



The Snapdragon® 680 4G Mobile Platform is purpose-built for extended multimedia play, offering unbeatable efficiency, long-lasting power, and reliable 4G LTE to back every sight, sound, and strategic move. Immerse yourself in optimized gaming, brilliant photography, smooth streaming, and rich audio—all day, every day.



All-day power

Game, stream, capture the action, and more—for as long as you'd like and with power to spare. A 6nm process leaps ahead of the predecessor's 11nm in efficiency, delivering up to 20% more days of overall use. Plus, refuel in a flash (and get back to your favorite activities) thanks to Qualcomm® Quick Charge™ 3.0 Technology.

- Quick Charge 3.0 can charge up to 50% in just 30 minutes while extending battery life cycles
- Qualcomm® Kryo™ 265 CPU designed for robust computing without draining power
- Qualcomm® Hexagon™ 686 DSP offloads tasks from CPU for added efficiency



Extended play

Get lost in your favorite podcast, binge that hit show, or browse your socials—all day and then some. The Snapdragon 680 offers long-lasting experiences that never leave you in the lurch. Plus, Qualcomm Aqstic™ Audio Technologies deliver hi-fi, studio-quality sound that doesn't quickly deplete power, adding full-sensory immersion to your on-device entertainment.

- Up to ten hours longer audio playback and 30 minutes longer video streaming versus the predecessor
- Efficient 6nm process and Hexagon 686 DSP prolong every passion and pastime



Optimized gaming

Level up your mobile achievements with high-performance features and connectivity. Game Jank Reducer and Q-Sync enable smooth, desktop-quality competition with minimal glitch and lag. Play from virtually anywhere over fast, robust 4G LTE, and stay ahead of your enemy's every move with Qualcomm® aptX™ Adaptive Audio—keeping game audio engaging and in-sync.

- Snapdragon X11 LTE Modem for reliable 4G LTE gaming
- Display support up to 90 FPS FHD+
- Qualcomm® Adreno™ 610 GPU renders complex visuals smoothly and efficiently
- Game Jank Reducer minimizes stutter while Q-Sync matches display FPS with in-game rendering



Enhanced camera experiences

Document every moment—remarkable or routine—with a mobile camera engineered to impress. Harness a triple ISP to capture up to three photos or videos simultaneously. Snap ultra-wide, wide, and telephoto images—and zoom smoothly between them. Plus, AI enables Low Light Capture, so memories of twilight hikes and late-night skylines are vivid and brilliant.

- Qualcomm Spectra™ 346 Triple ISP
- Concurrent 13/13/5 MP photo and 1080p60 video capture
- Low Light Capture for intelligently-lit photos in darker environments

To learn more visit
[snapdragon.com](https://www.qualcomm.com/snapdragon)

All comparisons made are in reference to previous generation. Results will vary depending on OEM implementation and other factors. Battery life varies significantly based on device, setting, usage, and other factors.

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Snapdragon®

680 4G mobile platform



SPECIFICATIONS & FEATURES

Qualcomm® Artificial Intelligence (AI) Engine

- Qualcomm® Adreno™ 610 GPU
- Qualcomm® Kryo™ 265 CPU
- Qualcomm® Hexagon™ 686 Processor
 - Hexagon Vector eXtensions
 - Hexagon Scalar Accelerator
- Qualcomm® Sensing Hub
 - Ultra low power hub for audio, voice and sensors
 - Supports multiple hardware accelerated always-on voice assistants
 - Multi-mic far-field detection and echo cancellation

Modem and RF Front-End

- Snapdragon X11 LTE modem
- Downlink: LTE Cat 13 up to 390 Mbps, 2x20 MHz carrier aggregation, up to 256-QAM
- Uplink: LTE Cat 13 up to 150 Mbps, 2x20 MHz carrier aggregation, up to 64-QAM
- 2x2 MIMO
- Supported Cellular Technologies: LTE FDD, LTE TDD, WCDMA (DC-HSDPA, HSUPA), TD-SCDMA, EVDO, DMA 1x, GSM/EDGE
- LTE Dual SIM Dual Standby
- VoLTE with SRVCC to 3G and 2G, HD and Ultra HD Voice (EVS), CSFB to 3G and 2G
- Wi-Fi calling with call continuity between LTE and Wi-Fi
- Qualcomm® Signal Boost adaptive antenna tuning
- High-power transmit (HPUE)

