AMD RYZEN™ 7 5800X3D DESKTOP PROCESSOR
The World's Fastest Gaming Processor[1]

There is only one processor that merges pure, raw gaming performance with advanced AMD 3D V-Cache™ technology to create a one-two punch of gaming performance, the AMD Ryzen™ 7 5800X3D processor.

TARGET AUDIENCE

ENTHUSIASTS WHO WANT CUTTING EDGE TECHNOLOGY WITH AMD 3D V-CACHE™

GAMERS WHO WANT A DROP-IN READY CPU

GAMERS WHO CRAVE MAX FPS AND IMMERSIVE GAMEPLAY

SELL IT IN 30 SECONDS

AMD 3D V-CACHE™ TECHNOLOGY
- 3D stacked cache for framerate improvements
- Provides more performance, better energy efficiency, and reduced latency

FASTER GAMING
- 15% faster on average than the AMD Ryzen™ 9 5900X[3]
- Up to 43% more performance than the Intel Core i9-12900K[7]

DESIGNED FOR GAMERS
- Specialized processor for enthusiast gamers
- 3D V-Cache™ provides an enormous gaming uplift

"ZEN 3" ARCHITECTURE
- More core throughput with large caches and powerful threads
- Increased computing performance with optimal energy efficiency

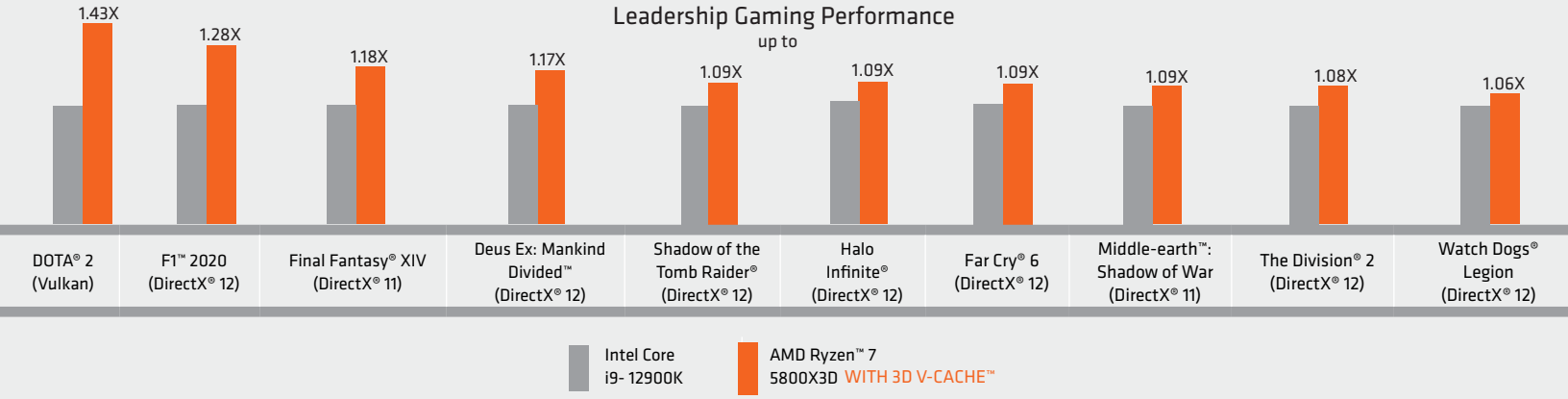
DROP-IN READY
- Ready with a simple BIOS update
- AMD 500, 400, select 300 Series motherboards

PRECISION BOOST 2[2]
- Automatically raises CPU clock speeds

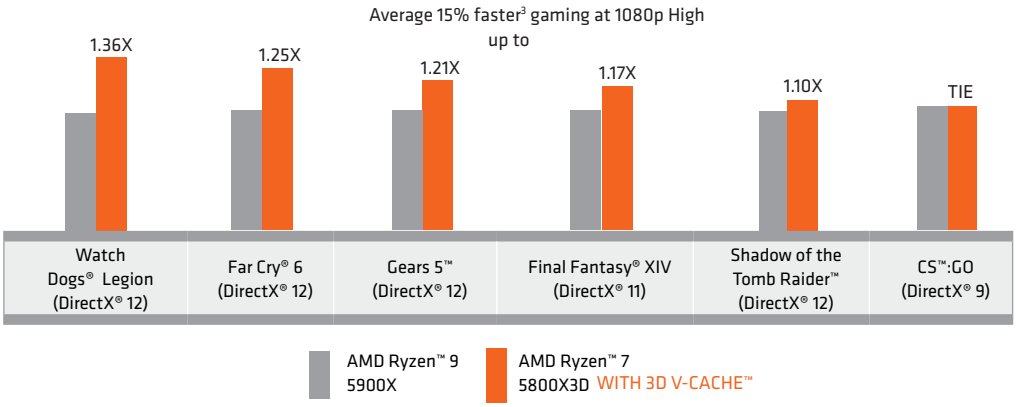
PRODUCT SPECIFICATIONS

CORES/THREADS	TYPICAL TDP	UP TO MAX/BASE FREQUENCY[4]	TOTAL CACHE	PCIE® READY	UNLOCKED FOR OVERCLOCKING[5,6]?	COMPETITIVE PROCESSOR
8/16	105W	4.5/3.4	100MB	Gen 4	Yes - Memory and Infinity Fabric™ Overclocking	Core i9-12900K

