

# AMD Radeon™ Pro

## Professional Workstation Graphics



AMD  
RADEON  
PRO

- Optimized for leading Applications
- ISV Certified for highend hardware
- Best in class Enterprise Driver Software
- Cost-effective longtime investments



Optimized

ISV Certified

Dependable

Cost-Effective

## Radeon™ Pro Highlights

- 10-year manufacturer's warranty
- 24/7 hotline for customers
- More than 420 Software Certifications
- **Remote Workstation Support (VDI / CITRIX)**
- G-Sync / Frame Lock Option with FirePro S400



### 8K Display Support

Support for next generation 8K displays for maximum fidelity in professional content visualization.



### 10-bit Color

Native support for 10-bits per color channel for color-critical tasks. Driving an effective 30-bits per pixel throughout the entire pipeline, professionals can confidently depend on the color accuracy of their work.



### Certifications

AMD Radeon™ Pro WX series graphics are optimized and certified on many of today's most popular applications for manufacturing, AEC & media and entertainment industries.



### HDR Ready3

High dynamic range (HDR) capability enables visuals that closely match what is familiar to the human eye.



### Eyefinity4

A unique multi-display technology which enables one graphics card to output high-quality visuals on three, four and even six displays from a single workstation or PC2. This reduces overall system complexity and allows multiple graphics cards to be combined and synchronized to create massive display walls across a multitude of screens.



### VR Ready Creators

Cards designated VR Ready Creator have extraordinary performance needed for professional VR workflows, and empowers VR content creators and experience designers with amazingly powerful and capable development tools from the AMD LiquidVR™ SDK.6 Supported products: AMD Radeon™ Pro WX 9100, WX 8200 and WX 7100.



### 4K Accelerated Encode/Decode

Multi-stream hardware H.265 HD encode/decode for power-efficient and quick video encoding and playback.

# Introducing the Radeon™ Pro professional graphics family

The Art of the Impossible: Radeon™ Pro WX workstation graphics

The Radeon™ Pro WX series graphics cards are designed for professionals pushing the boundaries of science, technology and engineering. Radeon™ Pro graphics cards are optimized and certified on many of today's most popular design and engineering, and media and entertainment applications. Rigorous certification processes conducted by ISVs and OEMs test Radeon™ Pro graphics against a battery of simulations and real-world scenarios to ensure their readiness for demanding professional use.



**Radeon™ Pro WX 9100**

Delivering up to 2.4x the performance over the previous generation graphics card from AMD, the WX 9100 is ready to tackle the most demanding professional workloads, from production-grade VR content creation to design simulations.



**Radeon™ Pro WX 8200**

From real-time visualization to virtual reality and rendering, the AMD Radeon™ Pro WX 8200 workstation graphics card can conquer your most challenging professional workloads.



**Radeon™ Pro WX 7100**

The most ideal single-slot workstation graphics solution, built to handle design and manufacturing as well as media and entertainment workflows. Ready for VR!



**Radeon™ Pro WX 5100**

Ideal for real time content engines, immersive design and manufacturing including CAD and CAM.



**Radeon™ Pro WX 4100**

Great performance in a low-profile card, designed for small form factor (SFF) workstations.



