

Introducing AMD Radeon™ Pro W5500 Workstation Graphics: Groundbreaking Technology for Modern Design and Engineering Professionals

— AMD RDNA architecture, industry-leading 7nm process technology and advanced software features deliver leadership multitasking performance, energy efficiency, and rocksolid stability to power demanding 2D and 3D professional design applications —

— AMD Radeon™ Pro W5500 graphics offer superior performance in real-world applications and up to 32 percent lower power consumption¹ than the competition —

SANTA CLARA, Calif., Feb. 10, 2020 (GLOBE NEWSWIRE) -- AMD (NASDAQ: AMD) today announced the AMD Radeon™ Pro W5500 workstation graphics card, delivering the performance and advanced features demanded by today's Design & Manufacturing and Architecture, Engineering & Construction (AEC) professionals. AMD also announced the AMD Radeon™ Pro W5500M GPU, designed and optimized to power next-generation, high-performance professional mobile workstations.

Today's design and engineering workforce pushes the boundaries of professional design applications. These increasingly mobile professionals often use multiple graphics-intensive applications simultaneously and require no-compromise performance to visualize, review and interact with their designs in real time.

AMD Radeon™ Pro W5500 graphics harness the high-performance, power-efficient AMD RDNA architecture, 7nm process technology, high-speed GDDR6 memory, high-bandwidth PCI® Express 4.0 support and advanced software features. Expanding the AMD family of high-performance professional graphics products, they offer outstanding performance in real-world applications, rock-solid stability and superb energy efficiency. In addition, the AMD Radeon™ Pro W5500 graphics card delivers incredible multitasking performance even in demanding situations, such as allowing professionals to continue developing their designs while rendering a visualization in the background.

"Designers and engineers require a professional graphics solution that delivers the performance and efficiency to meet today's unique challenges. Nothing is more stressful than a deadline, and AMD professional graphics keep performing when you need them most," said Scott Herkelman, corporate vice president and general manager, Radeon Technologies Group at AMD. "The AMD Radeon Pro W5500 graphics card delivers exceptional power efficiency and leadership performance for 2D and 3D design applications, enabling them to better visualize and interact with their designs in real time, explore new immersive workflows like virtual reality and maximize productivity."

The AMD Radeon™ Pro W5500 graphics card and the Radeon™ Pro W5500M GPU transform how project teams collaborate by enabling immersive, real-time visualizations of design concepts to make quick and better informed decisions. Key capabilities and features include:

- **High-Performance AMD RDNA Architecture** Features a redesigned geometry engine and compute units, delivering up to 25 percent higher performance-per-clock than the previous-generation Graphics Core Next (GCN) architecture².
- Incredible Multitasking Performance The AMD Radeon™ Pro W5500 graphics card delivers outstanding multitasking performance even in demanding situations, offering up to 10x better estimated application workflow performance than the competition in the SPECviewperf® 13 benchmark under a multitasking load.³
- Real-World Power Efficiency The combination of the power efficient AMD RDNA architecture and Radeon™ Pro Software for Enterprise's intelligent power management technology enable the AMD Radeon™ Pro W5500 graphics card to precisely scale to meet the power demands of professional applications. As a result, it consumes up to 32 percent less system power on average in SOLIDWORKS® solid modeling workflows than the competition¹.
- **Professional-Grade Software** Radeon™ Pro Software for Enterprise offers performance improvements in each release and is optimized for demanding 24/7 computing environments, with extensive OEM platform and ISV certification testing to deliver the quality professionals demand. The latest driver (20.Q1) achieves up to an estimated 15 percent faster geomean score in the SPECviewperf® 13 benchmark than version 19.Q1 from 2019⁴.
- AMD Remote Workstation⁵ Allows professionals to access their physical workstations from virtually anywhere with rich graphics experiences using Citrix Virtual Apps and Desktops™ or Microsoft[®] Remote Desktop.

