

AMD
RADEON
PRO

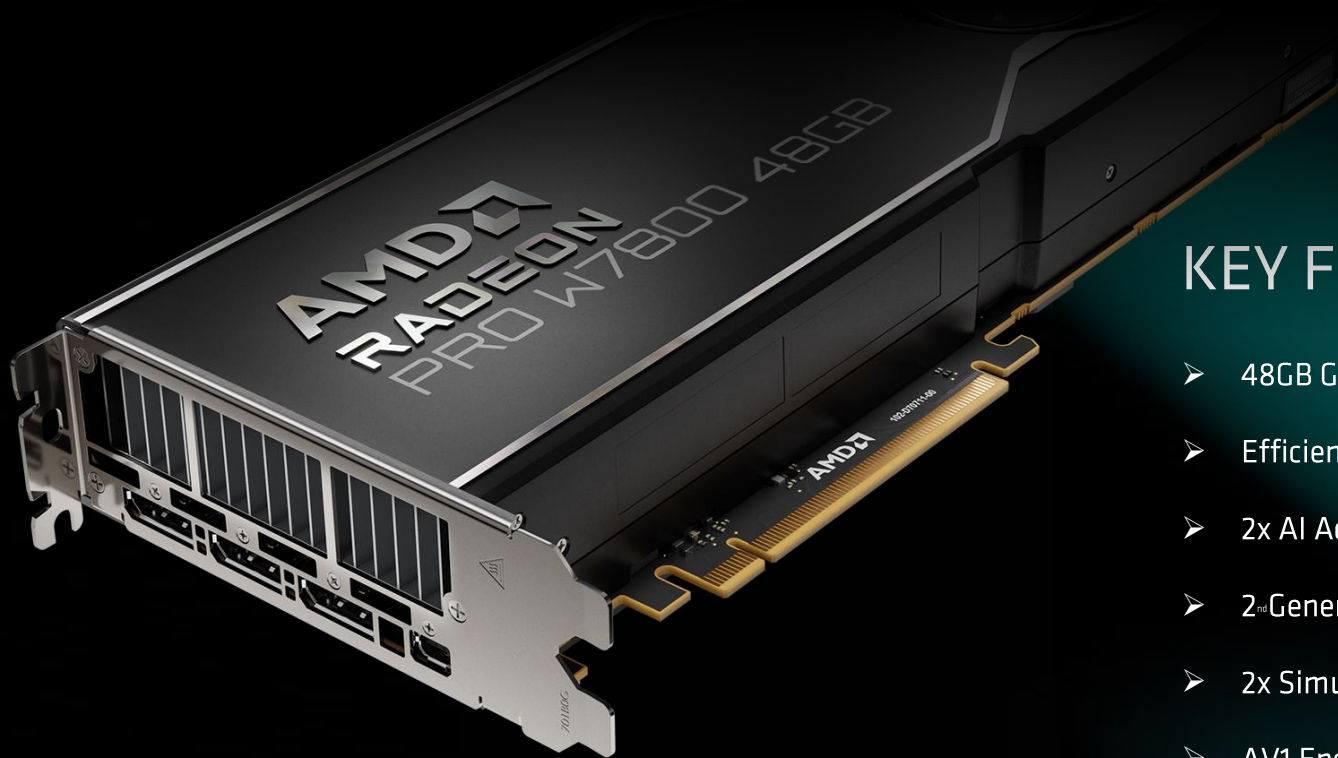
PERFORMANCE THAT SCALES
WITH YOUR WORKLOADS

AMD Radeon™ PRO **W7800 48GB** GRAPHICS

CREATE | VISUALIZE | INSPIRE



GDDR 6
48GB



1.5x

More Memory than
AMD Radeon™ W7800

Larger LLM models

Ultra-heavy 3D workloads

Very large RAW media

3x

Max Total Data Rate of
DisplayPort™ 2.1¹

Industry-leading

Radiant colors

Huge displays

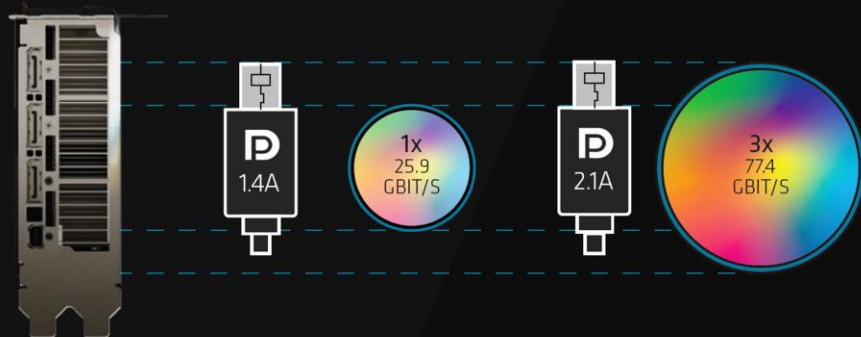
KEY FEATURES

- 48GB GDDR6 Memory with ECC Support
- Efficient Chiplet Design
- 2x AI Accelerators per Compute Unit
- 2nd-Generation Ray Tracing
- 2x Simultaneous Encode/Decode Streams
- AV1 Encode & Decode²
- AI Enhanced Video Encode
- AMD Radiance Display™ Engine
- DisplayPort™ 2.1 with up to 77.4Gbit/s¹
- Up to 12K120 display support
- Support for next-gen displays
- Dual slot form factor



