

Quick Reference Guide

AMD Radeon™ RX 6000M and RX 6000S Graphics

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Outstanding performance, powered by breakthrough AMD RDNA™ 2 architecture. The latest AMD Radeon™ RX 6000M and AMD Radeon™ RX 6000S Series Graphics bring phenomenal performance and a competitive gaming edge on the latest and most popular games.

PERFORMANCE PERFECTED

The AMD Radeon™ RX 6000M and RX 6000S Series Graphics, powered by **AMD RDNA™ 2 architecture**, deliver ultimate levels of gaming experiences, next-level visuals, and efficiency designed for the new generation of gaming and content creation laptops, even in thin and light form factors. Take advantage of AMD exclusive technologies such as **AMD SmartShift Max** for faster gaming and content creation applications, and **AMD Smart Access Memory™** technology for extra performance made possible by harnessing the full potential of AMD GPU memory.

VIVID VISUALS

AMD Radeon™ RX 6000M and 6000S Graphics bring life-like visuals with the latest **DirectX® 12 Ultimate** and **AMD FidelityFX™** technology enabled games, enabling realistic lighting, shadows, and reflections with jaw-dropping details, even in thin and light laptops. Enjoy extended brightness range and vivid colors in your DirectX® 11 and above games with **Windows 11 AutoHDR** support. AMD FidelityFX™ technology features are optimized for AMD RDNA™ 2 architecture to power the next generation of gaming visuals.

MAXIMIZED MOBILITY

With power saving technologies such as Microsoft Modern Standby®, **Windows 11 Dynamic Refresh Rate** and **AMD Infinity Cache™** technology, these graphics cards enable outstanding performance in slim and light form factors. AMD Radeon™ RX 6000 Series Graphics use extensive hardware and software optimizations to maximize operational efficiency at low power levels to enable high-performance gaming graphics in incredibly compact designs.

PRODUCT SPECIFICATIONS	GRAPHICS POWER (without AMD SmartShift)	ARCHITECTURE	COMPUTE UNITS	GAME CLOCK	GDDR6 MEMORY SIZE	MEMORY BANDWIDTH	MEMORY INTERFACE	INFINITY CACHE™
AMD Radeon™ RX 6850M XT	Up to 165W	AMD RDNA™ 2	40	2463 MHz	12 GB	432 GB/s	192 bit	96 MB
AMD Radeon™ RX 6800M	Up to 145W	AMD RDNA™ 2	40	2300 MHz	12 GB	384 GB/s	192 bit	96 MB
AMD Radeon™ RX 6700M	Up to 135W	AMD RDNA™ 2	36	2340 MHz	10 GB	320 GB/s	160 bit	80 MB
AMD Radeon™ RX 6650M XT	Up to 120W	AMD RDNA™ 2	32	2162 MHz	8 GB	256 GB/s	128 bit	32 MB
AMD Radeon™ RX 6650M	Up to 120W	AMD RDNA™ 2	28	2222 MHz	8 GB	256 GB/s	128 bit	32 MB
AMD Radeon™ RX 6600M	Up to 100W	AMD RDNA™ 2	28	2177 MHz	8 GB	224 GB/s	128 bit	32 MB
AMD Radeon™ RX 6550M	Up to 80W	AMD RDNA™ 2	16	2560 MHz	4 GB	144 GB/s	64 bit	16 MB
AMD Radeon™ RX 6500M	Up to 50W	AMD RDNA™ 2	16	2191 MHz	4 GB	128 GB/s	64 bit	16 MB
AMD Radeon™ RX 6450M	Up to 50W	AMD RDNA™ 2	12	2220 MHz	4 GB	128 GB/s	64 bit	16 MB
AMD Radeon™ RX 6300M	Up to 25W	AMD RDNA™ 2	12	1512 MHz	2 GB	64 GB/s	32 bit	8 MB
AMD Radeon™ RX 6800S	Up to 100W	AMD RDNA™ 2	32	1975 MHz	8 GB	256 GB/s	128 bit	32 MB
AMD Radeon™ RX 6700S	Up to 80W	AMD RDNA™ 2	28	1890 MHz	8 GB	224 GB/s	128 bit	32 MB
AMD Radeon™ RX 6600S	Up to 80W	AMD RDNA™ 2	28	1881 MHz	4 GB	224 GB/s	128 bit	32 MB
AMD Radeon™ RX 6550S	Up to 50W	AMD RDNA™ 2	16	2170 MHz	4 GB	128 GB/s	64 bit	16 MB

Exceptional Features, Designed For Gamers

Deliberately designed hardware and software features unleash the full potential of AMD Radeon™ Graphics products to enable elevated gaming experiences.

AMD FidelityFX™ technology

AMD FidelityFX¹ technology is a collection of high-quality visual effects that deliver ultimate visual quality with minimal performance overhead, freeing up your graphics card to power the intense gaming experiences you demand.

- FidelityFX™ **Super Resolution** technology² to boost framerates and deliver high-quality, high resolution gaming experiences
 - FidelityFX™ **Ambient Occlusion** for realistic geometric shading.
 - FidelityFX™ **Contrast Adaptive Sharpening** for stunning visual sharpness
 - FidelityFX™ **Screen Space Reflections** for high-quality realistic reflections
- ... and more: visit www.amd.com/fidelityfx for supported titles and to learn more.

Reducing Total System Latency**AMD Radeon™ Anti-Lag**

Radeon™ Anti-Lag³ reduces lag by intelligently controlling the queuing of CPU work ahead of GPU work so you can have the competitive edge when you game.

