



Snapdragon

S U M M I T

Oct. 24 – 26, 2023

Key Announcements:

- Qualcomm Brings Record-breaking Generative AI for Devices at Snapdragon Summit 2023 – [link](#)

- Qualcomm Unleashes Snapdragon X Elite: The AI Super-Charged Processor to Revolutionize the PC – [link](#)

- Qualcomm Launches Premium Snapdragon 8 Gen 3 to Bring Generative AI to the Next Wave of Flagship Smartphones – [link](#)

- Qualcomm S7 and S7 Pro Gen 1 Sound Platforms Unleash Next Level Audio Experiences – [link](#)

- Qualcomm Unveils Snapdragon Seamless to Allow Your Devices to Work as One – [link](#)

Establishing Qualcomm as a leader in on-device AI at the edge

- Qualcomm Brings Record-breaking Generative AI for Devices at Snapdragon Summit 2023 – [link](#)

- New Snapdragon® platforms showcase unmatched on-device AI performance for a wave of generative AI devices and applications, with enhanced focus on responsiveness, reliability and privacy.
- Snapdragon X Elite is built from the ground up for on-device AI with an industry-leading NPU, along with best-in-class CPU performance and efficiency among Windows PC platforms.
- Snapdragon 8 Gen 3 has the most powerful NPU for mobile devices and uses the power of AI to invisibly enhance camera, gaming, sound and connectivity experiences for premium smartphones.
- Partners including Microsoft, Meta, Google, HP, and multiple others showed their support of on-device AI at Snapdragon Summit.



13B+
Parameter support
in PCs

Support for a wide
range of models



**On-device
Personalization**
Qualcomm® Sensing Hub

**Fastest stable
diffusion in the
world**

<1 sec per image



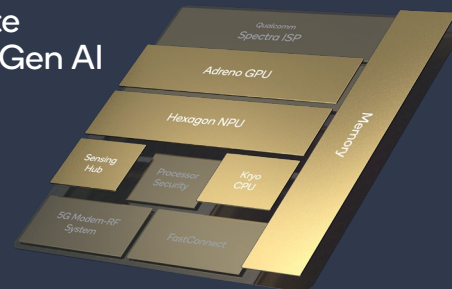
**Qualcomm® AI
Stack Models -**
Fully optimized models

First to support
**multi-modality gen
AI models**



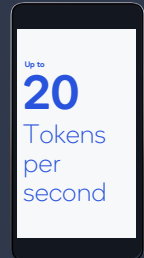
**Het. Compute
designed for Gen AI**

- CPU
- GPU
- NPU



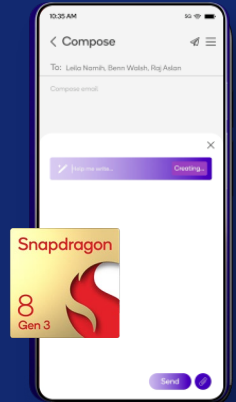
◆ Text Prompt. |

**Meta Llama 2
powered AI
assistants**



Up to
10B

Parameter support
in phones



Snapdragon® X Elite – The most powerful computing processor for the next generation AI PC

Key Announcement

- Qualcomm Unleashes Snapdragon X Elite: The AI Super-Charged Platform to Revolutionize the PC – [link](#)

- The Snapdragon X Elite platform features the new custom integrated Qualcomm Oryon™ CPU which sets the bar in performance – delivering up to 2 times faster CPU performance versus the competition, matching competitor peak performance at 68% less power.
- Built for AI, Snapdragon X Elite is capable of running generative AI models with over 13 billion parameters on-device and continues to expand Qualcomm’s AI leadership.
- With 45 TOPS of NPU performance, Snapdragon X Elite has 4.5 times faster AI processing power than competitors.
- PCs powered by Snapdragon X Elite are expected from leading OEMs starting mid-2024.



Best-in-class performance vs. x86

4nm
process node

Up to

2X

Faster CPU

Qualcomm Oryon™ CPU
12 High-performance cores
Dual-Core Boost

Up to

2X

Faster GPU

Qualcomm® Adreno™ GPU
4.6 Teraflops
Triple UHD monitor support

Generative AI powerhouse

Capable to run **13B+** Parameters on device

Generates **30** Tokens/sec For 7B LLMs

Built for AI

75 TOPS Qualcomm® AI Engine

45 TOPS Qualcomm® Hexagon™ NPU

<1 seconds Stable Diffusion

4.5X Faster AI processing power than competitors

Smart user experiences

- Lightning fast 5G | Wi-Fi 7
- Immersive Lossless Audio
- Advanced Camera ISP
- Snapdragon Seamless
- Chip-to-cloud security

