

QUICK REFERENCE GUIDE

AMD RYZEN™ 5000 SERIES PROCESSORS

THE WORLD'S BEST GAMING PROCESSORS



THE FASTEST IN THE GAME¹

AMD Ryzen™ 5000 Series processors power the next generation of demanding games, providing one of a kind immersive experiences and dominate any multithreaded task like 3D and video rendering, and software compiling. With up to 16 cores, 32 threads, boost clocks of up to 4.9GHz² and up to 72MB of cache in select models, AMD Ryzen™ 5000 Series processors deliver the ultimate gaming performance.

THE LATEST TECHNOLOGIES

All AMD Ryzen™ 5000 Series processors come with the full suite of Ryzen™ processor technologies designed to elevate your PC's processing power including Precision Boost 2 and Precision Boost Overdrive³. Also get maximum graphics and storage bandwidth with these PCIe® 4.0 ready processors. That's not all, AMD Ryzen™ 5000 Series features the exceptional 7nm architecture performance-per-watt.

BUILD WITH CONFIDENCE





With AMD Ryzen™ 5000 Series desktop processors, you can easily configure and customize your rig for the ultimate gaming build. These processors drop-in ready with a BIOS update on AMD 500 and 400 Series motherboards. You can easily tweak and tune your processor with Ryzen™ Master and jump in the game faster with AMD StoreMI technology.

	CORES/ THREADS	TYPICAL TDP	UP TO MAX/BASE FREQUENCY ^{2,4}	TOTAL CACHE	PCIe® 4.0 LANES WITH X570 CHIPSET (USABLE / TOTAL)	UNLOCKED FOR OVERCLOCKING ⁵	ARCHITECTURE	IN BOX COOLER	COMPETITIVE PROCESSOR
AMD Ryzen™ 9 5950X	16/32	105W	4.9/3.4	72MB	36/44	Yes	"Zen 3"	-	-
AMD Ryzen™ 9 3950X	16/32	105W	4.7/3.5	72MB	36/44	Yes	"Zen 2"	-	-
AMD Ryzen™ 9 5900X	12/24	105W	4.8/3.7	70MB	36/44	Yes	"Zen 3"	-	Core i9-10900K
AMD Ryzen™ 9 3900XT	12/24	105W	4.7/3.8	70MB	36/44	Yes	"Zen 2"	-	Core i9-10900K
AMD Ryzen™ 7 5800X	8/16	105W	4.7/3.8	36MB	36/44	Yes	"Zen 3"	-	Core i7-10700K
AMD Ryzen™ 7 3800XT	8/16	105W	4.7/3.9	36MB	36/44	Yes	"Zen 2"	-	Core i7-10700K
AMD Ryzen™ 5 5600X	6/12	65W	4.6/3.7	35MB	36/44	Yes	"Zen 3"	Wraith Stealth	Core i5-10600K
AMD Ryzen™ 5 3600XT	6/12	95W	4.5/3.8	35MB	36/44	Yes	"Zen 2"	Wraith Spire	Core i5-10600K

AMD RYZEN TECHNOLOGY

- **Precision Boost 2** automatically raises processor frequencies for supercharged performance. Whether your application uses one core or many, Precision Boost 2 is always watching temperature and power consumption to intelligently deliver the best possible result for your PC.
- **AMD StoreMI** technology is the fast and easy way to expand and accelerate the storage in a desktop by combining the speed of an SSD with the capacity of an HDD.
- **Precision Boost Overdrive⁵** makes automatic overclocking a reality with increased clock speed and power limits at the click of a button. Precision Boost Overdrive is also easy to use thanks to one-touch activation in the BIOS or via AMD Ryzen™ Master.
- Use **AMD Ryzen™ Master** with your unlocked AMD Ryzen desktop processor to easily personalize performance.

● = BEST ◐ = BETTER ○ = GOOD

	 PRODUCTIVITY & ENTERTAINMENT	 MAX GAME PERFORMANCE	 GAMING & STREAMING	 CONTENT CREATION
AMD Ryzen™ 9 5950X	●	●	●	●
AMD Ryzen™ 9 5900X	●	●	●	◐
AMD Ryzen™ 7 5800X	●	●	◐	◐
AMD Ryzen™ 5 5600X	●	●	○	○

*This chart illustrates relative product positioning on key functionality and is not necessarily an indication of relative performance. Performance may vary by application.

For more information visit www.AMD.com/RYZEN

1. Testing by AMD performance labs as of 9/2/2020 based on the average FPS of 40 PC games at 1920x1080 with the High image quality preset using an AMD Ryzen™ 9 5900X processor vs. Core i9-10900K. Results may vary. R5K-002

2. Max boost for AMD Ryzen and Athlon processors is the maximum frequency achievable by a single core on the processor running a bursty single-threaded workload. Max boost will vary based on several factors, including, but not limited to: thermal paste; system cooling; motherboard design and BIOS; the latest AMD chipset driver; and the latest OS updates. GD-150

3. Precision Boost Overdrive requires a compatible AMD Ryzen Threadripper, 3rd Gen AMD Ryzen processor or AMD Ryzen 5000 Series processor and a motherboard compatible with one or more of these processors. AMD 2nd Gen Ryzen processors including the Ryzen 3200G processor are not compatible with Precision Boost Overdrive. Because Precision Boost Overdrive enables operation of the processor outside of specifications and in excess of factory settings, use of the feature invalidates the AMD product warranty and may also void warranties offered by the system manufacturer or retailer. GD-135.

4. Base frequency is the approximate processor clock speed of a typical workload running at the processor's standard TDP. GD-166.

5. AMD's product warranty does not cover damages caused by overclocking, even when overclocking is enabled via AMD hardware and/or software. GD-26