8c

Qualcomm
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Qualcomm®
Snapdragon™

# 8c

Compute Platform

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# Revitalizing mainstream PCs with the Snapdragon 8c compute platform

Delivering up to 30% faster total system performance over the previous platform, the Qualcomm® Snapdragon™ 8c compute platform offers responsive performance and superior battery life. Enabling ultra-thin, light, and fanless mainstream systems, the Snapdragon 8c compute platform offers multi-gigabit cellular connectivity with multi-day battery life in always on, always connected PCs.

## Powerful performance for mainstream

The Qualcomm® Adreno™ 675 GPU is engineered to deliver up to a 40% performance improvement over the previous generation platform. The octa-core Qualcomm® Kryo™ 490 CPU provides up to 25% faster single- and multi-threaded performance. Together in the Snapdragon 8c, this powerful and efficient compute platform is designed to revitalize the mainstream mobile PC delivering amazing graphics, powerful productivity, and multi-day battery life.

## Always Connected with multi-gigabit LTE

The integrated X24 LTE modem in the 8c compute platform delivers peak download speeds of up to 2 Gbps, and improves throughput over non-gigabit LTE by up to 70% in poor network conditions. High-speed connected computing for fast and efficient productivity and entertainment, virtually anywhere. Avoid unsecure Wi-Fi networks and stay connected through LTE with the 8c compute platform.

## Enterprise-grade

The Snapdragon 8c is built with a suite of security features and architectures, including full hypervisor support. Protected LTE connectivity, improved crypto-security, and Windows 10 Enterprise and Windows 11 support are all designed to safeguard passwords, log-ons, and sensitive personal information. Location awareness with geofencing capabilities enable new user access policies to keep data more secure. Stay connected and productive with higher bandwidth and lower latencies enabled through 5G capable platforms.

## Powerful graphics, immersive entertainment

The Snapdragon 8c supports immersive graphics performance and HW acceleration for advanced video formats, with up to 4K HDR video playback at 120 frames-per-second for streaming and watching spectacular content virtually seamlessly. The integrated Qualcomm Aqstic™ Audio technology is designed to deliver high-fidelity sound, music, and true surround-sound experiences. The incredible efficiency of the Snapdragon 8c compute platform will keep you immersed longer.

## Integrated Qualcomm® AI engine for advanced applications

The integrated Qualcomm® AI Engine takes advantage of the Snapdragon 8c highly integrated architecture and allows developers to utilize the platform to deliver intelligent AI accelerated modern experiences. With reduced reliance on the CPU or GPU alone, the Snapdragon 8c compute platform efficiently supports the creation of next generation user experiences.

## Always connected, fast 5G

Snapdragon 8c platforms with the Snapdragon X55 modem unleash the incredible bandwidth and low latency of 5G connectivity, even in difficult conditions like high density situations.

Qualcomm® Snapdragon™

# 8c Compute Platform

## SPECIFICATIONS & FEATURES

### Qualcomm AI Engine

- Qualcomm® Hexagon™ 690 DSP
- Qualcomm All-Ways Aware™ technology

#### AI FEATURES

- 4th Generation Qualcomm AI Engine
- Enhanced voice assistant experiences for Alexa and Cortana with Qualcomm Aqstic technology

### 5G Modem

- Snapdragon X55 Modem-RF System
- Supported Technologies: 5G NR
- mmWave, sub-6 GHz, 5G/4G spectrum sharing, standalone (SA) and non-standalone (NSA) modes, FDD, TDD
- mmWave: 800 MHz bandwidth, 8 carriers, 2x2 MIMO
- 5G sub-6 GHz: 200 MHz bandwidth, 4x4 MIMO
- 5G Peak Download Speed: 7 Gbps
- 5G Peak Upload Speed: 3 Gbps
- 5G RF: 100 MHz envelope tracking, Adaptive antenna tuning

