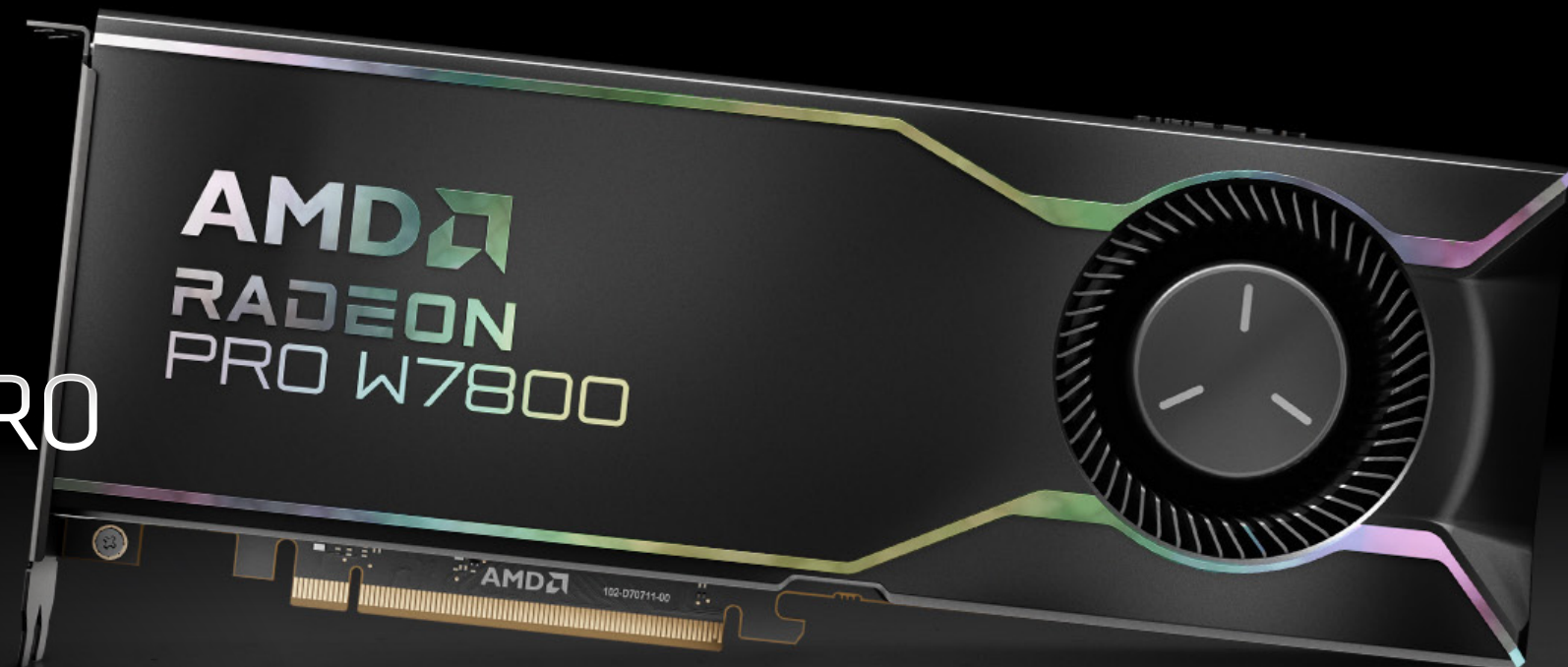


FOR HEAVY WORKLOADS

AMD Radeon™ PRO

W7800

GRAPHICS



DESIGN INTELLIGENTLY

GDDR6
32GB

AMD
RDNA 3



32GB

Memory

Large 3D models
Efficient multitasking
Heavier RAW media



3x

Max Total Data Rate¹ of
DisplayPort™ 2.1

Industry-leading
Radiant colors
Huge displays



1.2x

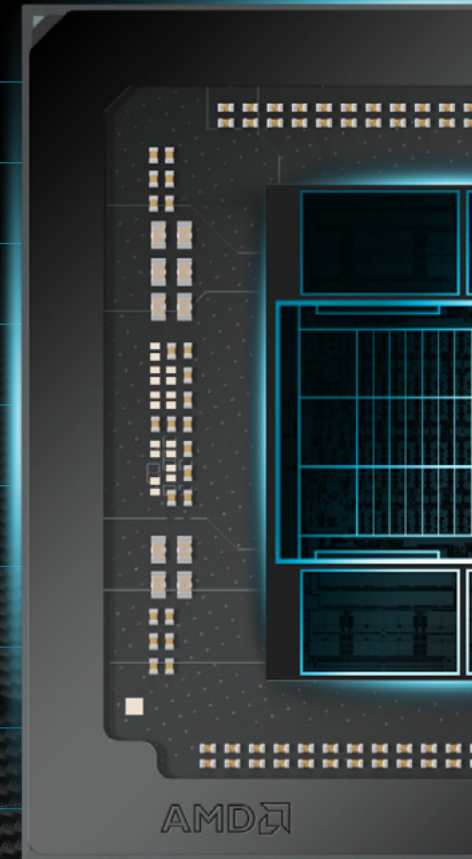
More Performance² than
Radeon™ PRO W6800

