



The Qualcomm® Snapdragon™ 678 Mobile Platform is designed to deliver reliable performance for dynamic entertainment experiences. A boost in both CPU and GPU provides improved gaming, photography, streaming, and more. Plus, experience it all at lightning-fast speeds with impressive connectivity.



### Boosted on-device performance

Key performance upgrades empower you to game, stream, or capture in high quality. Our improved Qualcomm® Kryo™ 460 CPU and Qualcomm® Adreno™ 612 GPU enable faster, more robust on-device interactions. Plus, with Qualcomm® Quick Charge™ 4+ technology, you'll be back to your favorite activities in a flash.

- Qualcomm® Hexagon™ 685 DSP with Qualcomm® Hexagon™ Vector eXtensions (HVX) boosts processing with impressive efficiency
- Kryo CPU boasts speeds up to 2.2 GHz
- Sensor low-power island (LPI) provides always-on AI awareness and assistance



### Dynamic photography and videography

Capture every occasion, experience, and adventure in share-worthy detail thanks to our Qualcomm Spectra™ 250L ISP. Snap pictures in up to 192 MP, or create unique content with HD slo-mo recording, 5x optical zoom, and portrait mode. Plus, the Hexagon 685 DSP produces better, brighter imagery without draining power.

- Dual-camera support up to 16 MP
- 3rd Gen Qualcomm® Artificial Intelligence (AI) Engine enables smarter photography experiences



### Immersive entertainment, at your fingertips

Rich entertainment value awaits gamers, movie buffs, and audiophiles alike. Live to compete with a platform optimized for popular mobile games—or stream and download seamlessly thanks to our super-fast Snapdragon X12 LTE Modem. Plus, Qualcomm Aqstic™ Audio Technologies bring your favorite content to life with clear, realistic sound.

- The boosted Kryo 460 CPU and Adreno 612 GPU make gaming smooth and responsive
- Optimized for Unity, Messiah, NeoX, and Unreal Engine 4
- Qualcomm® aptX™ Audio delivers rich, seamless Bluetooth audio



### Quality connections

Follow GPS, stream videos, or download music in real time with the Snapdragon X12 LTE Modem—pushing super-fast upload and download speeds, plus rapid response times. This modem delivers the best of both worlds, engineered to switch seamlessly between LTE and Wi-Fi for the strongest signal available. No more sluggish connections, even in congested areas.

- Supports advanced carrier aggregation for impressive peak speeds, with downloads up to 600 Mbps and uploads up to 150 Mbps

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

All comparisons made are in reference to previous generation, Snapdragon 675 Mobile Platform. Results will vary depending on OEM implementation and other factors.

Qualcomm Snapdragon, Qualcomm Kryo, Qualcomm Adreno, Qualcomm Quick Charge, Qualcomm Hexagon, Qualcomm Spectra, Qualcomm AI Engine, Qualcomm Aqstic, and Qualcomm aptX are products of Qualcomm Technologies Inc. and/or its subsidiaries.



## SPECIFICATIONS &amp; FEATURES

**Qualcomm AI Engine**

- Adreno 612 GPU
- Kryo 460 CPU
- Hexagon 685 Processor
  - Hexagon Vector eXtensions (HVX)
- Sensor low-power island (LPI)
- Qualcomm® Neural Processing SDK

**Modem**

- Snapdragon X12 LTE Modem
- Support for 600 Mbps LTE
- Downlink: LTE Cat 15 up to 600 Mbps, 3 x 20 MHz carrier aggregation, up to 256-QAM
- Uplink: LTE Cat 13 up to 150 Mbps, 2 x 20 MHz carrier aggregation, up to 64-QAM
- Dual SIM Dual VoLTE (DSDV)
- Support for all major cellular modes plus LAA. Support for:
  - VoLTE with SRVCC to 3G and 2G, HD and Ultra HD Voice (EVS), CSFB to 3G and 2G
  - Voice over Wi-Fi (VoWiFi) with LTE call continuity

**Wi-Fi & Bluetooth**

- Qualcomm® Wi-Fi Technology
- Qualcomm Wi-Fi integrated 802.11ac 1x1 MU-MIMO
- Tri-band Wi-Fi: 2.4 GHz and 5 GHz
- 11k/r/v: Enhanced mobility, fast acquisition and congestion mitigation for Carrier Wi-Fi
- Qualcomm TrueWireless™ Stereo
  - Bluetooth 5.0 with proprietary enhancements for:
    - Ultra-low power wireless ear buds
    - Direct audio broadcast to multiple devices

**Camera**

- Qualcomm Spectra 250L Image Signal Processor
- 14-bit image signal processing
- Dual camera: up to 16 MP, MFNR, ZSL, 30 fps
- Single camera: up to 25 MP, MFNR, ZSL, 30 fps
- Single camera: up to 48 MP, MFNR
- Single camera: up to 192 MP
- Video capture:
  - Standard: up to 2160p at 30 fps
  - Slow motion: up to 1080p at 120 fps or 720p at 240 fps
  - HEVC video capture
- Can connect up to 6 different cameras (many configurations possible)
- Multi-frame Noise Reduction (MFNR) with accelerated image stabilization
- Hybrid Autofocus with support for dual phase detection (2PD) sensors
- Ultra HD video capture (4K at 30 fps) with Motion Compensated Temporal Filtering (MCTF)

**Audio**

- Qualcomm Aqstic audio codec and Qualcomm Aqstic smart speaker amplifier
  - Up to native DSD support, PCM up to 384 kHz/32-bit
- aptX audio playback with support for aptX Classic and HD
- Far-field mic support
- Voice activation with machine learning algorithms
- Car mode

**CPU**

- Kryo 460, Octa-core CPU
- Up to 2.2 GHz
- 11nm Process Technology

**Visual Subsystem**

- Adreno 612 GPU
- 4K video playback
- H.264 (AVC), H.265 (HEVC), VP8 and VP9 playback
- FHD+ @ 60 Hz display
- DisplayPort over USB Type-C support
- API Support: OpenGL ES 3.2, OpenCL™ 2.0, Vulkan, DirectX 12

**RF Front-End**

- Qualcomm® Signal Boost adaptive antenna tuning
- High-power transmit (HPUE)
- On-Device: Qualcomm® Mobile Security, Qualcomm® Processor Security, Qualcomm® Content Protection

**General Specifications**

- Memory Speed: up to 1866 MHz, 8 GB RAM
- Memory type: 2 x 16-bit LPDDR4/4x
- GPS, Glonass, BeiDou, Galileo, QZSS, and SBAS
- Low Power Geofencing and Tracking, Sensor-assisted Navigation
- Quick Charge 4+ technology
- Part number: SM6150-AC