May 13, 2020

AMD Expands Professional Offerings with AMD Radeon Pro VII Workstation Graphics Card and AMD Radeon Pro Software Updates

— AMD Radeon™ Pro VII delivers up to 26 percent higher performance in Blackmagic Design DaVinci Resolve than the competition[1], and is optimized to power demanding broadcast workloads, complex CAE simulations and HPC application development —

AMD Radeon™ Pro VII graphics card

— New AMD Radeon™ Pro Software for Enterprise delivers enhanced performance for current-generation AMD Radeon™ Pro graphics cards; New plug-ins enable Radeon™ ProRender software integration into SideFX® Houdini™ and Unreal® Engine —

SANTA CLARA, Calif., May 13, 2020 (GLOBE NEWSWIRE) -- AMD (NASDAQ: AMD) today announced the AMD Radeon™ Pro VII workstation graphics card for broadcast and engineering professionals, delivering exceptional graphics and computational performance, as well as innovative features. The new graphics card is designed to power today's most demanding broadcast and media projects, complex computer aided engineering (CAE) simulations and the development of high-performance computing (HPC) applications that enable scientific discovery on AMD-powered supercomputers.

The AMD Radeon Pro VII graphics card offers 16GB of extreme speed HBM2 (High Bandwidth Memory), and support for 6x synchronized displays and high-bandwidth PCIe® 4.0 interconnect technology. Providing up to 26 percent higher 8K image processing performance in Blackmagic Design DaVinci Resolve[1] and up to 5.6x the double precision (FP64) performance-per-dollar versus the competition[2], the new graphics card introduces AMD Infinity Fabric™ Link technology[3] to the workstation market. AMD Infinity Fabric Link

speeds application data throughput by enabling high-speed GPU-to-GPU communications in multi-GPU system configurations.

The new workstation graphics card provides the high-performance and advanced features enabling post-production teams and broadcasters to visualize, review and interact with 8K content whether in the broadcast booth, on the studio floor or in the media server pipeline. It also enables engineers and data scientists to handle larger and more complex models and datasets, while reducing run times for engineering simulations and scientific computing workloads.

“Today’s professionals are challenged to meet high pressure deadlines under increasingly tight budgets while aiming to deliver world-class results,” said Scott Herkelman, corporate vice president and general manager, Graphics Business Unit at AMD. “They demand more from their graphics card, and AMD Radeon Pro VII delivers. It provides innovative, high-performance technologies that allow users to easily manage larger, more complex simulations, create and manage exceptionally high-resolution digital media and digital signage content, and develop advanced HPC applications to drive new waves of scientific discovery on large scale supercomputer deployments.”

Key capabilities and features of the AMD Radeon Pro VII graphics card include:

- **Leading Double Precision Performance** – With up to 6.5 TFLOPS (FP64) of double precision performance for demanding engineering and scientific workloads, the Radeon Pro VII graphics card provides 5.6x the performance-per-dollar[1] versus the competition on the AMD Internal Benchmark for Altair® EDEM “Screw Auger” viewset.
- **High-speed Memory** – 16GB of HBM2 with 1TB/s memory bandwidth and full ECC capability handles large and complex models and datasets smoothly with low latency.
- **AMD Infinity Fabric Link** – A high-bandwidth, low-latency connection that allows memory sharing between two AMD Radeon Pro VII GPUs, enabling users to increase project workload size and scale, develop more complex designs and run larger simulations to drive scientific discovery. AMD Infinity Fabric Link delivers up to 5.25x PCIe® 3.0 x16 bandwidth with a communication speed of up to 168 GB/s peer-to-peer between GPUs.
- **Remote Working** – Users can access their physical workstation from virtually anywhere for unhindered productivity with the remote workstation IP built into AMD Radeon Pro Software for Enterprise driver[4].
- **High-bandwidth PCIe 4.0 Support** – PCIe 4.0 delivers double the bandwidth of PCIe 3.0 to enable smooth performance for 8K, multichannel image interaction.
- **Frame Lock/Genlock** – Enables precise synchronized output for display walls, digital signage and other visual displays (AMD FirePro™ S400 synchronization module required).
- **High-resolution/Multi-display Support** – Supports up to 6x synchronized display panels, full HDR and 8K screen resolution (single display) combined with ultra-fast encode and decode support for enhanced multi-stream workflows.
- **Professional Application Certification** – Optimized and certified with leading professional applications for stability and reliability. The list of Radeon Pro Software-certified ISV applications can be found here.
- **ROCm™ Open Ecosystem** – Open software platform for accelerated compute provides an easy GPU programming model with support for OpenMP, HIP, and OpenCL™, as well as support for leading machine learning and HPC frameworks, including TensorFlow™, PyTorch™, Kokkos, and RAJA.

