October 8, 2020

AMD Launches AMD Ryzen 5000 Series Desktop Processors: The Fastest Gaming CPUs in the World

AMD Ryzen™ 5000 Series Desktop Processors built on new "Zen 3" core architecture deliver across-the board leadership performance for gamers and content creators

SANTA CLARA, Calif., Oct. 08, 2020 (GLOBE NEWSWIRE) -- Today, AMD (NASDAQ: AMD) introduced the highly anticipated AMD Ryzen 5000 Series desktop processor lineup powered by the new "Zen 3" architecture. Offering up to 16 cores, 32 threads and 72 MB of cache in the top-of-the-line AMD Ryzen 9 5950X, AMD Ryzen 5000 series processors dominate in heavily threaded workloads[1] and power efficiency[2], while the AMD Ryzen 9 5900X processor offers up to a 26% generational uplift in gaming performance[3]. With extensive improvements throughout the core including a unified 8-core complex with direct access to 32MB L3 cache, the new AMD "Zen 3" core architecture delivers a 19% generational increase in instructions per cycle (IPC)[4], the largest since the introduction of "Zen" processors in 2017.

"Our commitment with each generation of our Ryzen processors has been to build the best PC processors in the world. The new AMD Ryzen 5000 Series Desktop Processors extend our leadership from IPC[4], power efficiency[2] to single-core[5], multi-core performance[1] and gaming[6]," said Saeid Moshkelani, senior vice president and general manager, client business unit, AMD. "Today, we are extremely proud to deliver what our community and customers have come to expect from Ryzen processors – dominant multi-core[1] and single-core performance[5] and true gaming leadership[6] - all within a broad ecosystem of motherboards and chipsets that are drop-in ready for AMD Ryzen 5000 Series Desktop Processors."

AMD Ryzen 5000 Series Desktop Processors

Featuring a remarkable 19% IPC increase[4] over the prior generation in PC workloads, the "Zen 3" architecture pushes gaming and content creation performance leadership[6,1] to a new level. "Zen 3" architecture reduces latency from accelerated core and cache communication and doubles the directly accessible L3 cache per core while delivering up to 2.8X more performance-per-watt versus the competition[2].

The top of the line 16 core AMD Ryzen 9 5950X offers:

- The highest single-thread performance of any desktop gaming processor[5]
- The most multi-core performance of any desktop gaming processor and any desktop processor in a mainstream CPU socket[1]

The 12 core AMD Ryzen 9 5900X offers the best gaming experience by:

- Average of 7% faster in 1080p gaming across select game titles than the competition[7]
- Average of 26% faster in 1080p gaming across select titles generationally[8]

AMD Ryzen 5000 Series Desktop Processor Line-up and Availability

MODEL	CORES/ THREADS	TDP (Watts)	BOOST[9]/BASE FREQ. (GHz)	TOTAL CACHE	COOLER	SEP (USD)	EXPECTED AVAILABILITY
AMD Ryzen™ 9 5950X	16C/32T	105W	Up to 4.9 / 3.4	72MB	N/A	$799	November 5, 2020
AMD Ryzen™ 9 5900X	12C/24T	105W	Up to 4.8 / 3.7	70MB	N/A	$549	November 5, 2020
AMD Ryzen™ 7 5800X	8C/16T	105W	Up to 4.7 / 3.8	36MB	N/A	$449	November 5, 2020
AMD Ryzen™ 5 5600X	6C/12T	65W	Up to 4.6 / 3.7	35MB	Wraith Stealth	$299	November 5, 2020

AMD 500 series motherboards are ready for AMD Ryzen 5000 Series desktop processors with a simple BIOS update. This broad ecosystem support and readiness includes over 100 AMD 500 series motherboards from all major motherboard manufacturers. AMD Ryzen 5000 Series desktop processors announced today are expected to be available for purchase globally on November 5, 2020.

AMD Ryzen Equipped to Win Game Bundle

The AMD Ryzen Equipped to Win game bundle program is back with the highly anticipated next chapter in the Far Cry® series, Far Cry® 6. Customers who purchase an AMD Ryzen 9 5950X, AMD Ryzen 9 5900X, or AMD Ryzen 7 5800X processor between November 5th, 2020 and December 31st, 2020 will receive a complimentary copy of Far Cry® 6 Standard Edition – PC digital when released[10]. Additionally, customers who purchase an AMD Ryzen 9 3950X, AMD Ryzen 9 3900XT, or AMD Ryzen 7 3800XT processor between October 20th, 2020 and December 31st, 2020 will also receive a free copy of Far Cry® 6 Standard Edition – PC digital[10].