Leading PC performance per watt

Matches peak PC performance at **68%** of the power vs competition

Qualcomm, Snapdragon, Kryo, Qualcomm Oryon, Adreno, Hexagon, Snapdragon Sight, Snapdragon Sound, Snapdragon Smart and Snapdragon Seamless are trademarks or registered trademarks of Qualcomm Incorporated. | CPU Performance is based on Geekbench v6.2 Multi-Thread on Windows OS run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design on Windows OS. The i7-1360P (12 core) and i7-1355U (10 core) were tested using a Samsung Galaxy Book3 360 13" 2023 (NP730QFG) laptop and Samsung Galaxy Book3 15.6" 2023 (NP750XFG) laptop, respectively on Windows 11. Maximum performance reflected by i7-1360P and i7-1355U represent maximum achievable results in given platforms under unconstrained PL1/PL2 settings and no thermal limitations. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices. GPU Performance is based on 3DMark WildLife Extreme run in October 2023. Snapdragon X Elite was tested using a Qualcomm laptop reference design on Windows PS and a pre-commercial build of Wildlife Extreme. The i7-13800H (14 core) was tested using a Razer Blade 15 2023 (RZ09-0485) laptop on Windows 11. Maximum performance reflected by i7-13800H represents maximum achievable results in given platform under unconstrained PL1/PL2 settings and no thermal limitations. Power and performance comparison reflects results based on measurements and hardware instrumentation of given devices.

Snapdragon® 8 Gen 3 – A clear leader in on-device intelligence, premium-tier performance, and power efficiency

Key Announcement

- Qualcomm Launches Premium Snapdragon 8 Gen 3 to Bring Generative AI to the Next Wave of Flagship Smartphones – [link](#)

Our first mobile platform meticulously designed with generative AI in mind.

“Snapdragon 8 Gen 3 infuses high-performance AI across the entire system to deliver premium-level performance and extraordinary experiences to consumers. This platform unlocks a new era of generative AI enabling users to generate unique content, help with productivity, and other breakthrough use cases. Each year, we set out to design leading features and technologies that will power our latest Snapdragon 8-series mobile platform and the next generation of flagship Android devices. [The Snapdragon 8 Gen 3 delivers.](#)”

Chris Patrick
SVP & GM, Mobile Handsets
Qualcomm Technologies, Inc.

Snapdragon 8 Gen 3
Titan of on-device intelligence

Generative AI powerhouse

- Capable to run up to **10B** parameters on device
- Generates up to **20** tokens per sec For 7B LLMs

Gaming

- 25%** performance
- 25%** efficiency
- Unreal Engine 5** with Lumen lighting system
- 240 FPS**
- Global illumination** Next-gen lighting effects

AI

Qualcomm® Hexagon™ NPU

98% faster
40% more efficient

Fast Stable Diffusion and ControlNet

<1 Sec fastest in the world

77GB/s, 4.8GHz memory bandwidth

Qualcomm AI Stack

Pytorch ExecuTorch and optimized models

First to support **multi-modal gen AI models**

On-device personalization with Qualcomm sensing hub

World's 1st to support speculative decoding

Camera

- Photo expansion
- Video object eraser
- Night vision for video capture
- Dolby HDR photo capture

4nm process node

Qualcomm Kryo™ CPU

Improved performance and efficiency

3.3GHz CPU max Frequency

30% performance

20% efficiency

Security

Truepic with C2PA Android strongbox protection
Dual Always-Sensing ISPs

Sound

24bit, 96kHz Lossless

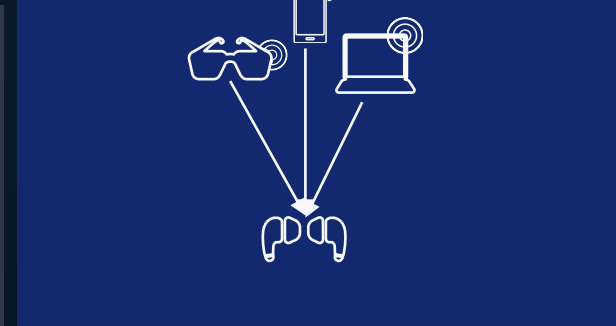
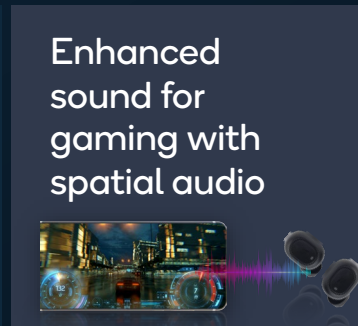
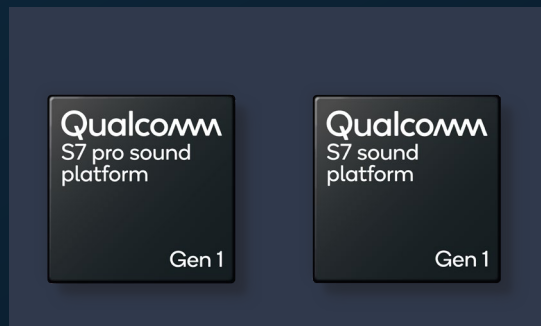
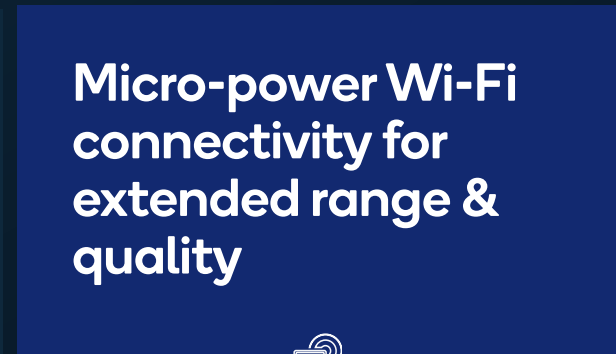
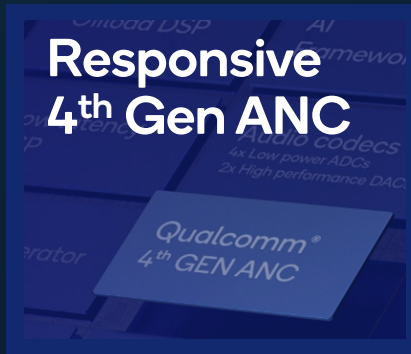
Qualcomm® Expanded Personal Area Network (XPAN)

