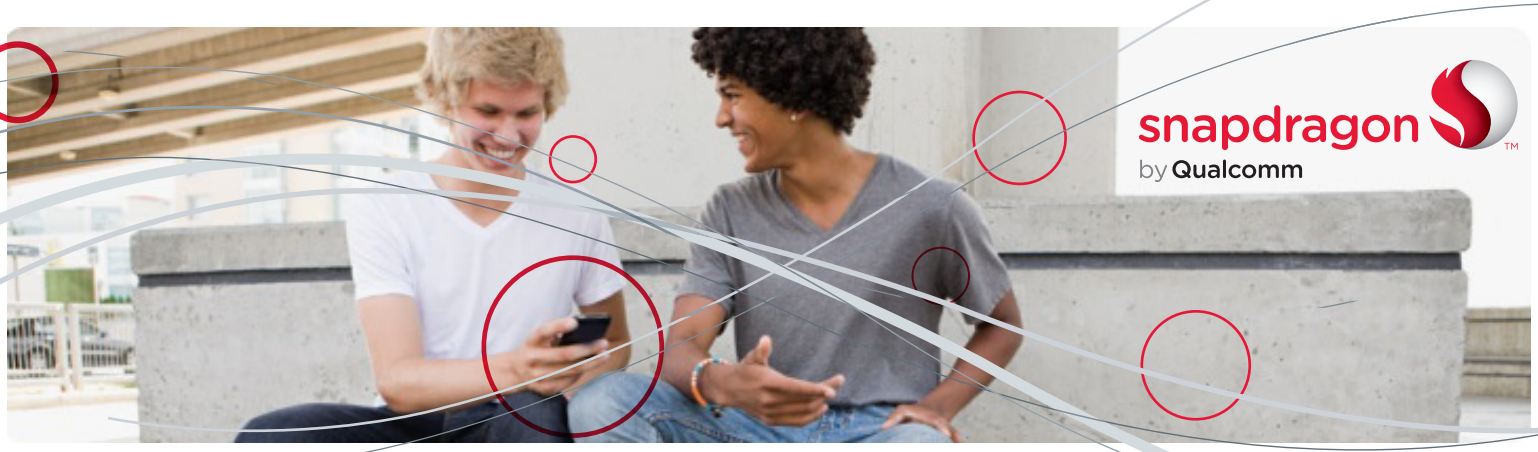

MSM8X55/APQ8055

SNAPDRAGON™ CPU PROCESSORS

This second generation Snapdragon CPU processor substantially improves overall user experience, increases system performance and further extends battery life. The 8x55 CPU chipset is designed specifically for mid and high-tier smartphones as well as larger display devices such as tablets. It also includes the new AP-only option APQ8055. Supported operating systems include Android™, Blackberry®, webOS, and Windows® Phone.

The 8x55 Snapdragon family of mobile CPU processors enables a fully immersive and engaging entertainment experience and designed to allow users to take full advantage of the latest in web technology.

- Enables access to the broadest array of internet media with Flash10 and HTML5 video support
- Video sharing and advanced camera support enables the latest in interactive technology to create, share and store memories and experiences

Key enhancements over previous Snapdragon™ chipsets include:

- Highly responsive user interface and system performance with second generation Scorpion CPU processor supporting speeds up to 1.4GHz. The Scorpion CPU at 1.4GHz leads the industry in performance with 33% more processor headroom at the same level of power consumption making it highly competitive with other CPU's including some mobile dual-core solutions.[1]
- Snapdragon's fully integrated custom Adreno™ 205 graphics processor (GPU) is designed to be one of the most advanced mobile GPUs in the industry today. The Adreno 205 GPU enhances the mobile web experience by accelerating WebGL and Flash 10 Web content. It also provides stunning 3D graphics performance that delivers a richer gaming experience, enriches augmented reality and enables more detailed navigation content. The Adreno 205 GPU is designed to easily handle the industry's latest and greatest mobile graphics content, making it look better, run faster and consume less device power.
- Improved web browsing and network connectivity with a HSPA+ modem supporting high speed data rates up to 14Mbps
- Improved Navigation and location-based services using new, highly accurate gpsOne Gen 8 engine with increased tracking sensitivity
- Designed to support 12MP camera with fully integrated ISP
  - Dual Camera Support (Hi/Lo Res)
  - Industry leading ISP with advanced imaging software supporting camcorder, advanced image editing, and augmented reality
- New multimedia system enables OEM's to seamlessly integrate leading VOD, MOD and Broadcast services with a full complement of advanced codec's and features
  - Full Multimedia experience with 720p HD video and Dolby™ 5.1 audio
  - Video conferencing fully supported on 3G and IP networks
- Designed to support advanced security options including platform, content and storage memory protection
  - Secure MSM™ provides encrypted boot, operation and file security
  - Digital Rights Management provides encrypted playback of OMA and Windows Media content
  - Trustzone™ enables mobile payment and conditional access as well as protection of storage media

