A MASTERPIECE OF PERFORMANCE

State-of-the-art performance

Agentic AI that takes action—on your terms

Your artistic vision, captured like a professional

Snapdragon 8 Elite Gen 5

Game smarter, not harder

Limitless sound

Leading AI-enhanced mobile connectivity
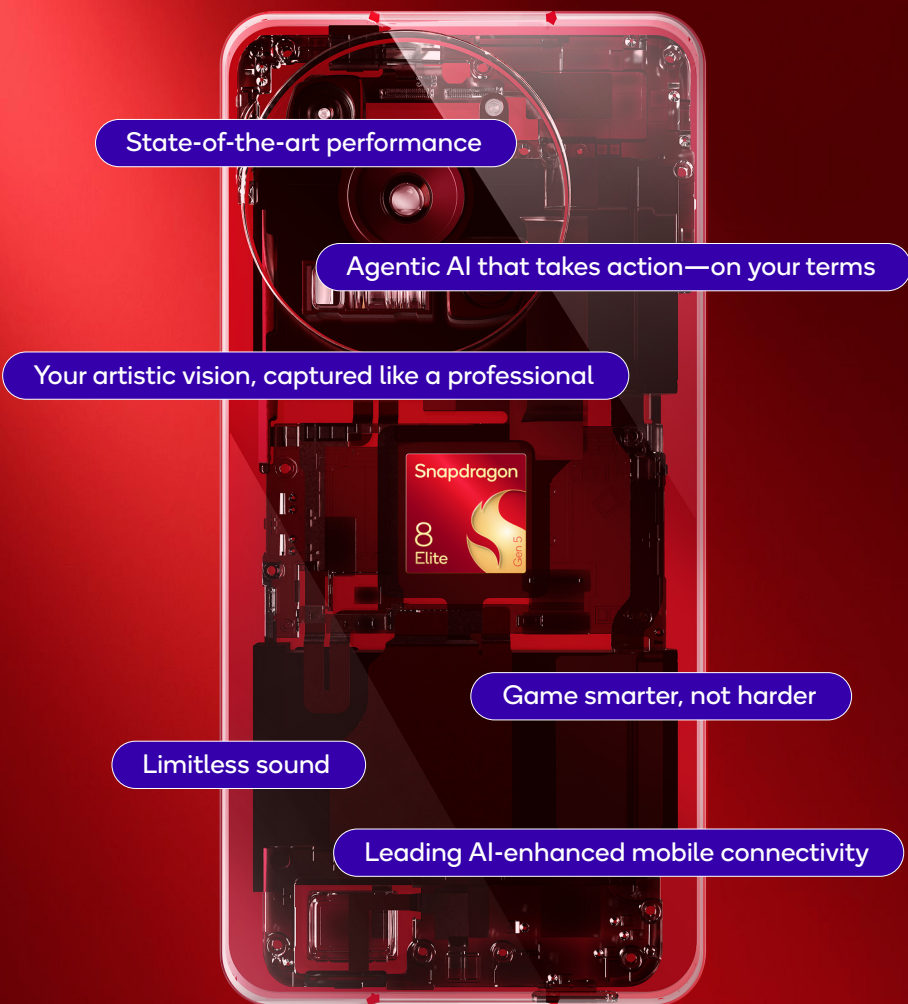
The Snapdragon® 8 Elite Gen 5 Mobile Platform is a masterpiece of performance, delivering state-of-the-art experiences fueled by the Qualcomm® Oryon™ CPU—the fastest mobile CPU in the world. Powerful and intuitive AI brings you agentic AI assistants, while our next-gen Qualcomm® Adreno™ GPU empowers you to game smarter, not harder. With a mobile-defying professional video toolkit and leading AI-enhanced connectivity, you can unleash your imagination with Snapdragon 8 Elite Gen 5. Beyond visionary.

State-of-the-art performance

With the world's fastest mobile CPU in your pocket, every action is smooth and dynamic. Because it's not just what your smartphone can do—it's how quickly it can do it. From lightning-fast app launches and instantaneous multitasking to fast-paced gameplay and responsive mobile content creation, the 3rd gen Qualcomm Oryon CPU helps you achieve peak performance at up to 4.6GHz speeds. With up to 35% CPU power efficiency and 16% overall SoC power savings, you can enjoy sustained performance for longer.

Unlock hyper-intuitive agentic AI capabilities with our custom-designed, 20% enhanced industry-leading CPU, featuring hardware matrix acceleration that works in tandem with the Qualcomm® Hexagon™ NPU.

