# RADEON PRO

# Radeon<sup>™</sup> Pro Duo Professional Graphics Card

## The World's First Dual-GPU Graphics Card Designed for Professionals

Unleash your creativity and create without constraints with the Radeon  $^{TM}$  Pro Duo professional graphics card. The Radeon Pro Duo is the first dual-GPU solution that offers outstanding performance in professional applications and is backed by ISV certifications to ensure compatibility and stability.

### Divide. Accelerate. Create.

With the Radeon Pro Duo graphics card, designers can now simultaneously use two software packages, with one GPU dedicated to the functions of each application concurrently. Live content creation using the first GPU, with real-time rendering and/or ray tracing on the second GPU is now possible. The user can benefit from shortened design cycles or is now able to do more design iterations within the allotted design window for an overall better outcome.

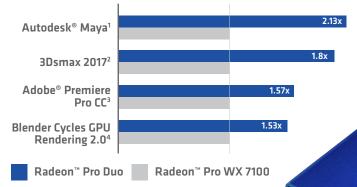
#### The Power of Duo

The Radeon Pro Duo, the world's first dual-GPU professional graphics solution, can accelerate supported applications or plug-ins for many of today's popular professional software such as Autodesk® Maya® and Dassault Systèmes® SOLIDWORKS®, reducing the amount of time needed to achieve a users' final design.

# Bringing Tomorrow's VR Workflows into the Hands of Creators Today

Professional VR content creation is one of the design industry's major inflection points and is becoming more commonplace in today's workflows. From small design shops to big Hollywood studios, the Radeon™ Pro Duo professional graphics card can leverage the power of two GPUs to render out separate images for each eye, increasing performance significantly compared to a single GPU.

### Radeon Pro Duo vs. Radeon Pro WX 7100\*



"In developing 4K 360 VR content, the biggest hurdle is the tech, because as an artist, I just want to create and not worry about limitations of the hardware. With the new Radeon Pro Duo, I immediately saw a speed difference of up to 2X, allowing me to push the boundaries of my projects without having to compromise on creativity or productivity." – JONATHAN WINBUSH, FOUNDER & CREATIVE DIRECTOR, WINBUSH.TV

### **Key Features:**

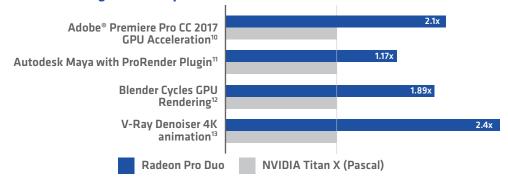
- 32 GB GDDR5 memory (16GB per GPU)
- 3 DisplayPort™ 1.4 HBR3/HDR Ready outputs<sup>6</sup>, 1 HDMI™ 4K60 output
- AMD Eyefinity multi-display technology. Learn more at amd.com/eyefinity
- Supports up to four 4K displays, or a single 8K display
- Up to 11.46 TFLOPS peak single precision performance
- OpenCL™, DirectX®, OpenGL® and Vulkan® support
- 250W maximum power consumption
- Full height/full length, dual-slot form factor





Feature	Benefits
10-BIT COLOR	Native support for 10-bits per color channel for color-critical tasks. Driving an effective 30-bits per pixel, the Radeon <sup>TM</sup> Pro Duo is great for any workload requiring that level of detail and color precision.
HDR READY	High dynamic range (HDR) capability enables visuals that closely match what is familiar to the human eye. <sup>7</sup>
AMD LIQUIDVR™ TECHNOLOGY	AMD is making VR as comfortable as possible by lowering motion-to-photo latency. Enhance design realism and maintain ultra-immersive VR presence. Enjoy liquid-smooth visual performance and ultra-high frame rates – and cross over to the other side of realistic virtual environments and interaction.
RADEON™ VR READY CREATOR	Enable extraordinary performance and world-class innovation with Radeon™ VR Ready Creator products like the Radeon™ Pro Duo. Empower VR content creators and experience designers with amazingly powerful and capable development tools in the AMD LiquidVR™ SDK.8 (Download the SDK ⓐ http://gpuopen.com/gaming-product/liquidvr/)
SUPPORT FOR 4K, 5K AND 8K DISPLAYS	With three discrete DisplayPort 1.4 HBR3/HDR Ready <sup>6</sup> outputs, and one HDMI 4K60 output, the Radeon™ Pro Duo graphics card can drive up to four, 4K displays at 60Hz or one 5K or 8K display at 60Hz.
4K ACCELERATED ENCODE/DECODE	Supports multi-stream hardware HEVC 4K encode/decode for power-efficient and quick video encoding and playback.9

### Drive Through the Competition with the Power of Duo\*\*



## To learn more about Radeon Pro, please visit: pro.radeon.com

- \* Testing conducted by AMD Performance Labs as of March 25th, 2017 on a test system comprising of dual Intel Xeon E5-2687W v4 @ 3.00 GHz, 32GB DDR4 RAM, Windows 10 Enterprise 64-bit, AMD Radeon<sup>TM</sup> Pro WX7100/AMD Radeon<sup>TM</sup> Pro Duo(Polaris), graphics driver 17.10 and Samsung 850 PRO 512G SSD. PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. Results are estimates only
- 1. Benchmark Application: Autodesk Maya Radeon ProRender plugin Radeon™ Pro WX7100 Dragon scene 8xAA render time: 275 seconds Radeon™ Pro Duo (Polaris) Dragon scene 8xAA render time: 129 seconds Performance Differential: (275-129)/129 = ~113.18% faster performance on Radeon™ Pro Duo (Polaris). PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-91
- 2. Benchmark Application: Autodesk 3ds Max Radeon ProRender plugin Radeon Pro WX7100 Helmet scene 100 passes render time: 295 seconds Performance Differential: (543-295)/295 = ~84.07% faster performance on Radeon TM Pro Duo (Polaris), PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-93