1 Source: Qualcomm - Average of Industry benchmarks composed of Softweg CPU, Linpack, Quadrant CPU, Sunspider

snapdragon by Qualcomm™

SNAPDRAGON FAMILY OVERVIEW

Qualcomm Snapdragon mobile CPU processors continue to redefine the ultimate in high performance – low power solutions available for smartphones and tablets worldwide.

The Snapdragon family of mobile CPU processors is a highly integrated and optimized "system on a chip" incorporating Qualcomm advanced technologies including Qualcomm's own Snapdragon CPU micro architecture, Adreno graphics processor (GPU), advanced wireless modem, GPS engine and a rich multimedia system capable of delivering the most advanced 3D, HD audio, video and camera support available to mobile devices.

- Qualcomm's Snapdragon CPU cores are designed and built from the ground up with mobile in mind. Based on the ARM v.7 instruction set, Snapdragon CPUs are highly optimized for mobile applications, allowing manufacturers to design slim and powerful devices that last longer between charges.
- Our Adreno GPU cores offer world-class graphics capabilities including an industry leading level of performance and resolution, as well as graphics API support to enable manufacturers and developers to deliver a wide variety of 2D and advanced 3D applications.
- The Snapdragon CPU family incorporates Qualcomm's advanced modem technology for high-speed mobile broadband.
- Every Snapdragon mobile processor includes a sophisticated multimedia sub-system that delivers a broad list of supported audio/video codec's, advanced noise cancellation, echo cancellation, and a wide variety of screen resolution support.

www.qualcomm.com/snapdragon >

Features	MSM8x55 and APQ8055 (AP only)
Process Technology	45nm
Package	904NSP PoP,14x14mm(0.4mm) Dual-channel LPDDR2
CPU Processor	Scorpion – up to 1.4GHz
Modem	MSM8255 – UMTS / Single Mode MSM8655 – CDMA / Multimode APQ8055 - No WWAN Modem
Peak Data Rates UL/DL	HSPA+: DL 14.4 Mbps / UL 5.76 Mbps DO: DL 14.7 Mbps / UL 5.4 Mbps 1x: DL / UL 307.2 kbps
Frequency Support	700 MHz, 800MHz(BCO/BC10 &JCDMA), 1700MHz(KPCS), 1900MHz(PCS+Block G), 1700MHz/2100MHz (AWS), 2100MHz (IMT), Quad-GSM (850, 900, 1800, 1900), UMTS (900, 2100)
Memory	2x 333MHz LPDDR2
LCD Support	24-bit XGA (1024x768)
Bluetooth	- BT 3.0 + HS, low energy, FM Rx/Tx - BT 4.0, FM Rx/Tx *Requires QTR8200 or WCN2243
WLAN	802.11b/g/n *Requires WCN1312 or WCN1314
USB	USB2.0 HS Peripheral or Host
Qcamera	12M Pixel
Audio	128-Voice Polyphony QconcertPlus, Dolby 5.1 Surround, Low Power Audio Core Enhanced Echo Cancellation FLUENCE (Noise cancellation)
GPU Processor	Adreno 205 Dedicated 2D engine APIs:OpenGL ES 1.1, OpenGL ES 2.0, Direct3D 9.0c, GDI, OpenVG1.1, SVG Tiny 1.2
GPS	gpsOneGen 8 with GNSS
Security and DRM	OMA DRM 1.0/2.1 SecureMSM v4 with Trustzone Microsoft WMDRM 10

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