

QUALCOMM®
SNAPDRAGON™

805

PROCESSOR

Model APQ8084 for Embedded Computing

The Snapdragon 805 processor supports superior performance and rich multimedia capabilities with low power consumption. It brings a long list of high-end features to the most demanding embedded computing applications:

- + Faster performance and more multitasking with quad-core Qualcomm® Krait™ 450 CPU at up to 2.7 GHz per core
- + 4K Ultra HD video with HEVC (H.265) playback and H.264 capture for bandwidth and power efficiency
- + Dual image signal processors (ISPs) with ~1GP/s throughput and image sensors up to 55 MP
- + New Qualcomm® Adreno™ 420 GPU with up to 40% increase in graphics and compute performance compared against the previous generation¹
- + Tight system integration and optimization for superior performance and power efficiency
- + Worldwide ecosystem of Snapdragon embedded device OEMs and developers

To learn more visit:

snapdragon.com or mydragonboard.org

EMBEDDED COMPUTING USE CASES



Robotics: Computer vision and image capture

Multiple cameras, dual ISPs, sensors and high-definition video capture for robots and drones



Smart glasses: High performance and energy efficiency

Small footprint for head-mounted displays and see-through digital eyewear



Medical Devices: Multiple computing cores

Quad-core CPU plus Qualcomm® Hexagon™ DSP for processor-intensive computing



Digital Signage and Media: 4K video playback

4K Ultra HD output to HDTV for improved picture sharpness with an amazing level of detail



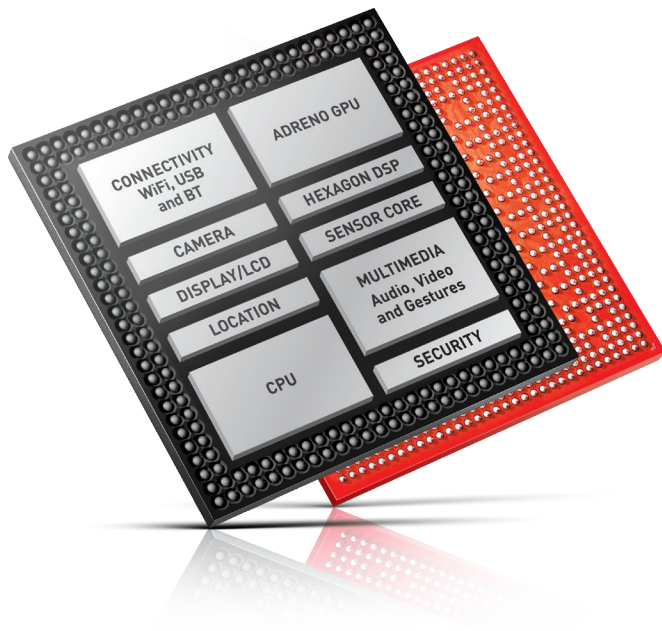
Gaming: Console-quality 3D output

Adreno 420 GPU with ~1GPixel/sec throughput for sharper graphics at higher speed

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¹ As compared to its predecessor, the Adreno 330 GPU in the Snapdragon 800 processor

Qualcomm Snapdragon, Qualcomm Adreno, Qualcomm Hexagon and Qualcomm Krait are products of Qualcomm Technologies, Inc.



The Snapdragon 805 processor offers rich multimedia capabilities, energy efficiency, integrated connectivity and heterogeneous computing for high-end mobile computing in embedded products.

Additionally, Snapdragon offers a clear product release path for embedded device OEMs and developers – starting with single-board computers and development kits and scaling up to larger solutions, integration services and production-ready, customizable system-on-modules (SOM).

FEATURES & SPECIFICATIONS

CPU

- + 28nm HPm quad-core Krait 450 CPU at up to 2.7GHz per core

GPU

- + Adreno 420 GPU: OpenGL ES 3.1, OpenCL 1.2 Full Profile, DX11.2, content security, plus hardware tessellation, geometry shaders, programmable blending and decreased power consumption¹

DSP

- + Qualcomm® Hexagon™ DSP V50 (up to 800MHz)

Display

- + Support for 4096x2160 primary DSI display + concurrent 4Kx2K@24Hz external with HDMI 1.4a or wireless 1080p@30fps with Miracast
- + Display Frame Buffer Compression

Memory

- + LPDDR3 2x64@800MHz
- + eMMC 5.0 ratio
- + SD 3.0 (UHS-I)
- + SATA3

Sensor Core

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

Security

- + Qualcomm® SecureMSM™ and Qualcomm® Snapdragon StudioAccess™ technologies

Camera

- + Dual image signal processors (ISPs) support ~1GP/s throughput and image sensors up to 55 MP

Multimedia

- + 4K playback with H.264 (AVC) and H.265 (HEVC) formats
- + 4K capture with H.264 (AVC) format
- + Hardware-based Hollywood Quality Video™ (HQV) for post processing
- + DASH support
- + Hi-Fi audio with 24bit/192kHz playback support
- + Qualcomm® Snapdragon™ Voice Activation tool
- + 11.1 surround sound with Dolby and DTS

Connectivity

- + Qualcomm® VIVE™ 2-stream 802.11n/ac with MU-MIMO
- + Qualcomm® IZat™ location services Gen8B
- + USB 3.0/2.0
- + BT4.1



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