

48GB
GDDR6

AMD
RDNA 3

AMD



AMD RADEON™ PRO W7900

FOR EXTREME WORKLOADS

CREATE. VISUALIZE. INSPIRE.



1.5x

More Memory¹
than Radeon™ PRO W6800



3x

Max Total Data Rate²
of DisplayPort™ 2.1



SPECviewperf® Geomean (up to)

1.5x

More Performance³
than Radeon™ PRO W6800

Larger 3D models
Efficient multitasking
Heavier RAW media

Industry-leading
Radiant colors
Huge displays

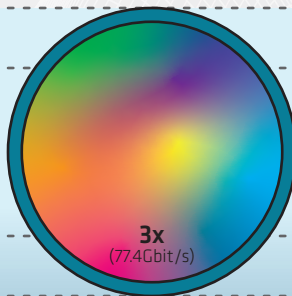
Dense geometry
Fluid viewports
Complex datasets

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

- 48GB 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**) & Decode⁴
- **NEW** AI Enhanced Video Encode
- **NEW** AMD Radiance Display™ Engine
- DisplayPort™ 2.1 with up to 77.4 Gbit/s
- Up to 12K120 display support
- Support for next-gen displays

AMD
RADEON
PRO W7900

TECHNICAL SPECIFICATIONS

GPU Architecture	AMD RDNA™ 3
Graphics Memory	48 GB GDDR6
Memory Interface	384-bit
Memory Bandwidth	864 GB/s
Error Correcting Code (ECC)	Yes
Peak Single-Precision Performance	61.32 Tflops
Ray Accelerators	96
PCI Express® Support	4.0 Ready (x16) with 3.0 Backward Compatibility
Total Board Power	295 W
Cooling	Active
Board Form Factor	11" (280 mm), Triple Slot, Full Height
Display Connectors	DisplayPort™: 3x DP 2.1 & 1x Enhanced Mini DP 2.1
Display Configuration	<ul style="list-style-type: none"> - 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
Power Connectors	2x8-Pin Power Connectors
Supported Rendering Formats ⁴	<ul style="list-style-type: none"> - 2x Encode (H265/HEVC, 4K H264) - 2x Decode (H265/HEVC, 4K H264) - 1x Encode & Decode (AV1)
VR and Realtime Ready	Yes
Supported Technologies	<ul style="list-style-type: none"> - AMD Remote⁵ Workstation - AMD Radeon™ Media Engine - AMD Software: PRO Edition - AMD Radeon™ VR Ready Creator - AMD EyefinityTechnology⁶ (Professionals)
Supported APIs	<ul style="list-style-type: none"> - DirectX®: 12.0 Ultimate - OpenCL™: 2.0 - OpenGL®: 4.6 - Vulkan®: 1.3.2xx
Supported Operating Systems	<ul style="list-style-type: none"> - Windows 11 - 64-Bit Edition - Windows 10 - 64-Bit Edition - Linux x86_64

¹ 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

² 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

³ 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 - 4K Geomean. Results may vary. RPW-425

⁴ 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

⁵ Learn more at www.amd.com/en/technologies/remote-workstation

⁶ Learn more at www.amd.com/en/technologies/eyefinity-professionals

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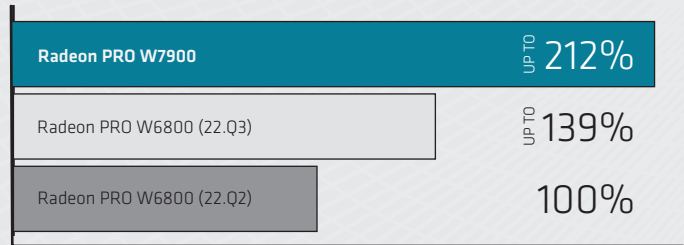
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PERFORMANCE



Generational Performance

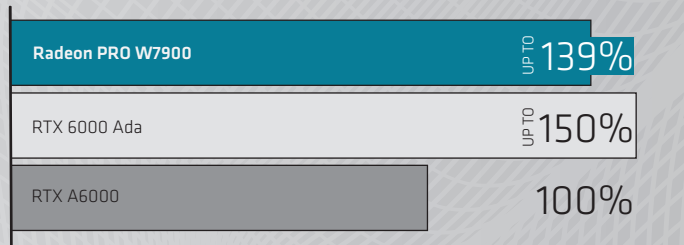
(SPECviewperf® 2020, Relative to Radeon PRO W6800, Higher is Better)



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-427

SPECviewperf® 2020 Geomean

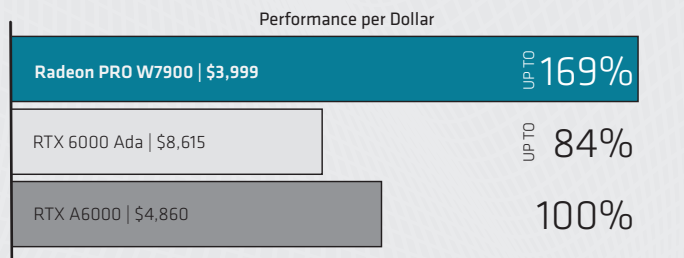
(Relative to RTX A6000, Higher is Better)



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-414

Price Performance Leadership

(SPECviewperf®. Relative to RTX A6000, 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