AMD Radeon™ Boost

Radeon™ Boost² delivers extra performance when fast motion via mouse input is detected in select titles, enabling higher FPS and a more responsive feel.

AMD FreeSync™ Technology

AMD FreeSync™ technology⁴ can put an end to choppy gameplay and broken frames with fluid, artifact-free performance at virtually any frame rate. With over 2000 certified FreeSync technology-enabled monitors to choose from, achieving pixel-perfect, low latency, smooth gaming has never been easier.

AMD Advantage™ Systems

The AMD Advantage framework initiative combines our best mobile hardware with a family of smart technologies engineered to intelligently accelerate performance and helps extend battery life based on the way you use your system.

AMD Smart Technologies

Used together, AMD Ryzen™ CPUs and Radeon™ GPUs are augmented by a collection of AMD smart technologies that orchestrate the whole system's behavior based on your workload.

Exclusive to all-AMD systems, smart technologies enhance system performance and efficiency by quickly and dynamically directing power to where it's needed and leveraging the synergies of AMD's CPUs and GPUs to help accelerate the overall platform, improve data transfers, reduce latency in your favorite games, and load levels in the blink of an eye.

● = BEST ◐ = BETTER ○ = GOOD

AMD RADEON™ GRAPHICS RECOMMENDED USAGE CHART

Product Family	Web Browsing, Email & Social	Watching 4K Media and Content	Video Editing	Esports Gaming	AAA Gaming	VR Ready Gaming¹	Live Game Streaming	1440p Gaming	Hardware Raytracing	4K Gaming
AMD RADEON™ RX 6850M XT	●	●	●	●	●	●	●	●	◐	◐
AMD RADEON™ RX 6800M	●	●	●	●	●	●	●	●	◐	○
AMD RADEON™ RX 6700M	●	●	●	●	●	●	●	●	◐	
AMD RADEON™ RX 6650M XT	●	●	●	●	●	●	◐	◐	○	
AMD RADEON™ RX 6650M	●	●	●	●	●	●	◐	◐	○	
AMD RADEON™ RX 6600M	●	●	●	●	◐	◐	◐	○	○	
AMD RADEON™ RX 6550M	●	●	◐	◐	◐	○				
AMD RADEON™ RX 6500M	●	◐	◐	◐	◐	○				
AMD RADEON™ RX 6450M	●	◐	◐	◐	○	○				
AMD RADEON™ RX 6300M	●	○	○	○	○	○				
AMD RADEON™ RX 6800S	●	●	●	●	●	●	●	◐	◐	
AMD RADEON™ RX 6700S	●	●	●	●	●	●	●	○	○	
AMD RADEON™ RX 6600S	●	●	●	●	●	●	◐	○	○	
AMD RADEON™ RX 6550S	●	◐	◐	◐	◐					

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1. For additional information about FidelityFX technology, see <https://www.amd.com/en/technologies/radeon-software-fidelityfx>. GD-172.

2. Radeon™ Boost is compatible with Windows 7/10/11 in select titles only. Hardware compatibility includes Radeon RX 400 and newer consumer dGPUs, Ryzen 2000 Series and newer APUs, including hybrid and detachable graphics configurations. No mGPU support. Radeon™ Boost VRS compatible with AMD Radeon™ RX 6000 Series Graphics only. For a list of compatible titles see <https://www.amd.com/en/technologies/radeon-boost>. GD-158

3. Radeon™ Anti-Lag is compatible with DirectX 9, DirectX 11 and DirectX 12 APIs, and Windows 7/10/11. Hardware compatibility includes Radeon GCN and newer consumer dGPUs, Ryzen 2000 Series and newer APUs, including hybrid and detachable graphics configurations. No mGPU support. GD-157

4. AMD FreeSync™ technology requires AMD Radeon™ graphics and a display that supports FreeSync technology as certified by AMD. AMD FreeSync™ Premium technology adds requirements of mandatory low framerate compensation and at least 120 Hz refresh rate at minimum FHD. AMD FreeSync™ Premium Pro technology adds requirements for the display to meet AMD FreeSync Premium Pro compliance tests. See www.amd.com/freesync for complete details. Confirm capability with your system manufacturer before purchase. GD-127

5. Radeon VR Ready Premium Products are select Radeon GPUs that meet or exceed the HTC, Oculus, and Valve recommended specifications for video cards/dGPUs. Other hardware (including CPU) and system requirements recommended by HTC, Oculus, and Valve 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-102

6. Smart Access Memory technology enablement requires an AMD Radeon RX 6000 series or RX 5000 series GPU (excluding the Ryzen 5 3400G and Ryzen 3 3200G), a 500 series motherboard with the latest BIOS update, and AMD Desktop Kits (4800S Series and later). BIOS requires support for AGESA 1.1.0.0 or higher. Download latest BIOS from vendor website. For additional information and system requirements, see <https://www.amd.com/en/technologies/smart-access-memory>. GD-178

7. AMD FidelityFX Super Resolution (FSR) versions 1 and 2 are available on select games which require game developer integration, and is supported on select AMD products. AMD does not provide technical or warranty support for AMD FidelityFX Super Resolution enablement on other vendors' graphics cards. See <https://www.amd.com/en/technologies/fidelityfx-super-resolution> for additional information. GD-187. GD-187

8. Microsoft Modern Standby availability depends on system manufacturer. Check with your manufacturer for further information