Wi-Fi & Bluetooth®

- Qualcomm® FastConnect™ 6100 Subsystem
 - Wi-Fi Standards: 802.11ac Wave 2, 802.11a/b/g/n
 - Wi-Fi Spectral Bands: 2.4 GHz, 5 GHz
 - Channel Utilization: 20/40/80 MHz
 - MIMO Configuration: 1x1
 - 8x8 sounding ready, MU-MIMO
 - Target Wake Time (TWT) ready
 - Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal
- Integrated Bluetooth
 - Bluetooth version: 5.1
 - Bluetooth audio: Qualcomm TrueWireless™ Technology, Qualcomm® aptX™ Adaptive Audio

Camera

- Qualcomm Spectra™ 346 Image Signal Processor
- Triple 12-bit ISPs
- Up to 13+13+5 MP triple camera @ 30 FPS with Zero Shutter Lag
- Up to 16+16 MP dual camera @ 30 FPS with Zero Shutter Lag and Multi-Frame Noise Reduction
- Up to 32 MP single camera @ 30 FPS with Zero Shutter Lag and Multi-Frame Noise Reduction
- Up to 64 MP Photo Capture
- Up to 10-bit color depth photo and video capture
- Slow-motion video capture at 720p @ 30 FPS
- Video Capture Formats: HEVC
- HEIF: HEIC photo capture, HEVC video capture

Audio

- Low Power Audio Subsystem
- Qualcomm® AI-based Echo Cancellation and Noise Suppression
- Snapdragon® Voice Activation
- Total Harmonic Distortion + Noise (THD+N), Playback: -108 dB
- Hi-Fi Audio with up to 384/32-bit
- Qualcomm Aqstic™ smart speaker amplifier (up to WSA8831)
- Qualcomm Aqstic™ audio codec (up to WCD9385)

Display

- On-Device Display Support:
 - FHD+ (1080 x 2520 @ 90 Hz)
 - HD+ (900 x 1600 @ 90 Hz)

CPU

- Kryo 265, Octa-core CPU
 - Up to 2.4 GHz
 - 64-bit architecture

Visual Subsystem

- Adreno 610 GPU
- H.264 (AVC), H.265 (HEVC) VP8 and VP9 playback
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0, Vulkan® 1.1

Security

- Platform Security Foundations: Secure Boot, Debug Security, HW Crypto Cores, HW/SW Key Management, HW/SW storage security, Peripherals Security
- Trusted Execution Environment and Services:
 - Qualcomm® Trusted Execution Environment (TEE)
 - Qualcomm® Content Protection (Widevine™ V15), Camera Security Framework, Trusted UI Framework

Charging

- Qualcomm Quick Charge 3 technology

Location

- GPS, Glonass, BeiDou, Galileo, and QZSS
- NavIC support
- Dual-Frequency GNSS (L1 + L5)
- Qualcomm® Sensor-Assisted Positioning

General Specifications

- Memory: 2x16 LP4x @ 2133 MHz
- Storage: eMMC, UFS 2.2
- Near Field Communications (NFC) support
- USB Type-C support
- 6nm Process Technology
- Part Number: SM6225

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

Qualcomm AI Engine, Qualcomm Sensing Hub, Qualcomm FastConnect, Qualcomm Sensor Assisted Positioning, Qualcomm WCD9370, Qualcomm Signal Boost, Qualcomm TrueWireless, Qualcomm aptX, Qualcomm Aqstic, Qualcomm Mobile Security, Qualcomm Processor Security, Qualcomm Content Protection, Qualcomm TEE, and Qualcomm Malware Protection are products of Qualcomm Technologies, Inc. and/or its subsidiaries.

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