48GB GDDR6 | **AMD** RDNA 3

AMD

AMD RADEON™
PRO **W7900**
FOR EXTREME WORKLOADS

CREATE. VISUALIZE. INSPIRE.

AMD RADEON PRO W7900

1.5x
More Memory[1]
than Radeon™ PRO W6800

Larger 3D models
Efficient multitasking
Heavier RAW media

3x
Max Total Data Rate[2]
of DisplayPort™ 2.1

Industry-leading
Radiant colors
Huge displays

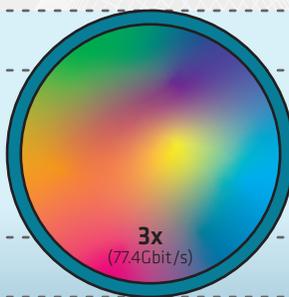SPECviewperf® Geomean (up to)
1.5x
More Performance[3]
than Radeon™ PRO W6800

Dense geometry
Fluid viewports
Complex datasets

AMD **RADIANCE DISPLAY**™ ENGINE
First Workstation Graphics with DisplayPort™ 2.1

DP 1.4a
1x
(25.9Gbit/s)

DP 2.1
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**) & Decode[4]
- **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	- 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]	- 2x Encode (H265/HEVC, 4K H264) - 2x Decode (H265/HEVC, 4K H264) - 1x Encode & Decode (AV1)
VR and Realtime Ready	Yes
Supported Technologies	- AMD Remote[5] Workstation - AMD Radeon™ Media Engine - AMD Software: PRO Edition - AMD Radeon™ VR Ready Creator - AMD EyefinityTechnology[6] (Professionals)
Supported APIs	- DirectX®: 12.0 Ultimate - OpenCL™: 2.0 - OpenGL®: 4.6 - Vulkan®: 1.3.2xx
Supported Operating Systems	- Windows 11 - 64-Bit Edition - Windows 10 - 64-Bit Edition - Linux x86_64

PERFORMANCE

Generational Performance
(SPECviewperf® 2020, Relative to Radeon PRO W6800, Higher is Better)
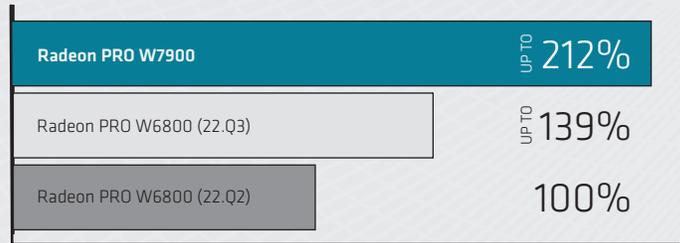
Radeon PRO W7900	UP TO **212%**
Radeon PRO W6800 (22.Q3)	UP TO **139%**
Radeon PRO W6800 (22.Q2)	**100%**

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
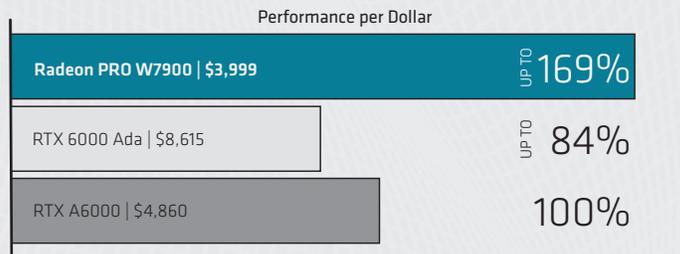
SPECviewperf® 2020 Geomean
(Relative to RTX A6000, Higher is Better)
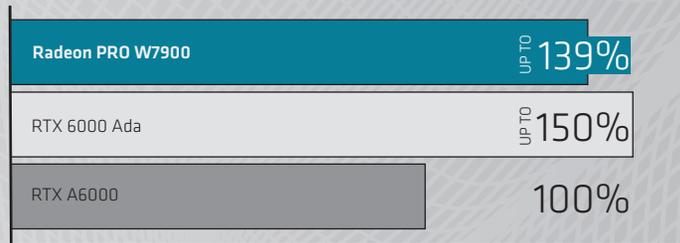
Radeon PRO W7900	UP TO **139%**
RTX 6000 Ada	UP TO **150%**
RTX A6000	**100%**

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)

Performance per Dollar

Radeon PRO W7900 | $3,999	UP TO **169%**
RTX 6000 Ada | $8,615	UP TO **84%**
RTX A6000 | $4,860	**100%**

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. 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