QUALCOMM® SNAPDRAGON™
800 PROCESSORS

Snapdragon 800 processors are designed to enable incredibly fast apps and web browsing, visually stunning graphics, breakthrough multimedia capabilities, seamless communications virtually anytime, anywhere, and outstanding battery life for premium smartphones, tablets, Smart TV's and digital media adapters.

Snapdragon 800 processors represent a leap forward in performance and power efficiency. Designed to deliver outstanding overall user experience, Snapdragon 800 expands the possibilities of seamless connected computing while enabling brand new high-end mobile experiences including Ultra HD video, multichannel HD audio and advanced imaging.

Custom built and optimized for mobile:

+ Superior Qualcomm® Krait™ CPU architecture
+ Custom designed Qualcomm® Adreno™ mobile graphics
+ Multithreaded Qualcomm® Hexagon™ DSP for ultra-low power applications
+ Dedicated multimedia subsystem for rich media and longer battery life
+ Broad sensor support for advanced application enablement
+ End-to-end content and platform security using Qualcomm® Snapdragon StudioAccess™ technology and Qualcomm® SecureMSM™ technology
+ Integrated Qualcomm® Gobi™ 4G LTE Advanced world mode modem for fast connectivity

When you need the latest in advanced mobile computing capability, Snapdragon 800 processors offer the ultimate in features, performance and battery life.

NEW USER EXPERIENCES

Snapdragon 800 processors enable more experiences, advanced features and capabilities than any other Qualcomm Technologies processor.

+ Capture, playback and display in UltraHD video (with four times 1080p pixel density)
+ Dual Image Signal Processors for Snapdragon Camera support simultaneous camera/video, ultrafast 640 Megapixel/second capture speeds and computational camera
+ HD multichannel audio with DTS-HD and Dolby Digital Plus for enhanced audio
+ Higher display resolutions (up to 2560x2048) and Miracast 1080p HD support

CUST0M BUILT FEATURES

CPU

+ Upgraded architecture for sustained peak performance in a mobile power profile
+ 800 CPU with Quad core Krait for advanced multitasking and multithreaded application support
+ LP-DDR3 memory for high performance and low latency

GPU

+ Updated Adreno 330 GPU delivers up to 50% increase in graphics performance[1]
+ Support for advanced graphic and compute APIs, including OpenGL ES 3.0, DirectX, OpenCL, Renderscript Compute and FlexRender™ technology[2]
+ Support for popular middleware and game engines like Unity, Epic, and Unigine

DSP

+ Hexagon DSP enables ultra-low power operation for a variety of applications like music playback, enhanced audio and advanced editing applications
+ Hexagon DSP now supports floating point calculations, dynamic multithreading and expanded multimedia instructions for enhanced low power performance

Connectivity

+ Gobi 4G LTE Advanced with Carrier Aggregation for speeds up to 150 Mbps
+ Gobi 4G LTE World Mode, supporting LTE FDD, LTE TDD, WCDMA, CDMA1x, EV-DO, TD-SCDMA and GSM[3]
+ New USB 3.0 for ultra-fast transfers
+ 802.11ac Wi-Fi for peak Wi-Fi performance
+ Qualcomm® IZat™ location technology combines multiple location services into a single high performance navigation system for auto and pedestrian applications

[1] Compared to its predecessor, Adreno 320
[2] FlexRender is designed to help the Adreno GPU boost speed and save power by dynamically switching between drawing pixels in direct or deferred rendering mode
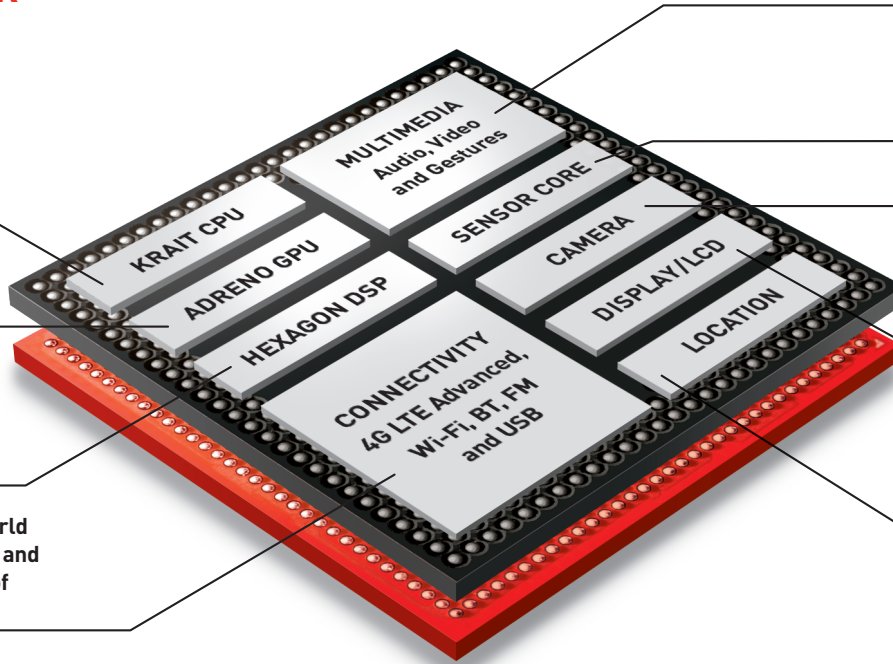[3] Available only in select processors

800 PROCESSOR

Krait 400 CPU features 28HPm process technology superior 2GHz+ performance

Adreno 330 for advanced graphics

Hexagon QDSP6 for ultra low power applications and custom programmability

Integrated Gobi 4G LTE World Mode [3], 802.11ac[3], USB 3.0 and BT 4.0 offers broad array of high speed connectivity

Ultra HD Capture and Playback DTS-HD and Dolby Digital Plus audio Expanded Gestures

Low-power Snapdragon Sensor Core increases sensor accuracy and efficiency

21MP with dual ISP

Support for up to 2560x2048 display Miracast 1080p HD support

IZat GNSS with support for three GPS constellations

KRAIT CPU
ADRENO GPU
HEXAGON DSP
MULTIMEDIA Audio, Video and Gestures
SENSOR CORE
CAMERA
DISPLAY/LCD
LOCATION
CONNECTIVITY 4G LTE Advanced, Wi-Fi, BT, FM and USB

Power Management
+ Energy efficient High Performance for Mobile (HPm) technology
+ aSMP dynamic CPU power control for sustained peak performance
+ New Qualcomm® Quick Charge™ 2.0 technology integrated for up to 75% faster battery charging[4]

SPECIFICATIONS

System
+ 28nm HPm quad core Krait 400 CPU at up to 2.3GHz per core
+ Adreno 330 GPU
+ Hexagon QDSP6 V5

Multimedia
+ Video: 4k x 2k Ultra HD video capture/playback
+ Camera: Up to 21 Megapixel, stereoscopic 3D, Dual ISP
+ Display: 2560x2048 + 1080p and 4K external displays
+ Audio: HD multichannel sound with DTS-HD and Dolby Digital Plus

Connectivity
+ Gobi 4G LTE Advanced World Mode[3]
+ USB 3.0/2.0[3]
+ Bluetooth (BT) T4.0 + Integrated digital core
+ 802.11n/ac (2.4/5GHz)[3] + Integrated digital core[3]
+ IZat GNSS

To learn more visit snapdragon.com or mydragonboard.org

Qualcomm® snapdragon™