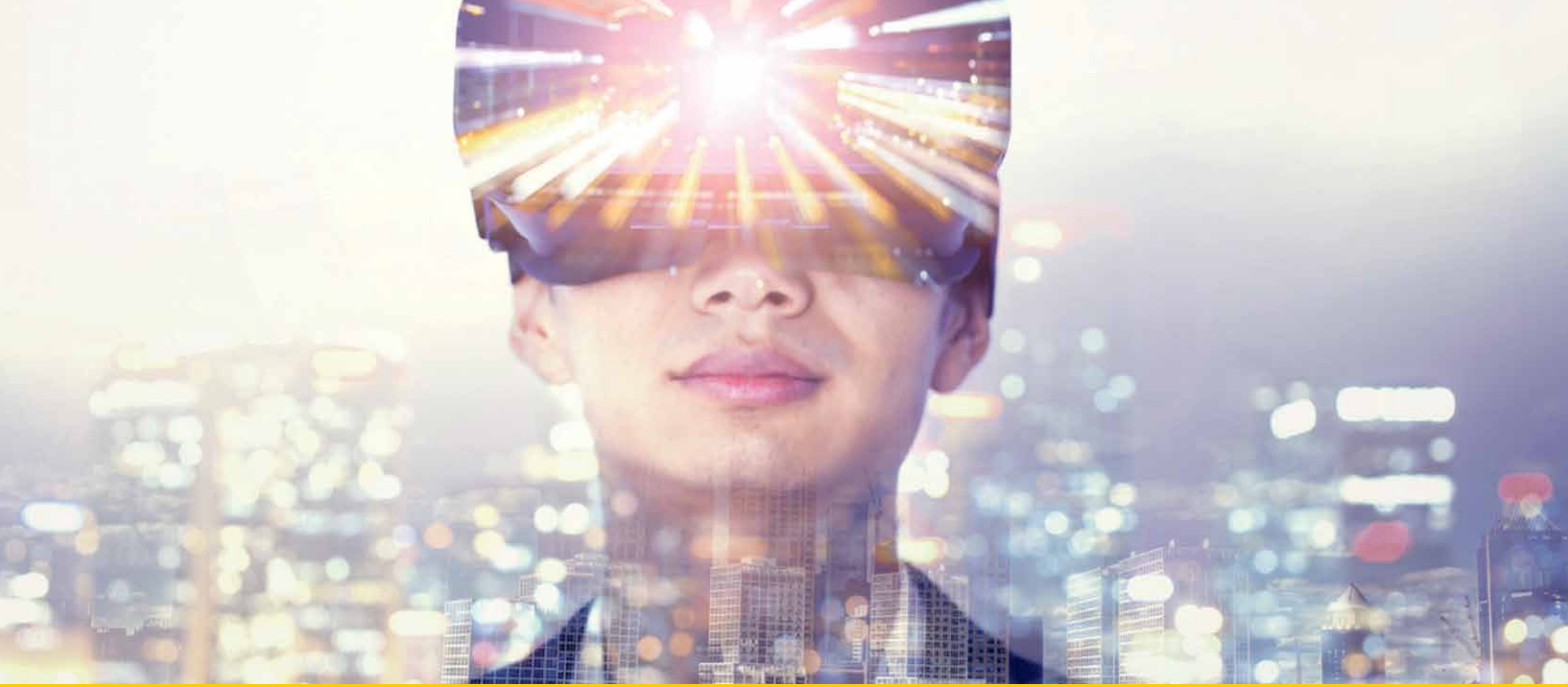
**Radeon™ Pro WX 3200**

The Radeon™ Pro WX 3200 workstation graphics card is ideal for mainstream CAD engineers who require an ISV-certified graphics solution.



**Radeon™ Pro WX 2100**

Your journey in professional graphics begins here. The Radeon™ Pro WX 2100 delivers 94% greater performance over the previous generation.



## What is a professional GPU?



### Reliability

Reliability is paramount for professionals, particularly when project margins remain tight and design efficiency is key. Having a key component of the workstation fail, such as the graphics card, simply isn't an option. Radeon™ Pro graphics cards are designed exclusively by AMD for workstation environments, built with top quality components, and stress tested to exceptional standards for demanding workloads.



### Application Certifications and Optimizations

Professional users rely on their workstations and their GPUs to get critical projects done. Their workstations need to behave like appliances that simply work. To this end, Radeon™ Pro hardware and software is certified by the leading professional application vendors. This means users have the peace of mind that their choice of design application will be capable of meeting the needs of their demanding workflows.



### Enterprise-Quality Software

All driver releases are rigorously tested for optimal stability with professional applications as the top priority, while delivering performance optimizations and value-added features. With leading driver stability and ease of IT management, Radeon™ Pro Software provides the optimal work environment for design professionals, whether in a small office or large enterprise.

AMD Radeon™ Pro GPUs have been designed, manufactured and optimized specifically for professional end users. The graphics hardware and software are strenuously optimized to deliver outstanding graphics performance in a wide range of 2D and 3D professional applications. Radeon™ Pro graphic cards also offer robust display output capabilities to drive multiple ultra-high resolution displays in a variety of configurations.

# Where are professional GPUs needed?

## Manufacturing & Design

Computer-aided design (CAD), manufacturing (CAM), and engineering simulation (CAE) applications rely on professional GPUs for optimal performance and stability to deliver robust products to market effectively.

## Media & Entertainment

Modern, high resolution digital content creation and broadcast workflows involve many compute-heavy tasks and have high memory requirements, areas that high-end professional GPUs excel in.



