

QUALCOMM® SNAPDRAGON™ 801 PROCESSOR

The Snapdragon 801 processor is designed to enable incredibly fast apps and web browsing, visually stunning graphics, breakthrough multimedia capabilities, smooth communications virtually anytime, anywhere, and outstanding battery life for premium smartphones, tablets, Smart TVs and digital media adapters.

The Snapdragon 801 processor represents a leap forward in mobile performance and power efficiency. Designed to deliver outstanding device capabilities, the Snapdragon 801 processor expands the possibilities of seamless connected computing while enabling premium mobile capabilities, including Ultra HD video capture and playback and advanced mobile imaging.

Custom built and optimized for mobile:

- + Superior Krait CPU architecture
- + Adreno™ GPU for rich UIs and console quality gaming
- + Multithreaded Hexagon™ DSP for ultra-low power applications
- + Dedicated, integrated multimedia subsystem for rich media
- + Broad sensor support for advanced application enablement
- + Comprehensive content and platform security using Snapdragon StudioAccess™ and SecureMSM™

When you need the latest in advanced mobile computing capability, the Snapdragon 801 processor offers the ultimate in features and performance.

NEW USER EXPERIENCES

The Qualcomm Snapdragon 801 processor enables many of the industry's most advanced mobile user experiences.

- + Capture, play back and display video in Ultra HD resolution (with four times 1080p pixel density)
- + Capture and edit even sharper images faster with Dual Image Signal Processors (ISPs), support for larger sensors and improved image post processing
- + HD multichannel audio with DTS-HD and Dolby Digital Plus for enhanced audio
- + Support for high resolution displays (up to 2560x2048) and Miracast 1080p HD

¹ Compared to the Adreno 330 GPU in the Snapdragon 800 processor

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

CUSTOM BUILT FEATURES

CPU

- + Custom architecture for sustained peak performance in a mobile power profile
- + Quad core Krait 400 CPU for advanced multitasking and multithreaded application support
- + LP-DDR3 memory for high performance and low latency

GPU

- + Speed-enhanced Adreno 330 GPU delivers up to 25% increase in graphics performance¹
- + Support for FlexRender™² and advanced graphic and compute APIs, including OpenGL ES 3.0, DirectX, OpenCL, and Renderscript Compute
- + Support for popular middleware and game engines from Unity, Epic, and Unigine

