

Title:AMD Ryzen 9 5900x

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Abstract—Power up your computing experience with the AMD Ryzen 9 5900X 3.7 GHz 12-Core AM4 Processor, which features 12 cores and 24 threads to help quickly load and multitask demanding applications. Designed for socket AM4 motherboards using the powerful Zen 3 architecture, the 7nm 5th generation Ryzen processor offers significantly improved performance compared to its predecessor. With a base clock speed of 3.7 GHz and a max boost clock speed of 4.8 GHz in addition to 64MB of L3 Cache, the Ryzen 9 5900X is built to deliver the performance needed to smoothly handle tasks ranging from content creation to immersive gaming experiences

Index Terms—The word mostly used in your -AMD Ryzen9 5900x,Latex

I. INTRODUCTION

Power up your computing experience with the AMD Ryzen 9 5900X 3.7 GHz 12-Core AM4 Processor, which features 12 cores and 24 threads to help quickly load and multitask demanding applications. Designed for socket AM4 motherboards using the powerful Zen 3 architecture, the 7nm 5th generation Ryzen processor offers significantly improved performance compared to its predecessor. With a base clock speed of 3.7 GHz and a max boost clock speed of 4.8 GHz in addition to 64MB of L3 Cache, the Ryzen 9 5900X is built to deliver the performance needed to smoothly handle tasks ranging from content creation to immersive gaming experiences. Other features include support for PCIe Gen 4 technology and 3200 MHz DDR4 RAM with compatible motherboards. This processor has a 105W TDP (Thermal Design Power) and does not include a cooling solution. Please note that it does not have an integrated GPU, so a dedicated graphics card is required. Please note: Our apologies for the price but, it is the supplier only having a few pieces and at an inflated price. Our margin is very small. We are only offering this for someone that just cant wait on stocks and needs a cpu today.

II. LITERATURE REVIEW

A majority of AMD's consumer Ryzen products use the Socket AM4 platform. In August 2017, AMD launched their Ryzen Threadripper line aimed at the enthusiast workstation market. AMD Ryzen Threadripper uses the larger TR4, sTRX4, and sWRX8 sockets, which support additional memory channels and PCI Express lanes.

In December 2019, AMD started producing first generation Ryzen products built using the second generation Zen+ architecture.[14] The most notable example is Ryzen 5 1600, with newest batches, having "AF" identifier instead of its usual "AE", being essentially a rebadged Ryzen 5 2600 with the same specifications as the original Ryzen 5 1600

III. KEY FEATURES

12 Cores 24 Threads 3.7 GHz Base Clock 4.8 GHz Max Boost Clock Socket AM4 6MB L2 64MB L3 Cache DDR4-3200 Memory Supports PCIe 4.0 x16

IV. PRECISION BOOST 2

AMD Ryzen processors monitor the system's energy consumption, temperatures, and other factors to automatically raise clock speeds, allowing applications to perform faster.

V. PRECISION BOOST OVERDRIVE

Precision Boost Overdrive technology takes advantage of your compatible motherboard's design to boost clock speeds higher and for longer periods of time. It also allows you overclock the processor at the touch of a button.

VI. AMD STOREMI TECHNOLOGY

AMD StoreMI technology helps to improve load times and overall system performance by combining solid-state drives and mechanical hard drives into a single hybrid storage drive. Frequently used files and programs are cached onto the fast SSD while other files are stored on the high-capacity HDD.

VII. AMD RYZEN VR READY PREMIUM

Ryzen VR Ready Premium processors are designed to meet or exceed the recommended specifications from the top HMD manufacturers, including Oculus Rift, HTC Vive, and Windows Mixed Reality for smooth performance.