## Finance & Sector

Comprehensive support for high resolution multi-displays and operating stability are required for the financial sector.

## Architecture & Engineering

Modern Building Information Modeling (BIM) workflows allow for collaboration throughout the entire design process. Our GPUs offer exceptional value throughout this process, starting with CAD design to high end visualization and VR/Real-time rendering.

## Energy & Industry

Energy exploration datasets, such as those used in seismic imaging, can be massive in size and complexity.



# Power for Desktop Workstations



**AMD RADEON PRO WX 2100**  
 1.25 TFLOPS  
 2 GB Memory  
 3 Displays



**AMD RADEON PRO WX 3200**  
 1.66 TFLOPS  
 4 GB Memory  
 4 Displays



**AMD RADEON PRO WX 4100**  
 3.46 TFLOPS  
 4 GB Memory  
 4 Displays



**AMD RADEON PRO WX 5100**  
 3.89 TFLOPS  
 8 GB Memory  
 4 Displays



**AMD RADEON PRO WX 7100**  
 5.73 TFLOPS  
 8 GB Memory  
 4 Displays



**AMD RADEON PRO WX 8200**  
 10.7 TFLOPS  
 8 GB Memory  
 4 Displays



**AMD RADEON PRO WX 9100**  
 12.3 TFLOPS  
 16 GB Memory  
 6 Displays

## Display Resolution Support

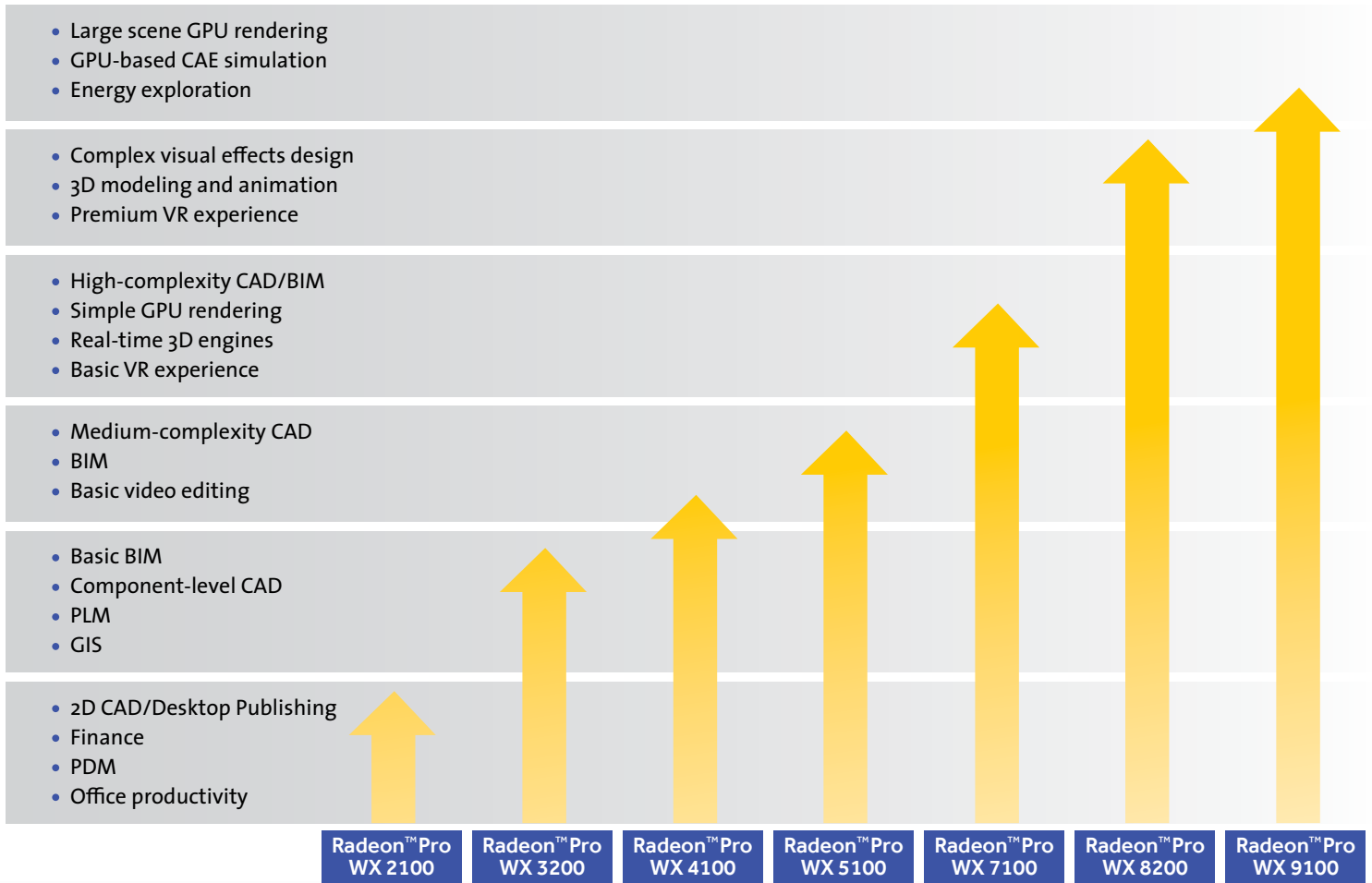
All Radeon™ Pro graphics cards support the latest DisplayPort 1.4 specification, which enables ultra-high monitor resolutions, such as 8K UHD (7680x4320), as well as technologies to enhance photorealism such as High Dynamic Range (HDR).