	Compute Units	TFLOPS (FP32)	Maximum Power Consumption	GDDR6	Memory Bandwidth	Memory Interface	Display Outputs (DisplayPort™ 1.4)
AMD Radeon™ Pro W5500	22	Up to 5.35	125W	8GB	Up to 224 GB/s	128-bit	4 (drives four 4K displays or one 8K display at 60Hz)
AMD Radeon™ Pro W5500M	22	Up to 4.79	85W	4GB	Up to 224 GB/s	128-bit	4

Availability

The AMD Radeon™ Pro W5500 graphics card is expected to be available from leading retailers beginning mid-February 2020, for an SEP of \$399 USD. More information is available on AMD.com. The AMD Radeon™ Pro W5500M GPU is expected to be available in professional mobile workstations beginning in Spring 2020.

The AMD Radeon™ Pro W5500 graphics card will be showcased in the AMD booth 208 at <u>3DEXPERIENCE World 2020</u>, taking place February 10-12 in Nashville, Tennessee.

Supporting Resources

- Learn more about the AMD Radeon™ Pro W5500 and the Radeon ™ Pro W5500M here
- Become a fan of AMD on Facebook

- Follow AMD on Twitter
- Follow Radeon™ Pro graphics on <u>Twitter</u>
- Discover certified ISV applications <u>here</u>

About AMD

For more than 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 and expectations of the AMD Radeon™ Pro W5500 workstation graphics card and the AMD Radeon™ Pro W5500M GPU, 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 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; AMD's operations are subject to political, legal and economic risks and natural disasters which could have a material adverse effect on AMD; government actions and regulations such as export administration regulations, tariffs and trade protection measures, may limit AMD's ability to export its products to certain customers; AMD 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 and reputation; AMD has a wafer supply agreement with GF with obligations to purchase all of its microprocessor and APU product requirements, and a certain portion of its GPU product requirements, from GLOBALFOUNDRIES Inc. (GF) with limited exceptions. If GF is not able to satisfy AMD's manufacturing requirements, its business could be adversely impacted; uncertainties involving the ordering and shipment of AMD's products could materially adversely affect it; AMD's operating results are subject to quarterly and seasonal sales patterns; 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; the markets in which AMD's products are sold are highly competitive; the conversion of the 2.125% Convertible Senior Notes due 2026 may dilute the ownership interest of its existing stockholders, or may otherwise depress the price of its common stock; 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 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 28, 2019.

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¹ Testing conducted by AMD Performance Labs as of January 21, 2020 on the AMD Radeon™ Pro W5500 graphics card and AMD Radeon™ Pro Software for Enterprise 20.Q1 and the NVIDIA Quadro® P2200 graphics card with the NVIDIA Quadro® Optimal Driver for

Enterprise (ODE) R440 U4 (441.66) driver, on a test system comprising an Intel[®] Core[™] i5-8400 CPU, 16 GB RAM, MSI Z370-A Pro motherboard with BIOS version 7B48v29 at default settings, 512 GB Intel 760p SSD, and Windows[®] 10 April 2018 Update running SOLIDWORKS[®] 2020.

Power was measured using the average of second-by-second value readouts from a Kill-A-Watt P3 P4400 wattmeter over a 5-minute timespan spent in the AMD internal SOLIDWORKS 2020 solid modeling workflow test.

AMD Radeon™ Pro W5500 SOLIDWORKS® 2020 solid modeling workflows system power consumption, averaged over 3 iterations: 56.86 watts.

NVIDIA Quadro[®] P2200 SOLIDWORKS[®] 2020 solid modeling workflows system power consumption, averaged over 3 iterations: 75.17 watts.

Differential power consumption: (56.86 – 75.17)/56.86*100 = ~32.20% lower average SOLIDWORKS® 2020 solid modeling workflows system power consumption. Scores are based on AMD internal lab measurements and may vary. PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-273

AMD Radeon™ Pro W5500 SPECviewperf® 13 benchmark sw-04 viewset average test results score: 138.75 (est.)

AMD Radeon™ Pro W5500 with SPECviewperf® 13 benchmark sw-04 viewset test results score with Autodesk® 3ds Max® 2019 rendering an AMD internal engine 3d model at 1920 x 1080 with continuous iterations using the Arnold CPU renderer simultaneously average: 86.82 (est.)

Performance when multitasking: 100 + (86.82-138.75)/138.75*100) = an estimated 62.57% of the workflow performance compared to the performance when not multitasking on the AMD RadeonTM Pro W5500 graphics card.

