

QUALCOMM®
SNAPDRAGON™

660

MOBILE PLATFORM

Snapdragon 660 mobile platform advancements:

- + Qualcomm Spectra™ 160 Camera ISP: Dual 14-bit ISPs support up to 24MP single or 16MP dual cameras for the ultimate photography and videography experience
- + Qualcomm® Adreno™ 512 GPU: Up to 30% better graphics and enhanced gaming performance¹ for lifelike visuals and more efficient rendering of advanced 3D graphics
- + Qualcomm® Hexagon™ 680 DSP includes Hexagon Vector eXtensions (HVX), designed to support Caffe2 and Tensorflow for machine learning and image processing
- + Snapdragon X12 LTE modem designed to support mobile industry leading connectivity with LTE download speeds up to 600 Mbps, integrated 2x2 802.11ac Wi-Fi with MU-MIMO, and RF front end technologies
- + Qualcomm® Kryo™ 260 CPU: Manufactured in 14nm, bringing Kryo to the 600-tier for the first time
- + Qualcomm® Quick Charge™ 4 technology: 20% faster, 30% more efficient than previous generation, charge from zero to 50% in 15 minutes²
- + Pin and software compatible with Snapdragon 630

To learn more visit: snapdragon.com

User Experiences



Outstanding image quality

The 14-bit Qualcomm Spectra 160 dual ISP taps into the performance enhancements Hexagon 680 DSP's HVX adds, bringing amazing features like smooth zoom, fast autofocus, and true-to-life colors.



Enhanced graphics and 3D gaming

With up to 30% improved performance¹, Adreno 512 GPU supports lifelike visuals and more efficient rendering of advanced 3D graphics. Developers gain access to the latest graphics APIs.



Connect faster at home and away²

With LTE and Wi-Fi downlink speeds up to 2X faster², the Snapdragon X12 modem can download files quickly. Improved Wi-Fi coverage is engineered to provide a stronger signal, even through hard to penetrate walls.



On device machine learning

Qualcomm® Machine Learning Platform supports high performance, intelligent, on-device processes, utilizing heterogeneous compute capabilities to power immersive and engaging experiences.

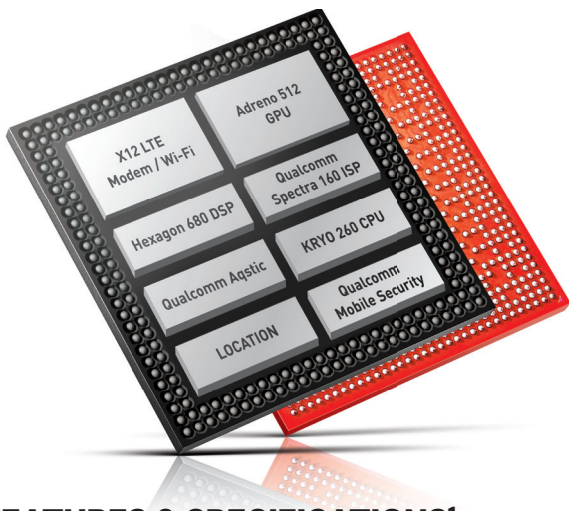


Power when it's needed most

Do more throughout the day: stream music and videos, play games, talk, all while getting up to 15% more battery life¹. When it's time to recharge, Quick Charge 4 gets it done super-fast.

¹As Compared to Snapdragon 626

²Quick Charge is designed to increase the battery charge of a device by up to 50% in 15 minutes. Actual results may vary depending on device design.



The Snapdragon 660 mobile platform supports a leap in performance, engineered to allow enhanced user experiences and mobile industry-leading battery performance

FEATURES & SPECIFICATIONS¹

GPU

- + Adreno 512 GPU
- + OpenGL ES 3.2, OpenCL 2.0 full, Vulkan, DX12

DSP

- + Hexagon 680 DSP with:
 - Hexagon Vector eXtensions
 - Qualcomm All-Ways Aware™
 - Snapdragon Neural Processing Engine SDK
 - Caffe/Caffe2 and Tensorflow support

Display

- + Quad HD 2560x1600
- + WQXGA
- + Up to 4K external display support
- + DisplayPort and USB Type-C support

Audio

- + Qualcomm Aqstic™ audio codec and speaker amplifier
- + Qualcomm® aptX™ audio playback with support for aptX Classic and HD

CPU

- + 8x Kryo 260 CPU
- + Up to 2.2 GHz
- + 14nm FinFET process technology

Camera

- + Qualcomm Spectra 160 ISP
- + Dual 14-bit ISPs
- + Up to 24 MP single camera
- + Up to 16 MP dual camera
- + Qualcomm® Clear Sight™ camera features, Hybrid Autofocus, Optical Zoom, Zero Shutter Lag

Video

- + Up to 4K UltraHD capture @ 30 fps
- + Up to 4K UltraHD playback @30fps
- + H.264 (AVC), H.265 (HEVC), VP9

Memory

- + LPDDR4, dual channel
- + Up to 1866MHz, 8GB RAM
- + eMMC and UFS

Charging

- + Quick Charge 4 technology

Security

- + Qualcomm® Mobile Security
 - Hardware Token
 - Camera Security
 - App Protect
 - Qualcomm® Processor Security

RF Front End

- + Qualcomm® TruSignal™ adaptive antenna tuning
- + High-power transmit (HPUE)
- + Envelope tracking technology

Modem

- + Snapdragon X12 LTE modem
- + Downlink: LTE Cat 12 up to 600 Mbps, 3x20 MHz carrier aggregation, up to 256-QAM
- + Uplink: LTE Cat 13 up to 150 Mbps, Snapdragon Upload+ (2x20 MHz carrier aggregation, up to 64-QAM)
- + Qualcomm® All Mode with support for all seven cellular modes, and 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

- + Wi-Fi integrated 802.11ac 2x2 with MU-MIMO
- + 2.4 GHz, 5 GHz
- + Bluetooth 5

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.

Qualcomm aptX is a product of Qualcomm Technologies International, Ltd., Qualcomm Aqstic, Qualcomm TruSignal, Qualcomm All-ways Aware, Qualcomm Mobile Security, Qualcomm Processor Security, Qualcomm Clear Sight, Qualcomm All Mode and Qualcomm Snapdragon Upload+ are products of Qualcomm Technologies, Inc.

© 2015-2017 Qualcomm Technologies, Inc. All Rights Reserved.

Qualcomm, Snapdragon, Kryo, Adreno, Hexagon and TruSignal are trademarks of Qualcomm Incorporated, registered in the United States and other countries. Qualcomm Spectra, Qualcomm All-Ways Aware, Quick Charge, Clear Sight and Qualcomm Aqstic are trademarks of Qualcomm Incorporated. aptX is a trademark of Qualcomm Technologies International, Ltd., registered in the United States and other countries. Other products and brand names may be trademarks or registered trademarks of their respective owners.

