SNAPDRAGON® 7+ GEN 2 MOBILE PLATFORM

Unleash legendary entertainment with our most powerful Snapdragon 7-Series ever—the brand-new Snapdragon 7+ Gen 2 Mobile Platform. Exceptional CPU and GPU performance fuels activities like swift, nonstop gaming. Capture dynamic low-light photography and 4K HDR videography—and share using high-speed 5G and Wi-Fi connectivity. Plus, AI-enhanced experiences provide expertise and utmost simplicity.

Exceptional performance

Entertainment and efficiency soar with this all-new, tier-topping platform. The Qualcomm® Kryo™ CPU delivers over 50% improvement, while the GPU boasts the biggest performance leap in 7-series history. Experience electrifying mobile gaming, photography, audio, and more—for longer—with up to 13% improved power efficiency.

- Kryo CPU delivers up to 2.91 GHz peak speeds
- Qualcomm® Adreno™ GPU boasts up to 2x improved performance
- Qualcomm® Quick Charge™ 5 powers devices up to 0-50% in five minutes[1]

Swift, nonstop gaming

Mobile gaming captivates with select Snapdragon Elite Gaming™ features, including the new-in-series Auto Variable Rate Shading for optimized power and performance. Volumetric rendering adds jaw-dropping realism with particle graphics, like fog and smoke, while Qualcomm® Adreno™ HDR Fast Blend doubles the speed of complex rendering for thrilling HDR gaming.

- Astounding QHD+ display rate at 120 FPS for smooth, stunning action
- Qualcomm® aptX™ produces lossless, lag-free gaming audio and in-game chat

Dynamic photography and videography

New-in-series camera capabilities produce vivid results with the Qualcomm Spectra™ Triple 18-bit ISP, enabling extreme dynamic range and simultaneous triple capture. Mega Low Light merges the best of 30 images together for brighter, clearer, and more colorful photos—even at night. Additionally, 2x staggered 4K HDR video with triple exposure brings out the best in every scene.

- New-in-series 18-bit Triple ISP captures over 4,000x more camera data
- New-in-series 18-bit RAW photo capture for unparalleled photo editing capabilities
- Highly detailed single shots up to 200 MP

High-speed 5G and Wi-Fi

Stay connected—at home and on-the-go. The Snapdragon X62 5G Modem-RF System takes your entertainment further, including new-in-series support for 5G/4G Dual-SIM Dual Active (DSDA)—great for travel or to separate work from play. Plus, the Qualcomm® FastConnect™ 6900 Mobile Connectivity System is equipped with 4-stream DBS for faster speeds, sustained connections, and lower latency over Wi-Fi 6E.

- Truly global 5G mmWave and Sub-6 GHz solution with peak download speeds up to 4.4 Gbps
- 5G/4G DSDA supports use of two SIMs at once
- Qualcomm FastConnect 6900 offers accelerated Wi-Fi up to 3.6 Gbps

AI-enhanced experiences

The Snapdragon 7+ Gen 2 is more intuitive than ever with a supercharged Qualcomm® AI Engine—fueling 2x better AI performance and up to 40% better performance per watt[2]. Communicate clearly with AI-enabled noise suppression while keeping your device secure with voice activation and face detection. Plus, lower-res game scenes and photos dazzle when upscaled with AI Super Resolution.

- Qualcomm® Sensing Hub with a dedicated AI processor allows for contextually-aware use cases, such as user activity recognition and acoustic scene detection
- AI Super Resolution intelligently upscales imagery from 1080p to 4K
- AI-powered Video Super Resolution (VSR) provides digital zoom capabilities for sharp, clear footage—even from far away

SPECIFICATIONS & FEATURES

Snapdragon 7+ Gen 2

Artificial Intelligence

Qualcomm® Adreno™ GPU

Qualcomm® Kryo™ CPU

Qualcomm® Hexagon™ Processor

- Fused AI Accelerator
- Hexagon Tensor Accelerator
- Hexagon Vector eXtensions (HVC)
- Hexagon Scalar Accelerator
- Support for mix precision (INT8+INT16)
- Support for all precisions (INT8, INT16, FP16)

Qualcomm® Sensing Hub

5G Modem-RF System

Snapdragon® X62 5G Modem-RF System

- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, FDD, TDD
- Dynamic Spectrum Sharing
- mmWave: 4 carriers, 2x2 MIMO
- Sub-6 GHz: 4x4 MIMO
- 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 4.4 Gbps

