

# Qualcomm® Snapdragon™ 710 Mobile Platform



## Snapdragon 710 Mobile Platform advancements

- **AI Engine:** Cutting-edge AI experiences are possible in camera, audio, security and gaming thanks to the AI Engine on the Snapdragon 710 mobile platform. Advanced hardware, including Qualcomm® Hexagon™ 685 DSP, Qualcomm® Adreno™ 616 GPU and Qualcomm® Kryo™ 360 CPU, along with support for Snapdragon Neural Processing (NPE) SDK, Android Neural NN or Hexagon Neural Network, are designed to result in superior overall AI on-device processing.
- **Snapdragon X15 LTE Modem:** Lightning-fast download speeds up to 800 Mbps with 3x carrier aggregation, 4x4 MIMO and LAA support. In a snap, you can download music and listen to it via Bluetooth 5 with audio broadcast and ultra-low power ear bud support.
- **Qualcomm Spectra™ 250 Image Signal Processor:** Designed with new architectures to bring cutting-edge photo and video experiences to your device.
- **Adreno 616 Visual Processing Subsystem:** Engineered to support stunning, life-like graphics and console-like gaming at lower power.
- **Hexagon 685 DSP:** Our most optimized DSP for on-device AI speed and power efficiency, resulting in smarter camera, voice and gaming experiences.
- **Kryo 360 CPU:** Built in 10 nanometers, our semicustom architecture is optimized across two performance and six efficiency cores.

## Elevate your mobile experiences

### AI helps your device work smarter, not harder

Our multi-core Qualcomm® AI Engine delivers up to 2x overall improvements compared to our previous generations for on-device AI applications. The Qualcomm AI Engine can help your device better manage battery usage, auto-adjust settings for pictures, and listen to your voice cues more naturally.



### Keeping you connected faster<sup>1</sup>, worldwide

Connect quickly with the new Snapdragon X15 LTE Modem, with download speeds over twice as fast as typical LTE Advanced capability<sup>1</sup>. Enjoy lightning-fast speeds for your connected apps and experiences - even in some of the most crowded places. Download an HD movie or your favorite band's latest album with confidence knowing that double the antennas<sup>2</sup> get you faster download speeds, even in some of the most remote locations.



### Capture more photos and videos per charge with stunning quality

Capture vibrant, high-quality photos and videos thanks to new architecture in the 2nd generation Qualcomm Spectra ISP. Take 4K Ultra HD video at up to 40% lower power<sup>2</sup> so you can capture more minutes per charge. Enjoy more vivid experiences with videos that show greater texture and sharper, more colorful photos - even in low light.



### Rich on-device experiences

The new Adreno 616 GPU is designed to allow you to enjoy console-like gaming and cinematic movie experiences on your smartphone. Feel immersed with 35% faster graphics rendering<sup>2</sup> and 4K HDR playback, capable of displaying over 1 billion shades of color. Qualcomm Aqstic™ audio technology is engineered to support incredible sound quality on your device - making hearing the people and things you love even better.



### Faster performance, better battery life<sup>2</sup>

Now you can do more, more powerfully, on a single charge. A 10 nm processor, architecture enhancements, and core improvements contribute to a 20% performance uplift across gaming, web browsing and more<sup>2</sup>. When it's time to recharge, rely on Qualcomm® Quick Charge™ 4+ technology to take your phone from 0% to 50% in 15 minutes!<sup>3</sup>

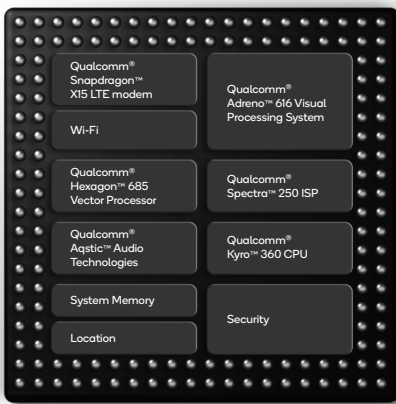


(1) Compared to Cat 7 LTE, (2) Compared to Snapdragon 660, (3) Quick Charge is designed to allow devices to charge from 0% to 50% in 15 minutes. Actual results may vary depending on device design.

