

AMD Ryzen™ 9 7950X3D

GENERAL SPECIFICATIONS	General Specifications	
	Platform:	Desktop
	Market Segment:	Enthusiast Desktop
	Product Family:	AMD Ryzen™ Processors
	Product Line:	AMD Ryzen™ 9 Processors
	AMD PRO Technologies:	No
	Consumer Use:	Yes
	Regional Availability:	Global
	Former Codename:	"Raphael AM5"
	Architecture:	"Zen 4"
CONNECTIVITY	# of CPU Cores:	16
	Multithreading (SMT):	Yes
GRAPHICS CAPABILITIES		
PRODUCT IDS		
KEY FEATURES		

# of Threads:	32
Max. Boost Clockⁱ:	Up to 5.7GHz
Base Clock:	4.2GHz
L1 Cache:	1MB
L2 Cache:	16MB
L3 Cache:	128MB
Default TDP:	120W
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
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):	89°C
Launch Date:	2/28/2023
*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	
PCI Express® Version:	PCIe® 5.0	
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)
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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:	100-100000908WOF
Product ID Tray:	100-000000908

Key Features

Supported Technologies:

AMD EXPO™ Technology
AMD Ryzen™ Technologies

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