Snapdragon 7s Gen 4 Mobile Platform

Boosted performance

Thrilling gaming

Breathtaking photos & videos

Snapdragon
7s
Gen 4

On-device Gen AI

High-fidelity sound

Effortless connectivity
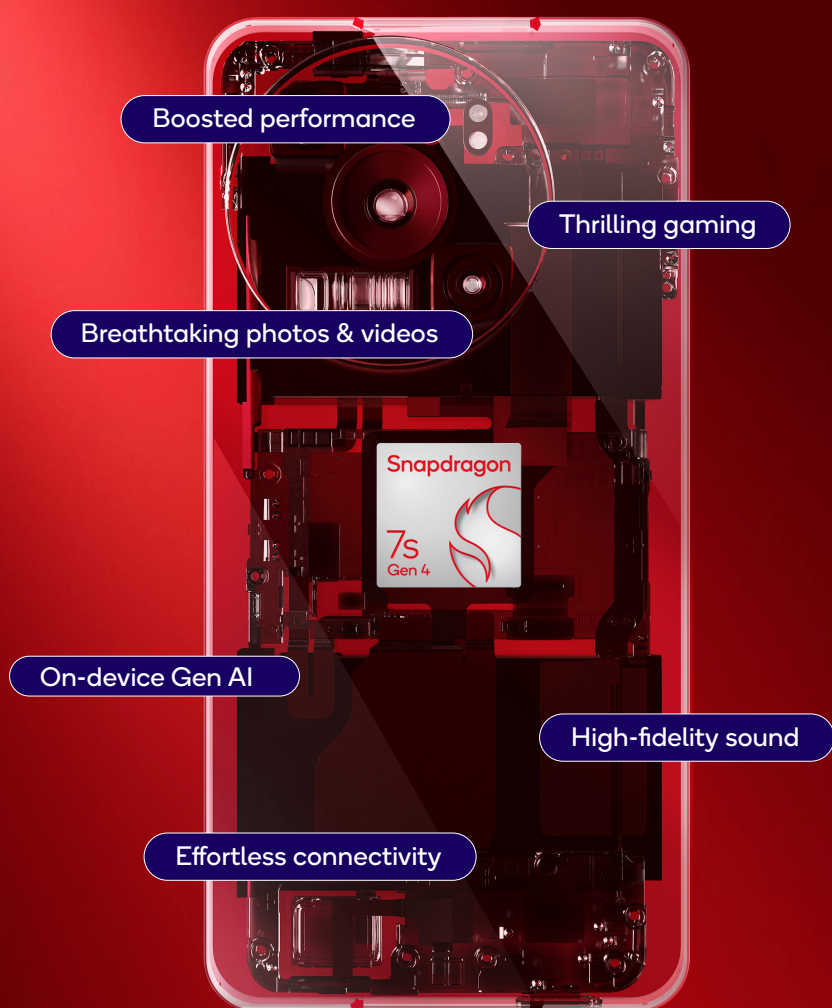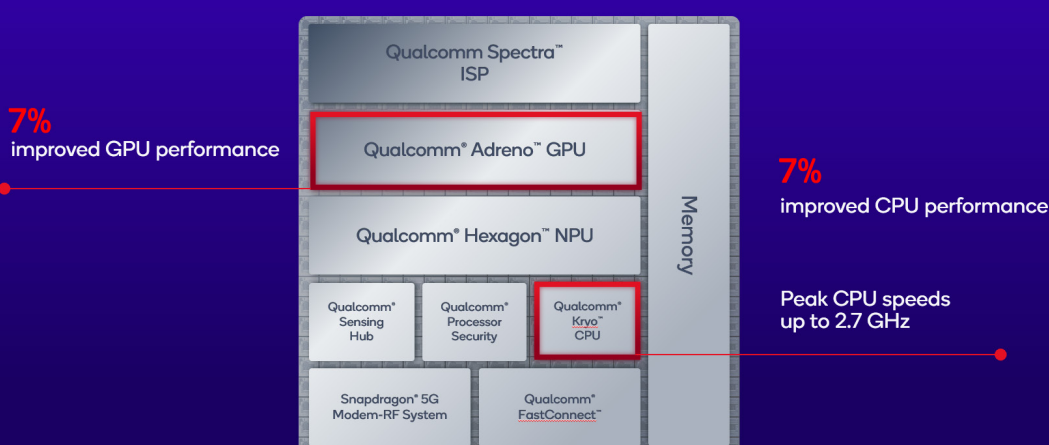
The Snapdragon® 7s Gen 4 Mobile Platform supercharges select Snapdragon experiences, with boosted performance that lets you get lost in gaming thrills with vibrant visuals on WFHD+ 144 Hz HDR10+ displays. Capture breathtaking photos and videos with AI-enhanced camera capabilities like AI Remosaic and Video Super Resolution, supporting up to 4K HDR recording. Plus, leverage the power of on-device AI with Gen AI support for intuitive actions and streamlined workflows— all backed by effortless 5G and Wi-Fi connections and high-fidelity sound.