Supporting Resources

- Learn more about the AMD Ryzen Desktop Processors
- 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) such as the features, functionality, performance, availability, timing and expected benefits of AMD Ryzen™ 5000 Series desktop processors, 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," "may," "expects," "believes," "plans," "intends," "projects" and other terms with similar meaning. 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. 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; the ability of third party manufacturers to manufacture AMD's products on a timely basis in sufficient quantities and using competitive technologies; expected manufacturing yields for AMD's products; AMD's ability to introduce products on a timely basis with features and performance levels that provide value to its customers; global economic uncertainty; the loss of a significant customer; AMD's ability to generate revenue from its semi-custom SoC products; the impact of the COVID-19 pandemic on AMD's business, financial condition and results of operations; political, legal, economic risks and natural disasters; the impact of government actions and regulations such as export administration regulations, tariffs and trade protection measures; potential security vulnerabilities; potential IT outages, data loss, data breaches and cyber-attacks; uncertainties involving the ordering and shipment of AMD's products; quarterly and seasonal sales patterns; the restrictions imposed by agreements governing AMD's notes and the secured credit facility; the competitive markets in which AMD's products are sold; AMD's ability to generate sufficient revenue and operating cash flow or obtain external financing for research and development or other strategic investments; the potential dilutive effect if the 2.125% Convertible Senior Notes due 2026 are converted; market conditions of the industries in which AMD products are sold; AMD's reliance on third-party intellectual property to design and introduce new products in a timely manner; AMD's reliance on third-party companies for the design, manufacture and supply of motherboards, software and other computer platform components; AMD's reliance on Microsoft Corporation and other software vendors' support to design and develop software to run on AMD's products; AMD's reliance on third-party distributors and add-in-board partners; future impairments of goodwill and technology license purchases; AMD's ability to attract and retain qualified personnel; AMD's indebtedness; AMD's ability to generate sufficient cash to service its debt obligations or meet its working capital requirements; AMD's ability to repurchase its outstanding debt in the event of a change of control; the cyclical nature of the semiconductor industry; the impact of acquisitions, joint ventures and/or investments on AMD's business; the impact of modification or interruption of AMD's internal business processes and information systems; the availability of essential equipment, materials or manufacturing processes; compatibility of AMD's products with some or all industry-standard software and hardware; costs related to defective products; the efficiency of AMD's supply chain; AMD's ability to rely on third party supply-chain logistics functions; AMD's stock price volatility; worldwide political conditions; unfavorable currency exchange rate fluctuations; AMD's ability to effectively control the sales of its products on the gray market; AMD's ability to adequately protect its technology or other intellectual property; current and future claims and litigation; potential tax liabilities; and the impact of environmental laws, conflict minerals-related provisions and other laws or regulations. 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 quarter ended June 27, 2020.

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[1] Testing by AMD performance labs as of 09/01/2020. Multi-core performance evaluated with Cinebench R20 nT with a similarly configured Ryzen 9 5950X vs. a Core i9-10900K. Results may vary. R5K-005

[2] Testing by AMD Performance Labs as of 09/01/2020 using Cinebench R20 nT versus system wall power during full load CPU test using a Core i9-10900K, Ryzen 9 3900XT, Ryzen 9 5900X, Ryzen 9 3950X, and a Ryzen 9 5950X configured with: 2x8GB DDR4-3600, GeForce RTX 2080 Ti, Samsung 860 Pro SSD, Noctua NH-D15s cooler, and an open-air test bench with no additional power draw sources. Results may vary. R5K-007

[3] Testing by AMD performance labs as of 09/01/2020 measuring gaming performance of a Ryzen 9 5900X desktop processor vs. a Ryzen 9 3900XT in 11 popular titles at 1920x1080, the High image quality preset, and the newest graphics API available for each title (e.g. DirectX® 12 or Vulkan™ or DirectX® 11). Results may vary. R5K-009

[4] Testing by AMD performance labs as of 09/01/2020. IPC evaluated with a selection of 25 workloads running at a locked 4GHz frequency on 8-core "Zen 2" Ryzen 7 3800XT and "Zen 3" Ryzen 7 5800X desktop processors configured with Windows® 10, NVIDIA GeForce RTX 2080 Ti (451.77), Samsung 860 Pro SSD, and 2x8GB DDR4-3600. Results may vary. R5K-003

[5] Testing by AMD performance labs as of 09/01/2020 with a Ryzen 9 5950X processor vs a Core i9-10900K configured with NVIDIA GeForce GTX 2080 Ti graphics, Samsung 860 Pro SSD, 2X8 DDR4-3600, Windows 10 and a Noctua NH-D15s cooler. Single-core performance evaluated with Cinebench R20 1T benchmark. Results may vary. R5K-004

[6] Testing by AMD performance labs as of 9/2/2020 based on the average FPS across 40 PC games at 1920x1080 with the High image quality preset using an AMD Ryzen™ 9 5900X processor vs. Core i9-10900K. Results may vary. R5K-002

[7] Testing by AMD performance labs as of 09/01/2020 measuring the Gaming performance of a Ryzen 9 5900X vs a Core i9-10900K in 11 popular titles at 1920x1080, the High image quality preset, and the newest graphics API available for each title (e.g. DirectX® 12 or Vulkan™ over DirectX® 11, or DirectX® 11 over DirectX® 9). GeForce RTX 2080 Ti (451.77), 2x8GB DDR4-3600, Noctua NH-D15s, and Windows 10 May 2020 Update (build 2004) used for all titles. Results may vary. R5K-010

[8] Testing by AMD performance labs as of 09/01/2020 measuring gaming performance of a Ryzen 9 5900X desktop processor vs. a Ryzen 9 3900XT in 11 popular titles at 1920x1080, the High image quality preset, and the newest graphics API available for each title (e.g. DirectX® 12 or Vulkan™ or DirectX® 11). Results may vary. R5K-009

[9] Max boost for AMD Ryzen Processors is the maximum frequency achievable by a single core on the processor running a bursty single-threaded workload. Max boost will vary based on several factors, including, but not limited to: thermal paste; system cooling; motherboard design and BIOS; the latest AMD chipset driver; and the latest OS updates. GD-150

[10] Limited time offer available through participating retailers only. 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.



Source: Advanced Micro Devices, Inc.