The Snapdragon® 7 Gen 1 Mobile Platform is your total gaming package. This platform delivers epic mobile gaming with high-speed connectivity, plus heart-pumping audio and visuals. And when taking a break from boosting high scores, it fuels intelligent entertainment and larger-than-life capture. Stay fully immersed and leave lag behind, while conquering adversaries from anywhere.

Epic mobile gaming

Mobile competition becomes mobile domination. Our newest 7-series platform is action-packed with an improved Qualcomm® Adreno™ GPU delivering over 20% faster graphics rendering and ultra-low-latency HDR gaming. Bolster your moves and harness responsiveness by the millisecond with select Snapdragon Elite Gaming™ features, like the Adreno Frame Motion Engine and Qualcomm® Game Quick Touch.

- Adreno Frame Motion Engine doubles framerates to upscale content while maintaining the same power consumption
- Qualcomm Game Quick Touch dramatically reduces touch latency

High-speed connectivity

Never miss a checkpoint with low-latency 5G cloud gaming. Our truly global 4th Gen Snapdragon X62 5G Modem-RF System delivers all the speed, consistency, and power efficiency you need to dominate virtually anywhere, all day. Plus, our Qualcomm® FastConnect™ 6700 Mobile Connectivity System delivers blazing Wi-Fi 6/6E speeds up to 2.9 Gbps for legendary living room gameplay.

- Snapdragon X62 5G Modem-RF System offers blazing speeds up to 4.4 Gbps and supports more networks, frequencies, and bandwidths globally
- Bluetooth® 5.2 increases audio reliability while LE Audio broadcasts in-game sound to multiple devices for multi-player immersion

Heart-pumping audio and display

Lose yourself in every quest, battle, or mission—this platform immerses all your senses. Support for a next-gen Quad HD+ display brings graphics to life in mesmerizing realism, while Snapdragon Sound™ technology delivers low-latency, lossless audio for the ultimate in-game situation. Hear rustling leaves, far-off explosions, or crunching gravel in real-time and with stunning authenticity.

- Qualcomm® aptX™ Lossless Technology produces CD-quality sound over Bluetooth
- Anti-howling technology reduces feedback heard when gaming near teammates
- Audio Contextual Detection adjusts volume based on environment

Intelligent entertainment

The 7th Gen Qualcomm® AI Engine, our fastest, most advanced ever, is aided by our next-gen Qualcomm® Hexagon™ Processor for faster, more intuitive AI experiences. AI-powered Video Super Resolution (VSR) provides digital zoom capabilities for sharp, clear footage, even from far away. And now you can capture crisp photos—even while masked—with Camera Deep Learning Face Detect (DLFD), offering ultra-accurate autofocus based on 300 facial landmarks.

- 7th Gen Qualcomm AI Engine is a first to the Snapdragon 7-Series Platform
- Up to 30% improved AI performance

Larger-than-life capture

Remember every moment in vibrant color and striking clarity with up to 200MP photos—a Snapdragon 7-series platform first! Our Triple ISP captures photos from three cameras at once, rendering a full range of footage from wide angle to macro. Pair this incredible detail with 4K HDR+ to snap moments full of luminosity and contrast, or record vivid 4K HDR video.

- Qualcomm Spectra™ Triple 14-bit ISP enables simultaneous triple capture
- Snapdragon® Low Light Photo (LLP) provides beautifully crisp noise reduction for images and videos
- Up to 2.5 Gigapixels per second computer vision ISP (CV-ISP)

Vault-like security

Reinforcing these incredible on-device experiences are two more Snapdragon 7-series firsts that help keep your data protected. A dedicated Trust Management Engine achieves heightened security and provides additional Root of Trust for apps and services, while Android Ready SE is the new standard for digital car keys, drivers' licenses, and more.

