# Qualcomm
## snapdragon
### 460 mobile platform

460

The Qualcomm® Snapdragon™ 460 Mobile Platform delivers impressive mobile experiences with gigantic performance leaps, first-in-series AI, and feature-packed camera experiences.

## Gigantic performance improvements

Give your on-device performance a jolt with massive improvements from the previous generation. These advancements allow you to accomplish more on your device from easy multitasking and web browsing to casual gaming.

- Qualcomm® Kryo™ 240 CPU distributes workloads between 8 cores, providing a 70% boost in performance
- Qualcomm® Adreno™ 610 GPU boasts a 60% faster graphics rendering
- First 11 nm Process in 4-series for improved performance and power savings

## Smarter mobile experiences

With first-in-series AI, this platform opens up a bright new world of possibility. The 3rd gen Qualcomm® AI Engine powers smarter, more intuitive on-device interactions that respond to you and your environment— like intelligent photo capture and better voice assistants to accomplish daily tasks.

- First 4-series Qualcomm AI Engine and Qualcomm® Hexagon™ Vector eXtensions
- Qualcomm® Sensing Hub enables your favorite voice assistant to be always-on, awaiting your command

## Feature-packed camera

Behold a powerful camera more capable and brilliant than the Snapdragon 4-series has ever seen. The Qualcomm® Spectra™ 340 ISP offers a whole new photography experience complete with more megapixels of detail and better capture in extreme low light. And now, you can document all your special moments from nearly every angle with multi-camera support.

- First Qualcomm Spectra in the 4-series with power savings for more photos and videos per charge
- Qualcomm AI Engine works with your camera to effortlessly enhance your photos

## Fast, precise location tracking

Snapdragon 460 can better pinpoint where you are with first-in-series dual-frequency GNSS. It boasts up to 6x the accuracy in dense urban areas compared to the previous generation. Plus, with first-in-series support for India's NavIC satellite system (where available), your device can track your location faster and more accurately.

- First-in-series to support for India's NavIC satellite system
- First-in-series to support Dual Frequency GNSS (L1 and L5)
- Qualcomm® Sensor-Assisted Positioning

## Make better connections

Life calls for better connections—and the Snapdragon 460 delivers. This is our first 4-series mobile platform to come fully loaded with Qualcomm® FastConnect™ 6100 Subsystem, a Wi-Fi 6-ready integrated subsystem with Bluetooth 5.1, WPA3 Security, and digital FM.

- FastConnect 6100 lets you experience maximized performance and better battery life
- Bluetooth 5.1 provides improvement in power performance from previous generation

To learn more visit
**snapdragon.com**

Qualcomm® Snapdragon™

# 460 Mobile Platform

## SPECIFICATIONS & FEATURES

### AI Engine

- Adreno 610 GPU
- Kryo 240 CPU
- Hexagon 683 Processor
  - Hexagon Vector eXtensions
  - Hexagon Scalar Accelerator
- Qualcomm Sensing Hub
  - Ultra low power hub for audio, voice and sensors
  - Support for fusing contextual data streams including sensors, audio and voice
  - Supports multiple hardware-accelerated always-on voice assistants
  - Multi-mic far-field detection and echo cancellation

### Modem and RF Front-End

- Snapdragon X11 LTE modem
- Downlink: LTE Cat 13 up to 390 Mbps, 2x20 MHz carrier aggregation, up to 256-QAM
- Uplink: LTE Cat 13 up to 150 Mbps, 2x20 MHz carrier aggregation, up to 64-QAM
- 2x2 MIMO
- Supported Cellular Technologies: LTE FDD, LTE TDD, WCDMA (DC-HSDPA, HSUPA), TD-SCDMA, EVDO, CDMA 1x, GSM/EDGE
- LTE Dual SIM Dual Standby
- VoLTE with SRVCC to 3G and 2G, HD and Ultra HD Voice (EVS), CSFB to 3G and 2G
- Wi-Fi calling with call continuity between LTE and Wi-Fi
- Qualcomm® Signal Boost adaptive antenna tuning
- High-power transmit (HPUE)

### Wi-Fi & Bluetooth

- FastConnect 6100 Subsystem
  - Wi-Fi Standards: 802.11ax-ready, 802.11ac Wave 2, 802.11a/b/g/n
  - Wi-Fi Spectral Bands: 2.4 GHz, 5 GHz

- Channel Utilization: 20/40/80 MHz
- MIMO Configuration: 1x1
- 8-stream sounding, MU-MIMO
- Target Wake Time (TWT)
- Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal
- Integrated Bluetooth
  - Bluetooth version: 5.1
  - Bluetooth audio: Qualcomm TrueWireless™ Technology, Qualcomm® aptX™ Adaptive

### Camera

- Qualcomm Spectra 340 Image Signal Processor
- Dual 14-bit ISPs
- Up to 48 MP Photo Capture
- Up to 16 MP dual camera with Zero Shutter Lag and Multi-Frame Noise Reduction
- Up to 25 MP single camera with Zero Shutter Lag and Multi-Frame Noise Reduction
- Up to 25 MP with Multi-Frame Noise Reduction
- 1080p Video Capture @ 60 FPS
- HEIF: HEIC photo capture, HEVC video capture

### Audio

- Qualcomm Aqstic™ audio codec (WCD9370)
  - Total Harmonic Distortion + Noise (THD+N), Playback: -105 dB
  - PCM, Playback: Up to 192 kHz/24-bit
- Low power audio subsystem
  - DSP offload for low power audio playback (Bluetooth, USB digital, analog out)

### Display

- On-Device Display Support:
  - FHD+ (1080 x 2520 @ 60 Hz)
  - HD+ (900 x 1600 @ 90 Hz)

### CPU

- Kryo 240, Octa-core CPU
- Up to 1.8 GHz
- 64-bit architecture

### Visual Subsystem

- Adreno 610 GPU
- H.264 (AVC), H.265 (HEVC) VP8 and VP9 playback
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0, Vulkan® 1.1

### 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, Peripheral Security, Crypto Engine, Qualcomm® Malware Protection, Secure Boot, Secure Token

### Charging

- Qualcomm® Quick Charge™ 3 technology

### Location

- GPS, Glonass, BeiDou, Galileo, QZSS, and SBAS
- NavIC support
- Dual-Frequency GNSS (L1 + L5)
- Qualcomm Sensor-Assisted Positioning

### General Specifications

- Storage: eMMC, UFS 2.1
- Memory: 1x32 LP3 @ 933 MHz, 2x16 LP4x @ 1866 MHz
- Near Field Communications (NFC) support
- USB Type-C support
- 11 nm Process Technology
- Part number: SM4250-AA