

# AMD Introduces Radeon™ RX 5500 Series Graphics: Superior Visual Fidelity, Advanced Features and High-Performance Gaming Experiences

 The AMD Radeon™ RX 5500 series provides up to 37 percent faster performance on average than the
 competition in select titles at 1080p¹, supercharging top AAA and eSports games –

Acer, HP, Lenovo<sup>™</sup> and MSI to provide incredible gameplay
 with new desktop and notebook PCs powered by Radeon<sup>™</sup> RX 5500 series –

 Gamers receive their choice of Borderlands 3 or Tom Clancy's Ghost Recon® Breakpoint with purchase of eligible Radeon™ RX 5500 series-powered desktop and notebook systems² –

SANTA CLARA, Calif., Oct. 07, 2019 (GLOBE NEWSWIRE) -- Today, AMD (NASDAQ: AMD) announced the Radeon™ RX 5500 series graphics products, harnessing groundbreaking RDNA gaming architecture to deliver the ultimate in high-performance, high-fidelity 1080p gaming.

The AMD Radeon™ RX 5500 series includes the Radeon™ RX 5500 graphics card that will be available in desktop PCs from leading manufacturers and graphics cards from board partners, as well as the Radeon™ RX 5500M GPU for notebook PCs. Top system providers worldwide are embracing the new products, with HP and Lenovo™ planning to offer Radeon™ RX 5500 graphics cards in their high-performance desktop gaming PCs beginning this November, and Acer planning to offer systems with the cards beginning this December. In addition, later this month MSI is expected to launch the world's first gaming notebook powered by AMD Ryzen™ processors and Radeon™ RX 5500M GPUs.

"Based on feedback and insights from global gaming communities, gamers rank graphics as the most critical component for speed and performance," said Johnson Jia, senior vice president and general manager, Consumer Business of Intelligent Devices Group, Lenovo. "That's why the Lenovo Legion™ T730 and T530 gaming towers and the IdeaCentre™ T540 Gaming desktop pack in AMD's latest Radeon™ RX graphics – satisfying players' need for high-fidelity visuals and lightning-fast framerates to fully immerse into their gameplay."

"MSI Alpha 15 is a new chapter for us, and we're excited to partner with AMD to combine the latest 7nm technology found in the Radeon™ RX 5500M GPU and MSI's gaming DNA for our gamers," said Charles Chiang, CEO of MSI.

With the newest additions to the Radeon™ family, AMD is bringing its advanced RDNA gaming architecture and industry-leading 7nm process technology to legions of mainstream

gamers worldwide in exciting new form factors and systems. Powered by RDNA, the Radeon™ RX 5500 provides up to 1.6X higher gaming performance-per-watt than current Radeon™ graphics cards based on the Graphics Core Next (GCN) architecture<sup>3</sup>.

The AMD Radeon™ RX 5500 series was built from the ground up to deliver incredible 1080p gaming, high-fidelity visuals and ultra-responsive gameplay. Optimized to deliver incredible experiences on the hottest games, the Radeon™ RX 5500 graphics card provides up to 37 percent faster performance on average than the competitive product in select titles at 1080p¹. For mobile gaming, a laptop configured with the Radeon™ RX 5500M GPU provides up to 30 percent faster performance on average than the competition, and delivers up to 60+ FPS in select AAA titles and up to 90+ FPS in select eSports games⁴.

"It's been incredible to see the response to our RDNA architecture from gamers worldwide, and now we're bringing the same high-framerate, dynamic gameplay and advanced features to 1080p gaming with the Radeon™ RX 5500 series," said Scott Herkelman, corporate vice president and general manager, Radeon Technologies Group at AMD. "AMD is committed to delivering incredible gaming experiences to all gamers across all price-points. Whether fighting the Calypso twins in *Borderlands 3* or battling to take back Auroa in *Tom Clancy's Ghost Recon*® *Breakpoint*, the Radeon™ RX 5500 series allows every gamer to feel fully immersed and lose themselves in these beautiful and complex worlds."

Built on industry-leading 7nm process technology and supporting high-bandwidth PCIe® 4.0 technology, the new AMD Radeon™ products take advantage of powerful features to bring 1080p gameplay to the next level, including:

- Radeon™ Image Sharpening (RIS)<sup>5</sup> Brings <u>crispness and clarity to in-game visuals</u> that have been softened by upscaling and post-process effects in DirectX<sup>®</sup> 9, 12 and Vulkan<sup>®</sup> titles. When paired with Radeon™ GPU upscaling, RIS enables sharp visuals and fluid frame rates on high-resolution displays.
- AMD FidelityFX Offers an <u>open-source toolkit for game developers</u> to add high-quality post-process effects to help make games look beautiful while offering the optimal balance of visual fidelity and performance. Available on <u>GPUOpen</u>, FidelityFX features Contrast-Adaptive Sharpening (CAS), which draws out detail in low-contrast areas while minimizing artifacts caused by typical image sharpening routines.
- Radeon™ Anti-Lag<sup>6</sup> Anti-Lag significantly decreases input-to-display response times, including making *Borderlands 3* up to 23 percent more responsive<sup>7</sup> with Radeon™ RX 5500 series graphics and offering a competitive edge in gameplay.
- Largest gaming display ecosystem<sup>8</sup> With over 950 supported monitors to choose from, gamers can enjoy stutter-free, tear-free gameplay with AMD Radeon FreeSync™ 2 HDR technology<sup>10</sup>.