0 1 2 3 4 5 6

Snapdragon 8 Elite Gen 5

GHz

Agentic AI that takes action—on your terms

The Hexagon NPU now boasts even more AI accelerators, better performance, and power efficiency. Combined with the Qualcomm® Sensing Hub on-device AI learning features, it brings agentic AI to your device. This allows for more personalized on-device experiences while your favorite everyday apps get faster, smarter, and more power efficient—without you even noticing.

TAILOR-MADE INTELLIGENCE

Agentic AI marks a shift from a reactive assistant to an intelligent collaborator that learns, adapts, and initiates decisions on your behalf, powered by our 37% faster Hexagon NPU and upgraded Qualcomm Sensing Hub.

ATTUNED TO YOU

Created with the Qualcomm Sensing Hub, your personal knowledge graph and Qualcomm® Personal Scribe powers an agentic AI assistant that makes recommendations and acts on your behalf based on your routine, preferences, and conversations—all while helping to keep your information protected.

BUILT-IN INTELLIGENCE

Whether applying auto filters to photos, using real-time translations while you travel, or making advanced edits to your videos, our enhanced Hexagon NPU, delivering 16% better performance per watt, is the AI powerhouse you need to keep you one step ahead.

Your artistic vision, captured like a professional

Snapdragon 8 Elite Gen 5 is the ultimate instrument for creatives, giving you the power of a film crew in your pocket. With a full suite of pro-grade video tools and a groundbreaking AI-powered camera, it enables effortless HDR video capture and real-time instant highlights. Your best moments are automatically clipped, making it easier to find, edit, and share stunning content with precision and speed.

- The first mobile platform to record in Advanced Professional Video (APV) Codec, capturing incredible quality, high-bitrate footage to enable post-production workflows that push your artistic vision to new limits.

- Introducing a fully computational video pipeline on Snapdragon smartphones, every frame can be extracted and utilized, offering the same level of detail and visual quality as a snapshot.

- Context-Aware auto-focus, auto-exposure, and auto-white balance keep subjects sharp, highlights controlled, and colors true in every scene.

- Record professional-quality audio in any environment with Snapdragon Audio Sense delivering industry-leading wind noise rejection, audio zoom, and HDR audio.

Game smarter, not harder

Explore, battle, and play with unmatched performance and power efficiency, thanks to our next-generation Qualcomm® Adreno™ GPU offering a 23% increase in overall performance and a 20% reduction in power consumption. Snapdragon 8 Elite Gen 5 sees another leap forward with the introduction of Adreno High Performance Memory (HPM) and support for next-gen gaming features, like Tile Memory Heap and Mesh Shading. Plus, full Unreal Engine 5 support brings console-quality visuals and immersive gameplay to your mobile device for the first time.

- Industry-leading memory cache solution, Adreno HPM, provides 18 MB of dedicated memory for revolutionary efficiency and visual rendering.

- Tile Memory Heap maximizes the impact of Adreno RAM, optimizing memory usage and bandwidth while reducing power draw to maximize play times.

- Support for Mesh Shading allows developers to group geometry more efficiently, enabling smarter GPU-driven rendering for even more power savings and processing headroom.

Limitless sound

Embrace the freedom of whole home and building audio coverage with Snapdragon Sound™ Technology Suite and Qualcomm® Expanded Personal Area Network (XPAN) technology, allowing untethered music, calls, and AI assistant interactions via earbuds.

- Tap into Qualcomm XPAN anywhere with exceptional global support at 6 GHz.

- Multitask with convenient multipoint connectivity—no matter where you roam—with Qualcomm XPAN delivering 24-bit, 96kHz lossless music streaming while still being able to receive calls and messages.

Leading AI-enhanced mobile connectivity

Live in the moment with cutting-edge, AI-powered mobile connectivity that combines the latest in 5G, 5G-Advanced, Wi-Fi, Bluetooth®, and UWB technologies. Plus, the innovative Qualcomm® AI-Powered Data Traffic Engine dynamically identifies and prioritizes data patterns to improve mobile gaming, OTT call quality, and seamless transitioning between Wi-Fi and 5G.

- The Qualcomm® X85 5G Modem-RF sets a new standard in 5G technology, combining Release 17 and 18 capabilities with a 5G AI processor.

- Achieve 30% faster AI inferencing speeds for smarter, more reliable mobile experiences.

- The Qualcomm® FastConnect™ 7900 Mobile Connectivity System with leading Wi-Fi 7 offers up to 40% power savings.

- Up to 50% lower gaming latency with AI-enhanced Wi-Fi.

- Find lost items or gain access control with UWB, Wi-Fi ranging, and Bluetooth Channel Sounding with Proximity AI.