	Outputs	Full HD (1920x1080)	4K (3840x2160)	5K (5120x2880)	8K (7680x4320)
Radeon™ Pro WX 9100	(6x) Mini-DisplayPort	6@120 Hz	6@60 Hz 2@120 Hz	3@60 Hz (dual cable) 3@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)
Radeon™ Pro WX 8200	(4x) Mini-DisplayPort	4@120 Hz	4@60 Hz 2@120 Hz	2@60 Hz (dual cable) 3@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)
Radeon™ Pro WX 7100	(4x) DisplayPort	4@120 Hz	4@60 Hz 1@120 Hz	2@60 Hz (dual cable) 1@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)
Radeon™ Pro WX 5100	(4x) DisplayPort	4@120 Hz	4@60 Hz 1@120 Hz	2@60 Hz (dual cable) 1@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)
Radeon™ Pro WX 4100	(4x) Mini-DisplayPort	4@120 Hz	4@60 Hz 1@120 Hz	2@60 Hz (dual cable) 1@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)
Radeon™ Pro WX 3200	(4x) Mini-DisplayPort	4@120 Hz	4@60 Hz 1@120 Hz	2@60 Hz (dual cable) 1@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)
Radeon™ Pro WX 2100	(2x) Mini-DisplayPort (1x) DisplayPort	3@120 Hz	3@60 Hz 1@120 Hz	1@60 Hz (dual cable) 1@60 Hz (single cable)	1@60 Hz (dual cable) 1@30 Hz (single cable)

# The Choice for Professionals Everywhere

## Power to the Innovators

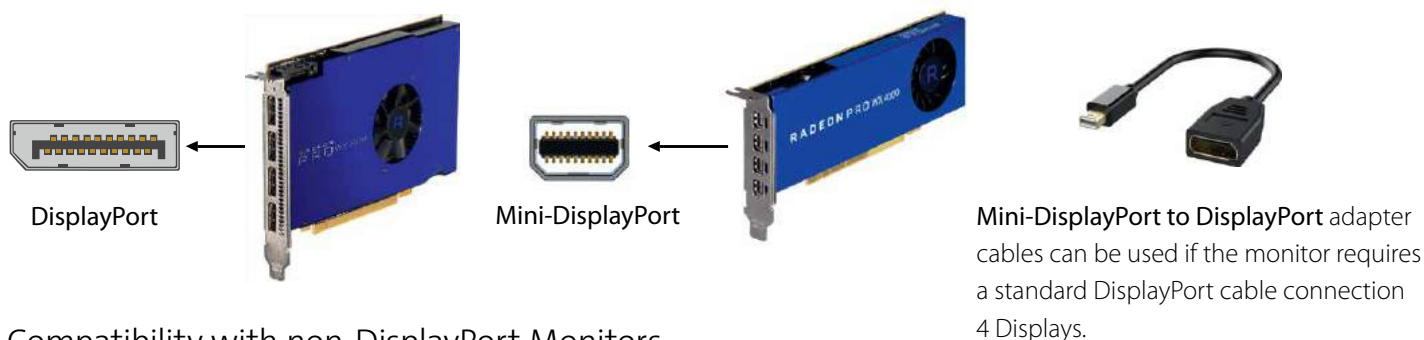
The Radeon™ Pro family of professional graphics solutions was crafted, from the ground up, for the most demanding of professional users. It provides the performance, features and reliability needed to tackle professional workflows in a multitude of industries such as manufacturing and architecture. With stringent product qualification, comprehensive application certifications, performance optimizations and regular enterprise driver updates, professional users can be assured a high quality visual experience and peace of mind when working on mission critical projects.



