

QUALCOMM®  
SNAPDRAGON™

810

PROCESSOR

## The “Ultimate Connected Mobile Computing Processor”

The Snapdragon 810 processor offers many advantages:

- + Integrated 4G LTE Advanced Category 6 World Mode modem with speeds of up to 300 Mbps
- + 3x20MHz Carrier aggregation up to 60 MHz
- + Two clusters of 64-bit CPUs are designed to support an improved user experience
- + Combined 14-bit dual image signal processors (ISPs) support 1.2GP/s throughput and image sensors up to 55 MP
- + HEVC H.265 Video with hardware decoding and encoding for bandwidth and power efficiency
- + Tight system integration and optimization for superior performance and power efficiency
- + Integrated sensor core for advanced application support and sensor management

To learn more visit:

[snapdragon.com](http://snapdragon.com) or [mydragonboard.org](http://mydragonboard.org)

## USER EXPERIENCES SUPPORTED



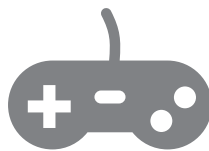
### Streaming 4K Ultra HD video at home and on the go

3x20MHz fully integrated Carrier Aggregation supports connection intensive use cases like 4K streaming



### Capture and share sharper camera images faster

Dual image signal processors and enhanced camera software supports higher quality photos



### Immersive 3D gaming on your device and 4K TV

New Qualcomm® Adreno™ 430 GPU and display engine enable 3D gaming on 4K displays



### Stream higher quality video using less bandwidth

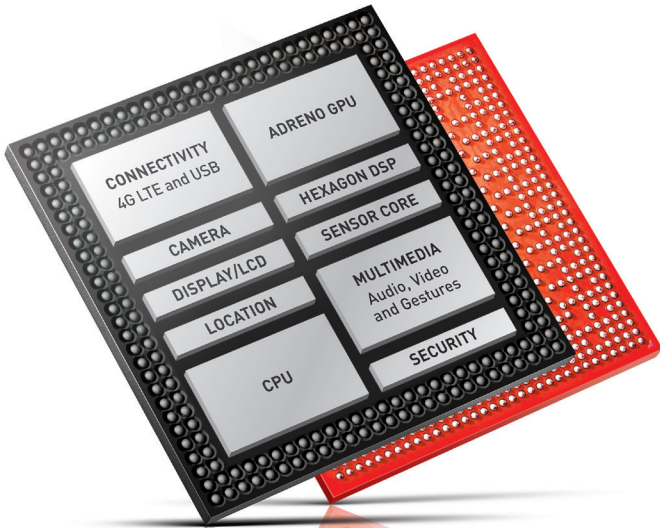
Support for hardware based HEVC playback and capture at 4K resolution supports power efficient 4K streaming and uploads



### All day battery life and easier, faster charging

Tight integration and support for Qualcomm® Quick Charge™ 2.0 technology and Qualcomm® WiPower™ technology

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When you need premium tier mobile computing capability, the Snapdragon 810 processor offers highly advanced features, performance and power-efficient design.

## FEATURES & SPECIFICATIONS

### CPU

- + 4x4 64 bit CPU

### GPU

- + Adreno 430 GPU: OpenGL ES 3.1<sup>1</sup>, OpenCL1.2 Full<sup>2</sup>, DX11.2, content security, plus hardware tessellation, geometry shaders, programmable blending and decreased power consumption<sup>3</sup>

### DSP

- + Qualcomm® Hexagon™ QDSP V56 DSP

### Display

- + 4Kx2K@60fps primary display + 4Kx2K@30fps external display with HDMI 1.4a or wireless 1080p@60fps with Miracast
- + 3:1 Frame Buffer Compression ratio

### Memory

- + LPDDR4 2x32@1600MHz
- + eMMC 5.0

### Modem

- + Integrated 4G LTE Advanced CAT6 World Mode, supporting LTE FDD, LTE TDD, WCDMA (DC-HSUPA, DC-HSPA+), CDMA1x, EV-DO Rev. B, TD-SCDMA and GSM/EDGE
- + CAT6 speeds of up to 300 Mbps with support for up to 3x20 MHz carrier aggregation on LTE FDD and LTE TDD
- + LTE-Broadcast, LTE multimode dual-SIM (DSDS and DSDA) and HD VoLTE with SRVCC

### RF

- + 4th gen power efficient LTE multimode transceiver (WTR3925) with Qualcomm Technologies, Inc.'s integrated and system optimized Qualcomm RF360™ front end solution for world mode bands and lower power

### Sensor Core

- + Supports more accurate, low-power, always on sensors

### Multimedia

- + 4Kx2K@30fps, 1080p@120fps
- + Hardware HEVC encode and decode
- + DASH support
- + Next Gen codec (WCD9330) support for Low Power Snapdragon Voice Activation
- + 11.1 surround sound with Dolby and DTS

### Camera

- + Combined 14-bit dual ISPs can support 1.2GP/s throughput and image sensors up to 55MP

### Connectivity

- + Qualcomm® VIVE™ 2-stream 802.11n/ac technology with Multi-user MIMO
- + Qualcomm® IZat™ location services Gen8C
- + USB 3.0/2.0
- + BT4.1

### Security

- + Qualcomm® Snapdragon StudioAccess™ technology and Qualcomm® SecureMSM™ digital rights management platform



<sup>1</sup> Product is based on a published Khronos specification and is expected to pass the Khronos Conformance Testing Process when available. Current conformance status can be found at [www.khronos.org/conformance](http://www.khronos.org/conformance).

<sup>2</sup> Product is based on a published Khronos Specification, and is expected to pass the Khronos Conformance Testing Process. Current conformance status can be found at [www.khronos.org/conformance](http://www.khronos.org/conformance).

<sup>3</sup> As compared to its predecessor, the Adreno 420 GPU in the Snapdragon 805 processor