AMD RYZEN 7000 Series

HP OMEN 16 GAMING LAPTOP

POWERED BY AMD RYZEN™ 7000 SERIES PROCESSORS

2023

Highlights

PORTABLE, POWERFUL PERFORMANCE FROM AMD RYZEN™ PROCESSORS

- Speed meets endurance with the latest AMD Ryzen™ 7040HS Series processors, bringing pure performance for on-the-go gaming
- Usher in the future with AMD Ryzen™ AI, the world's first integrated AI engine on a Windows x86 processor[1]
- AMD smart power management technology helps enable long-lasting battery to stay on the move, up to 13 hours video playback[2]
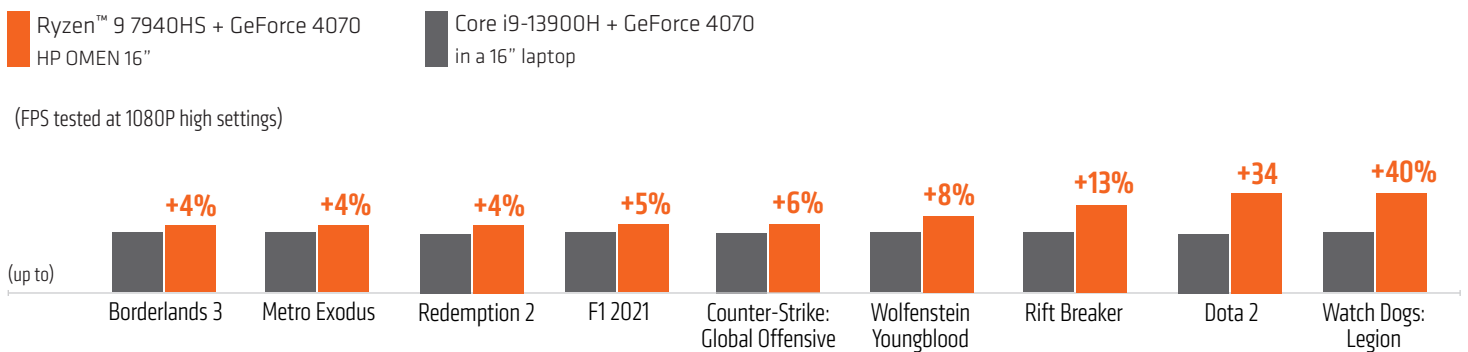
IMMERSIVE ENTERTAINMENT

- See it all clearly in up to QHD DDS 16" display with 240Hz refresh rate and a new FHD built-in camera
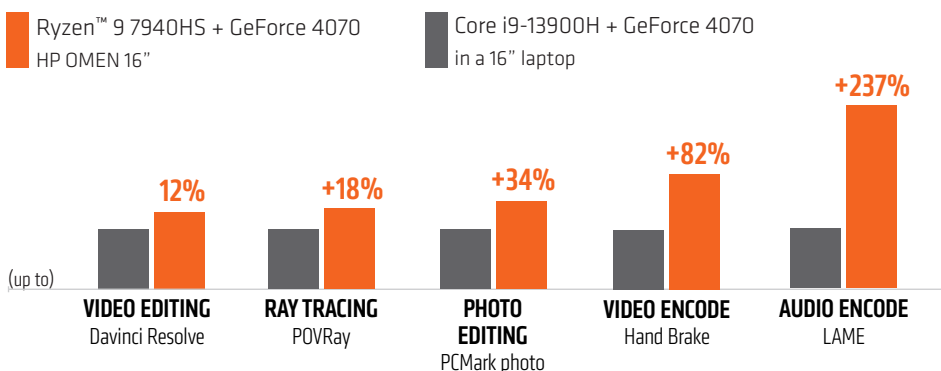- Immerse in sound from Audio by Bang & Olufsen with dual speakers and HP Audio Boost

EVOLVED COOLING DESIGN

- Up to 29% more airflow to keep your gaming laptop cool (compared to 2022 OMEN 16)

HIGH-PERFORMANCE MOBILE GAMING[3]

Ryzen™ 9 7940HS + GeForce 4070
HP OMEN 16"

Core i9-13900H + GeForce 4070
in a 16" laptop

(FPS tested at 1080P high settings)

(up to)

Borderlands 3	Metro Exodus	Redemption 2	F1 2021	Counter-Strike: Global Offensive	Wolfenstein Youngblood	Rift Breaker	Dota 2	Watch Dogs: Legion
+4%	+4%	+4%	+5%	+6%	+8%	+13%	+34	+40%

POWER THROUGH APPLICATIONS WITH EASE[4]

Ryzen™ 9 7940HS + GeForce 4070
HP OMEN 16"

Core i9-13900H + GeForce 4070
in a 16" laptop

(up to)

VIDEO EDITING Davinci Resolve	RAY TRACING POVRay	PHOTO EDITING PCMark photo	VIDEO ENCODE Hand Brake	AUDIO ENCODE LAME
12%	+18%	+34%	+82%	+237%

BATTERY LIFE THAT LASTS[2]

HP OMEN w/ AMD Ryzen™ 9 7940HS (up to):

13 hours battery life
video playback

vs Intel Core i9-13900H (up to):

39% longer battery life while video conferencing

98% longer video playback battery life

AMD

AMD RYZEN™ AI FOR NEXT-GEN EXPERIENCES

AMD
RYZEN AI

Experience the power of personal AI in your laptop with AMD Ryzen™ AI, the world's first dedicated AI engine on an x86 PC processor.[1] Open the door to new AI-powered experiences, efficient processing of AI workloads to help extend battery life, while helping keep data more private by running on local AI hardware. AMD Ryzen™ AI is here and it's ready now.