DSP

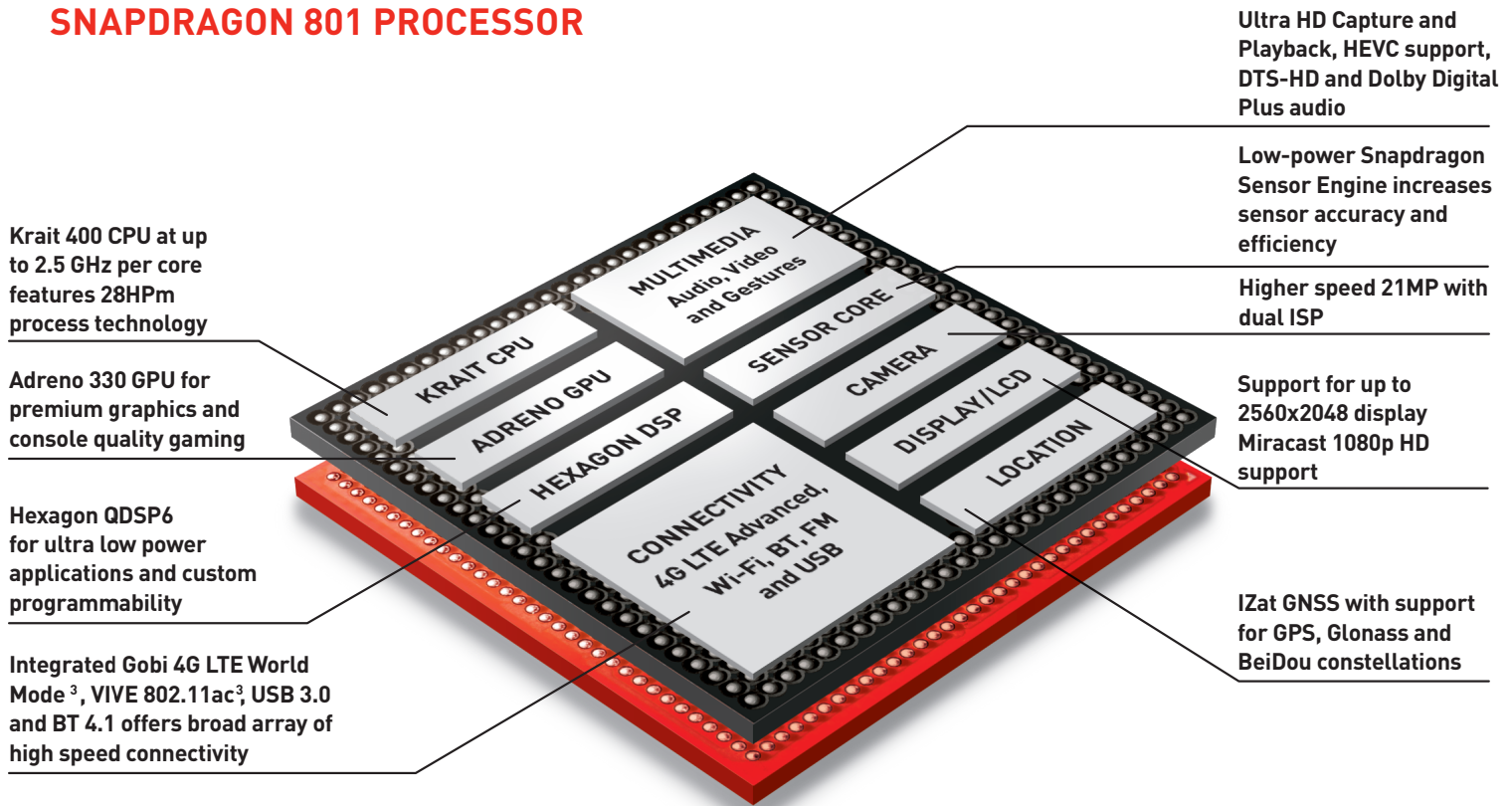
- + Hexagon DSP enables ultra-low power operation for a variety of applications like music playback, enhanced audio and advanced editing applications
- + Hexagon DSP now supports floating point calculations, dynamic multithreading and expanded multimedia instructions for enhanced low power performance

Connectivity

- + 4G LTE Advanced with Carrier Aggregation for speeds up to 150 Mbps
- + 4G LTE World Mode³, supporting LTE FDD, LTE TDD, WCDMA, CDMA1x, EV-DO, TD-SCDMA and GSM
- + Dual-SIM/dual active (DSDA) support in hardware
- + New USB 3.0 for ultra-fast transfers
- + Qualcomm VIVE802.11ac for high-performance Wi-Fi streaming and downloads
- + Qualcomm IZat™ location technology combines multiple location services into a single high performance navigation system for auto and pedestrian applications
- + Bluetooth 4.1 for point-to-point connections



SNAPDRAGON 801 PROCESSOR



Power Management

- + Energy efficient High Performance for Mobile (HPm) technology
- + aSMP dynamic CPU power control for sustained peak performance
- + Quick Charge 2.0 for up to 75% faster battery charging⁴

SPECIFICATIONS

System

- + 28nm HPm quad core Krait 400 CPU at up to 2.5GHz per core, EMMC 5.0 memory interface
- + Adreno 330 GPU
- + Hexagon QDSP6 V5

Multimedia

- + Video: 4k x 2k Ultra HD video capture/playback, HEVC support
- + Camera: Higher speed 21 Megapixel with dual ISP
- + Display: 2560x2048 + 1080p and 4K external displays
- + Audio: HD multichannel sound with DTS-HD and Dolby Digital Plus

Connectivity

- + 3G/4G LTE Advanced/World Mode³
- + Dual-SIM/dual active (DSDA) support in hardware
- + USB 3.0/2.0³
- + Bluetooth (BT) 4.1 + Integrated digital core
- + Qualcomm VIVE 802.11n/ac (2.4/5GHz)³ + Integrated digital core³
- + IZat GNSS

To learn more visit snapdragon.com or mydragonboard.org



³ Available only in select processors

⁴ As compared to devices without fast charge technology

The Snapdragon 801 processor includes the following part number: 8974 v3