Boosted performance

Qualcomm Spectra™ ISP

Qualcomm® Adreno™ GPU

Qualcomm® Hexagon™ NPU

Memory

Qualcomm® Sensing Hub

Qualcomm® Processor Security

Qualcomm® Kryo™ CPU

Snapdragon® 5G Modem-RF System

Qualcomm® FastConnect™

7%
improved GPU performance

7%
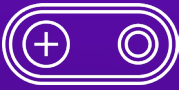improved CPU performance

Peak CPU speeds up to 2.7 GHz

From vivid gaming to smooth multitasking across apps, our upgraded CPU and GPU make every interaction more effortless and engaging. Plus, Qualcomm® Quick Charge™ 4+ Technology takes your device from 0-50% in just five minutes.

Compared to previous generations.
Quick Charge is designed to increase the battery charge of a device by up to 50% in 5 minutes. Actual results may vary depending on device design.

Thrilling gaming

Immersion and performance unite for epic, ultra-smooth mobile gameplay, thanks to select Snapdragon Elite Gaming™ features and support for stunning WFHD+ 144 Hz and HDR10+ displays.

- Adaptive Performance Engine 3.0 intelligently manages thermal and power dynamics to keep games fast, consistent, and cool under pressure.
- Snapdragon Game Super Resolution boosts in-game visuals with smart upscaling for sharp detail and sustained performance.
- Support for Vulkan® 1.3 API brings cutting-edge graphics capabilities to mobile, enabling richer game worlds, faster rendering, and future-ready performance.

Breathtaking photos and videos

Capture detailed content and memories with razor-sharp clarity, even when zoomed in, thanks to Video Super Resolution.

- Capture from three lenses at once with our Qualcomm Spectra Triple ISP, enabling astonishing detail, concurrent photo and video, fluid zooming, and rapid parallel processing.
- Advanced AI-driven camera technology delivers stunning 200 MP images and vibrant 4K HDR video.
- AI Remosaic harnesses machine learning to reduce discoloration and grain for high-res results every time.

On-device Gen AI

From on-device content creation to streamlining your productivity, the Qualcomm® AI Engine puts fast, private, and responsive generative AI at your fingertips.

- Support for a broad range of LLMs, and LVMs, including Llama 1B, Qwen 1B, and more.
- Break down language barriers with real-time translation and transcription across multiple languages, ensuring seamless communication worldwide.
- Qualcomm® Sensing Hub enhances audio experiences with intelligent noise cancellation and background noise reduction.

High-fidelity sound

Tune into lossless-quality music, lag-free gaming audio, and seamless communication with the Snapdragon Sound™ Technology Suite—making every note authentic and unforgettable.

- Spatial audio with head tracking creates a dynamic, 360° listening experience that adjusts to your every move.
- Immerse in authentic sound, just as the creator intended, at lower power consumption thanks to Qualcomm Aqstic™ Hi-Fi DAC.
- Turn up the volume without distortion with Qualcomm Aqstic Speaker Max delivering amplified, clear, and rich audio directly from device speakers.

Effortless connectivity

Stream, game, create, and communicate—from virtually anywhere—backed by ultra-responsive 5G and Wi-Fi connections, while support for Dual-SIM Dual Active 5G+5G/4G enhances flexibility at low latency.

- Snapdragon 5G Modem-RF System delivers vast coverage across more global networks and bands.
- FastConnect Mobile Connectivity System with Wi-Fi 6E enables responsive gaming, streaming, and multitasking.
- Untethered audio is more immersive and efficient with Bluetooth® 5.4 wireless technology.

Camera
Triple ISP
AI Remosaic
Video Super Resolution

Connectivity
5G Modem-RF System
FastConnect Mobile Connectivity System
Bluetooth 5.4

Performance
Snapdragon 7s Gen 4
7% improved CPU
7% faster GPU

All comparisons made to previous generation.