Snapdragon
8 Elite

Artificial Intelligence

Qualcomm® AI Engine

Qualcomm® Adreno™ GPU

Qualcomm Oryon™ CPU with hardware-based AI acceleration

Qualcomm® Hexagon™ NPU
- Fused AI accelerator architecture
- 12 scalar + 8 vector + 1 accelerator configuration
- Hexagon Direct Link
- Micro Tile Inferencing
- Concurrency support
- 64-bit memory virtualization
- Support for INT2, INT4, INT8, INT16, FP8, FP16 precisions, including mix precision
- Support for Gen AI model encryption for extra security

Qualcomm® Sensing Hub
- Dual Micro NPUs for audio, voice, and sensors for creating personal knowledge graphs
- Dual Always-Sensing ISPs to support two concurrent always-sensing cameras
- Qualcomm® Personal Scribe
- Support for INT4, INT8, INT16 precision

AI software
- Qualcomm AI Stack

5G Modem-RF System

Qualcomm® X85 5G Modem-RF
- 5G Advanced, 5G mmWave, and sub-6 GHz, 5G standalone (SA) and non-standalone (NSA) modes, standalone mmWave and mmWave-sub-6 dual connectivity, FDD, TDD

Downlink: Up to 12.5Gbps

Uplink: Up to 3.7Gbps

mmWave: 8 carriers, 2x2 MIMO
- Sub-6 GHz: 4x6 MIMO
- Converged mmWave-sub-6 transceiver
- Qualcomm® AI-Powered Data Traffic Engine for better end user experience and performance with AI-enhanced dynamic gaming traffic prioritization, AI-enhanced OTT calling for clearer voice and video calls, and smooth Wi-Fi cellular transfer
- AI-assisted mmWave beam management–mmWave (SA) range extension for CPE
- 5G NR-based GNSS Location
- Qualcomm® 5G AI Processor with dedicated tensor hardware accelerator
- Qualcomm® 5G PowerSave
- Fully integrated NB-NTN support
- Qualcomm® Smart Transmit™ Plus with enhanced uplink support
- 6-antenna (6Rx) support for smartphones
- 6xCA with 400 MHz bandwidth for downlink
- 1024 QAM sub-6 GHz support
- Switched uplink with Rel-17 (FDD/TDD)
- Supplemental uplink (China)
- Uplink 4-layer carrier aggregation (200 MHz)—UL MIMO
- Qualcomm® QTM565 mmWave module
- Qualcomm® Wideband Envelope Tracking
- 5G New Calling support
- Qualcomm® 5G Ultra-Low Latency Suite
- Qualcomm® RF Uplink Optimization
- Qualcomm® RF Downlink Boost
- Global 5G multi-SIM, including Qualcomm® Turbo DSDA with 3CC + 1CC carriers support for higher throughput in DL and UL

3GPP Release 18 support
- Supports all major global 5G bands, from 0.6 to 41GHz

Multimode support: 5G NR, NR-DC, EN-DC, LTE, CBRS, WCDMA, LAA, GSM/EDGE, Dynamic Spectrum Sharing (DSS)

Wi-Fi, Bluetooth®, & UWB

Qualcomm® FastConnect™ 7900 Mobile Connectivity System
- Wi-Fi Generation: Wi-Fi 7
- Peak Speed: 5.8Gbps
- 802.11be, 802.11ax, 802.11ac, 802.11a/b/g/n
- Wi-Fi Spectral Bands: 6GHz, 5GHz, 2.4GHz
- Channel Bandwidth: 320/240/160/80/40/20 MHz
- 4K QAM
- AI-enhanced Wi-Fi
- High Band Simultaneous (HBS) Multi-Link
- Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal

Integrated Bluetooth
- Bluetooth 6.0 wireless technology, LE Audio, Bluetooth Channel Sounding

Integrated Ultra Wideband (UWB)
- IEEE 802.15.4z, FiRA, CCC

Audio

Snapdragon Sound™ Technology Suite
- Qualcomm® aptX™ Adaptive and aptX Lossless audio
- Qualcomm® Expanded Personal Area Network (XPAN) technology
- Qualcomm Aqstic™ audio codec
- Qualcomm Aqstic smart speaker amplifier: Total Harmonic Distortion + Noise (THD+N) Playback: -108dB
- Qualcomm Aqstic Speaker Max
- Qualcomm® Audio and Voice Communication Suite
- Spatial audio with head-tracking