AMD offers a built-in AI engine AVAILABLE NOW in laptops[6]; Intel does not*.

13th Gen Intel Core Processors	AMD Ryzen™ 7040 Series Processors
✗	✓
No integrated AI engine	AMD Ryzen™ AI built-in

*As of Oct 2023 there are no Intel laptops for purchase with an integrated AI engine on the processor

SPECIFICATIONS

Processor
- AMD Ryzen™ 9 7940HS (8-core/16-thread, 24MB cache, up to 5.2 GHz boost[5])

AI Engine
- AMD Ryzen™ AI

Graphics
- up to Nvidia GeForce RTX 4070

Storage and Memory
- up to 2TB PCIe Gen4 NVME™ TLC M.2 SSD
- up to 32GB DDR5-5600MHz memory

Connectivity
- Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3[6]

Design
- Audio by Bang & Olufsen with dual speakers and HP Audio Boost 1.0

Battery
- up to 6-cell, 83 Wh Li-ion polymer
- up to 13 hours battery life[2]

Display
- 40.9 cm (16.1") diagonal IPS, micro-edge, anti-glare screen
- Up to QHD (2560 x 1440), 300 nits, 100% sRGB
- Up to 240hz, 3 ms response time

I/O ports
- 2x USB Type-A
- 2x USB Type-C
- 1x HDMI 2.1
- 1x RJ-45
- 1x headphone/mic combo

FOOTNOTES:

1. As of May 2023, AMD has the first and only available dedicated AI engine on an x86 Windows processor, where 'dedicated AI engine' is defined as an AI engine that has no function other than to process AI inference models and is part of the x86 processor die. For detailed information, please check: https://www.amd.com/en/products/ryzen-ai. PHX-3.
2. Testing as of July 2023 AMD Performance Labs using an HP OMEN 16" laptop (AMD Ryzen 9 7940HS processor, Nvidia RTX 4070 graphics, 16GB RAM, 512GB NVMe SSD, 83Wh battery, Windows 11 Pro) vs a similarly configured 16" laptop (Intel Core i9-13900H processor, Nvidia RTX 4070 graphics, 16GB RAM, 1TB NVMe SSD, 100Wh battery, and Windows 11), both with VBS and SAM enabled. Battery life results tested via two methodologies: 1. Operation of a nine-participant Microsoft Teams video conference on battery power and 2., Video playback rundown. Testing done in best power efficiency mode. Actual battery life will vary based on several factors, including, but not limited to: product configuration and usage, software, operating conditions, wireless functionality, power management settings, screen brightness and other factors. PC manufacturers may vary configurations yielding different results. Performance may vary. PHX-54
3. Testing as of July 2023 AMD Performance Labs using an HP OMEN 16" laptop (AMD Ryzen 9 7940HS processor, Nvidia RTX 4070 graphics, 16GB RAM, 512GB NVMe SSD, Windows 11 Pro) vs a similarly configured 16" laptop (Intel Core i9-13900H processor, Nvidia RTX 4070 graphics, 16GB RAM, 1TB NVMe SSD, and Windows 11), both with VBS and SAM enabled. Games tested at 1080p high settings: Strange Brigade, Shadow of the Tomb Raider, Rainbow Six Siege, Total War Three Kingdoms, Borderlands 3, Metro Exodus, Red Dead Redemption 2, F1 2021, CSGO, Wolfenstein Youngblood, Rift Breaker, Dota 2, and Watch Dogs Legion. PC manufacturers may vary configurations yielding different results. Performance may vary. PHX-53
4. Testing as of July 2023 AMD Performance Labs using an HP OMEN 16" laptop (AMD Ryzen 9 7940HS processor, Nvidia RTX 4070 graphics, 16GB RAM, 512GB NVMe SSD, Windows 11 Pro) vs a similarly configured 16" laptop (Intel Core i9-13900H processor, Nvidia RTX 4070 graphics, 16GB RAM, 1TB NVMe SSD, and Windows 11), both with VBS and SAM enabled. Benchmarks tested: Hand Brake, LAME, Davinci Resolve, POVRay, Cinebench R23, PCMark 10, Passmark 10, and Kraken. PCMark is a registered trademark of UL Solutions. PC manufacturers may vary configurations yielding different results. Performance may vary. PHX-52
5. Max boost for AMD Ryzen processors is the maximum frequency achievable by a single core on the processor running a bursty single-threaded workload. Max boost will vary based on several factors, including, but not limited to: thermal paste; system cooling; motherboard design and BIOS; the latest AMD chipset driver; and the latest OS updates. GD-150
6. Wi-Fi 6E and Bluetooth 5.0 availability varies by laptop manufacturer and are system configuration dependent. Check with your laptop manufacturer for compatibility information. GD-149.

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

AMD