### LTE/4G Modem

- Snapdragon X24 LTE modem
- LTE Category: LTE Category 20
- Peak Download Speed: 2 Gbps
- Peak Upload Speed: 316 Mbps
- LTE Downlink Features: 7x20 MHz carrier aggregation, Up to 256-QAM, Up to 4x4 MIMO on five carriers, Full-Dimension MIMO (FD-MIMO), Maximum 20 spatial streams
- LTE Uplink Features: Qualcomm® Snapdragon™ Upload+, Uplink Data Compression (UDC), 3x20 MHz carrier aggregation, Up to 256-QAM, Up to 2x 106 Mbps LTE streams
- Supported Cellular Technologies: LTE FDD, LTE TDD including CBRS support, LAA, LTE Broadcast, WCDMA (DB-DC-HSDPA, DC-HSUPA), TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

#### MODEM FEATURES

- Connected Standby / Instant On
- Multi-gigabit speeds for virtually seamless cloud connectivity/computing: up to 2 Gbps LTE

### Wi-Fi

- Wi-Fi Standards: 802.11ad, 802.11ac Wave 2, 802.11a/b/g, 802.11n
- Wi-Fi Bands: 2.4 GHz, 5 GHz, 60 GHz
- MIMO Configuration: 2x2 (2-stream)

### WI-FI FEATURES

- MU-MIMO
- Multi-gigabit Wi-Fi
- Dual-band simultaneous (DBS)
- Integrated baseband

### Camera

- Image Signal Processor: Dual 14-bit ISPs, Qualcomm Spectra™ 390 image signal processor
- 4K HDR video capture @ 30 FPS (10-bit color depth, rec2020.)
- Dual 16 MP cameras @ 30 FPS Zero Shutter Lag
- Single HFR 32 MP camera @ 30 FPS Zero Shutter Lag
- Slow-mo Video Capture: 720p @ 480 FPS
- 4K HDR decode @ 120 FPS
- Codec Support: H.265 (HEVC), H.264 (AVC), VP9

#### CAMERA FEATURES

- DirectX® 12 API
- Advanced Camera and Video capabilities: Cinema core with VP9 & H.265 decoder and 2nd Gen HDR Playback; High efficiency video encoder
- Dual 4K external displays

### Audio

- Qualcomm Aqstic audio technology
- Qualcomm TrueWireless™ technology
- Qualcomm® Broadcast Audio technology
- Qualcomm® aptX™ audio technology: aptX Classic, aptX HD
- Surround Sound Audio
- Speaker Protection

### Display

- Maximum On-Device Display Support: 4K Ultra HD
- Maximum External Display Support: Two 4K Displays

### CPU

- CPU Cores: 8x Kryo 490
- CPU Architecture: 64-bit
- Up to 2.45 GHz
- 7 nm Process Technology

### Visual Subsystem

- Adreno 675
- API Support: DirectX® 12

### RF Front-End

- Comprehensive 5G/4G modem-to-antenna solution
- Qualcomm® Signal Boost adaptive antenna tuning
- High-power transmit (HPUE)

### OS Support

- Supports Windows 10 and Windows 11

#### OS FEATURES

- Improved crypto-security
- Remote management and location awareness for enterprise efficiency

### Memory & Storage

- Memory Type: LPDDR4x, 4 channels
- Memory Speed: up to 2133 MHz
- Storage: NVMe SSD; UFS 3.0

### Location

- Global Emergency Services Support: Assisted GPS, OTDOA (LTE-based positioning)
- Satellite Systems: Beidou, Galileo, GLONASS, GPS, QZSS, SBAS
- Location Support: Qualcomm® Location

#### LOCATION FEATURES

- Location Aware for app accuracy
- Low Power Geofencing and Tracking
- Sensor-assisted Navigation
- Pedestrian Navigation

### Connectivity Specifications

- Bluetooth Version: Bluetooth 5.0
- Near Field Communications: Supported
- USB Version: USB 3.1

#### CHARGING FEATURES

- Qualcomm® Quick Charge™ 4+ technology