AMD W7700 Graphics Card

AMD W7700 Graphics Card User Manual

Contents

AMD

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Product Information

Technical Specifications

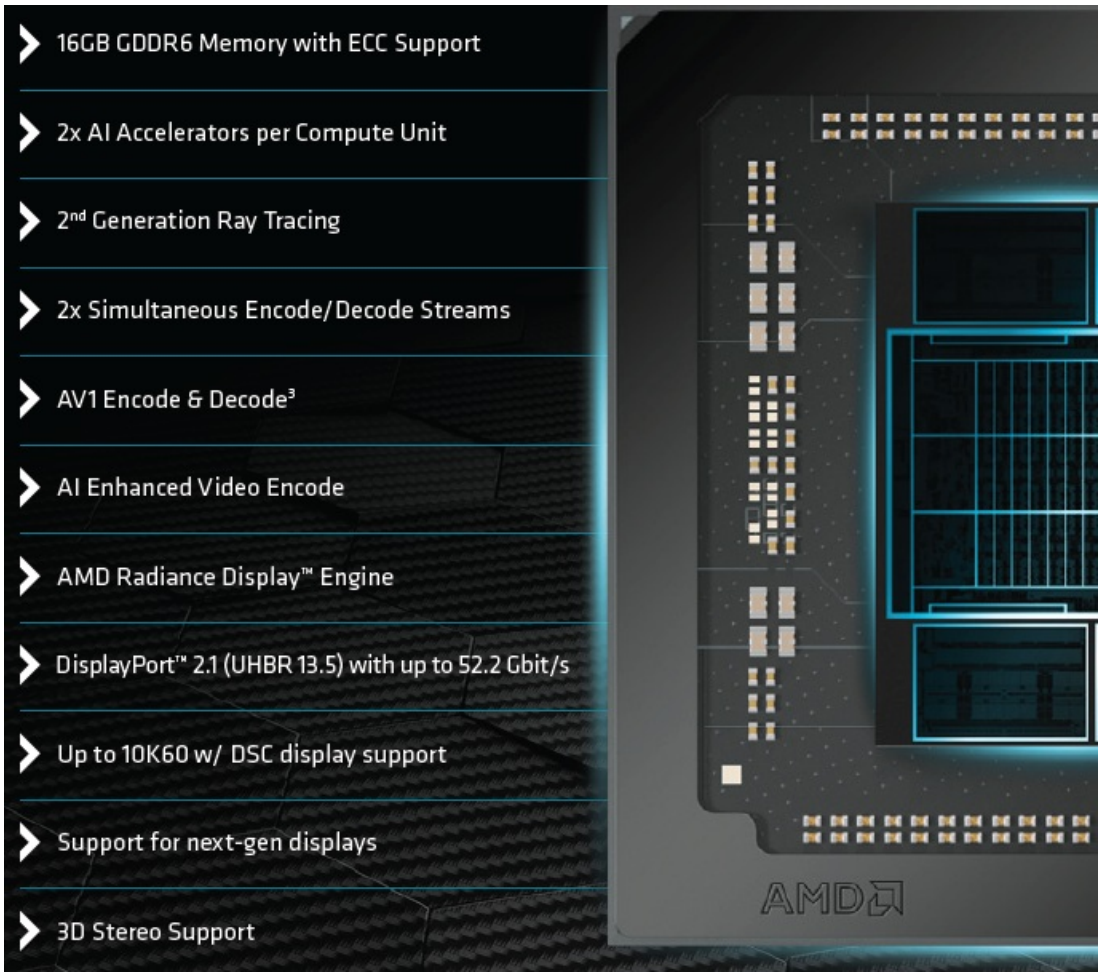
- **GPU Architecture:** AMD RDNA™ 3
- **Hardware Raytracing:** Yes
- **Lithography:** TSMC 5nm GCD | 6nm MCD
- **Ray Accelerators:** 48
- **ROPs:** 96
- **Stream Processors:** 3072
- **Compute Units:** 48
- **AI Accelerators:** 96
- **Peak Half Precision (FP16) Performance:** 56.54 TFLOPS
- **Peak Single Precision (FP32) Performance:** 28.27 TFLOPS
- **Peak Double Precision (FP64) Performance:** .88 TFLOPS
- **Transistor Count:** 28.1 Billion
- **Total Board Power (TBP):** 190 W
- **PSU Recommendation:** 650 W
- **Dedicated Memory Size:** 16 GB
- **Memory Speed:** Up to 18 Gbps
- **Dedicated Memory Type:** GDDR6
- **AMD Infinity CacheTM:** 64 MB
- **Memory Interface:** 256-bit
- **Peak Memory Bandwidth:** Up to 576 GB/s

