Image Zoom

AMD Ryzen™ 7 PRO 8840U

AMD Ryzen™ 7 PRO processor for business

Contact Sales | Learn More

Collapse All

General Specifications

Name	AMD Ryzen™ 7 PRO 8840U
Family	Ryzen PRO
Series	Ryzen PRO 8000 Series
Form Factor	Desktops, 1L Desktops, Laptops, Mobile Workstations
AMD PRO Technologies	Yes
Regional Availability	Global
Former Codename	Hawk Point
Processor Architecture	Zen 4
# of CPU Cores	8
Multithreading (SMT)	Yes
# of Threads	16
Max. Boost Clock	Up to 5.1 GHz
Base Clock	3.3 GHz
L2 Cache	8 MB
L3 Cache	16 MB
Default TDP	28W
AMD Configurable TDP (cTDP)	15-30W
Processor Technology for CPU Cores	TSMC 4nm FinFET
CPU Compute Die (CCD) Size	178mm²
Package Die Count	1
Unlocked for Overclocking	No
AMD EXPO™ Memory Overclocking Technology	No
Precision Boost Overdrive	No
Curve Optimizer Voltage Offsets	No
CPU Socket	FP7, FP7r2
Supported Extensions	AES , AMD-V , AVX , AVX2 , AVX512 , FMA3 , MMX-plus , SHA , SSE2 , SSE , SSE3 , SSE4.1 , SSE4.2 , SSE4A , SSSE3 , x86-64
Max. Operating Temperature (Tjmax)	100°C
***OS Support**	Windows 11 - 64-Bit Edition , Windows 10 - 64-Bit Edition , RHEL x86 64-Bit , Ubuntu x86 64-Bit

Connectivity

Native USB 4 (40Gbps)	2
Native USB 3.2 Gen 2 (10Gbps)	2
Native USB 2.0 (480Mbps)	4
PCI Express® Version	PCIe® 4.0
Native PCIe® Lanes (Total/Usable)	20 , 20
NVMe Support	Boot , RAID0 , RAID1
System Memory Type	DDR5 (FP7r2) , LPDDR5X (FP7)
Memory Channels	2
Max. Memory	256 GB
Max Memory Speed	**4x2R** : DDR5-5600 **4x2R** : LPDDR5x-7500
ECC Support	Yes (FP7r2 only; Requires platform support)

Graphics Capabilities

Graphics Model	AMD Radeon™ 780M
Graphics Core Count	12
Graphics Frequency	2700 MHz
DirectX® Version	12
DisplayPort™ Version	2.1
DisplayPort Extensions	Adaptive-Sync , HDR Metadata , UHBR10
DisplayPort Max Refresh Rates (SDR)	7680x4320 @ 60Hz , 3840x2160 @ 240Hz , 3440x1440 @ 360Hz , 2560x1440 @ 480Hz , 1920x1080 @ 600Hz
DisplayPort Max Refresh Rates (HDR)	7680x4320 @ 60Hz , 3840x2160 @ 240Hz , 3440x1440 @ 360Hz , 2560x1440 @ 480Hz , 1920x1080 @ 600Hz
HDMI® Version	2.1
HDCP Version Supported	2.3
USB Type-C® DisplayPort™ Alternate Mode	Yes
Multi-Monitor Support	Yes
Max Displays	4
AMD FreeSync™	Yes
Wireless Display	Miracast
Max Video Encode Bandwidth (SDR)	1080p630 8bpc H.264, 1440p373 8bpc H.264, 2160p175 8bpc H.264, 1080p630 8bpc H.265, 1440p373 8bpc H.265, 2160p175 8bpc H.265, 4320p43 8bpc H.265, 1080p864 8/10bpc AV1 , 1440p513 8/10bpc AV1 , 2160p240 8/10bpc AV1 , 4320p60 8/10bpc AV1
Max Video Decode Bandwidth	1080p60 8bpc MPEG2, 1080p60 8bpc VC1, 1080p786 8/10bpc VP9 , 2160p196 8/10bpc VP9, 4320p49 8/10bpc VP9, 1080p1200 8bpc H.264, 2160p300 8bpc H.264, 4320p75 8bpc H.264, 1080p786 8/10bpc H.265, 2160p196 8/10bpc H.265, 4320p49 8/10bpc H.265, 1080p960 8/10bpc
AMD SmartShift MAX	Yes
AMD SmartAccess Memory	Available

AI Engine Capabilities

AMD Ryzen™ AI	Available
Performance	Up to 16 TOPS
Overall TOPS	Up to 38 TOPS
NPU TOPS	Up to 16 TOPS

Product IDs

Product ID Tray	100-000001317 (FP7r2) , 100-000001377 (FP7)

Manageability

DASH support	Yes

Security

AMD Memory Guard	Yes
AMD Secure Processor Support	Yes
Windows Secure Boot Support	Yes
UEFI Secure Boot Support	Yes
Windows Device Guard Support	Yes
Guest Mode Execution (GMET) Trap Support	Yes
Virtualization-Based Security (VBS) Support	Yes
Windows Secured-Core PC Support	Yes
Firmware TPM	Yes
AMD-V (SVM) Support	Yes
AMD-V Nested Paging (RVI) Support	Yes
AMD AVIC (Interrupt Virtualization) Support	Yes
AMD-Vi (I/O MMU Virtualization) Support	Yes
Second Level Address Translation (SLAT) Supported	Yes
Advanced Encryption Standard New Instructions (AES-NI)	Yes
AMD Enhanced Virus Protection (NX bit)	Yes
FIPS Certification	Yes
FIPS Certification Links	Module Certification Algorithm Certification

Drivers and Resources

Driver & Software Downloads
Access the latest drivers, software and release notes for AMD products.
Search by Product >

Community Support
Online community helping others by sharing valuable knowledge and experiences.
Join the Conversation >

Product Specifications
AMD processors and graphics full product specifications.
View Specs >

Certain AMD technologies may require third-party enablement or activation. Supported features may vary by operating system. Please confirm with system manufacturer for specific features. No technology or product can be completely secure.

© 2026 Advanced Micro Devices, Inc.