  3. Benchmark Application: Adobe Premiere Pro CC 2017 Radeon TM Pro WX7100 37 effects render time: 13 minutes 44 seconds Radeon TM Pro Duo (Polaris) 37 effects render time: 8 minutes 46 seconds Performance Differential: (824-526)/526 = ~56.65% faster performance on
- Radeon<sup>TM</sup> Pro Duo (Polaris). PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-95
- 4. Benchmark Application: Blender 2.78c Radeon Pro WX7100 Koro scene render time: 6 minutes 17 seconds Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance on Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance on Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance on Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance on Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance on Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance on Radeon Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (377-188)/188 = -100.53% faster performance Different Duo (Polaris). PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-92
- 5. Third party result not tested or verified by AMD
- $6. \ Product is \'eased on the DisplayPort 1.4 \'specification published February 23, 2016, and is expected to pass VESA's compliance testing process when available. GD-110 \ref{eq:controlled} and the DisplayPort 1.4 \ref{eq:controlled} and t$
- 7. As of September 2016, certified for DisplayPort<sup>TM</sup> 1.4 HBR3 and ready for DisplayPort<sup>TM</sup> 1.4 HBR based on independent verification by DisplayPort<sup>TM</sup> testing authority. HDR content requires that the system be configured with a fully HDR-ready content chain, including, graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system supports. GD-100)
- 8. Radeon VR Ready Creator Products are select Radeon Pro and AMD FirePro™GPUs that meet or exceed the Óculus Rift or HTC Vive recommended specifications for video cards/GPUs. Other hardware (including CPU) and system requirements recommended by Oculus Rift or HTC Vive should also be met in order to operate the applicable HMDs as intended. As VR technology, HMDs and other VR hardware and software evolve and/or become available, these criteria may change without notice. PC/System manufacturers may vary configurations, yielding different VR results/performance. Check with your PC or system manufacturer to confirm VR capabilities. GD-101
- 9. HEVC acceleration is subject to inclusion/installation of compatible HEVC players GD-81
- \*\* Testing conducted by AMD Performance Labs as of March 25th, 2017 on a test system comprising of dual Intel Xeon E5-2687W v4 (a) 3.00 GHz, 32GB DDR4 RAM, Windows 10 Enterprise 64-bit, AMD Radeon<sup>TM</sup> Pro Duo(Polaris)/Nvidia Titan X (Pascal), AMD graphics driver 17.10, Nvidia graphics driver 378.92 and Samsung 850 PRO 512G SSD. PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. Results are estimates only.
- 10. Testing conducted by AMD Performance Labs as of March 25th, 2017 on a test system comprising of dual Intel Xeon E5-2687W v4 @ 3.00 GHz, 32GB DDR4 RAM, Windows 10 Enterprise 64-bit, AMD Radeon Pro Duo(Polaris)/Nvidia Titan X, AMD graphics driver 17.10, Nvidia graphics driver 378.92 and Samsung 850 PRO 512G SSD. Benchmark Application: Adobe Premiere Pro CC 2017, Nividia Titan X 37 effects render time: 19 minutes 08 seconds, Radeon M Pro Duo (Polaris) 37 effects render time: 8 minutes 46 seconds. Performance Differential: (1148-526)/526 = ~118.25% faster performance on Radeon™ Pro Duo (Polaris). PC manufacturers may vary configurations, yielding different results. Performance may vary based on use of latest drivers. RPW-100
- 11. Benchmark Application: Autodesk Maya Radeon ProRender plugin, Nvidia Titan X (Pascal) Dragon scene 8xAA render time: 151 seconds, Radeon™ Pro Duo (Polaris) Dragon scene 8xAA render time: 129 seconds, Performance Differential: (151-129)/129 = ~17.05% faster performance on Radeon™ Pro Duo (Polaris). RPW-102
- . 12. Benchmark Application: Blender 2.78c, Nvidia Titan X (Pascal) Koro scene render time: 5 minutes 56 seconds, Radeon™ Pro Duo (Polaris) Koro scene render time: 3 minutes and 8 seconds Performance Differential: (356-188)/188 = ~89.36% faster performance on Radeon™ Pro Duo (Polaris), RPW-101
- 13. Testing conducted by AMD Performance Labs as of March 25th, 2017 on a test system comprising of dual Intel Xeon E5-2687W v4 (a) 3.00 GHz, 32GB DDR4 RAM, Windows 10 Enterprise 64-bit, AMD Radeon<sup>TM</sup> Pro Duo (Polaris)/ Nvidia Titan X (Pascal), AMD graphics driver 17.10, Nvidia graphics driver 378.92 and Samsung 850 PRO 512G SSD. Benchmark Application: V-Ray standalone denoising tool using all system OpenCL devices, including CPUs and GPUs, with strong mode for 4K animation frames System with Nvidia Titan X (Pascal) denoising time: 14.06 seconds System with Radeon<sup>TM</sup> Pro Duo (Polaris) denoising time: 5.89 seconds Performance Differential: 14.06/5.89 = ~2.39 times faster performance on Radeon<sup>TM</sup> Pro Duo (Polaris) denoising time: 5.89 seconds Performance may vary based on use of latest drivers. RPW-113
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