QUALCOMM® SNAPDRAGON™

810

PROCESSOR

The "Ultimate Connected Mobile Computing Processor"

The Snapdragon 810 processor offers many advantages:

+ Integrated X10 LTE
  • LTE Advanced Carrier Aggregation up to 3x20 MHz in the downlink
  • Support for Category 9 speeds of up to 450 Mbps download, 50 Mbps upload

+ Two clusters of 64-bit quad core ARM® Cortex®-A57 and quad Cortex®-A53 CPUs are designed to support an improved user experience

+ New ARMv8-A ISA supports improved instruction set efficiency

+ 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 or **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

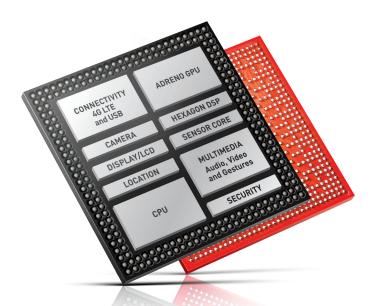### Stream higher quality video using less bandwidth

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

Qualcomm® snapdragon™

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

FEATURES & SPECIFICATIONS[4]

CPU

+ Quad ARM® Cortex®-A57 and quad Cortex-A53 cores with 64-bit and ARMv8-A ISA support

GPU

+ Adreno 430 GPU: OpenGL ES 3.1 + AEP[1], OpenCL1.2 Full[2], DX11.2, content security, plus hardware tessellation, geometry shaders, programmable blending and decreased power consumption[3]

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 X10 LTE, with Global Mode supporting LTE FDD, LTE TDD, WCDMA (DC-HSPA+, DC-HSUPA), CDMA1x, EV-DO, TD-SCDMA and GSM/EDGE
+ Cat 9 speeds of up to 450 Mbps with support for up to 3x20 MHz carrier aggregation on LTE FDD and LTE TDD
+ Support for LTE Broadcast, LTE multimode dual SIM (DSDS and DSDA) and VoLTE with HD Voice and 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

Security

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

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 802.11ac w/MU-MIMO technology
+ Multi-Gigabit speeds with Qualcomm® 802.11ad technology
+ Qualcomm® IZat™ location services Gen8C
+ USB 3.0/2.0
+ BT4.1

Sensor Core

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

Qualcomm® snapdragon™