



AMD
RADEON
ProRender

SDK v1.34.1

Release Notes

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Overview

Thinking about adding physically-based rendering to your application's workflow? AMD Radeon™ ProRender delivers stunningly photorealistic images enabling faster render times and high frame rates for photorealistic assets.

Radeon™ ProRender is built on industry-standard OpenCL™ and Apple® Metal® 2, making it hardware agnostic so it runs on virtually any OS and virtually any combination of GPUs and CPUs.

The Radeon™ ProRender roadmap is shared with developer partners so they can plan ahead, and engineering support may also be available for those who need it.

Radeon ProRender SDK v1.34.1 Highlights

AMD's Radeon™ ProRender is a physically based pathtracer which runs on CPUs and GPU via OpenCL or Metal2 (on macOS). The SDK provides an executable to render scene files exported in the .rprs file format as well as the libraries and headers to integrate Radeon™ ProRender into other applications.

New additions in version 1.34.1 of the renderer include:

- Full spectrum rendering ready and able to select rendering plugin backend to switch render mode from RPR to hybrid modes easily
- RprSupport library has been integrated inside RPR API Core, thus RPRX context is no longer needed to use UBER material
- In the SDK, simple examples of RPR_MATERIAL_NODE_UBERV2 usage can be found
- RprSupport.h is still provided to help backward compatibility with our ecosystem. Internally those rprx functions are doing nothing more than calling the corresponding RPR API calls.
- New material node:
 - UberV2 node
 - Transform node to support object space normal map
 - Lookup for color vortex map
 - Lookup for local position (as opposed to world space)
- Ubuntu support moved from version 16.04 to 18.04
- Color Vertex map for meshes support
- Added API to query active pixels for adaptive sampling
- Added AOV for reflection catcher. Objects to contribute as a reflection catcher need to be enabled on their mesh.
- DLL's versioning system changed to:
 - RPR_VERSION_MAJOR.RPR_VERSION_MINOR.RPR_VERSION_REVISION.RPR_VERSION_BUILD – RPR_API_VERSION_MINOR = 0x00103305

For the detailed list of features and user guide for the Radeon™ ProRender SDK, click [here](#)

Fixed Issues

- Fixed screen issues of .rpr export with compression activated
- Fixed screen issues when rendering .rpr files
- Fixed caustic reflections between multiple objects that were incorrect
- Context parameter “stage” renamed to “rendermode”
- RPR_CONTEXT_CREATEPROP_CPU_THREAD_LIMIT renamed to RPR_CONTEXT_CPU_THREAD_LIMIT
- RPR_CONTEXT_CREATEPROP_SAMPLER_TYPE renamed RPR_CONTEXT_SAMPLER_TYPE
- Removed Context parameters aacellsize and aasamples
- CPU Rendering fixes:
 - Difference between CPU and GPU rendering improved
 - UV of curves objects
 - AOV_LIGHT_GROUP Aov
 - Bloom post processing implemented
 - Ambient Occlusion Node
 - Fisheye Camera
- Fixed double sided emission not working on Uber
- Fixed a screen issue with adaptive subdivision
- Fixed an issue with curves on NVIDIA cards
- Fixed shadow catcher objects that were not visible behind transparent surfaces
- Fixed a screen issue after detaching emissive shader
- Various fixes for adaptive sampling and Variance AOV
- Camera sensor size was previously not respected – API change:
 - The new default of RPR_CAMERA_SENSOR_SIZE is (-1, -1), meaning auto sized sensor
- Fixed faulty metalness blender of Uber shader
- Fixed issues with roughness and anisotropy of Uber shader reflection
- MacOS has improved exception management in case of fail in rprCreateContext

Known Issues

- Adaptive sampling may not work on multiple GPUs.

System Requirements

Hardware

- Runs on both GPUs and CPUs. OpenCL™ 1.2 support required for GPUs on Windows® and Linux®. Metal® 2 support required for GPUs on macOS®.
- AMD graphics cards are recommended.
- For non-AMD OpenCL™ 1.2 cards, Windows® 10 is required.
- VR-capable graphics card for VR visualization.
- **Recommended Windows® and Linux® Graphics Hardware:**
 - AMD Radeon™ Pro WX series cards, Radeon™ Pro SSG graphics, Radeon™ Pro Duo (“Polaris”) graphics, Radeon™ Vega Frontier Edition cards, and AMD FirePro™ W9100, W8100, W7100 and S series cards.
- **Compatible Windows® and Linux® Graphics Hardware:**
 - AMD Radeon™ Pro Duo (“Fiji”) graphics, Radeon™ RX series cards, R9 Fury series cards, R9 Nano graphics, R9 300 series cards, R9 290X graphics, R9 290 graphics, R9 285 graphics, R9 280X graphics, R9 280 graphics.
- **Compatible Apple® Mac® Hardware:**
 - MacBook® (Early 2015 or newer), MacBook Pro® (Mid 2012 or newer), MacBook Air® (Mid 2012 or newer), Mac mini® (Late 2012 or newer), iMac® (Late 2012 or newer), iMac Pro™ (Late 2017 or newer), Mac Pro® (Late 2013) (Models without discrete AMD Radeon™, Radeon™ Pro, or AMD FirePro™ graphics will be limited to CPU rendering with Radeon™ ProRender).
- **Compatible Apple® Mac® External Graphics (eGPU) Hardware:**
 - AMD Radeon™ RX 570 graphics, Radeon™ RX 580 graphics, Radeon™ Vega 56 graphics, Radeon™ Vega 64 graphics, Radeon™ Vega Frontier Edition (Air-Cooled) graphics, Radeon™ Pro WX 7100 graphics, Radeon™ Pro WX 9100 graphics (Requires macOS® High Sierra 10.13.4 and compatible eGPU Thunderbolt™ 3 chassis).

Software

- Microsoft Windows® 7, 8.1, 10 64-bit (AMD Radeon™ RX series, Radeon™ Pro Duo (“Fiji”) graphics, and R9 series)
- Microsoft Windows® 7, 10 64-bit (AMD Radeon™ Pro WX series, Radeon™ Pro SSG, Radeon™ Pro Duo (“Polaris”), Radeon™ Vega Frontier Edition, and AMD FirePro™ W series)
- Microsoft Windows® 10 (non-AMD GPU)
- macOS® High Sierra 10.13.3 and up (10.13.4 required for external GPU support)
- Linux® distributions: Ubuntu® 16.04.3 and 18.04.0, CentOS® 6.5, CentOS® 7.2 (depends on the application support)