMD web driver 17.1.1 and Windows 10 (64bit). PC manufacturers may vary configurations yielding different results. The following games were tested at 1080p: Civilization 6 (Medium Presets, DX12), DOOM (Medium Presets, Vulkan), Battlefield 1 (Medium Quality, DX12), Hitman (Medium Presets, DX12), Resident Evil 7 and Overwatch (Epic Settings, DX11). The RadeonTM RX 560 (4GB) scored 64.5, 67.5, 69.8, 62.5, 65.4 and 109.7 respectively. The RadeonTM R7 360 scored 43.5, 35.3, 32.1, 46.2, 47.9 and 74.1 respectively. All scores in average FPS and are an average of 3 runs with the same settings. Performance may vary based on use of latest drivers. RX-97

<sup>11.</sup> Testing done by AMD Performance Labs March 2nd 2017 using an Intel Core i7 6700K (<u>@4.0GHz</u>), 1x8GB DDR4-2667 MHz memory, AMD web driver 17.1.1, Intel Display Driver 20.19.15.4590 and Windows 10 (64bit). PC manufacturers may vary configurations yielding different results. The following games were tested at 1080p: Counter Strike: Global Offensive (Ultra Presets, DX9), DOTA 2 (Best Looking Preset, DX9), Overwatch (Medium Presets, DX11), Rocket League (High Presets, DX9), World of Warships (High Presets,

DX9). The RadeonTM RX 550 (2GB) scored 96.5, 84.2, 98.0, 81.5 and 71.2 respectively. The RadeonTM R7 250 scored 59.0, 46.4, 44.4, 56.1 and 43.3 respectively. Intel HD 530 IGP scored 23.8, 23, 18.4, 18.5 and 24.7 respectively. All scores in average FPS and are an average of 3 runs with the same settings. Performance may vary based on use of latest drivers. RX-98

<sup>12.</sup> HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support. GD-96

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Source: Advanced Micro Devices