

AMD Ryzen™ 9 7900X

GENERAL SPECIFICATIONS

General Specifications

CONNECTIVITY

Platform: Desktop

GRAPHICS CAPABILITIES

Market Segment: Enthusiast Desktop

PRODUCT IDS

Product Family: AMD Ryzen™ Processors

KEY FEATURES

Product Line: AMD Ryzen™ 9 Processors

AMD PRO Technologies: No

Consumer Use: Yes

Regional Availability: Global

Former Codename: "Raphael AM5"

Architecture: "Zen 4"

of CPU Cores: 12

Multithreading (SMT): Yes

# of Threads:	24
Max. Boost Clockⁱ:	Up to 5.6GHz
Base Clock:	4.7GHz
L1 Cache:	768KB
L2 Cache:	12MB
L3 Cache:	64MB
Default TDP:	170W
Processor Technology for CPU Cores:	TSMC 5nm FinFET
Processor Technology for I/O Die:	TSMC 6nm FinFET
CPU Compute Die (CCD) Size:	71mm ²
I/O Die (IOD) Size:	122mm ²
Package Die Count:	3
Unlocked for Overclockingⁱ:	Yes
AMD EXPO™ Memory Overclocking Technology:	Yes
Precision Boost Overdrive:	Yes
Curve Optimizer Voltage Offsets:	Yes
AMD Ryzen™ Master Support:	Yes

CPU Socket:	AM5
Supporting Chipsets:	A620 X670E X670 B650E B650
CPU Boost Technology:	Precision Boost 2
Instruction Set:	x86-64
Supported Extensions:	AES, AMD-V, AVX, AVX2, AVX512, FMA3, MMX(+), SHA, SSE, SSE2, SSE3, SSE4.1, SSE4.2, SSE4A, SSSE3, x86-64
Thermal Solution (PIB):	Not included
Recommended Cooler:	Liquid cooler recommended for optimal performance
Max. Operating Temperature (Tjmax):	95°C
Launch Date:	9/27/2022
*OS Support:	Windows 11 - 64-Bit Edition Windows 10 - 64-Bit Edition RHEL x86 64-Bit Ubuntu x86 64-Bit *Operating System (OS) support will vary by manufacturer.

Connectivity

USB Type-C® Support:	Yes	
Native USB 3.2 Gen 2 (10Gbps) Ports:	4	
Native USB 3.2 Gen 1 (5Gbps) Ports:	0	
Native USB 2.0 (480Mbps) Ports:	1	
Native SATA Ports:	0	
Native PCIe® Lanes (Total/Usable):	28 / 24	
Additional Usable PCIe Lanes from Motherboard:	AMD X670E	12x Gen4
	AMD X670	12x Gen4
	AMD B650E	8x Gen4
	AMD B650	8x Gen4
NVMe Support:	Boot, RAID0, RAID1, RAID10	
System Memory Type:	DDR5	
Memory Channels:	2	
Max. Memory:	128GB	
System Memory Subtype:	UDIMM	
Max Memory Speed:	2x1R	DDR5-5200
	2x2R	DDR5-5200
	4x1R	DDR5-3600
	4x2R	DDR5-3600

ECC Support: Yes (Requires mobo support)

Graphics Capabilities

Integrated Graphics: Yes

Graphics Model: AMD Radeon™ Graphics

Graphics Core Count: 2

Graphics Frequency: 2200 MHz

USB Type-C® DisplayPort™ Alternate Mode: Yes

Product IDs



Product ID Boxed: 100-100000589WOF

Product ID Tray: 100-000000589

Key Features

Supported Technologies: AMD EXPO™ Technology
AMD Ryzen™ Technologies

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