SPECPERF® GEOMEAN

Dense geometry
Fluid viewports
Complex datasets

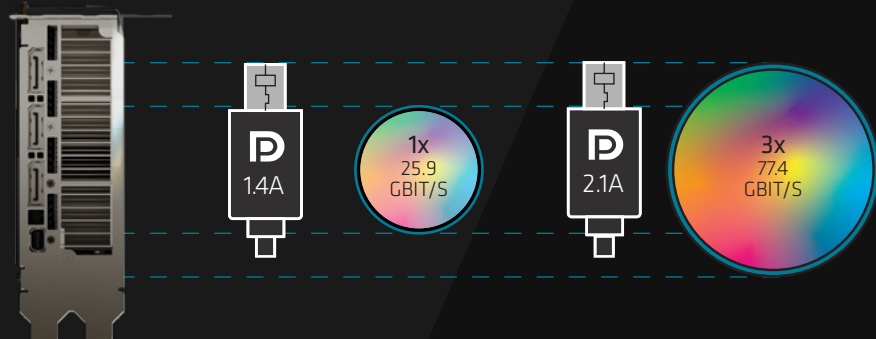
Key Features

- 32GB 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 & Decode³
- AI Enhanced Video Encode
- AMD Radiance Display™ Engine
- DisplayPort™ 2.1 with up to 80Gbit/s
- Up to 12K120 display support
- Support for next-gen displays



AMD Radiance Display™ Engine

First Workstation Graphics with DisplayPort™ 2.1



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

Technical Specifications

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)
295 W

PSU Recommendation
650 W

Dedicated Memory Size
32 GB

Memory Speed
18 Gbps

Dedicated Memory Type
GDDR6

AMD Infinity Cache™
64

Memory Interface
256-bit

Peak Memory Bandwidth
Up to 576 GB/s

Memory ECC Support
Yes

4K H264 Encode | Decode
Yes | Yes

H265/HEVC Encode | Decode
Yes | Yes

AV1 Encode | Decode
Yes | Yes

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 Remote⁴ Workstation
AMD Radeon™ Media Engine
AMD Software: PRO Edition
AMD Radeon™ VR Ready
Creator
AMD EyefinityTechnology⁵
(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

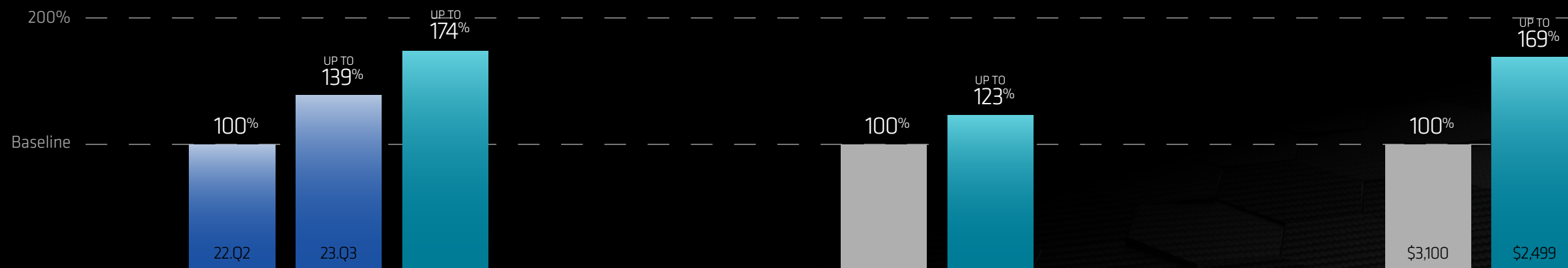
NVIDIA RTX
A5500

AMD Radeon™
PRO W6800

AMD Radeon™
PRO W7900

AMD
together we advance.

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 22H2, 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 22H2, 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 – Performance per Dollar

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 22H2, 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

- 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 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 22H2, 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
- 3 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
- 4 Learn more at www.amd.com/en/technologies/remote-workstation
- 5 Learn more at www.amd.com/en/technologies/eyefinity-professionals

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