



The Qualcomm® Snapdragon™ 765 unites 5G and AI to power select premium-tier experiences on a global scale including breakthrough entertainment, intelligent multi-camera capabilities, and all-day battery life.



5G connectivity to more users than ever before

This best-in-class platform integrates a new level of 5G connectivity to your mobile experience. Working in tandem with on-device AI, the brand-new Snapdragon X52 5G Modem-RF System delivers the 5G trifecta of multi-gigabit speeds, superior coverage and superior power efficiency. And with global compatibility, you can connect far and wide.

- Support for mmWave, sub-6 GHz, TDD, FDD and DSS for truly global coverage
- Multi-gigabit download speeds up to 3.7Gbps
- Supports global roaming and global multi-SIM



Smarter experiences with 5th Gen AI Engine™

Uniting with the Snapdragon X52 5G Modem-RF System, Qualcomm's all-new 5th generation AI engine powers your device with more brilliance, speed and precision than ever before. Running faster than its predecessor, this engine fuels mobile experiences that are sophisticated and seamless including camera, entertainment and power savings.

- All-new Qualcomm® Hexagon™ Tensor Accelerator (HTA)
- All-new Qualcomm Sensing Hub enables your device to be contextually aware of its surroundings at all times



Capture over 1 billion shades of color

Unlock intelligent multi-camera photography. Choose from telephoto, wide and ultra-wide lenses giving you all the photo equipment you need right at your fingertips. Capture over a billion shades of color with 4K HDR video capture and snap photos with vivid quality. Then, get creative with AI-powered tools that can detect and upgrade backgrounds in real-time.

- AI and CV-ISP create a camera that is smarter and quicker with 4x power savings
- 4K HDR video capture available in every format: HLG, HDR10, HDR10+
- Capture massive images up to 192 MP



Breakthrough entertainment at your command

A new era of intelligent, binge-worthy entertainment is here. 5G enables near-instant downloads and seamless 4K HDR video streaming. And even while offline, on-device AI video processing can transform standard video into vibrant, electrifying visuals. Plus, the brand-new Qualcomm® Sensing Hub allows voice assistants to be environmentally aware and provide contextual alerts.

- New Qualcomm® Adreno™ 620 offers 20% faster graphics rendering
- Qualcomm® aptX™ Adaptive keeps audio in sync with media
- HDR10+, HDR10 and Dolby Vision video playback



Incredible performance and all-day battery life

Get the best out of your device all day long. In addition to incredible battery life, on-device AI ensures peak efficiency throughout daily use, intelligently monitoring battery health and safety while ensuring everything runs more intuitively.

- Qualcomm 5G PowerSave and Qualcomm Wideband Envelope Tracking provide major power efficiency improvements for big battery benefits
- Qualcomm® Quick Charge™ AI extends battery life cycles up to 200 days

To learn more visit
[snapdragon.com](https://www.qualcomm.com/snapdragon)

All comparisons made are in reference to previous generation, Snapdragon 730 mobile platform. Results will vary depending on OEM implementation and other factors.

Qualcomm Snapdragon, Qualcomm Hexagon, Qualcomm aptX, Qualcomm Quick Charge, Qualcomm Sensing Hub and Qualcomm AI Engine are products of Qualcomm Technologies Inc. and/or its subsidiaries.



SPECIFICATIONS & FEATURES

Qualcomm AI Engine

- Adreno 620 GPU
- Qualcomm® Kryo™ 475 CPU
- Hexagon 696 Processor
- Hexagon Vector eXtensions
- Hexagon Tensor Accelerator
- Qualcomm Sensing Hub
 - Ultra low power hub for audio, voice and sensors
 - Supports AI algorithms at low power
 - Support for fusing contextual data streams including sensors, audio and voice
 - Supports multiple voice assistants
 - Always-on multi-mic far-field detection and echo cancellation