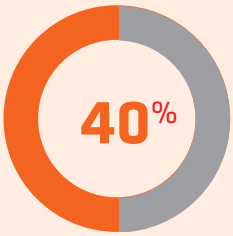
BENCHMARK COMPARISON - COMPETITIVE[7]



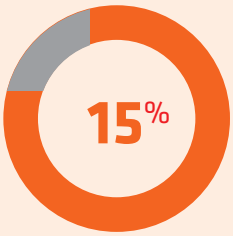
BENCHMARK COMPARISON - GENERATIONAL[3]



CLAIMS COMPARISON



Up to 40% more gaming performance per dollar versus the Intel Core i9-12900K[8]



On average, 15% Faster Gaming versus the AMD Ryzen™ 9 5900X[3]

1. Based on testing by AMD as of 12/14/2021. Performance evaluated with Watch Dogs Legion, Far Cry 6, Gears 5, Final Fantasy XIV, Shadow of the Tomb Raider and CS:GO. All games test at 1920x1080p resolution with the HIGH in-game quality preset (or equivalent). System configuration: Ryzen 7 5800X3D and AMD Reference Motherboard with 2x8GB DDR4-3600. Core i9-12900K and ROG Maximus Z690 Hero motherboard with BIOS 0702 and 2x16GB DDR5-5200. Both systems configured with GeForce RTX 3080 on driver 472.12, Samsung 980 Pro 1TB, NZXT Kraken X62, Windows 11 28000.282. R5K-107
2. For additional information about Precision Boost 2, see https://www.amd.com/en/support/kb/faq/cpu-pb2. GD-188
3. Based on testing by AMD as of 12/14/2021. Performance evaluated with Watch Dogs Legion, Far Cry 6, Gears 5, Final Fantasy XIV, Shadow of the Tomb Raider and CS:GO. All games test at 1920x1080 resolution with the HIGH in-game quality preset (or equivalent). System configuration: Ryzen 7 5800X3D and AMD Reference Motherboard, Ryzen 9 5900X and ASUS Crosshair VIII Hero with BIOS 3801. Both systems configured with 2x8GB DDR4-3600, GeForce RTX 3080 with 472.12 driver, Samsung 980 Pro 1TB, NZXT Kraken X62, and Windows 11 28000.282. R5K-106
4. Max boost for AMD Ryzen 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
5. AMD's product warranty does not cover damages caused by overclocking or undervolting outside of AMD's published specifications, even when these are enabled via AMD hardware and/or software. GD-26
6. Overclocking and/or Undervolting AMD processors and memory, including without limitation, altering clock frequencies / multipliers or memory timing / voltage, to operate outside of AMD's published specifications will void any applicable AMD product warranty, even when enabled via AMD hardware and/or software. This may also void warranties offered by the system manufacturer or retailer. Users assume all risks and liabilities that may arise out of overclocking and/or undervolting AMD processors, including, without limitation, failure of or damage to hardware, reduced system performance and/or data loss, corruption or vulnerability. GD-106
7. Based on testing by AMD as of 3/18/2021. All games tested at 1920x1080p resolution with the High in-game quality preset (or equivalent). System configuration: Ryzen 7 5800X3D and MSI MEG GODLIKE X570 with 2x8GB DDR4-3600 versus a Core i9-12900K and ROG Maximus Z690 Hero motherboard with 2x16GB DDR5-5200. Both systems configured with GeForce RTX 3090 on driver 511.79, Samsung 980 Pro 1TB, MSI MAG 360R, Windows 11 22000.527. R5K-120
8. Based on testing by AMD as of 3/18/2021. All games tested at 1920x1080p resolution with the High in-game quality preset (or equivalent). Pricing determined by using launch pricing as stated by each manufacturer at time of launch. System configuration: Ryzen 7 5800X3D and MSI MEG GODLIKE X570 with 2x8GB DDR4-3600 versus a Core i9-12900K and ROG Maximus Z690 Hero motherboard with 2x16GB DDR5-5200. Both systems configured with GeForce RTX 3090 on driver 511.79, Samsung 980 Pro 1TB, MSI MAG 360R, Windows 11 22000.527. R5K-121