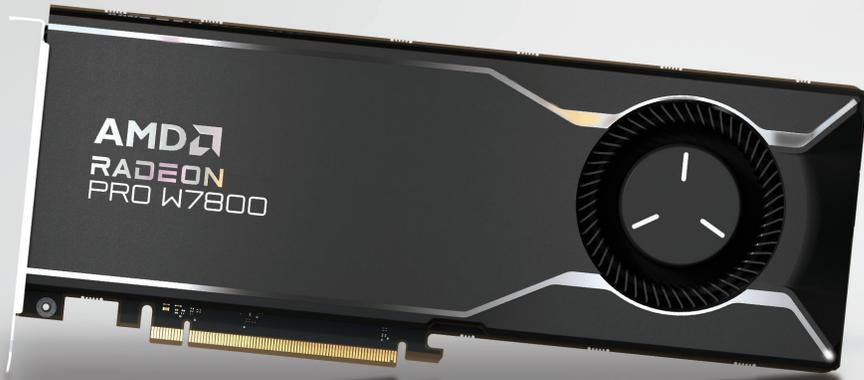


32GB  
GDDR6

AMD  
RDNA 3

AMD



# AMD RADEON™ PRO W7800

FOR HEAVY WORKLOADS

DESIGN INTELLIGENTLY



32GB  
Memory



3x  
Max Total Data Rate<sup>2</sup>  
of DisplayPort™ 2.1



SPECviewperf® Geomean (up to)

1.2x  
More Performance<sup>3</sup>  
than Radeon™ PRO W6800

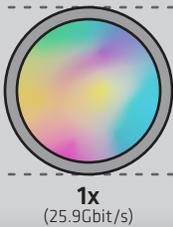
Large 3D models  
Efficient multitasking  
Heavy RAW media

Industry-leading  
Radiant colors  
Huge displays

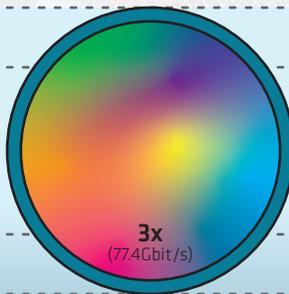
Dense geometry  
Fluid viewports  
Complex datasets

## AMD RADIANCE DISPLAY™ ENGINE

First Workstation Graphics with DisplayPort™ 2.1



1x  
(25.9Gbit/s)



3x  
(77.4Gbit/s)

### DisplayPort™ 1.4a

### DisplayPort™ 2.1

High Frame Rate

8K60 w/ DSC

8K120 w/ DSC

Accurate Color

8K60 Compressed

8K60 Uncompressed

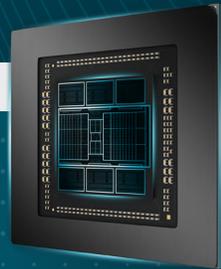
Larger Resolutions

8K60 w/ DSC

12K120 w/ DSC

## Key Features

- 32GB GDDR6 Memory with ECC Support
- **NEW** Efficient Chiplet Design
- 2x AI Accelerators per Compute Unit
- 2nd Generation Ray Tracing
- 2x Simultaneous Encode/Decode Streams
- AV1 Encode (**NEW**) & Decode<sup>4</sup>
- **NEW** AI Enhanced Video Encode
- **NEW** AMD Radiance Display™ Engine
- DisplayPort™ 2.1 with up to 80Gbit/s
- Up to 12K120 display support
- Support for next-gen displays



AMD  
RADEON  
PRO W7800

# TECHNICAL SPECIFICATIONS

|  |  |
|--|--|
| GPU Architecture                         | AMD RDNA™ 3  |
| Graphics Memory                          | 32 GB GDDR6  |
| Memory Interface                         | 256-bit  |
| Memory Bandwidth                         | 576 GB/s   |
| Error Correcting Code (ECC)              | Yes  |
| Peak Single-Precision Performance        | 45.25 Tflops   |
| Ray Accelerators                         | 70   |
| PCI Express® Support                     | 4.0 Ready (x16) with 3.0 Backward Compatibility  |
| Total Board Power                        | 260 W  |
| Cooling                                  | Active   |
| Board Form Factor                        | 11" (280 mm), Double Slot, Full Height   |
| Display Connectors                       | DisplayPort™: 3x DP 2.1 & 1x Enhanced Mini DP 2.1  |
| Display Configuration                    | - 4x 4096 x 2160 (4K DCI) @ 120Hz with DSC<br>- 2x 6144 x 3456 (6K) 12-bit HDR @ 60Hz Uncompressed<br>- 1x 7680 x 4320 (8K) 12-bit HDR @ 60Hz Uncompressed<br>- 1x 12288 x 6912 (12K) @ 120Hz with DSC |
| Power Connectors                         | 2x8-Pin Power Connectors   |
| Supported Rendering Formats <sup>4</sup> | - 2x Encode (H265/HEVC, 4K H264)<br>- 2x Decode (H265/HEVC, 4K H264)<br>- 1x Encode & Decode (AV1)   |
| VR and Realtime Ready                    | Yes  |
| Supported Technologies                   | - AMD Remote <sup>5</sup> Workstation<br>- AMD Radeon™ Media Engine<br>- AMD Software: PRO Edition<br>- AMD Radeon™ VR Ready Creator<br>- AMD EyefinityTechnology <sup>6</sup> (Professionals)         |
| Supported APIs                           | - DirectX®: 12.0 Ultimate<br>- OpenCL™: 2.0<br>- OpenGL®: 4.6<br>- Vulkan®: 1.3.2xx  |
| Supported Operating Systems              | - Windows 11 - 64-Bit Edition<br>- Windows 10 - 64-Bit Edition<br>- Linux x86_64   |

