Qualcomm® Snapdragon™

8cx
Compute Platform

8cx

Qualcomm snapdragon

The most extreme Snapdragon. Ever.

The Qualcomm® Snapdragon™ 8cx Compute Platform combines the best of the smartphone with the power and performance of a premium laptop in ultra-thin, fanless form factors – delivering a superior Always On, Always Connected PC* computing experience. The first 7nm PC platform, the Snapdragon 8cx supports multi-gigabit LTE and multi-day battery life** and marks the biggest generational performance increase ever in a Snapdragon platform.

Extreme performance

The Qualcomm® Adreno™ 680 GPU is engineered to provide a 2x performance improvement and 60% greater power efficiency over the previous generation platform. Together with the Qualcomm® Kryo™ 495 CPU, our fastest yet, the Snapdragon 8cx is designed to deliver amazing graphics, powerful productivity, and multi-day battery life.

Always Connected* with Multi-Gigabit LTE

The integrated X24 LTE modem delivers peak download speeds of up to 2 Gbps, and improves throughput by up to 70% in poor network conditions over non-gigabit LTE. High speed connected computing for fast and efficient productivity and entertainment, virtually anywhere.

Enterprise-grade security

The Snapdragon 8cx is built with a suite of security features and architectures, including full hypervisor support. Protected LTE connectivity, improved cryptosecurity, and Windows 10 Enterprise support, designed to safeguard passwords, log-ons, and sensitive personal information.

Powerful graphics, immersive entertainment

The Snapdragon 8cx 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 and music and true surround-sound experiences.

New AI architectures for advanced applications

The integrated Qualcomm® AI Engine takes advantage of the Snapdragon 8cx highly integrated architecture, and allows developers to utilize the platform intelligently and efficiently, reducing reliance on the CPU alone and supporting the creation of the next generation of user experiences.

To learn more visit
snapdragon.com

*Requires network connection.
**Battery life varies significantly with settings, usage, and other factors.

SPECIFICATIONS & FEATURES

Qualcomm® Artificial Intelligence Engine

- Qualcomm® Hexagon™ 685 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

Modem

- Qualcomm® Snapdragon™ X24 LTE Modem
- LTE Category: LTE Category 20
- Peak Download Speed: 2 Gbps
- Peak Upload Speed: 316 Mbps
- 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
- Uplink Features: Qualcomm® Snapdragon™ Upload+, 3x20 MHz carrier aggregation, Up to 2x 106Mbps LTE streams, Up to 256-QAM, Uplink data compression
- 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 2Gbps 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 @30fps (10-bit color depth, rec2020.)
- Single HFR 16 MPix camera at 60fps ZSL
- Dual 16 MPix cameras at 30fps ZSL
- Single 32 MPix camera at 30fps ZSL
- 4K HDR decode at 120fps
- Codec Support: H.265 (HEVC), VP9 and H.264

CAMERA FEATURES

- Latest DirectX 12 API
- High efficiency video encoder
- Cinema core - VP9 & H.265 decoder
- 2nd Gen HDR Playback
- Dual 4K external display support

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
- Maximum External Display Support: Two 4K Displays

CPU

- CPU Cores: 8x Qualcomm® Kryo™ 495
- CPU Architecture: 64-bit
- 7nm Process Technology

Visual Subsystem

- Qualcomm® Adreno™ 680
- API Support DX12

RF Front-End

- Qualcomm® RF Front-End solution
- Qualcomm® Signal Boost adaptive antenna tuning
- High-power transmit (HPUE)

Security

- Windows 10 Support: Enterprise, Pro, Home

SECURITY FEATURES

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

Memory & Storage

- Memory Type: LPDDR4x, 8 Channels
- Storage: NVME SSD; UFS3.0

Location

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

LOCATION FEATURES

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

Connectivity Specifications

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

CHARGING FEATURES

- Qualcomm® Quick Charge™ 4+ technology