AMD Radiance Display™ Engine

Workstation Graphics with DisplayPort™ 2.1¹



DISPLAYPORT™ 1.4A

DISPLAYPORT™ 2.1

HIGH FRAME RATE

8K60 W/ DSC

8K120 W/ DSC

ACCURATE COLOR

6K60 COMPRESSED

8K60 UNCOMPRESSED

LARGER RESOLUTIONS

8K60 W/ DSC

12K60 W/ DSC

See Endnote RPW-412a

GPU Architecture
AMD RDNA™ 3

Hardware Raytracing
Yes

Lithography
TSMC 5nm GCD | 6nm MCD

Ray Accelerators
96

ROPs
160

Stream Processors
4480

Compute Units
70

Shaders
64

Peak Half Precision (FP16) Performance
90.50 TFLOPS

Peak Single Precision (FP32) Performance
45.25 TFLOPS

Peak Double Precision (FP64) Performance
1.41 TFLOPS

Transistor Count
57.7 Billion

Total Board Power (TBP)
260 W

PSU Recommendation
700 W

Dedicated Memory Size
48 GB

Memory Speed
18 Gbps

Dedicated Memory Type
GDDR6

AMD Infinity Cache™
96MB

Memory Interface
384-bit

Peak Memory Bandwidth
Up to 864GB/s

Memory ECC Support
Yes

4K H264 Encode | Decode
Yes | Yes²

H265/HEVC Encode | Decode
Yes | Yes²

AV1 Encode | Decode
Yes | Yes²

Dual Media Support
Yes

3D Stereo Support
Yes

Form Factor
PCIe® Add-in Card

Bus Type
PCIe 4.0 x16

Cooling
Active

Displays Type(s)
**3x DisplayPort™ 2.1
& 1x Enhanced Mini DP 2.1**

Display Configurations
**4x 4096 x 2160 (4K DCI)
@ 120Hz with DSC**

**2x 6144 x 3456 (6K) 12-bit HDR
@ 60Hz Uncompressed**

**1x 7680 x 4320 (8K) 12-bit HDR
@ 60Hz Uncompressed**

**1x 12288 x 6912 (12K)
@ 120Hz with DSC**

HDR Support
Yes

8K Support
Yes

16K Support
Yes

Board Height
Full Height

Board Length
11" (280 mm)

Board Width
Triple Slot

Supported Technologies
AMD Remote³ Workstation

AMD Radeon™ Media Engine

AMD Software: PRO Edition

AMD Radeon™ VR Ready Creator

**AMD Eyefinity Technology⁴
(Professionals)**

Software API Support
DirectX 12 Ultimate

OpenGL 4.6

Vulkan 1.3

Open CL 2.1

Product Family
AMD Radeon™ PRO

Product Line
AMD Radeon™ PRO W7000 Series

Platform
Desktop Workstation

Supported Operating Systems
Windows 11 - 64-Bit Edition

Windows 10 - 64-Bit Edition

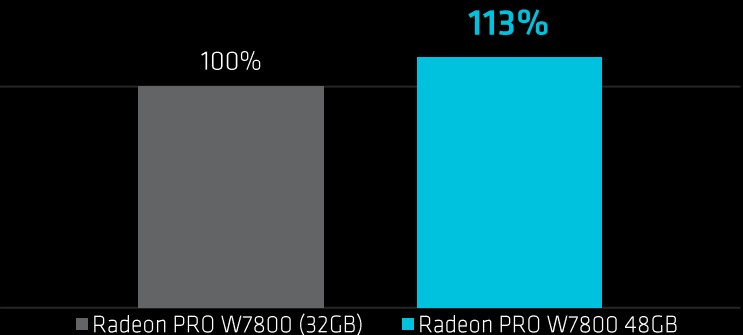
Linux x86_64-Bit

External Power Connectors
2x8-Pin Power Connectors

Performance

SPECviewperf® 2020

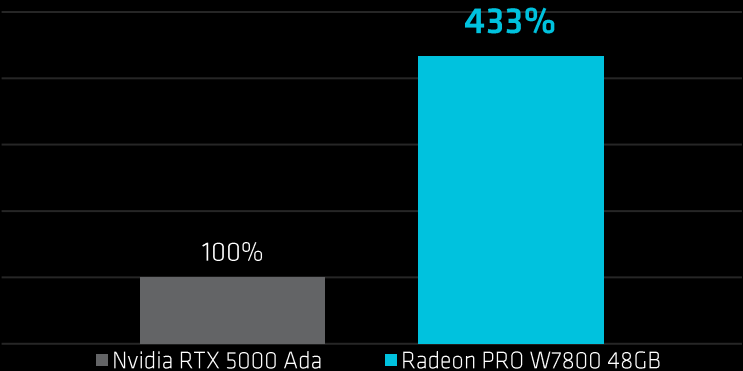
Relative to AMD Radeon™ PRO W7800 (32GB)
SPECviewperf® 2020 Geomean 4K, Higher is Better
up to