Display

On-Device Display Support
- 4K+ @ 120Hz
- QHD+ @ 240Hz

Maximum External Display Support
- Up to 4K @ 120Hz
- Up to 8K @ 30Hz

Scaling and Detail Enhancement
- 10-bit color depth, Rec. 2020 color gamut
- HDR10, HDR10+, HDR vivid, and Dolby Vision HDR
- Display Uniformity Correction
- Display Aging Compensation

CPU

Custom-built Qualcomm Oryon CPU
- 64-bit Architecture
- 2 Prime core, up to 4.6GHz
- 6 Performance cores, up to 3.62GHz

Camera

Qualcomm Spectra™ Image Signal Processor
- Triple 20-bit AI-ISPs

Limitless real-time Semantic Segmentation photo and video processing

Advanced Professional Video (APV) Codec

Engine for Visual Analytics (EVA) 5.0 with significant quality improvement in local motion estimation (optical flow)

Locally Motion Compensated Temporal Filtering

Support for the latest HDR, LOFIC, DCG+VS, DCG, Staggered, QDOL, Less Blanking, and Multi-Frame HDR image sensors

Support for triple video capture from HDR image sensors, with seamless switching between any HDR mode
- Up to 48 MP triple camera @ 30FPS with Zero Shutter Lag
- Up to 108 MP single camera @ 30FPS with Zero Shutter Lag
- Up to 320-megapixel photo capture

Context-Aware 3As (autofocus, autoexposure, and auto-white balance)

Snapdragon® Audio Sense

Rec. 2020 color gamut photo and video capture

Up to 10-bit color depth photo and video capture

10-bit HEIF: HEIC photo capture, HEVC video capture

Google Ultra HDR photo capture

Video capture HDR formats: HDR10+, HDR10, HLG, Dolby Vision

8K HDR video playback @60FPS

4K video capture @120FPS

Slow-mo video capture at 1080p @ 480FPS

Hardware Bokeh Engine 2 for video capture

Pro Sight video capture

Ultra-low light video capture in 4K60 and AI Noise Reduction in 4K30FPS

Computational HDR video capture: Up to 4 exposures (with QDOL image sensors)

Video super resolution

Massive Multi-Frame Noise Reduction with AI

AI Video Processing
- Enhanced AI video segmentation @ 4K60FPS
- Real-time AI skin and sky tone adjustments in 4K60FPS

Truepic photo capture with C2PA-compliant certificate authority

Visual Subsystem

Adreno GPU
- Qualcomm Adreno High Performance Memory (HPM)
- Tile Memory Heap

Unreal Engine 5 Advanced Optimizations
- Real-time Hardware-Accelerated Ray Tracing with Lumen + Global Illumination
- Nanite Virtualized Geometry
- Screen Space Ambient Occlusion
- Temporal Anti-Aliasing
- Temporal Super Resolution

Snapdragon Adaptive Game Configuration
- Gaming Frame Rate Conversion
- Auto Variable Rate Shading

Snapdragon Game Super Resolution 2.0

Adreno Frame Motion Engine 3.0

Snapdragon Game Post-Processing Accelerator

HDR gaming (10-bit color depth, Rec. 2020 color gamut)

Snapdragon Shadow Denoiser

API support: OpenGL® ES 3.2, OpenCL™ 3.0 FP, Vulkan® 1.3

Hardware-accelerated H.265, VP9, AV1 decoder

HDR Playback Codec support for HDR10+, HDR10, HLG, and Dolby Vision

Security

Trust Management Engine (Root of Trust), along with platform-level security foundations

Qualcomm® Trusted Execution Environment (TEE) and Qualcomm TEE Services for use cases requiring higher processing assurance

Qualcomm® Type-1 Hypervisor for isolation from the high-level OS

Secure Processing Unit (SPU) with support for the Android latest Strongbox software components

Qualcomm® wireless edge services (WES) for secure attestation and provisioning

Qualcomm® 3D Sonic Sensor and Qualcomm 3D Sonic Max (fingerprint sensor)

C2PA support for media provenance attestation

Enhanced AI processing isolation and model protection

Location

Concurrent GPS, Glonass, BeiDou, Galileo, QZSS, NavIC

Triple frequency GNSS (L1/L2C/L5)

AI-based GNSS Location Gen 3

Sensor-Assisted Positioning 6.0

Urban pedestrian navigation with sidewalk accuracy

Global freeway lane-level vehicle navigation

Charging

Qualcomm® Quick Charge™ 5 Technology

Memory

Support for LP-DDR5x memory, up to 5300MHz

Memory Density: Up to 24GB

General Specifications

Full suite of Snapdragon Elite Gaming™ features

3nm Process Technology

USB Version 3.1 Gen 2; USB Type-C Support

Storage: UFS 4.1

Part Number: SM8850-AC