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

Wi-Fi & Bluetooth®

Qualcomm® FastConnect™ 6900 System

- Wi-Fi Generation: Wi-Fi 6E, Wi-Fi 6
- Wi-Fi Standards: 802.11ax, 802.11ac, 802.11a/b/g/n
- Wi-Fi Spectral Bands: 6 GHz, 5 GHz, 2.4 GHz
- Peak speed: 3.6 Gbps
- Channel Bandwidth: 20/40/80/160 MHz
- 8-stream sounding (for 8x8 MU-MIMO)
- MIMO Configuration: 2x2 (2-stream)
- MU-MIMO (Uplink & Downlink)
- 4K QAM
- OFDMA (Uplink & Downlink)
- 4-Stream (2x2 + 2x2) Dual Band Simultaneous (DBS)
- Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal

Integrated Bluetooth

- Bluetooth features: Bluetooth® 5.3, LE Audio
- Bluetooth audio: Snapdragon Sound™ Technology with support for Qualcomm® aptX™ Voice, aptX Lossless, aptX Adaptive, and LE audio

Camera

Qualcomm Spectra™ Image Signal Processor

- Triple 18-bit ISPs
- Up to 3.0 Gigapixels per second computer vision ISP (CV-ISP)
- Up to 32 MP triple camera @ 30 FPS with Zero Shutter Lag
- Up to 64+36 MP dual camera @ 30 FPS with Zero Shutter Lag
- Up to 108 MP single camera @ 30 FPS with Zero Shutter Lag
- Up to 200 MP Photo Capture

Rec. 2020 color gamut photo and video capture

Up to 10-bit color depth photo and video capture

4K HDR Video Capture + 64 MP Photo Capture

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

Video Capture Formats: HDR10+, HDR10, HLG, Dolby Vision

4K HDR Video Capture @ 60 FPS

Slow-mo video capture at 1080p240

Bokeh Engine for Video Capture

Video Super Resolution (VSR)

Multi-Frame Noise Reduction (MFNR)

Locally Motion Compensated Temporal Filtering

Multi-frame and triple exposure staggered/digital overlap HDR dual-sensor support

AI-based face detection, auto-focus, and auto-exposure

Audio

Qualcomm Aqstic™ audio codec

Qualcomm Aqstic smart speaker amplifier

Total Harmonic Distortion + Noise (THD+N), Playback: -108dB

Qualcomm® Audio & Voice Communication Suite

Display

On-Device Display Support:

- 4K @ 60 Hz
- QHD+ @ 120 Hz

Maximum External Display Support:

- Up to 4K @ 60 Hz
- 10-bit color depth, Rec. 2020 color gamut
- HDR10 and HDR10+

CPU

Kryo CPU

- 1 Prime core, up to 2.91 GHz
- Arm® Cortex®-X2 technology
- 3 Performance cores, up to 2.49 GHz
- 4 Efficiency cores, up to 1.8 GHz
- 64-bit architecture

Visual Subsystem

Adreno GPU

- Vulkan® 1.1 API support
- HDR gaming (10-bit color depth, Rec. 2020 color gamut)
- Physically Based Rendering
- Volumetric Rendering
- Adreno Frame Motion Engine
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0 FP, Vulkan 1.1
- Hardware-accelerated H.265 and VP9 decoder
- HDR Playback Codec support for HDR10+, HDR10, HLG, and Dolby Vision

Security

Platform Security Foundations, Trusted Execution Environment & Services

Trust Management Engine

Qualcomm® Wireless Edge Services (WES) and premium security features

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

Qualcomm® Type-1 Hypervisor

Charging

Qualcomm® Quick Charge™ 5 Technology

Location

GPS, Glonass, BeiDou, Galileo, QZSS, NavIC capable

Dual Frequency GNSS (L1/L5)

Sensor-Assisted Positioning

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

Memory

Support for LP-DDR5 memory up to 3200 MHz

Memory Density: Up to 16 GB

General Specifications

Select Snapdragon Elite Gaming™ features

4 nm Process Technology

USB Version 3.1; USB Type-C Support

Storage: UFS 3.1

Part Number: SM7475-AB

Snapdragon