Model	Compute Units	Stream Processors	TFLOPS	GDDR6 (GB)	Game Clock <sup>11</sup> (MHz)	Boost Clock <sup>12</sup> (MHz)	Memory Interface
Radeon™ RX 5500M GPU	22	1,408	Up to 4.6	4GB	Up to 1,448	Up to	128-bit
(For Mobile Systems)						1,645	
Radeon™ RX 5500 series	22	1,408	Up to 5.2	Up to 8GB	Up to	Up to	128-bit
(For Desktop Systems)					1,717	1,845	

# AMD Radeon 'Raise the Game' Bundle

The new Radeon™ RX 5500 series are included in the latest AMD Radeon™ Raise the Game bundle<sup>3</sup>, offering gamers their choice of *Borderlands 3* or *Tom Clancy's Ghost Recon*® *Breakpoint* with the purchase of eligible pre-configured desktop and notebook systems powered by Radeon™ RX 5500 and RX 5500M graphics. Learn more here.

### **Availability**

Later this month, MSI is expected to launch the MSI Alpha 15 laptop, powered by Radeon™ RX 5500M GPUs. In addition, Radeon™ RX 5500 graphics cards are expected to be available in leading desktop gaming systems beginning in November 2019, including HP'S OMEN Obelisk and Pavilion Gaming desktops, as well as Lenovo Legion™ T530 and IdeaCentre™ T540 Gaming PCs. The Radeon™ RX 5500 graphics cards are expected to be available in Acer Nitro 50 PCs beginning in December 2019. AMD board partners are expected to launch standalone graphics cards this quarter (Q4 2019).

# **Supporting Resources**

- Learn more about the AMD Radeon™ RX 5500 series here
- Become a fan of AMD on Facebook
- Follow AMD on Twitter

#### About AMD

For 50 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, deployment and expectations of the Radeon<sup>TM</sup> RX 5500 series and the expected availability of products using the Radeon<sup>TM</sup> RX 5500 series of products from system providers and board partners. which are made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. 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 document are based on current beliefs, assumptions and expectations, speak only as of the date of this document and involve risks and uncertainties that could cause actual results to differ materially from current expectations. Such statements are subject to certain known and unknown risks and uncertainties, many of which are difficult to predict and generally beyond AMD's control, that could cause actual results and other future events to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. 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 Inc. (GF) with obligations to purchase all of its microprocessor and APU product requirements, and a certain portion of its GPU product requirements, manufactured at process nodes larger than 7 nanometer from GF with limited exceptions. If GF is not able to satisfy AMD's manufacturing requirements, AMD's 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 and market uncertainty may adversely impact AMD's business and operating results; AMD's products may be subject to security vulnerabilities that could have a material adverse effect on AMD; IT outages, data loss, data breaches and cyber-attacks could compromise AMD's intellectual property or other sensitive information, be costly to remediate and cause significant damage to its business, reputation and operations; AMD's operating results are subject to quarterly and seasonal sales patterns; AMD may not be able to generate sufficient cash to service its debt obligations or meet its working capital requirements; AMD has a large 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 AMD's ability to operate its business; the markets in which AMD's products are sold are highly competitive; AMD's worldwide operations are subject to political, legal and economic risks and natural disasters, which could have a material adverse effect on it; the conversion of the 2.125% Convertible Senior Notes due 2026 may dilute the ownership interest of AMD's existing stockholders, or may otherwise depress the price of its common stock; 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; and AMD's reliance on third-party distributors and add-in-board 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 Quarterly Report on Form 10-Q for the guarter ended June 29, 2019.

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countries. Other product names used in this publication are for identification purposes only and may be trademarks of their respective companies.

The information contained herein is for informational purposes only, and is subject to change without notice. Timelines, roadmaps, and/or product release dates shown in this Press Release are plans only and subject to change. "Navi" is an AMD codename and is not a product name.

- <sup>1</sup> Graphics performance claims are based on pre-production hardware tested by AMD performance labs on August 29, 2019 on similarly configured systems. Ryzen 7 3800X. 16GB DDR4-3200MHz. Win10 Pro x64 AMD Driver Version 19.30-190812n and Nvidia Driver 431.36 WHQL. Testing on the following games with the following settings: Fortnite (DX11 High), Apex Legends (DX11, Ultra High), PUBG (DX11, High), World of Warcraft: Battle For Azeroth (DX11, 10), Overwatch (DX11, Epic), Rainbow Six Siege (DX11, Ultra), DOTA 2 (DX11, Ultra). PC manufacturers may vary configurations yielding different results. Actual performance may vary. RX-383
- <sup>2</sup> 18+ only. Following purchase, product must be installed on system where coupon code will be redeemed. Void where prohibited. Residency and additional limitations apply. Full offer terms at www.amdrewards.com/terms.

