Qualcomm
snapdragon
768G 5G mobile platform

768G 5G

The Qualcomm® Snapdragon™ 768G 5G Mobile Platform empowers smart, immersive gaming backed by next-level performance. CPU and GPU improvements from the previous generation provide exhilarating experiences with the integration of truly global 5G, sophisticated on-device AI and select Qualcomm® Snapdragon Elite Gaming™ features.

Smart, immersive gaming

Take your gameplay to new levels of brilliance and realism. Select Snapdragon Elite Gaming features produce ultra-rich graphics in over a billion shades of color. Watch the action unfold smoothly with 120 Hz display support so you can make smarter moves in real time. Plus, updateable GPU drivers bring desktop-quality gaming to your mobile device for optimized performance and the latest and greatest graphics.

- Qualcomm® Adreno™ 620 GPU delivers up to 15% faster graphics rendering compared to Snapdragon 765G
- Select Snapdragon Elite Gaming features including: True HDR Gaming, Qualcomm® Game Color Plus, and updateable GPU drivers

Next-level performance

Dive into masterful gameplay with performance enhancements backing every action, adventure, and achievement. The improved Qualcomm® Kryo™ CPU emboldens each move with speed and strength, while leveled-up graphics rendering makes imagery explode across the screen in sharp contrast and dynamic color.

- Upgraded Kryo 475 CPU offers up to 15% performance improvement from the Snapdragon 765G
- 7nm process supports fast experiences without draining your battery quickly

Sophisticated on-device AI

Our 5th generation Qualcomm® Artificial Intelligence (AI) Engine enables cutting-edge device intelligence at maximum efficiency for immersive games with intuitive interactions. And, with advanced AI real-time translation, communicate with gamers across the globe—with no lag or language barrier—for ultimate teamwork and victory.

- Qualcomm® Hexagon™ 696 processor with Hexagon Tensor Accelerator enables fast, seamless AI user experiences, including real-time translation
- Qualcomm® Sensing Hub for always-on environment awareness and AI virtual assistance

Truly global 5G

Battle multiple players in real time with blazing 5G speeds and global 5G accessibility. Download or stream immersive, PC-quality games from the cloud right onto your mobile device—whether you're at home or on the go. 5G power and performance are yours to harness, and no challenger is off-limits.

- Multi-gigabit 5G gaming with download speeds up to 3.7 Gbps
- Global support for mmWave, sub-6 GHz, TDD, FDD and Dynamic Spectrum Sharing (DSS)
- Supports global roaming and global multi-SIM

Entertainment unleashed

Even when you're not gaming, the Snapdragon 768G 5G is still the total entertainment package. Get lost in scenes or storylines with Qualcomm® aptX™ Adaptive audio, providing 3D surround-sound that syncs flawlessly with on-screen action. Or, record your own captivating content with HDR video capture, packing over a billion shades of color for striking, true-to-life memories.

- aptX Adaptive audio auto-adjusts between high definition mode and low latency mode, keeping audio in sync with media to reduce audio/lip-synchronization issues

To learn more visit
snapdragon.com

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SPECIFICATIONS & FEATURES

Qualcomm AI Engine

- Adreno 620 GPU
- Kryo 475 CPU
- Hexagon 696 Processor
  - Hexagon Scalar Accelerator
  - Hexagon Vector eXtensions (HVX)
  - Hexagon Tensor Accelerator
- Qualcomm Sensing Hub
  - Ultra low power hub for audio, voice and sensors
  - Supports AI algorithms at low power
  - Support for fusing contextual data streams including sensors, audio and voice
  - Supports multiple voice assistants
  - Multi-mic far-field detection and echo cancellation

5G Modem-RF System

- Snapdragon X52 5G Modem-RF System – Modem to antenna integrated system for 5G multimode
- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, FDD, TDD
- Dynamic Spectrum Sharing
- mmWave: 400 MHz bandwidth, 2x2 MIMO
- Sub-6 GHz: 100 MHz bandwidth, 4x4 MIMO
- Qualcomm® 5G PowerSave
- Qualcomm® Smart Transmit™ technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® Signal Boost adaptive antenna tuning
- Global 5G multi-SIM
- Downlink: Up to 3.7 Gbps (5G), 1.2 Gbps (LTE)
- Uplink: Up to 1.6 Gbps (5G), 210 Mbps (LTE)
- Multimode support: 5G NR, LTE including CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

