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AMD Announces World's Best Mobile Processors[1] In CES 2021 Keynote

AMD Ryzen Threadripper PRO Processors, designed for the most demanding professional workloads, coming to retail channel

SANTA CLARA, Calif., Jan. 12, 2021 (GLOBE NEWSWIRE) -- CES 2021 -- Today, AMD (NASDAQ: AMD) announced the full portfolio of AMD Ryzen™ 5000 Series Mobile Processors, bringing the highly-efficient and extremely powerful "Zen 3" core architecture to the laptop market. New AMD Ryzen 5000 Series Mobile Processors provide unprecedented levels of performance and incredible battery life for gamers, creators, and professionals. New laptops powered by Ryzen 5000 Series Mobile processors will be available from major PC manufacturers including ASUS, HP and Lenovo, starting in Q1 2021. Expanding its leadership client computing product portfolio featuring the "Zen 3" core, AMD also announced the AMD Ryzen PRO 5000 Series Mobile Processors, delivering enterprise-grade security and seamless manageability to commercial users. Throughout the course of 2021, AMD expects a broad portfolio of more than 150 consumer and commercial notebooks based on the Ryzen 5000 Series Mobile Processors.

"As the PC becomes an even more essential part of how we work, play and connect, users demand more performance, security and connectivity," said Saeid Moshkelani, senior vice president and general manager, Client business unit, AMD. "The new AMD Ryzen 5000 Series Desktop and Mobile Processors bring the best innovation AMD has to offer to consumers and professionals as we continue our commitment to delivering best-in-class experiences with instant responsiveness, incredible battery life and fantastic designs. With our PC partners, we are delivering top-quality performance and no-compromise solutions alongside our record-breaking growth in the notebook and desktop space in the previous year."

AMD Ryzen 5000 Series Mobile Processors

Building upon the previous generation of leadership mobile processors, the Ryzen 5000 Series includes high-performance H- and ultra-mobile U-Series processors. At the top of the product stack, AMD Ryzen 5000 H-Series Mobile Processors deliver impressive gaming experiences by combining unmatched performance with outstanding battery life, featuring up to 8 cores and 16 threads and built on the new AMD "Zen 3" architecture.

Topping out the mobile processor offering, the HX Series processors provide gamers and creators with elite-level performance while HS processors bring the power of H-Series in thinner and lighter form factors. The new AMD Ryzen 9 5980HX processor is capable of up to 23% increased single-threaded performance and up to 17% faster multi-threaded performance over the previous generation[2] making it the ideal solution for gaming and creator notebooks.

For mainstream consumers looking for performance on-the-go, the AMD Ryzen 5000 U-Series Mobile Processors offer the perfect blend of performance and efficiency. The new AMD Ryzen 7 5800U processor offers:

- Up to 16% more single-threaded performance and up to 14% faster multithreaded performance over the previous generation[3]
- Up to an incredible 17.5 hours of general usage battery life and up to 21 hours of movie playback on a single charge[4]

Product Specification: AMD Ryzen 5000 Series Mobile Processors

Model	Cores/Threads	Boost[5]/Base[6] Frequency (GHz)	Cache (MB)	TDP (Watts)	Architecture
AMD Ryzen 9 5980HX	8C/16T	Up to 4.8 / 3.3 GHz	20	45+	“Zen 3”
AMD Ryzen 9 5980HS	8C/16T	Up to 4.8 / 3.0 GHz	20	35	“Zen 3”
AMD Ryzen 9 5900HX	8C/16T	Up to 4.6 / 3.3 GHz	20	45+	“Zen 3”
AMD Ryzen 9 5900HS	8C/16T	Up to 4.6 / 3.0 GHz	20	35	“Zen 3”
AMD Ryzen 7 5800H	8C/16T	Up to 4.4 / 3.2 GHz	20	45	“Zen 3”
AMD Ryzen 7 5800HS	8C/16T	Up to 4.4 / 2.8 GHz	20	35	“Zen 3”
AMD Ryzen 5 5600H	6C/12T	Up to 4.2 / 3.3 GHz	19	45	“Zen 3”
AMD Ryzen 5 5600HS	6C/12T	Up to 4.2 / 3.0 GHz	19	35	“Zen 3”
AMD Ryzen 7 5800U	8C/16T	Up to 4.4 / 1.9 GHz	20	15	“Zen 3”
AMD Ryzen 7 5700U	8C/16T	Up to 4.3 /1.8 GHz	12	15	“Zen 2”
AMD Ryzen 5 5600U	6C/12T	Up to 4.2 / 2.3 GHz	19	15	“Zen 3”
AMD Ryzen 5 5500U	6C/12T	Up to 4.0 / 2.1G Hz	11	15	“Zen 2”
AMD Ryzen 3 5300U	4C/8T	Up to 3.8 / 2.6 GHz	6	15	“Zen 2”

