# 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[2]

+ 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[1]

+ 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

**To learn more visit: snapdragon.com**

## 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.

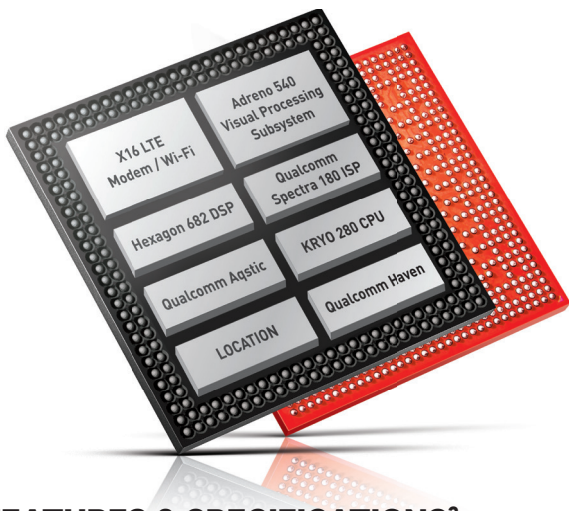### Comprehensive security from the inside out

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.

## Qualcomm® snapdragon™

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

# FEATURES & SPECIFICATIONS[3]

## 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