- **Memory ECC Support:** Yes

Frequently Asked Questions

- **Q:** What operating systems are supported by the AMD RadeonTM PRO W7700?
  - **A:** The AMD RadeonTM PRO W7700 supports Windows 11 – 64-Bit Edition, Windows 10 – 64-Bit Edition, and Linux x86_64-Bit operating systems.
- **Q:** How many DisplayPort connections does the AMD RadeonTM PRO W7700 support?
  - **A:** The AMD RadeonTM PRO W7700 supports four DisplayPortTM 2.1 connections for multiple display configurations.
- **Q:** Does the AMD RadeonTM PRO W7700 support HDR and high-resolution displays?
  - **A:** Yes, the AMD RadeonTM PRO W7700 supports HDR displays and resolutions up to 12K, providing accurate colors and high frame rates.

Key Features



 **50%**

More Ray Tracing Performance Per CU1

- Higher Quality

- Faster Rendering
- Beautiful Results

2x

Max Total Data Rate 2

- Industry-leading
- Radiant colors
- Huge displays

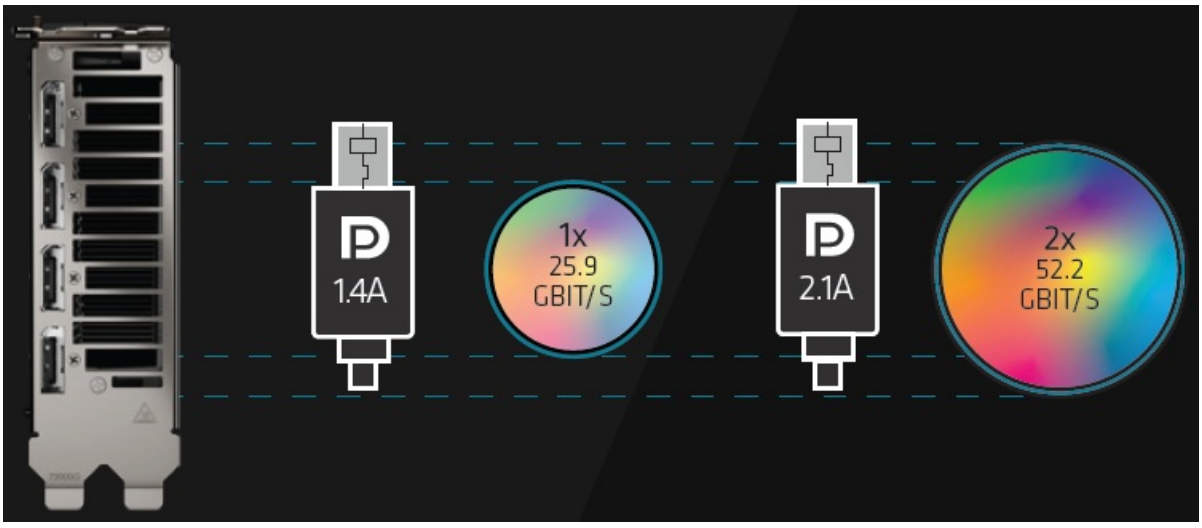
24/7

Reliability

- Built for demand
- Certified performance
- Efficient multitasking

AMD Radience Display™ Engine

First Workstation Graphics with DisplayPort™ 2.1



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  - GDDR6
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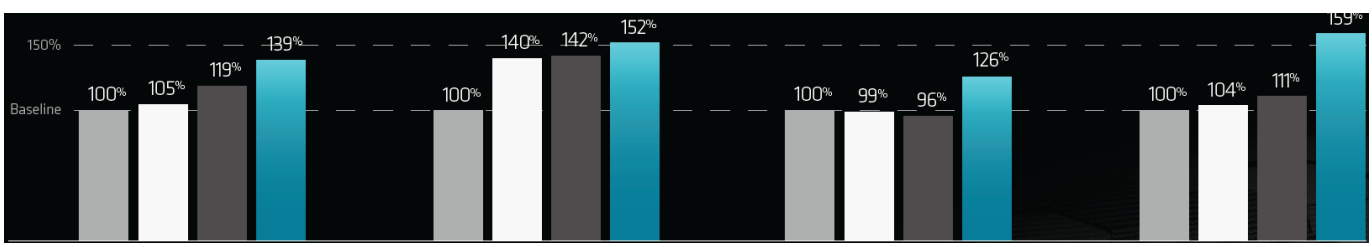
  - 64 MB
- Memory Interface
  - 256-bit
- Peak Memory Bandwidth
  - Up to 576 GB/s
- Memory ECC Support
  - Yes
- 4K H264 Encode | Decode
  - Yes | Yes
- H265/HEVC Encode | Decode
  - Yes | Yes
- AV1 Encode | Decode
  - Yes | Yes
- 3D Stereo Support
  - Yes
- VR and Realtime Ready
  - Yes
- Form Factor
  - PCIe® Add-in Card
- Bus Type
  - PCIe 4.0 x16 with 3.0
  - Backward Compatibility
- Cooling
  - Active
- Displays Type(s)
  - 4x DisplayPort™ 2.1
- Display Configurations
  - 4x 4096 x 2160 (4K DCI)
  - 2x 6144 x 3456 (6K)
  - 1x 7680 x 4320 (8K)
  - 1x 12288 x 6912 (12K)
- HDR Support
  - Yes
- 8K Support
  - Yes
- 12K Support
  - Yes
- 10-BIT Color Ready

    - Yes
- 12-BIT Color Ready
    - Yes
- Board Form Factor
    - 9.5” (241 mm), Double Slot, Full Height
- Supported Technologies
    - AMD Remote4 Workstation
    - AMD Radeon™ Media Engine
    - AMD Software: PRO Edition
    - AMD Radeon™ VR Ready Creator
    - AMD EyefinityTechnology5 (Professionals)
    - AMD Radeon™ ProRender
- 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
    - 1×8-Pin Power Connectors

Performance



