QUALCOMM® SNAPDRAGON™

653

PROCESSOR

Redefining the Snapdragon 600 tier with better performance, multimedia, gaming and connectivity

The Snapdragon 653 processor offers many advantages:

+ 4K video capture and playback

+ Up to 8GB addressable memory

+Integrated X9 LTE
  • Cat 7 downlink, up to 300 Mbps
  • Cat 13 uplink, up to 150 Mbps
  • 2x20Mz carrier aggregation with up to 64-QAM
  • Snapdragon All Mode
  • Ultra HD Voice with EVS codec

+ Next generation Qualcomm® Adreno™ 510 GPU makes high-tier graphics and gaming more immersive than ever

+ Quad HD (2K) displays and wireless streaming full HD

+ Dual ISP (image signal processor) offers support for up to 21MP zero shutter lag (ZSL) photos at 24fps
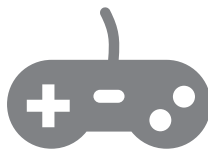
+ 653 / 652 / 650 pin and software compatibility

To learn more visit:
snapdragon.com

USER EXPERIENCES SUPPORTED

Shoot and play back 4K Ultra HD video

Bringing the most advanced video capabilities from the Snapdragon premium tier to the high tier

Play immersive 3D games at home and on the go

Next generation Adreno 510 GPU provides the efficient processing power needed for amazing visual detail and longer battery life

Integrated X9 LTE

Up to 3x the LTE upload speeds of most LTE devices - up to 150 Mbps, and advanced Wi-Fi with MU-MIMO - for super-fast sharing of high res photos and videos
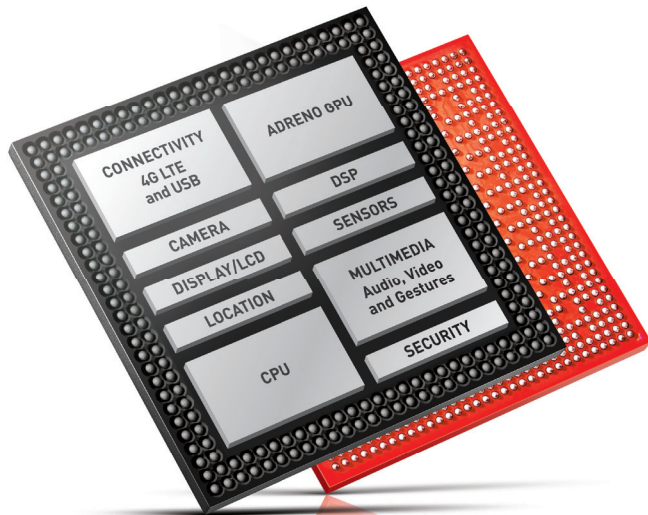
Capture and send sharp camera images quickly

Support for up to 21 megapixel ZSL photo capture @ 24fps and super-fast connectivity, from 4G LTE to 802.11ac WiFi

Efficient, high-quality video streaming

Embedded HEVC H.265 hardware decoder and integrated Qualcomm® VIVE™ 802.11ac WiFi technology and Bluetooth 4.1 solutions

Qualcomm® snapdragon

The Snapdragon 653 processor integrates superior user experiences for high-tier mobile devices, while maintaining industry-leading battery performance.

FEATURES & SPECIFICATIONS[1]

CPU

+ Quad ARM Cortex A72 up to 1.95GHz + Quad Cortex A53 CPU up to 1.4GHz

GPU

+ Next generation Adreno 510 GPU with support for the latest graphics APIs, hardware tessellation and geometry shading

DSP

+ Qualcomm® Hexagon™ DSP

Memory

+ Dual channel LPDDR3 (933MHz)
+ Up to 8GB addressable memory

Security

+ Robust Security with Qualcomm® Security Solutions, including:
+ Qualcomm® Snapdragon StudioAccess™ content protection technology
+ Qualcomm SafeSwitch™ theft prevention solution
+ All based in proven Qualcomm® SecureMSM™ hardware and software foundation

Snapdragon X9 LTE Modem

+ X9 LTE with 2x20Mz carrier aggregation
+ Cat 7 downlink, up to 300 Mbps; up to 4x 75Mbps LTE streams
+ Cat 13 uplink, up to 150 Mbps; up to 2x 75Mbps LTE streams
+ Snapdragon Upload+
+ Up to 64-QAM
+ Snapdragon All Mode LTE FDD, LTE TDD, WCDMA (DB-DC-HSDPA, DC-HSUPA), TD-SCDMA, EV-DO, CDMA1x, and GSM/EDGE
+ Qualcomm RF360™ front end solution
+ Support for LTE Broadcast, LTE multimode dual SIM and VoLTE with HD Voice and SRVCC

Connectivity

+ VIVE 1-stream 802.11ac technology
+ Qualcomm® IZat™ location services
+ USB 2.0
+ Bluetooth Smart 4.1

Fast Charging

+ Qualcomm® Quick Charge™ 3.0

Display

+ Primary Quad HD 2560x1600
+ Miracast support for up to 1080p wireless display

Video

+ 4K@30fps capture, 1080p@120fps capture
+ Hardware HEVC (H.265) encode and decode

Audio

+ Qualcomm® Immersive Audio
+ Hi-Fi 192kHz/24bit music playback
+ Low power Snapdragon Voice Activation

Camera

+ Dual ISPs can support up to 21MP ZSL @ 24fps
+ Real-Time HDR by Local Tone Mapping
+ Advanced Hybrid AF
+ Advanced Noise Reduction for low-light
+ Dual Resolution Front Camera

Qualcomm® snapdragon™