Game Pass for PC Offer: Participating retailers only for eligible purchases made July 1, 2019 through March 10, 2020 or when supply of coupon codes is exhausted. Over 100 PC Games available starting August 2019. Gears 5 available fall 2019. Game Pass code must be redeemed by June 30, 2020. Limit one promotional 3-month subscription per Microsoft account over a 12-month period. Requires the Xbox (beta) app and Windows 10 (with updates). Age restrictions and system requirements apply. Game catalog varies over time. Learn more at Xbox.com/gamepass.

Choice of Game Offer: Participating retailers only for eligible purchases made September 30, 2019 through December 31, 2019 or when supply of coupon codes is exhausted. Coupon code must be redeemed by January 30, 2020.

- <sup>3</sup> Graphics performance claims are based on pre-production hardware tested by AMD performance labs on August 29, 2019. Systems tested: Radeon RX 5500 4GB with Ryzen 7 3800X. 16GB DDR4-3200MHz Win10 Pro x64 18362.175. AMD Driver Version 19.30-190812n Vs Radeon RX 480 8GB with Core i7-5960X (3.0GHz) 16GB DDR4-2666 MHz Win10 14393 AMD Driver version 16.10.1. The "Navi" chip powering RX 5500 series products provides up to up to 1.2X more performance, 1.6x performance per watt, and up to 1.7X performance per area compared to RX 480. PC manufacturers may vary configurations yielding different results. Performance may vary based on use of latest drivers. RX-382
- <sup>4</sup> Graphics performance claims are based on pre-production hardware tested by AMD performance labs on September 23, 2019 on similarly configured systems. Performance measurements were done while plugged in with battery saver disabled. Systems tested: a notebook PC with Ryzen 7 3750H with Radeon RX 5500M, 32GB DDR4 AMD Driver 19.30.01.27-190802a vs. a notebook with Ryzen 7 3750H with GTX 1650, 8GB DDR4 Nvidia Driver 431.60 WHQL Testing on the following games with the following settings: Monster Hunter: World (DX11, High), Borderlands 3 (DX11, Medium), Division 2 (DX12, High), Sid Meier's Civilization 6 (DX12, Ultra), World War Z (DX11, Ultra) Battlefield 5 (DX11, Ultra), World of Warcraft (DX12, 10), PUBG (DX11, Medium), Apex Legends (DX11, Medium) manufacturers may vary configurations yielding different results. Actual performance may vary. RX-385
- <sup>5</sup> Radeon Image Sharpening technology requires Radeon Software Adrenalin Edition 2020 and is subject to OEM enablement. Please check with your manufacturer for compatibility information. RIS does not support Direct X® 11 at this time. GD-152

- <sup>6</sup> Radeon Anti-Lag technology requires Radeon Software Adrenalin Edition 2020 and is subject to OEM enablement. Please check with your manufacturer for compatibility information. GD-153
- <sup>7</sup> Graphics performance claims are based on pre-production hardware tested by AMD performance labs on September 20, 2019 on similarly configured systems. Performance measurements were done while plugged in with battery saver disabled. Systems tested: Radeon 5500 4GB with Ryzen 5 3600. 16GB DDR4-3200MHz Win10 Pro x64 18362.175. AMD Version 19.30-190812n. Testing on Borderlands 3, the measured average latency was 30ms with Anti-Lag off, and 23ms with Anti-Lag on. Both at 90 FPS. Manufacturers may vary configurations yielding different results. Actual performance may vary. RX-386.
- <sup>8</sup> As of September 2019, the number of FreeSync technology enabled screens available (900+) at https://www.amd.com/en/products/freesync-monitors Largest ecosystem when compared to publicly available listings of competing product solutions at https://www.144hzmonitors.com/list-of-g-sync-monitors/ and https://www.blurbusters.com/gsync/list-of-gsync-monitors/ which list 58 screens respectively. GD-130.
- <sup>9</sup> FreeSync requires a monitor and AMD Radeon™ graphics, both with FreeSync support. See www.amd.com/freesync for complete details. Confirm capability with your system manufacturer before purchase. GD-127
- <sup>10</sup> FreeSync 2 HDR does not require HDR capable monitors; driver can set monitor in native mode when FreeSync 2 HDR 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>11</sup> Game clock is the expected GPU clock when running typical gaming applications, set to typical TGP (Total Graphics Power). Actual individual game clock results may vary. GD-147
- <sup>12</sup> Boost Clock Frequency is the maximum frequency achievable on the GPU running a bursty workload. Boost clock achievability, frequency, and sustainability will vary based on several factors, including but not limited to: thermal conditions and variation in applications and workloads. GD-151

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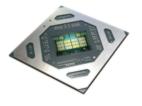
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# AMD Radeon™ RX 5500 series graphics card



AMD Radeon™ RX 5500 series graphics card

AMD Radeon™ RX 5500 series chip



AMD Radeon™ RX 5500 series chip