Generational Performance

SPECviewperf® 2020. Relative to the RTX 4000 SFF Ada. Higher is better.

RPW-447: Testing as of October 2023 by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software23.30 RCP 3 with AMD Radeon™ PRO W7700 vs. similarly configured system with Nvidia Driver 536.67 with Nvidia RTX 4000 SFF Ada, RTX A4000, RTX A4500 at 3840×2160 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). Additional information about the SPEC benchmarks can be found at **www.spec.org/gwpg.SPEC®** and SPECviewperf® are registered trademarks of the Standard Performance Evaluation Corporation. Results may vary. RPW-447.

SOLIDWORKS

4K GPU Composite Score. Relative to the RTX 4000 SFF Ada. Higher is better.

RPW-455: Testing as of October 2023 by AMD Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software23.30 RCP 3 with AMD Radeon™ PRO W7700 vs. similarly configured system with Nvidia Driver 536.67 with Nvidia RTX 4000 SFF Ada, RTX A4000, RTX A4500 at 3840×2160 display resolution.

Benchmark Application: SPECapc® for Solidworks® 2022 benchmark. Additional information about the SPEC benchmarks can be found at **www.spec.org/gwpg.SPEC®** and SPECviewperf® are registered trademarks of the Standard Performance Evaluation Corporation. Results may vary. RPW-455.

Blackmagic DaVinci Resolve

RPW-454: Testing as of October 2023 AMD by Performance Labs on a test system comprised of an AMD Ryzen Threadripper PRO 5945WX, 64GB, Windows® 11 Pro build 22621, 64-bit, AMD Radeon™ PRO Software 23.30 RCP 3 with AMD Radeon™ PRO W7700 vs. similarly configured system with Nvidia Driver 536.67 with Nvidia RTX 4000 SFF Ada, RTX A4000, RTX A4500 at 3840×2160 display resolution. Benchmark Application: PugetBench for DaVinci Resolve – Standard Overall Score. Results may vary. RPW-454

1. **PW-428:** 50% more RAYTRACING performance per CU Based on November 2022 AMD internal performance lab measurement of rays with indirect calls on W7900 GPU vs. W6800 GPU. RPW-428
2. RPW-449. Based on VESA DisplayPort 2.1 (UHBR 13.5) specifications details. RPW-449.
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**

PID# 232358354

Documents / Resources

	AMD W7700 Graphics Card [pdf] User Manual W7700 Graphics Card, W7700, Graphics Card, Card

References

- SPEC - Standard Performance Evaluation Corporation
- SPEC Graphics Card and Workstation Benchmarks
- User Manual