All comparisons made are in reference to previous generation, Snapdragon 778G Mobile Platform. Results will vary depending on OEM implementation and other factors. Battery life varies significantly based on device, setting, usage, and other factors. Snapdragon, Qualcomm Adreno, Snapdragon Elite Gaming, Qualcomm Game Quick Touch, Qualcomm FastConnect, Snapdragon Sound, Qualcomm aptX, Qualcomm AI Engine, Qualcomm Hexagon, Qualcomm Spectra, and Qualcomm AI Engine are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

Snapdragon 7 mobile platform Gen 1

Artificial Intelligence

Qualcomm® Adreno™ GPU

Qualcomm® Kryo™ CPU

Qualcomm® Hexagon™ Processor

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

3rd Gen Qualcomm® Sensing Hub

5G Modem-RF System

Snapdragon X62 5G Modem-RF System

- 5G mmWave and sub-6 GHz
- (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 including CBRS, WCDMA, HSPA, CDMA 1x, EV-DO, GSM/EDGE

Wi-Fi & Bluetooth®

Qualcomm® FastConnect™ 6700 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: 2.4 GHz, 5 GHz, 6 GHz
- Peak speed: 2.9 Gbps
- Channel Bandwidth: 20/40/80/160 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® 5.2, LE Audio, Dual Bluetooth antennas, Snapdragon Sound™ Technology with support for Qualcomm® aptX™ Voice, aptX Lossless, aptX Adaptive

Camera

- Qualcomm Spectra™ Image Signal Processor
- Triple 14-bit ISPs
- Up to 2.5 Gigapixels per Second computer vision ISP (CV-ISP)
- Up to 25 MP triple camera @ 30 FPS with Zero Shutter Lag
- Up to 64+20 MP dual camera @ 30 FPS with Zero Shutter Lag
- Up to 84 MP single camera @ 30 FPS with Zero Shutter Lag
- Up to 200 Megapixel 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
- 4K HDR Video Capture @ 30 FPS
- Slow-mo video capture at 720p @ 480 FPS
- Video super resolution
- Multi-frame Noise Reduction (MFNR)
- Locally Motion Compensated Temporal Filtering
- Support for Staggered HDR image sensors
- AI-based face detection, auto-focus, and auto-exposure

Audio

Qualcomm Aqstic™ audio codec (WCD9385)

New Qualcomm Aqstic smart speaker amplifier (WSA8835)

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

Qualcomm® Audio and Voice Communication Suite

Display

On-Device Display Support:

- FHD+ @ 144 Hz
- QHD+ @ 120 Hz

Maximum External Display Support: up to QHD+ @ 60 Hz

- 10-bit color depth, Rec. 2020 color gamut
- Adaptive HDR10 and HDR10+

Demura and subpixel rendering for OLED Uniformity

CPU

Kryo CPU

- Up to 2.5 GHz*
- 64-bit Architecture

Visual Subsystem

Adreno GPU

- Vulkan® 1.1 API support
- HDR gaming (10-bit color depth, Rec. 2020 color gamut)
- 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 and Trusted Execution Environment & Services

Trust Management Engine

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

Qualcomm® Type-1 Hypervisor

Charging

Qualcomm® Quick Charge™ 4+ 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

Part Number: SM7450-0-AB, SM7450-1-AB

snapdragon.com

*Snapdragon 7 Gen 1 Mobile Platform also available in 2.4 GHz CPU version. Maximum CPU speed will vary based on platform version. Consult OEM specifications for device CPU speed.

Certain optional features available subject to Carrier and OEM selection for an additional fee.

Snapdragon, Qualcomm, Qualcomm Adreno, Qualcomm Sensing Hub, Qualcomm 3D Sonic Max, Qualcomm FastConnect, Snapdragon Sound, Qualcomm aptX, Snapdragon Elite Gaming, Qualcomm Hexagon, Qualcomm 5G PowerSave 2.0, Qualcomm Kryo, Qualcomm Smart Transmit, Qualcomm Wideband Envelope Tracking, Qualcomm AI-Enhanced Signal Boost, Qualcomm Spectra, Qualcomm Aqstic, Qualcomm 3D Sonic Sensor, Qualcomm Type-1 Hypervisor, and Qualcomm Quick Charge are products of Qualcomm Technologies, Inc. and/or its subsidiaries. Qualcomm WES are offered by Qualcomm Technologies Inc. and/or its subsidiaries.

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