

**QUALCOMM®  
SNAPDRAGON™**

**835**

**MOBILE PLATFORM**

### **Snapdragon 835 mobile platform advancements:**

- + Snapdragon X16 LTE modem: mobile connectivity with LTE download speeds up to 1 Gbps, multi-gigabit 802.11ad, and integrated 2x2 802.11ac Wi-Fi with MU-MIMO
- + Qualcomm® Quick Charge™ 4 technology: 20% faster, 30% more efficient than our previous generation, charge from zero to up to 50% in 15 minutes<sup>2</sup>
- + Qualcomm® Adreno™ 540 GPU with visual processing subsystem: Advanced 3-D graphics rendering and up to 60X more colors help deliver life-like visuals for immersive experiences<sup>1</sup>
- + Qualcomm Spectra™ 180 Camera ISP: Dual 14-bit ISPs support up to 32MP single or dual 16MP cameras for the ultimate photography and videography experience
- + Qualcomm® Hexagon™ 682 DSP: Support for latest Machine Learning frameworks and image processing. Includes Hexagon Vector eXTensions and Qualcomm All-Ways Aware™ technology utilizing connectivity and sensors
- + Qualcomm® Kryo™ 280 CPU: Manufactured in 10nm FinFET to deliver our most power-efficient architecture to date

## **Featuring our latest in Mobile Technology**

### **More power to power users**



The Snapdragon 835 processor is 35% smaller and uses 25% less power than previous our designs, providing maximum performance, long battery life and super fast charging for today's power users.

### **Putting the “real” in virtual reality**



Experience superior virtual and augmented reality with immersive visuals, heightened 3D sounds, and intuitive interactions—with less of the lag or latency that causes motion sickness.

### **Capture the world as you see it**



With support for optical zoom for smooth close-ups, fast autofocus and cutting edge lowlight technology, you can now capture life almost as accurately and quickly as your eyes do.

### **Fiber-optic Internet speeds, wirelessly**



Stream highly-immersive VR videos, get lightning-fast access to your files in the cloud, and enjoy the convenience of Instant Apps.

### **Comprehensive security from the inside out**



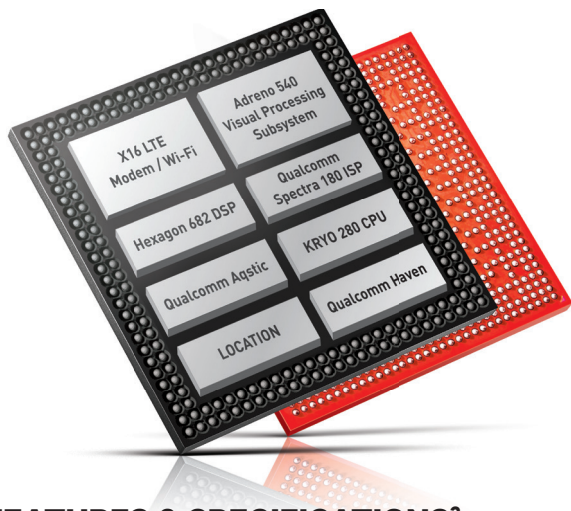
Help protect yourself with authentication technologies such as fingerprint, iris scanning, facial recognition and voice print, plus other security features that are designed to help safeguard your personal information.

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

**Qualcomm®  
snapdragon** 

<sup>1</sup>As compared to the Adreno 530 GPU in the Snapdragon 820 processor.

<sup>2</sup>Quick 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.



Snapdragon 835 mobile platform. Supporting a cutting-edge connected, immersive and intelligent all-day experience.

## FEATURES & SPECIFICATIONS<sup>3</sup>

### GPU

- + Adreno 540 GPU
- + OpenGL ES 3.2, OpenCL 2.0 full, Vulkan, DX12

### DSP

- + Hexagon 682 DSP with:
  - Hexagon Vector eXtensions
  - Qualcomm All-Ways Aware
  - TensorFlow and Halide support
  - Qualcomm® Neural Processing Engine (NPE) SDK

### Display

- + UltraHD Premium-ready
- + 4K Ultra HD, 60 FPS
- + 10-bit color depth
- + DisplayPort, HDMI, and USB Type-C support

### Audio

- + Qualcomm Aqstic™ audio codec and speaker amplifier
- + High 123dB SNR, Native DSD support
- + Qualcomm® aptX™ audio playback with support for aptX Classic and HD

### CPU

- + 8x Kryo 280 CPU
- + Up to 2.45 GHz
- + 10nm FinFET process technology

### Camera

- + Qualcomm Spectra 180 ISP
- + Dual 14-bit ISPs
- + Up to 16 MP dual camera
- + Up to 32 MP single camera
- + Qualcomm® Clear Sight™ camera features, Hybrid Autofocus, Optical Zoom, hardware-accelerated Face Detection, HDR Video Recording

### Video

- + Up to 4K UltraHD capture @ 30 fps
- + Up to 4K UltraHD playback @ 60 fps
- + H.264 (AVC), H.265 (HEVC), VP9

### Memory

- + LPDDR4x, dual channel
- + UFS2.1 Gear3 2L
- + SD 3.0 (UHS-I)

### Charging

- + Quick Charge 4.0 technology
- + Qualcomm® WiPower™ technology

### Connectivity

- + Qualcomm® Wi-Fi 802.11ad Multi-gigabit
- + Wi-Fi integrated 802.11ac 2x2 with MU-MIMO
- + 2.4 GHz, 5 GHz and 60 GHz
- + Bluetooth 5.0

### Optimized Software Solutions

- + Android and Windows OS

### Security

- + Qualcomm® SecureMSM™ technology
- + Qualcomm Haven™ Security Suite
- + Qualcomm® Snapdragon StudioAccess™ content protection

### Modem

- + Snapdragon X16 LTE modem
- + Downlink: LTE Cat 16 up to 1 Gbps, 4x20 MHz carrier aggregation, up to 256-QAM
- + Uplink: LTE Cat 13 up to 150 Mbps, Qualcomm® Snapdragon™ Upload+ (2x20 MHz carrier aggregation, up to 64-QAM, uplink data compression)
- + Qualcomm® All Mode with support for all seven cellular modes plus LTE-U and LAA. Support for:
  - VoLTE with SRVCC to 3G and 2G, HD and Ultra HD Voice (EVS), CSFB to 3G and 2G
  - Qualcomm® Signal Boost with carrier aggregation

### Location

- + Qualcomm® Location Suite Support for:
  - GPS, Glonass, BeiDou, Galileo, and QZSS systems content protection

<sup>3</sup> Certain optional features available subject to Carrier and OEM selection for an additional fee.

Qualcomm Clear Sight, Qualcomm Aqstic, Qualcomm Wi-Fi, Qualcomm SecureMSM, Qualcomm Haven, Qualcomm Neural Processing Engine, Qualcomm Wireless Power, Qualcomm All Mode, Qualcomm Signal Boost, Qualcomm Snapdragon StudioAccess, Qualcomm Snapdragon Upload+, Qualcomm Location are products of Qualcomm Technologies, Inc. Qualcomm WiPower wireless charging technology is licensed by Qualcomm Incorporated. Qualcomm aptX is a product of Qualcomm Technologies International, Ltd.

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