Snapdragon 7s Gen 4

Gaming
Adaptive Perf Engine 3.0
Snapdragon Game Super Resolution
Adreno Frame Motion Engine

Audio
Spatial Audio
Aqstic Speaker Max and Hi-Fi DAC
Qualcomm aptX Lossless Audio

AI
Gen AI Support
Multi-Language Translation / Transcription

Snapdragon 7s Gen 4

Artificial Intelligence

Qualcomm® Adreno™ GPU

Qualcomm® Kryo™ CPU

Qualcomm® Hexagon™ NPU
- Fused AI Accelerator Architecture
- Hexagon Tensor Accelerator
- Hexagon Vector eXtensions
- Hexagon Scalar Accelerator
- Support for all precisions (INT4, INT8, and INT16)
- Qualcomm® Sensing Hub
- Dedicated NPUs for audio and sensors

5G Modem-RF System

Snapdragon® 5G Modem-RF System
- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, FDD, TDD
- Dynamic Spectrum Sharing
- mmWave: 2 carriers, 2x2 MIMO
- Sub-6 GHz: 4x4 MIMO
- Qualcomm® Smart Network Selection Gen 3
- Qualcomm® 5G PowerSave 2.0
- Qualcomm® Smart Transmit™ 2.0 technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® AI-Enhanced Signal Boost
- Global 5G multi-SIM, including 5G/4G DSDA

Downlink: Up to 2.9 Gbps

Multimode Support: 5G NR, LTE including CBRS, WCDMA, HSPA, CDMA 1x, EV-DO, GSM/EDGE

Wi-Fi & Bluetooth®

Qualcomm® FastConnect™ Mobile Connectivity System

- Wi-Fi Standards: Wi-Fi 6E, Wi-Fi 6 (802.11ax), Wi-Fi 5 (802.11ac), 802.11a/b/g/n
- Wi-Fi Spectral Bands: 6 GHz, 5 GHz, 2.4 GHz
- Peak Speed: 2.9 Gbps
- Channel Bandwidth: 160/80/40/20 MHz
- MIMO Configuration: 8x8 Sounding
- MU-MIMO (Uplink and Downlink)
- 4K QAM
- OFDMA (Uplink & Downlink)
- Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3 Personal, FIPS 140-2-support, 256-bit encryption

Integrated Bluetooth
- Bluetooth Features: Bluetooth 5.4, LE Audio

Snapdragon Sound™ Technology Suite, with support for Qualcomm® aptX™ Voice, aptX Lossless, aptX Adaptive

Camera

Qualcomm Spectra™ Image Signal Processor
- Triple 12-bit ISPs
- Up to 21 MP triple camera @ 30 FPS with Zero Shutter Lag
- Up to 32+21 MP dual camera @ 30 FPS with Zero Shutter Lag
- Up to 64 MP single camera @ 30 FPS with Zero Shutter Lag
- Up to 200 megapixel photo capture

Deep learning-based face detection, facial landmark detection, auto-focus, and auto-exposure

AI De-noiser (AIDE) for low-light snapshot

Rec. 2020 color gamut photo and video capture

Up to 10-bit color depth photo and video capture

4K @ 30 FPS HDR video capture + 64 MP photo capture

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

Video capture HDR formats: HDR10, HLG

Slow-mo video capture at 1080p @ 120 FPS

Snapdragon Low Light Vision (LLV)

Support for 4K staggered HDR, multi-frame HDR, and limited-blanking multi-frame HDR image sensors

Multi-Frame Noise Reduction (MFNR)

Motion Compensated Temporal Filtering

Audio

Qualcomm Aqstic™ audio codec

Qualcomm Aqstic smart speaker amplifier

Total Harmonic Distortion + Noise (THD+N),

Playback: -108 dB

Qualcomm® Audio and Voice Communication Suite

Display

On-Device Display Support:
- WFHD+ 1300x2900 @ 144 Hz

Maximum External Display Support:
- Up to 4K @ 60 Hz
- 10-bit color depth
- HDR10 and HDR10+

CPU

Kryo CPU

64-bit Architecture
- 1 Prime core, up to 2.7 GHz
- 3 Performance cores, up to 2.4 GHz
- 4 Efficiency cores, up to 1.8 GHz

Visual Subsystem

Adreno GPU
- HDR gaming (10-bit color depth)
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0 FP, Vulkan® 1.3
- Hardware-accelerated H.265 and VP9 decoder
- HDR Playback Codec support for HLG, HDR10+, HDR10, and HDR vivid

Security

Platform Security Foundations

Trusted Execution Environment & Services (TEE)

Trust Management Engine

Qualcomm® wireless edge services (WES) and premium security features

Qualcomm® Type-1 Hypervisor

Location

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

Triple frequency GNSS (L1/L5/L2)

Sensor-Assisted Positioning
- Urban pedestrian navigation with sidewalk accuracy
- Global freeway lane-level vehicle navigation

Charging

Qualcomm® Quick Charge™ 4+ Technology

Memory

Support for LP-DDR5 memory, up to 3200 MHz

Support for LP-DDR4X memory, up to 2133 MHz

Memory Density: Up to 16 GB

General Specifications

Select Snapdragon Elite Gaming™ features

4nm Process Technology

USB Version 3.1; USB Type-C Support

Part Number: SM7635-AC

Storage: UFS 3.1