# Display Output Capabilities

## DisplayPort Monitors Compatibility

All Radeon™ Pro graphics cards support DisplayPort 1.4 which supports the latest ultra-high monitor resolutions, such as 8K UHD (7680x4320). Depending on the product model, a Radeon™ Pro graphics card can be equipped with standard DisplayPort receptacles, Mini-DisplayPort, or a combination of both. Both connector types are functionally equivalent. Mini-DisplayPort enables higher connector density, but it may require an adapter or a Mini-DisplayPort-to-DisplayPort cable if the monitor only uses standard DisplayPort.

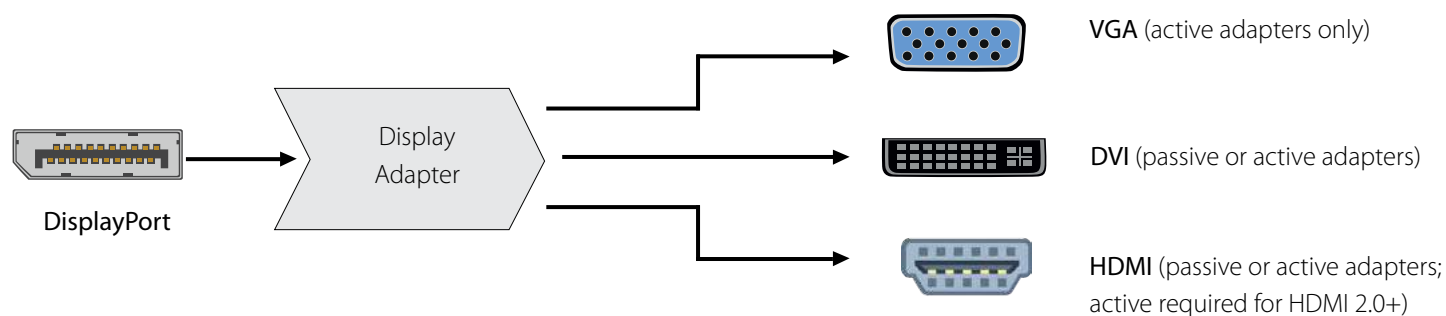


## Compatibility with non-DisplayPort Monitors

While Radeon™ Pro graphics cards are only equipped with DisplayPort connectors, other types of connections (e.g. HDMI) are also supported via adapters. There are two types of display adapters: passive and active.

- Passive adapter: only changes the connector form factor while relying on the GPU for signal conversion
- Active adapter: contains an integrated circuit for signal conversion, while the GPU continues to output a standard DisplayPort signal

There are advantages to both types of adapters, so the choice depends on the user's needs. Passive adapters are generally less expensive, while active adapters sometimes offer more robust conversion capabilities and are required when using a large number of displays.





# Radeon™ Pro Software for Enterprise

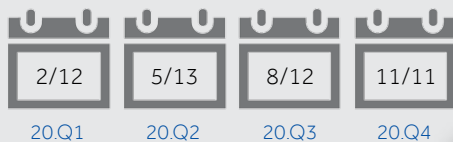
Great software to pair with great hardware

It is only with a combination of purpose-built hardware and software that AMD is able to offer a product that is designed to provide a dependable graphics solution for professional visualization needs.

Radeon™ Pro Software for Enterprise is a quarterly release of updated graphics drivers with stability fixes, performance enhancements, and new or updated features. It is AMD's commitment to continuously improve the user experience of Radeon™ Pro graphics users.

## Quarterly releases

AMD announces the Radeon™ Pro Software for Enterprise release dates at the end of each calendar year for the following year, enabling ease of planning for IT deployment. Each major release seeks to improve stability and performance, and often introduces new features to enhance productivity. The anticipated release dates for 2019 are set forth below:



## "One Driver"

Radeon™ Pro Software for Enterprise is a unified package that supports all AMD Radeon™ graphics products, including Radeon™ for commercial platforms, Radeon™ Pro WX-series for workstations, and Radeon™ Pro V-series for virtualized deployments. A unified software package for all products, greatly simplifying enterprise IT deployment efforts.