VIII. AMD RYZEN MASTER UTILITY

Personalized Performance: The AMD Ryzen Master Utility provides you with multiple custom profiles to store CPU, GPU, and DDR4 memory configurations. Use it to configure performance parameters for the active cores and adjust memory times. You can also optimize general performance or fine tune your favorite applications

System Monitoring: Monitor your system in real-time using the AMD Ryzen Master Utility, which features a histogram of per-core clock rates and temperature, including average and peak readings

IX. AMD 5900X SPECS : GENERAL

CPU Model - AMD Ryzen 9 5900X
CPU Socket - AM4
Manufacturing Process - 7 nm
Unlocked -Yes.

X. AMD 5900X SPECS :PERFORMANCE

Number of Cores - 12
Number of Threads - 24
Base Clock Speed -3.7 GHz
Maximum Boost Speed - 4.8 GHz
L3 Cache - 64 MB
Memory Support -DDR4 3200 MHz
ECC Memory - No
Thermal Design Power - (TDP) 105 W
Included Thermal Solution - None
Thermal Monitoring Technologies - No

XI. ADDITIONAL INFORMATION

Brand - AMD
SKU - 100-100000061WOF
Weight - 1.5000
Compatibility - AM4(+)
Series - 5000 Series
Cores - 12
Operating Frequency - 3.8 GHz
Hyper Threading Support - Yes
Threads - 24
Thermal Design Power - 105W

XII. THIS IS THE SYSTEM WE USED TO TEST DESKTOP CPU PERFORMANCE:

Intel 10th Gen:
CPU Cooler: Cooler Master Masterliquid 360P Silver Edition
Graphics card: Nvidia GeForce RTX 2080 Ti
RAM: 32GB HyperX Predator RGB @ 3,000MHz
Motherboard: MSI MEG Z490 Godlike
SSD: ADATA XPG SX8200 Pro @ 1TB
Power Supply: Phanteks RevoltX 1200
Case: Praxis Wetbench
Intel 9th Gen:
CPU Cooler: Cooler Master Masterliquid 360P Silver Edition
Graphics card: Nvidia GeForce RTX 2080 Ti
RAM: 32GB HyperX Predator RGB @ 3,000MHz
Motherboard: MSI MEG Z390 ACE
SSD: ADATA XPG SX8200 Pro @ 1TB
Power Supply: Phanteks RevoltX 1200
Case: Praxis Wetbench
AMD 3rd Gen: CPU Cooler: Cooler Master Masterliquid 360P Silver Edition

Graphics card: Nvidia GeForce RTX 2080 Ti
RAM: 32GB HyperX Predator RGB @ 3,000MHz
Motherboard: X570 Aorus Master
SSD: ADATA XPG SX8200 Pro @ 1TB
Power Supply: Phanteks RevoltX 1200
Case: Praxis Wetbench
AMD Ryzen 9 5900X and Ryzen 7 5800X:
CPU Cooler: Cooler Master Masterliquid 360P Silver Edition
Graphics card: Nvidia GeForce RTX 2080 Ti
RAM: 32GB HyperX Predator RGB @ 3,000MHz
Motherboard: AsRock X570 Taichi
SSD: ADATA XPG SX8200 Pro @ 1TB
Power Supply: Corsair AX100

XIII. PERFORMANCE

You want the best processor for gaming:

The AMD Ryzen 9 5900X is an incredibly powerful processor for gaming, bringing single-core performance that goes way beyond what last-generation CPUs brought to the table. A large portion of games should see a massive performance increase.

You need something that can do creative work:

Ryzen is Ryzen, and with 12 cores and 24 threads, the AMD Ryzen 5900X is an absolute beast for multi-core workloads. The massive boost to single-core performance helps to increase multi-core performance – after all if every core is faster, the entire processor will obviously benefit.

You want a nice upgrade from Ryzen 2000 or 3000:

Because the AMD Ryzen 9 5900X features such a huge jump in single-core performance over the Ryzen 9 3900X, it's genuinely worth the upgrade, especially if one of the main things you're doing with your PC is playing PC games.

XIV. IN FUTURE WHAT WILL WE DO:

Future we will try to gather more information about this latest version of AMD processor

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