Setting a new benchmark for high-performance sound at ultra-low power

Key Announcement

- Qualcomm® S7 and S7 Pro Gen 1 Sound Platforms Unleash Next Level Audio Experiences – [link](#)

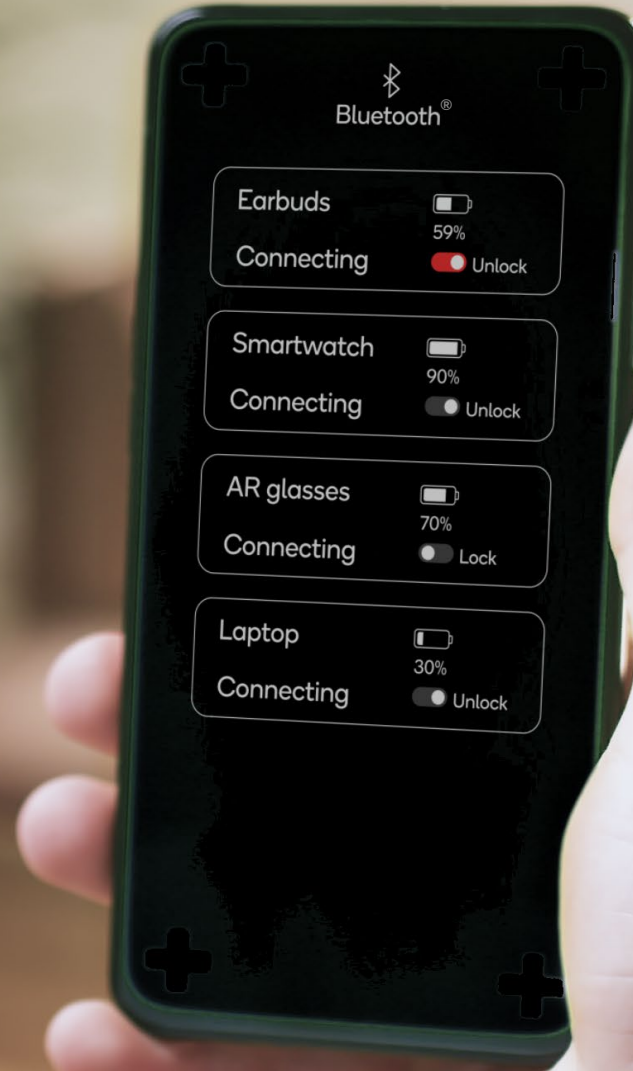
- The Qualcomm S7 and S7 Pro Gen 1 Platforms utilize an unparalleled level of on-device AI to deliver our most advanced, personalized, and responsive audio experiences.
- The platforms deliver six times the compute power, almost 100 times the AI power of previous generation platforms and a new tier of ultra-premium performance at low power.
- The Qualcomm S7 Pro Sound platform is the first to support Qualcomm® Expanded Personal Area Network Technology (XPAN) and micro-power Wi-Fi connectivity to extend audio range across the home, building or campus, with support for up to 192kHz lossless music quality.



Breaking down the barriers between OEMs, devices and operating systems

Key Announcement

- Qualcomm Unveils Snapdragon Seamless™ to Allow Your Devices to Work as One – [link](#)



- Snapdragon Seamless is a cross-platform technology that enables the seamless linking of multiple devices across multiple OSeS, sharing peripherals and data.
- Microsoft, Android, Xiaomi, ASUS, Honor, Lenovo, and OPPO, among others, are collaborating with Qualcomm to create multi-device experiences enabled by Snapdragon Seamless and set to arrive on global device platforms starting as early as this year.
- Snapdragon Seamless, device manufacturers and OS partners can enhance and extend their multi-device experiences for consumers. For example:
 - Mice and keyboards can work seamlessly across PCs, phones and tablets.
 - Files and windows can be dragged and dropped across different types of devices.
 - Earbuds can switch intelligently based on the priority of an audio source.
 - XR can extend the abilities of smartphones.