Available in the first half of 2021, the Ryzen™ PRO 5000 Series Mobile Processors provide new levels of productivity and collaboration along with seamless manageability to meet the ever-shifting demands of modern work environments. The Ryzen PRO 5000 Series Mobile Processors also offer enterprise-level security features with innovative layers of defense at the silicon, OS and platform levels, giving IT teams confidence their PCs have protection, no matter where their workforce is stationed.

AMD Ryzen Desktop Processors

AMD is also announcing reduced-TDP alternatives to the award-winning AMD Ryzen™ 9 5900X and AMD Ryzen™ 7 5800X desktop processors, coming to pre-built OEM systems only. Powered by the new “Zen 3” core architecture and with a lower 65W TDP, the Ryzen 9 5900 desktop processor offers an average of 24% faster 1080p gaming across select titles compared to the prior generation[7].

Product Specification: AMD Ryzen 5000 Series Desktop Processors

Model	Cores/Threads	Boost[5]/Base[6] Frequency (GHz)	Cache (MB)	TDP (Watts)
AMD Ryzen 9 5900	12C/24T	Up to 4.7 / 3.0 GHz	70	65
AMD Ryzen 7 5800	8C/16T	Up to 4.6 / 3.4 GHz	36	65

Additionally, AMD Ryzen Threadripper PRO Processors will now be directly available to consumers through participating global retailers, e-tailers and system integrators with on-shelf availability expected in March 2021. Ryzen Threadripper PRO Processors offer an unmatched feature set to workstation customers with up to 64 cores, 8 channels of memory, RDIMM and LRDIMM support, 128 PCIe® Gen 4 lanes, and AMD PRO security technologies.

Product Specification: AMD Ryzen Threadripper PRO

Model	Cores/ Threads	Boost[5]/Base[6] Frequency (GHz)	Total Cache (MB)	TDP (Watts)
AMD Ryzen Threadripper PRO 3995WX	64C/128T	Up to 4.2 / 2.7 GHz	288	280
AMD Ryzen Threadripper PRO 3975WX	32C/64T	Up to 4.2 / 3.5 GHz	144	280
AMD Ryzen Threadripper PRO 3955WX	16C/32T	Up to 4.3 / 3.9 GHz	72	280

Partner Quotes

“As the world continues to embrace a flexible, remote lifestyle, ASUS is constantly innovating to bring consumers the products they need to stay connected no matter where in the world they are gaming, streaming or working,” said Eric Chen, corporate senior vice president, ASUS. “ASUS is also pleased to continue to work with AMD to deliver cutting-edge innovations to raise the bar of gaming performance for mobile and gaming users everywhere.”

"Today's employees and IT teams are continuing to adapt to new ways of collaborating and creating – whether at home, in the office or other remote locations," said Andy Rhodes, global head of Commercial Personal Systems, HP Inc. "We are proud of our continued collaboration with AMD to offer powerful and highly secure business PCs to help people stay connected, engaged, and productive wherever they are."

