

AMD Ryzen™ 5 8600G

GENERAL SPECIFICATIONS

General Specifications

CONNECTIVITY

Platform: Desktop

GRAPHICS CAPABILITIES

Product Family: AMD Ryzen™ Processors

AI ENGINE CAPABILITIES

Product Line: AMD Ryzen™ 5 8000 G-Series Desktop Processors with Radeon™ Graphics

PRODUCT IDS

AMD PRO Technologies: No

SECURITY, VIRTUALIZATION, AND MANAGEABILITY

Consumer Use: Yes

Regional Availability: Global

Former Codename: "Phoenix"

Architecture: "Zen 4"

of CPU Cores: 6

Multithreading (SMT): Yes

of Threads: 12

Max. Boost Clock: Up to 5.0GHz

Base Clockⁱ: 4.3GHz

L2 Cache: 6MB

L3 Cache: 16MB

Default TDP: 65W

AMD Configurable TDP (cTDP): 45-65W

Processor Technology for CPU Cores: TSMC 4nm FinFET

CPU Compute Die (CCD) Size: 178mm²

Package Die Count: 1

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

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

**Max. Operating Temperature
(Tjmax):** 95°C

Launch Date: 1/31/2024

***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

Native USB 4 (40Gbps) Ports: 2

**Native USB 3.2 Gen 2
(10Gbps) Ports:** 2

Native USB 2.0 (480Mbps) Ports: 1

PCI Express® Version: PCIe® 4.0

Native PCIe® Lanes (Total/Usable): 20 / 16

NVMe Support: Boot, RAID0, RAID1

System Memory Type: DDR5

Memory Channels: 2

Max. Memory: 256GB

System Memory Subtype: UDIMM

Max Memory Speed:	2x1R	DDR5-5200
	2x2R	DDR5-5200
	4x1R	DDR5-3600
	4x2R	DDR5-3600

Graphics Capabilities

Integrated Graphics: Yes

Graphics Model: AMD Radeon™ 760M

Graphics Core Count: 8

Graphics Frequency: 2800 MHz

DirectX® Version: 12

DisplayPort™ Version: 2.1

DisplayPort Extensions: HDR Metadata
Adaptive-Sync
UHBR10

DisplayPort Max Refresh Rates (SDR): 7680x4320 @ 60Hz
3840x2160 @ 240Hz
3440x1440 @ 360Hz
2560x1440 @ 480Hz
1920x1080 @ 600Hz

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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 AV1
2160p240 8/10bpc AV1
4320p60 8/10bpc AV1

AMD SmartAccess Memory: Yes

AI Engine Capabilities

Brand Name:	AMD Ryzen™ AI
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AMD Ryzen™ AI:	Available
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Performance:	Up to 16 TOPS
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Product IDs

Product ID Boxed:	100-100001237BOX
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Product ID Tray:	100-000001237
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Product ID MPK:	100-100001237MPK
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Security, Virtualization, and Manageability

AMD Enhanced Virus Protection (NX bit):	Yes
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