NVIDIA QUADRO® P2200 RESULTS:

NVIDIA Quadro[®] P2200 SPECviewperf[®] 13 benchmark sw-04 viewset average test results score: 139.76 (est.)

NVIDIA Quadro $^{\mathbb{R}}$ P2200 with SPECviewperf $^{\mathbb{R}}$ 13 benchmark sw-04 viewset test results score with Autodesk $^{\mathbb{R}}$ 3ds Max $^{\mathbb{R}}$ 2019 rendering an AMD internal engine 3d model at 1920 x

² RDNA provides up to 1.25x higher performance per clock over GCN. Testing done by AMD performance labs 5/23/19, showing a geomean of 1.25x per/clock across 30 different games @ 4K Ultra, 4xAA settings. Performance may vary based on use of latest drivers. RX-327

³ Testing conducted by AMD Performance Labs as of January 21, 2020 on the AMD Radeon™ Pro W5500 graphics card and AMD Radeon™ Pro Software for Enterprise 20.Q1 and the NVIDIA Quadro® P2200 graphics card with the NVIDIA Quadro® Optimal Driver for Enterprise (ODE) R440 U4 (441.66) driver, on a test system comprising an Intel® Core™ i9-9900K, 32 GB DDR4 RAM, Asus ROG Strix Z390-E Gaming motherboard with BIOS version 0905 at default settings, 512 GB Intel 760p SSD, Windows® 10 October 2018 Update. Benchmark application and derived metric calculation: the SPECviewperf® 13 benchmark sw-04 viewset was run with Autodesk® 3ds Max® 2019 rendering an AMD internal engine 3d model at 1920 x 1080 with continuous iterations using the Arnold CPU renderer to simulate the application workflow performance with multitasking. Calculated the performance when multitasking as a percentage then calculated the ratio between the two percentages. AMD RADEON™ PRO W5500 RESULTS:

1080 with continuous iterations using the Arnold CPU renderer simultaneously average: 7.91 (est.)

Performance when multitasking: 100 + (7.91- 139.76)/139.76*100) = an estimated 5.66% of the workflow performance compared to the performance when not multitasking on the NVIDIA Quadro[®] P2200 graphics card.

Difference in performance while multitasking between the AMD Radeon™ Pro W5500 graphics card and the NVIDIA Quadro® P2200 graphics card (62.57/5.66)-1 = ~10.05x average better estimated application workflow performance for the AMD Radeon™ Pro W5500 graphics card.

Scores are based on AMD internal lab measurements and may vary. PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-274

⁴ Testing conducted by AMD Performance Labs as of January 2020, on a test system comprising of an Intel[®] Xeon[®] W-2125 4-core 4.50 GHz CPU, 32 GB RAM, Windows[®] 10 for Workstations 64-bit October 2018 Update, System BIOS 1.11.1 at default settings, Radeon[™] Pro WX 9100, AMD Radeon[™] Pro Software for Enterprise 20.Q1/AMD Radeon[™] Pro Software for Enterprise 19.Q1.

Benchmark Application: ran the SPECviewperf® 13 benchmark and then calculated the geomean of all viewsets (higher is better).

AMD Radeon™ Pro Software for Enterprise 20.Q1: 147.64 (est.).

AMD Radeon™ Pro Software for Enterprise 19.Q1: 127.88 (est.).

Performance Differential: (147.64-127.88)/127.88*100 = ~15.45% better estimated performance with AMD Radeon™ Pro Software for Enterprise 20.Q1 on the Radeon Pro WX 9100 graphics card.

Scores are based on AMD internal lab measurements and may vary. PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers.

RPS-118

⁵ Compatible with AMD Radeon™ Pro WX 3200, WX 4100, WX 5100, WX 7100, WX 8200, WX 9100, W5700 and W5500 GPUs. Remote Workstation functionality requires AMD Radeon™ Pro Software for Enterprise driver 18.Q4 or newer plus purchase and installation of Citrix Virtual Apps & Desktops™ or Microsoft® Remote Desktop Services. RPS-50

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/94cb33aa-068e-4124-a4e3-02f5fef86274



Source: Advanced Micro Devices

AMD Radeon™ Pro W5500 Graphics Card



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