“Lenovo listens to customer feedback to derive user insights for innovation. What’s demanded of us during this new 'remote revolution' is simple—top performance to help foster more real-time collaboration. By partnering with AMD, we deliver on both counts to provide amazing user experiences,” said Dilip Bhatia, chief customer experience officer, Lenovo. “From small business pros working together on the new ThinkBook 14p Gen 2 and ThinkBook 16p Gen 2 laptops, to competitive gamers whose team is playing to win on this season’s powerful new Lenovo Legion laptops—staying productive and entertained with the latest Ryzen™ mobile processor technology is essential to those thriving in today’s blended work- and play-from-home lifestyle."

Supporting Resources

- Watch the AMD CES keynote with, CEO, Dr. Lisa Su
- Learn more about AMD Ryzen Mobile Processors
- Learn more about Ryzen for Business
- Learn more about the AMD Ryzen Desktop Processors
- Learn more about AMD Ryzen Threadripper PRO Processors
- Become a fan of AMD on Facebook
- Follow AMD on Twitter

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 products including the AMD Ryzen™ 5000 Series Mobile Processors, AMD Ryzen™ 5000 Series Desktop Processors and AMD Ryzen™ Threadripper PRO, 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; the availability of essential equipment, materials or manufacturing processes; 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; the impact of acquisitions, joint ventures and/or investments on AMD's business, including the announced acquisition of Xilinx, and the failure to integrate acquired businesses; AMD's ability to complete the Xilinx merger; the impact of the announcement and pendency of the Xilinx merger on AMD's business; 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 revolving credit facility; the competitive markets in which AMD's products are sold; 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; the potential dilutive effect if the 2.125% Convertible Senior Notes due 2026 are converted; future impairments of goodwill and technology license purchases; AMD's ability to attract and retain qualified personnel; AMD's ability to generate sufficient revenue and operating cash flow or obtain external financing for research and development or other strategic investments; 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 modification or interruption of AMD's internal business processes and information systems; 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 September 26, 2020.

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.

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[1] 'Best Mobile Processors' is defined as having the highest multi-thread processing performance in each of four (4) classes of Ryzen 5000 series processors. Testing by AMD engineering using the Cinebench R20 nT benchmark, measuring multithreaded performance of a Ryzen 9 5900HX processor engineering sample vs Core i9-10980HK, Ryzen 7 5800U processor engineering sample vs Core i7-1185G7 processor, the Ryzen 5 5600U processor engineering sample vs Core i5-1135G7 processor, and a Ryzen 3 5400U processor engineering sample vs Core i3-1115G4 processor. Performance may vary. CZM-1.

[2] Testing by AMD engineering using the Cinebench R20 nT benchmark to measure the single-threaded and multithreaded performance of a Ryzen 7 5980X processor engineering sample vs. the previous generation Ryzen 9 4900H processor. Performance may vary. CZM-50.

[3] Testing by AMD Performance Labs as of 09/02/2020 utilizing engineering platforms configured with Ryzen 7 5800U and Ryzen 7 4800U processors, each with 32GB RAM, 512MB SSD, Radeon™ Graphics, and Win 10 vs. a similarly configured Dell XPS 7390 laptop with a Core i7-1065G7 processor, Integrated Graphics and 16GB RAM, in the following benchmarks: Cinebench R20 nT, Cinebench R20 1T and 3DMark Physics for gaming performance. Performance may vary. 3DMark is a registered trademark of Futuremark Corporation. – CZM-11

[4] Testing by AMD Performance Labs as of 12/08/2020 using an AMD Ryzen 7 5800U processor on an AMD Reference Platform configured with a 53WHr battery, WLAN enabled and Bluetooth off, using 1080p video playback (result: up to 21.4 hours) and the MobileMark 2018 benchmark test (result: up to 17.5 hours). CZM-33.

[5] 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

[6] Base frequency is the approximate processor clock speed of a typical workload running at the processor's standard TDP. GD-166.

[7] Testing by AMD performance labs as of December 11, 2020 measuring the gaming performance of an AMD Ryzen 9 5900 vs an AMD Ryzen 9 3900 in 12 popular titles at 1920x1080, High image quality preset. Systems configured with a GeForce RTX 2080 Ti. Results may vary. R5K-055

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