<sup>1</sup> The AMD Radeon™ PRO W7900 graphics powered by the RDNA™ 3 architecture offers memory size of 48 GB GDDR6, AMD Radeon™ PRO W6800 graphics offers memory size of 32 GB GDDR6. RPW-411

<sup>2</sup> 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

<sup>3</sup> Testing as of February 16, 2023 by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5975WX, 64GB DDR4-2133MHz RAM, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software 31.0.14001.45012 with AMD Radeon™ PRO W7800 vs. a system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB DDR4-3200MHz RAM, Windows® 10 Pro build 19044, 64-bit, AMD Radeon™ PRO Drivers 22.Q3 with AMD Radeon™ PRO W6800 at 1920x1080 display resolution. Benchmark Application: SPECviewperf 2020 V3.1 - 1K Geomean. Results may vary. RPW-425a

<sup>4</sup> GD-176: 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

<sup>5</sup> Learn more at [www.amd.com/en/technologies/remote-workstation](http://www.amd.com/en/technologies/remote-workstation)

<sup>6</sup> Learn more at [www.amd.com/en/technologies/eyefinity-professionals](http://www.amd.com/en/technologies/eyefinity-professionals)

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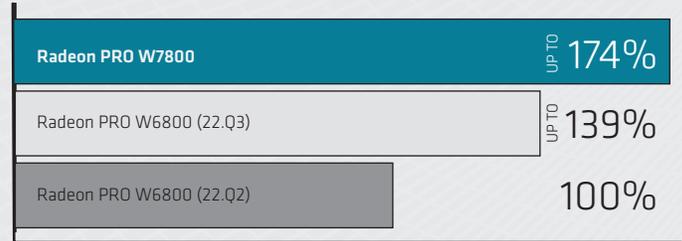
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# PERFORMANCE

AMD  
RADEON  
PRO W7800

## Generational Performance

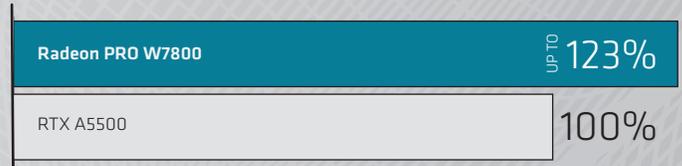
(SPECviewperf® 2020, Relative to Radeon PRO W6800, Higher is Better)



Testing as of February 16, 2023 by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5975WX, 64GB DDR4-2133MHz RAM, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software 31.0.14001.45012 with AMD Radeon™ PRO W7900, vs. a system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB DDR4-3200MHz RAM, Windows® 10 Pro build 19044, 64-bit, AMD Radeon™ PRO Drivers 22.Q2 and 22.Q3 with AMD Radeon™ PRO W6800 at 1920x1080 display resolution. Benchmark Application: SPECviewperf 2020 V3.1 (Geomean across 3dsmax-07, catia-6, creo-03, energy-03, maya-06, medical-03, snx-04, solidworks-07) Results may vary. RPW-427a

## SPECviewperf® 2020 Geomean

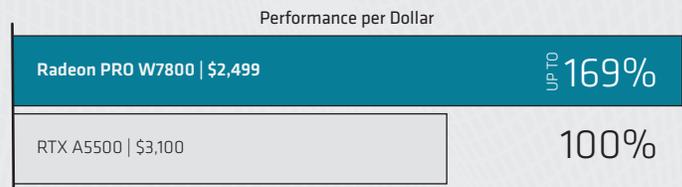
(Relative to RTX A5500, Higher is Better)



Testing as of February 16, 2023 by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5975WX, 64GB DDR4-2133MHz RAM, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software 31.0.14001.45012 with AMD Radeon™ PRO W7800 vs. similarly configured system with Nvidia Driver 531.18 with Nvidia RTX A5500 at 1920x1080 display resolution. Benchmark Application: SPECviewperf 2020 V3.1 (Geomean across 3dsmax-07, catia-6, creo-03, energy-03, maya-06, medical-03, snx-04, solidworks-07). Results may vary. RPW-414a

## Price Performance Leadership

(SPECviewperf® 2020, Relative to RTX A5500, Higher is Better)



Testing as of February 16, 2023 by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5975WX, 64GB DDR4-2133MHz RAM, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software 31.0.14001.45012 with AMD Radeon™ PRO W7900, W7800 vs. similarly configured system with Nvidia Driver 531.18 with Nvidia RTX 6000 (Ada), RTX A6000 at 1920x1080 display resolution. Benchmark Application: SPECviewperf 2020 V3.1 (Geomean across 3dsmax-07, catia-6, creo-03, energy-03, maya-06, medical-03, snx-04, solidworks-07). Results may vary. RPW-415. CDW USD e-tail pricing for individual NVIDIA GPUs as of March 27, 2023. AMD USD is suggested e-tail pricing (SEP) as of April 13, 2023. RPW-409c