5G Modem-RF System

- Snapdragon X52 5G Modem-RF System – Modem to antenna integrated system for 5G multimode
- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, FDD, TDD
- Dynamic Spectrum Sharing
- mmWave: 400 MHz bandwidth, 2x2 MIMO
- Sub-6 GHz: 100 MHz bandwidth, 4x4 MIMO
- Qualcomm® 5G PowerSave
- Qualcomm® Smart Transmit™ technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® Signal Boost adaptive antenna tuning
- Global 5G multi-SIM
- Downlink: Up to 3.7 Gbps (5G), 1.2 Gbps (LTE)
- Uplink: Up to 1.6 Gbps (5G), 210 Mbps (LTE)
- Multimode support: 5G NR, LTE including CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

Wi-Fi & Bluetooth

- Qualcomm® FastConnect™ 6200 Subsystem
 - Wi-Fi Standards: 802.11ax-ready, 802.11ac Wave 2, 802.11a/b/g, 802.11n
 - Wi-Fi Spectral Bands: 2.4 GHz, 5 GHz
 - Channel Utilization: 20/40/80 MHz
 - MIMO Configuration: 2x2 (2-stream) with MU-MIMO
 - 8-stream sounding (for 8x8 MU-MIMO)
 - Dual-band simultaneous (DBS)

- Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal
- Target Wake Time (TWT)
- Integrated Bluetooth
 - Bluetooth version: 5.0
 - Bluetooth Speed: 2 Mbps
 - Bluetooth audio: Qualcomm TrueWireless™ Technology, Qualcomm aptX Adaptive

Camera

- Qualcomm® Spectra™ 355 Image Signal Processor
- Dual 14-bit ISPs
- Hardware accelerator for computer vision (CV-ISP)
- Up to 192 MP capture
- Up to 22 MP dual camera with Zero Shutter Lag
- Up to 36 MP single camera with Zero Shutter Lag
- Rec. 2020 color gamut video capture
- Up to 10-bit color depth video capture
- Slow motion video capture at 720p at 480fps
- HEIF: HEIC photo capture, HEVC video capture
- Video Capture Formats: HDR10+, HDR10, HLG
- 4K HDR Video Capture with Portrait Mode (Bokeh)
- Multi-frame Noise Reduction (MFNR)
- Real-time object classification, segmentation and replacement

Audio

- Hexagon Voice Assistant Accelerator for hardware accelerated voice signal processing
- Qualcomm Aqstic™ audio codec (up to WCD9385)
 - Total Harmonic Distortion + Noise (THD+N), Playback: -108dB
 - Native DSD support, PCM up to 384 kHz/32-bit
 - Customizable "Golden Ears" filter
- Qualcomm Aqstic smart speaker amplifier (up to WSA8815)

Display

- On-Device Display Support:
 - QHD+ at 60Hz
 - FHD+ at 120Hz
- Maximum External Display Support: UHD at 60Hz
- 10-bit color depth, Rec. 2020 color gamut
- HDR10 and HDR10+

CPU

- Kryo 475, Octa-core CPU
- Up to 2.3 GHz
- 64-bit Architecture

Visual Subsystem

- Adreno 620 GPU
- Vulkan® 1.1 API support
- 4K HDR10 PQ and HLG Video Playback (10 bit color depth, Rec. 2020 color gamut)
- H.264 (AVC), H.265 (HEVC) VP8 and VP9 playback
- Physically Based Rendering
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0 FP, Vulkan 1.1, DirectX 12

Security

- Biometric Authentication: Fingerprint, Iris, Voice, Face
- On-Device: Qualcomm® Mobile Security, Key Provisioning Security, Qualcomm® Processor Security, Qualcomm® Content Protection, Qualcomm® Trusted Execution Environment, Camera Security, Crypto Engine, Malware Protection, Secure Boot, Secure Token

Charging

- Qualcomm Quick Charge 4+ technology
- Qualcomm Quick Charge AI

Location:

- GPS, Glonass, BeiDou, Galileo, QZSS, and SBAS
- Dual Frequency Support
- Low Power Geofencing and Tracking, Sensor-assisted Navigation

General Specifications

- Memory Speed: up to 2133 MHz, 12 GB RAM
- Memory Type: 2 x 16-bit, LPDDR4x
- Near Field Communications (NFC) support
- DisplayPort over USB Type-C support
- 7nm. Process Technology
- Part Number: SM7250-AA