Testing as of May 2024, by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5975WX, 64GB DDR4-2133Mhz RAM, Ubuntu OS, 64-bit, with AMD Radeon PRO W7800 (32GB) and AMD Radeon PRO W7800 (48GB) using SPECviewperf® 2020. 4K Geomean (3dsmax-07, catia-06, creo-03, energy-03, maya-06, medical-03, snx-04, solidworks-07). Performance may vary based on factors including driver version and system configuration. RPW-480

Amuse Flux.1-Schnell

Relative to Nvidia RTX 5000 Ada
Normalized based on Elapsed Time, Higher is Better
up to

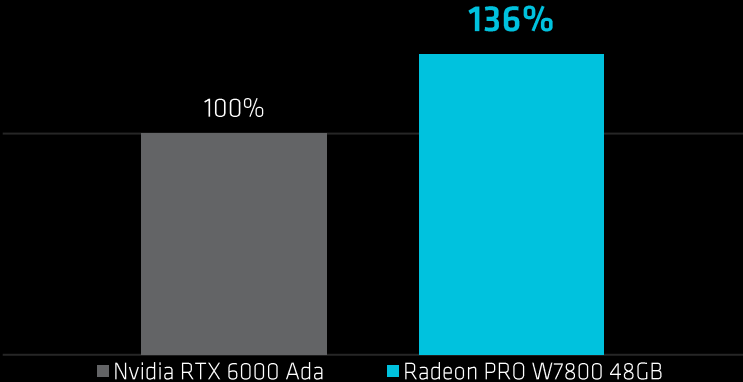


Testing as of November 2024, by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB RAM, Windows 11 Pro, with an AMD Radeon PRO W7800 32GB, PRO W7800 48GB and PRO W7900DS 48GB vs. a similarly configured system with Nvidia RTX Ada 5000 32GB using Amuse, Flux.1-Schnell (elapsed time). Performance may vary based on factors including driver version and system configuration. RPW-478

Value (Performance / Dollar)

Llama 2 70b

Performance / \$ relative to Nvidia RTX 6000 Ada
Based on Llama2-70b-Q4_K_M tok/sec, Higher is Better
up to



Testing as of November 2024, by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB RAM, Windows 11 Pro, with an AMD Radeon PRO W7800 48GB vs. a similarly configured system with Nvidia RTX Ada 6000 using LMStudio Llama2-70b-Q4_K_M tok/sec. Performance per dollar calculated using SEP for individual AMD GPU(s) and USD pricing on NVIDIA.com for individual NVIDIA GPU(s) as of November 22, 2024, over the average performance scores in the tests above. Performance and pricing may vary based on factors including driver version and system configuration. RPW-479

1. The AMD Radeon™ PRO W7900 and the AMD Radeon™ PRO W7800 graphics card have DisplayPort™ 2.1 with up to 77.4Gbit/s is a 3x higher maximum total data rate vs. DisplayPort 1.4a with up to 25.9Gbit/s on the Nvidia® RTX® 6000 Ada and Nvidia® RTX® A6000. RPW-412a
2. Video codec acceleration (including at least the HEVC (H.265), H.264, VP9, and AV1 codecs) is subject to and not operable without inclusion/installation of compatible media players. GD-176
3. Learn more at www.amd.com/en/technologies/remote-workstation
4. Learn more at www.amd.com/en/technologies/eyefinity-professionals

Radeon™ PRO W6000 and W7000 Series graphics cards (and later models) are not designed, marketed nor recommended for datacenter usage. Use in a datacenter setting may adversely affect manageability, efficiency, reliability, and/or performance. GD-239.
The information contained herein is for informational purposes only and is subject to change without notice. While every precaution has been taken in the preparation of this document, it may contain technical inaccuracies, omissions and typographical errors, and AMD is under no obligation to update or otherwise correct this information. Advanced Micro Devices, Inc. makes no representations or warranties with respect to the accuracy or completeness of the contents of this document, and assumes no liability of any kind, including the implied warranties of noninfringement, merchantability or fitness for particular purposes, with respect to the operation or use of AMD hardware, software or other products described herein. No license, including implied or arising by estoppel, to any intellectual property rights is granted by this document. Terms and limitations applicable to the purchase or use of AMD's products are as set forth in a signed agreement between the parties or in AMD's Standard Terms and Conditions of Sale. GD-18
© 2024 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD Arrow logo, AMD RDNA, Radeon, Ryzen, Threadripper, and combinations thereof are trademarks of Advanced Micro Devices, Inc. SPEC®, SPECviewperf®, and SPECapc® are trademarks or registered trademarks of Standard Performance Evaluation Corporation (SPEC). Learn more at www.spec.org, only and may be trademarks of their respective owners. PID #243081756