To learn more visit: [snapdragon.com](http://snapdragon.com)

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

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The new architectures of Snapdragon 710 Mobile Platform are engineered to optimize and enhance AI, power, and performance for some of the most in-demand mobile devices.

## Features & Specifications<sup>1</sup>

### Visual Processing Subsystem

- Adreno 616 Visual Processing Subsystem
- Open GL ES 3.2, Open CL 2.0, Vulkan, DirectX 12
- 4K HDR video playback (10-bit color depth, Rec. 2020 color gamut)
- H.264 (AVC), H.265 (HEVC) and VP9 playback
- DisplayPort over USB Type-C support

### DSP

- Hexagon 685 DSP with:
  - 3rd Gen Qualcomm Hexagon Vector Extensions (HVX)
  - Qualcomm All-Ways Aware™ Sensor Hub
  - Qualcomm Neural Processing SDK
  - Caffe, Caffe2, Tensorflow, Tensorflow Lite and other framework support

### Audio

- Qualcomm Aqstic audio codec and Qualcomm Aqstic smart speaker amplifier
  - Up to native DSD support, PCM up to 384 kHz/32-bit
- Qualcomm® aptX™ audio playback with support for aptX Classic and HD

### CPU

- 8x Kryo 360 CPU
- Up to 2.2 GHz
- 10 nm process technology

### Memory

- LPDDR4x, 2 x 16-bit
- Up to 1866 MHz, 8 GB RAM

### Image Signal Processor

- Qualcomm Spectra 250 Image Signal Processor

- 2nd Generation Qualcomm Spectra architecture for 14-bit image signal processing, with support up to:
  - Up to 32 megapixel single camera
  - Up to 20 megapixel dual camera
  - 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)
  - 3D structured light and time of flight active depth sensing

### Charging

- Quick Charge 4+ technology

### Security

- Qualcomm® Processor Security
- Qualcomm® Mobile Security
- Qualcomm® Content Protection

### Modem

- Snapdragon X15 LTE Modem
- Support for 800 Mbps LTE
- Downlink: LTE Cat 15 up to 800 Mbps, 3 x 20 MHz carrier aggregation, up to 256-QAM, up to 4 x 4 MIMO on two aggregated carriers
- Uplink: LTE Cat 13 up to 150 Mbps, Snapdragon Upload+ (2 x 20 MHz carrier aggregation, up to 64-QAM)
- License Assisted Access (LAA)
- Citizens Broadband Radio Service (CBRS) shared radio spectrum
- Dual SIM Dual VoLTE (DSDV)

- All Mode with 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

### Connectivity

- Qualcomm® Wi-Fi Solutions
- Wi-Fi integrated 802.11ac 2 x 2 with MU-MIMO
- Tri-band Wi-Fi: 2.4 GHz and 5 GHz with Dual Band Simultaneous (DBS) + 60 GHz
- 11k/r/v: Enhanced mobility, fast acquisition and congestion mitigation for carrier Wi-Fi
- Qualcomm TrueWireless™ Stereo Plus
- Qualcomm® Broadcast Audio
- Bluetooth 5.0
- RF Front End
- Qualcomm® Signal Boost adaptive antenna tuning
- High-power transmit (HPUE)

### Location

- GPS, Glonass, BeiDou, Galileo, QZSS, and SBAS
- Low power geofencing and tracking, sensor assisted navigation

<sup>1</sup> Certain optional features available subject to Carrier and OEM selection for an additional fee.

Qualcomm All-Ways Aware, Qualcomm Secure Processing Unit, Qualcomm Processor Security, Qualcomm Mobile Security, Qualcomm Content Protection, Qualcomm Signal Boost, and Qualcomm Wi-Fi, Qualcomm aptX and Qualcomm TrueWireless are products of Qualcomm Technologies Inc. and/or its subsidiaries.

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