AMD  
RADEON PRO  
**Software**  
FOR ENTERPRISE

## Prioritized Issue Resolution

Professional applications can be very complicated and intricate. Being the graphics solution of choice for professional users, quick issue resolution to minimize downtime is of utmost importance for productivity. AMD works closely with application vendors to resolve any field-reported issues.



## Day-Zero Certification Program

Each major release of Radeon™ Pro Software for Enterprise strives to have a comprehensive set of certifications for all the major professional applications on the day of release. This is achieved through AMD's close collaboration with the application vendors to certify the software release as part of its standard qualification process.



# Compatible with more than 1.225 leading Applications

Professional GPU Graphics for powerful requirements

Product requirements in professional environments vary greatly from application to application, and user to user. Contrary to typical consumer use cases where nearly all aspects of a given 3D application is fully GPU accelerated (e.g. gaming), and thus benefit from having a powerful GPU, many professional applications are not entirely bound by GPU performance. Different applications utilize the GPU to varying degrees, and each application's GPU performance requirements can range from very low to very high depending on the complexity of the dataset.

The Logotable below shows a list of common applications used in manufacturing, architecture, and media and entertainment with accompanying GPU recommendations based on AMD's analysis of GPU accelerated features for the respective applications. This information is intended to be a guideline only. For the most up-to-date product recommendations, please visit AMD's online GPU selector tool: <https://www.amd.com/en/technologies/radeon-pro-software-certifications>. Please also see <https://www.amd.com/en/support/certified-drivers> for a complete list of Radeon™ Pro Software certifications.



# Radeon™ Pro Technical Specifications

	Radeon™ Pro WX 2100	Radeon™ Pro WX 3200	Radeon™ Pro WX 4100	Radeon™ Pro WX 5100	Radeon™ Pro WX 7100	Radeon™ Pro WX 8200	Radeon™ Pro WX 9100
Max Resolution per Display Output	7680x4320	7680x4320	7680x4320	7680x4320	7680x4320	7680x4320	7680x4320
Display Connectors	(2x) Mini-DP(1x) DP	(4x) Mini-DP	(4x) Mini-DP	(4x) DP	(4x) DP	(4x) Mini-DP	(6x) Mini-DP
Graphics Memory	2 GB GDDR5	4 GB GDDR5	4 GB GDDR5	8 GB GDDR5	8 GB GDDR5	8 GB HBM2	16 GB HBM2
Memory Bandwidth	48 GB/s	96 GB/s	96 GB/s	160 GB/s	224 GB/s	512 GB/s	484 GB/s
Stream Processors	512	640	1024	1792	2304	3584	4096
Peak Half Precision (FP16 TFLOPS)	1.25	1.66	2.46	3.89	5.73	21.5	24.6
Peak Single Precision (FP32 TFLOPS)	1.25	1.66	2.46	3.89	5.73	10.7	12.3
Peak Double Precision (FP64 TFLOPS)	0.08	0.104	0.15	0.24	0.36	0.67	0.77
DirectX® 12 Version	12_0	12_0	12_0	12_0	12_0	12_1	12_1
OpenGL Version	4.6	4.6	4.6	4.6	4.6	4.6	4.6
OpenCL™ Version	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Vulkan® Version	1.1	1.1	1.1	1.1	1.1	1.1	1.1
AMD VR Ready Creator	--	--	--	--	•	•	•
ECC Memory	--	--	--	--	--	•	•
HBC Controller	--	--	--	--	--	•	•
HEVC Encode/Decode	•	•	•	•	•	•	•
10-Bit Display Pipeline Support	•	•	•	•	•	•	•
AMD DirectGMATechnology	--	•	•	•	•	•	•
3D Stereo Sync	--	--	--	•	•	•	•
Genlock/Frame Lock Support	--	--	--	--	•	•	•
Graphics Card Form Factor	Low Profile Single Slot	Low Profile Single Slot	Low Profile Single Slot	Full Height Single Slot	Full Height Single Slot	Full Height Double Slot	Full Height Double Slot
Max Power Consumption	35 W	50 W	50 W	75 W	130 W	230 W	230 W
PCIe Power Connectors	--	--	--	--	6-pin	6-pin & 8-pin	6-pin & 8-pin



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