

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 faster¹, worldwide

Connect quickly with the new Snapdragon X15 LTE Modem, with download speeds over twice as fast as typical LTE Advanced capability¹. 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 antennas² 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 power² 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 rendering² 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 life²

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 more². When it's time to recharge, rely on Qualcomm® Quick Charge™ 4+ technology to take your phone from 0% to 50% in 15 minutes!³

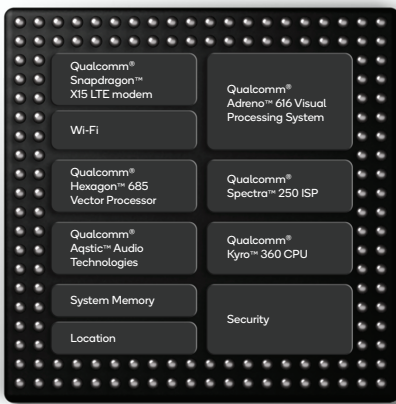


(1) Compared to Cat 7 LTE, (2) Compared to Snapdragon 660, (3) Quick Charge is designed to allow devices to charge from 0% to 50% in 15 minutes. Actual results may vary depending on device design.

To learn more visit: snapdragon.com

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 & Specifications¹

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

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

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