	Stream Processors	TFLOPS	HBM2 Memory	Memory Bandwidth	Memory Interface	Display Outputs (Mini-DisplayPort 1.4)
Radeon™ Pro VII	3840	Up to 6.5 (FP64) Up to 13.1 (FP32)	16GB with ECC	1 TB/s	4096-bit	6x

AMD Radeon Pro Software for Enterprise 20.Q2

AMD Radeon Pro workstation graphics cards are supported by the Radeon Pro Software for Enterprise driver, delivering enterprise-grade stability, performance, security, image quality and other innovative features, including high-resolution screen capture, recording and video streaming. The latest release offers up to a 14 percent year-over-year performance improvement for current-generation AMD Radeon Pro graphics cards[5]. The new software driver is now available for download from AMD.com

Updated AMD Rendering Software

AMD also released updates for AMD Radeon™ ProRender, a physically-based rendering engine built on industry-standards that enables accelerated rendering on any GPU, any CPU and any OS[6]. The updates include new plug-ins for SideFX® Houdini™ and Unreal® Engine, and updated plug-ins for Autodesk® Maya® and Blender®. For developers, an updated AMD Radeon™ ProRender SDK is now available on the redesigned GPUOopen.com site, and is now easier to implement with an Apache License 2.0. AMD also released a beta SDK of the next-generation Radeon ProRender 2.0 rendering engine with enhanced CPU and GPU rendering support with open-source versions of the plug-ins.

Availability

The AMD Radeon Pro VII graphics card is expected to be available from major etailers/retailers beginning mid-June, 2020 for an SEP of $1899 USD. AMD Radeon Pro VII-equipped workstations are expected to be available in the second half of 2020 from leading OEM partners.

Supporting Resources

- Learn more about AMD Radeon Pro VII graphics card here
- Learn more about AMD Radeon Pro Software for Enterprise 20.Q2 here
- Learn more about AMD Radeon ProRender updates here
- Learn more about ROCm Open Ecosystem here
- Become a fan of AMD on Facebook
- Follow AMD on Twitter
- Follow Radeon™ Pro graphics on Twitter

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 VII workstation graphics card, 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 and market uncertainty may adversely impact AMD’s business and operating results; the ongoing novel coronavirus (COVID-19) pandemic could materially adversely affect AMD’s business, financial condition and results of operations; AMD’s worldwide 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, reputation and operations; 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 Facility 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, memory 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 Quarterly Report on Form 10-Q for the quarter ended March 28, 2020.

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[1] Testing as of April 02, 2020 by AMD Performance Labs on a production test system comprised of an Intel® Xeon® W-2125, 32GB HBM2 RAM, Windows® 10 Pro for Workstations, 64-bit, System BIOS 1.11.1, AMD Radeon™ Pro VII, AMD Radeon™ Software for Enterprise 20.Q2 Pre-release version/NVIDIA Quadro® RTX, NVIDIA Quadro® Optimal Driver for Enterprise (ODE) R440 U6 (442.5) using PugetBenchfor DaVinci ResolveStudiov. 0.6 Beta. PugetBench by Puget Systems. Results may vary. RPW-310

[2] Testing as of April 29, 2020 by AMD Performance Labs on a production test system comprised of an Intel® Xeon® W-2125, 32GB HBM2 RAM, Windows® 10 Pro for Workstations, 4096-bit, System BIOS 1.11.1, AMD Radeon™ Pro VII, AMD Radeon™ Pro Software for Enterprise 20.Q1/NVIDIA Quadro® RTX, NVIDIA Quadro® Optimal Driver for Enterprise (ODE) R440 U6 (442.5) using AMD Internal Benchmark for EDEM. RPW-320.

[3] AMD Infinity Fabric™ Link requires two Radeon Pro VII GPUs, a compatible bridge connector (either a two- or a three-slot bridge connector, both sold separately.), and Radeon Software for Enterprise driver 20.Q2 or later. Compatible software is currently limited to Radeon™ ProRender, but additional application compatibility is expected in future 3rd party software releases and are required to use the combined graphics memory of both cards. GD-169

[4] Compatible with AMD Radeon™ Pro WX 2100, 3100, 3200, 4100, 5100, 7100, 8200, 9100, and AMD Radeon™ Pro W5500, W5700, and VII 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

[5] AMD Radeon™ Pro Software for Enterprise 20.Q2 is up to 14% faster in the geomean of the SPECviewperf® 13 benchmark viewsets than AMD Radeon™ Pro Software for Enterprise 19.Q2 when using the Radeon™ Pro WX 4100 GPU. Testing conducted by AMD Performance Labs as of April 29, 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 4100, AMD Radeon™ Pro Software for Enterprise 20.Q2/AMD Radeon™ Pro Software for Enterprise 19.Q2. 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.Q2: 41.84. AMD Radeon™ Pro Software for Enterprise 19.Q2: 36.86. Performance Differential: (41.84-36.86)/36.86*100 = ~13.51% better performance with AMD Radeon™ Pro Software for Enterprise 20.Q2 on the Radeon™ Pro WX 4100 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. SPEC®, SPECapc™, and SPECviewperf® are registered trademarks of the Standard Performance Evaluation Corporation. Additional information about the SPEC benchmarks can be found at www.spec.org/gwpg. RPS-125

[6] GPU or CPU support for OpenCL™ or Apple® Metal® required. Radeon™ ProRender supports Windows®, macOS®, and Linux®.

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/7d661ea6-800a-41aa-a034-ce38e918be3c

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