Wi-Fi & Bluetooth

- Qualcomm® FastConnect™ 6200 Subsystem
  - Wi-Fi Standards: 802.11ax-ready, 802.11ac Wave 2, 802.11a/b/g, 802.11n
  - Wi-Fi Spectral Bands: 2.4 GHz, 5 GHz
  - Channel Utilization: 20/40/80 MHz
  - MIMO Configuration: 2x2 (2-stream) with MU-MIMO
  - 8-stream sounding (for 8x8 MU-MIMO)
  - Dual-band simultaneous (DBS)
  - Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal
  - Target Wake Time (TWT)

- Integrated Bluetooth
  - Bluetooth version: 5.2
  - Bluetooth audio: Qualcomm TrueWireless™ Technology, aptX Adaptive

Camera

- Qualcomm Spectra™ 355 ISP
- Dual 14-bit ISPs
- Hardware accelerator for computer vision (CV-ISP)
- Up to 192 MP capture
- Up to 22 MP dual camera @ 30 FPS with Zero Shutter Lag
- Up to 36 MP single camera @ 30 FPS with Zero Shutter Lag
- Rec. 2020 color gamut video capture
- Up to 10-bit color depth video capture
- Slow-mo video capture at 720p @ 480 FPS
- HEIF: HEIC photo capture, HEVC video capture
- Video Capture Formats: HDR10, HDR10+, HLG
- 4K HDR Video Capture with Portrait Mode (Bokeh)
- Multi-frame Noise Reduction (MFNR)
- Real-time object classification, segmentation and replacement

Audio

- Hexagon Voice Assistant Accelerator for hardware accelerated voice signal processing
- Qualcomm Aqstic™ audio codec (up to WCD9385)
  - Total Harmonic Distortion + Noise (THD+N), Playback: -108dB
  - Native DSD support, PCM up to 384 kHz/32-bit
  - Customizable "Golden Ears" filter
- Qualcomm Aqstic smart speaker amplifier (up to WSA8815)

Display

- Maximum On-Device Display Support:
  - QHD+ @ 60 Hz
  - FHD+ @ 120 Hz
- Maximum External Display Support: UHD @ 60 Hz
- 10-bit color depth, Rec. 2020 color gamut
- HDR10 and HDR10+

CPU

- Kryo 475, Octa-core CPU
- Up to 2.8 GHz
- 64-bit Architecture

Visual Subsystem

- Adreno 620 GPU
- Vulkan® 1.1 API support
- 4K HDR10 PQ and HLG Video Playback (10 bit color depth, Rec. 2020 color gamut)
- H.264 (AVC), H.265 (HEVC) VP8 and VP9 playback
- Physically Based Rendering
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0 FP, Vulkan 1.1, DirectX 12

Security

- Biometric Authentication: Fingerprint, Iris, Voice, Face
- On-Device: Qualcomm® Mobile Security, Key Provisioning Security, Qualcomm® Processor Security, Qualcomm® Content Protection, Qualcomm® Trusted Execution Environment, Secure Camera, Crypto Engine, Malware Protection, Secure Boot, Secure Token

Charging

- Qualcomm® Quick Charge™ 4+ Technology
- Quick Charge AI

Location

- GPS, Glonass, BeiDou, Galileo, QZSS, NavIC and SBAS
- Dual Frequency Support
- Low Power Geofencing and Tracking, Sensor-assisted Navigation
- Near Field Communications (NFC): Supported

General Specifications

- Select Snapdragon Elite Gaming features
- Memory Speed: up to 2133 MHz, 12GB RAM
- Memory Type: 2 x 16-bit, LPDDR4x
- Near Field Communications (NFC) support
- DisplayPort over USB Type-C support
- 7 nm Process Technology
- Part Number: SM7250-AC