

# The new standard for heavy double precision workloads

Simulation & design validation.

**AMD**  
**RADEON PRO VII**

## Today's design validation & simulation bottlenecks

As the reliance on simulation-driven design increases, the need for faster content calculations also rapidly increase along with size and complexity. With many of today's software vendors looking to the local GPU for scalable and accurate simulation acceleration, the need for a dedicated, reliable and affordable professional solution rises. You may have experienced large simulation performance slow-downs today, and these are typically due to a lack of GPU compute or memory bandwidth speed. The Radeon™ Pro VII GPU answers these needs.

## The new GPU standard for affordable double precision simulations

Powered by the 7nm "Vega" architecture, 16GB of ultra-fast HBM2 ECC memory, and support of up to six display outputs, the AMD Radeon™ Pro VII GPU delivers exceptional double precision experiences. Access to the latest hardware on the Radeon™ Pro VII GPU brings greater simulation interaction in demanding simulation-driven design applications. The AMD Radeon™ Pro VII workstation graphics card is purpose-built to deliver high-class performance to pioneering professionals within an extremely reasonable price.

## Key specifications

'Vega' Architecture	60 Compute Units (3840 Stream Processors)
Memory Size	16GB High-Speed HBM2
PCIe® Interface Support	Gen 3.0 and 4.0 x16 compatible
Memory Bandwidth	Up to 1024 GB/s
Memory Interface	4096-bit HBM2
Double Precision Performance	Up to 6.5 TFLOPS (FP64)
Display Output	(6x) Mini-DisplayPort™ 1.4
Display Output Support (@60Hz)	6 @ 3840x2160 (4K) 3 @ 5120x2880 (5k) 1 @ 7680x4320 (8K)
Video Acceleration <sup>1</sup>	HEVC Encode (up to 4K) HEVC Decode (up to 8K)
Supported APIs	DirectX® 12, OpenGL® 4.6, OpenCL™ 2.0, Vulkan® 1.1, Shader Model 5.1, ROCm™ (Linux® Only)
Max Power Consumption	250 W
Form Factor	4.4" x 10.5" (H x L); Dual Slot
Supported Operating Systems (64-bit)	Microsoft Windows® 10, Linux®



## Support for remote working

The AMD Radeon™ Pro VII supports the GPU-accelerated experience of AMD Remote Workstation<sup>2</sup> allowing you to access your physical workstation from virtually anywhere for unhindered productivity, with the remote workstation IP built into AMD Radeon™ Pro Software for Enterprise driver.

[amd.com/RadeonProSoftware](https://amd.com/RadeonProSoftware)

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## More than a driver

This Radeon™ Pro VII graphics driver delivers enterprise-grade stability, performance, security features, and innovative features, including high-resolution screen capture, recording, and video streaming.

## Peace of mind for demanding situations

AMD Radeon™ Pro graphics cards are built for demanding 24/7 environments; constructed with quality components and tested to exceptional standards. The Radeon™ Pro VII GPU has undergone an extensive certification process to help ensure reliability in software you love. Retail versions of Radeon™ Pro graphics cards are covered by a 3-year limited warranty<sup>4</sup>.

For additional updates on certified ISV applications visit:

[amd.com/Certified](https://amd.com/Certified)

UP TO  
**6.5 TFLOPS**  
DOUBLE PRECISION PERFORMANCE  
FOR HPC APPLICATIONS

SUPPORT FOR  
**PCIe® 4.0**  
OFFERING WORKLOAD  
ACCELERATION

OVER  
**1TB/s bandwidth**  
FOR MEMORY INTENSIVE WORKLOADS

SUPPORT FOR  
**6x UHD Screens**  
VIA MINI-DISPLAYPORT™ 1.4

UP TO  
**16GB HBM2 ECC**  
MEMORY FOR LARGE  
SIMULATIONS



**AMD**  
**ROCm**



Features 16GB HBM2 memory, 6x miniDP UHD outputs, PCIe® 4.0 interface support and blazing-fast 1TB/s memory bandwidth.

## Why AMD:

AMD is proud to power the graphics behind many world-class workstations and mobile solutions, be at the heart of major games consoles beloved for gameplay and streaming video entertainment, to powering some of the worlds fastest supercomputers for research, to driving business laptop performance. AMD already touches many areas of your life.

[amd.com](https://amd.com)

## The secret of larger workloads

Adding a second GPU into your workstation can bring performance benefits, but one major limitation is applications can only utilize the available memory on one of the GPUs. With AMD's Infinity Fabric™ Link<sup>3</sup>, the total available graphics memory for compatible applications becomes the sum of interconnected GPUs. For instance, if two Infinity Fabric™ Link connected GPUs each have 16GB of graphics memory, then compatible applications can utilize all 32GB.

<sup>1</sup> HEVC (H.265), H.264, and VP9 acceleration are subject to and not operable without inclusion/installation of compatible HEVC players. GD-81

<sup>2</sup> Learn more at <https://www.amd.com/en/technologies/remote-workstation>.

<sup>3</sup> GD-169: 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

<sup>4</sup> Learn more at <https://www.amd.com/en/support/kb/warranty-information/workstation-graphics>.

<sup>5</sup> Learn more at <https://www.amd.com/en/technologies/vr-ready-creator>.

To learn more about AMD professional graphics visit:

[amd.com/RadeonPro](https://amd.com/RadeonPro)

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