The Snapdragon 870 5G Mobile Platform is the total package, backed by truly global 5G, premium intelligence, boosted performance, and geared-up gaming. These features and more deliver elite experiences with unstoppable speed and efficiency.

**Truly powerful, truly global 5G**
The world is yours to explore with truly global 5G connectivity. Multi-gigabit speeds and support for both mmWave and Sub-6 GHz spectrums empower new potential—no matter where you go with 5G. Stream desktop-quality content right on your mobile device, upload or download in a flash, and communicate with friends (near or far) in real time.

- Snapdragon X55 5G Modem-RF System with insanely fast peak speeds up to 7.5 Gbps
- Supports all key regions and frequency bands including mmWave, sub-6, TDD, FDD and Dynamic Spectrum Sharing (DSS)
- Supports both standalone and non-standalone modes, global roaming and global multi-SIM

**Boosted performance**
Break mobile barriers with our Qualcomm® Kryo™ 585 CPU—now supplying an uptick in speed. Designed for powerful computing, it delivers top performance with maximum power efficiency. Plus, when your battery does need a boost, Qualcomm® Quick Charge™ 4+ technology gets you back on track in record time.

- Kryo 585 CPU clocks up to 3.2 GHz
- Display support for up to 4K at 60 Hz

**Smarter, faster, longer**
Our 5th gen Qualcomm® AI Engine works with mind-boggling speed and efficiency, enabling responsive on-device interactions and assistance. Plus, the Qualcomm® Hexagon™ 698 Processor with Hexagon Tensor Accelerator pushes up to 15 TOPS performance.

- AI real-time translation makes it easy to form connections with users across the globe
- Qualcomm® Sensing Hub provides always-on contextual awareness

**Geared-up gaming**
No challenge is too great with the complete Qualcomm® Snapdragon Elite Gaming™ armory on your side. Desktop-level rendering, hyper-realistic graphics, and real-time performance optimization put you at the head of the pack. Add our ultra-fast Qualcomm® Adreno™ 650 GPU, and this platform brings brilliance to every arena.

- Qualcomm® Game Smoother reduces jank while Adreno Fast Blend seamlessly renders complex visuals
- Qualcomm® Game Color Plus and True 10-bit HDR gaming add vivid color and crisp contrast for total immersion
- Updateable GPU drivers deliver the latest tech, no OS update required

**Immersive Wi-Fi 6 and Bluetooth audio**
The Qualcomm® FastConnect™ 6800 Subsystem delivers Wi-Fi 6 and Bluetooth audio experiences that are fast, responsive and reliable with advanced feature implementations that translate to more immersive applications.

- Wi-Fi 6 feature innovation supporting gigabit-class speeds (up to 1.8 Gbps) and low latency connections
- Wi-Fi 6 Uplink and Downlink Multi-User-MIMO (MU-MIMO) fit for modern network congestion and two-way traffic demands
- Qualcomm® aptX™ suite for crisp, reliable and responsive Bluetooth audio
Qualcomm® Snapdragon™
870 5G Mobile Platform

SPECIFICATIONS & FEATURES

Artificial Intelligence
- Adreno 650 GPU
- Kryo 585 CPU
- Hexagon 698 Processor
  - Hexagon Tensor Accelerator
  - Hexagon Vector eXtensions
  - Hexagon Scalar 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
- Multi-mic far-field detection and echo cancellation

5G Modern-RF System
- Snapdragon X55 5G Modern-RF System
- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, FDD, TDD
- Dynamic Spectrum Sharing
- mmWave: 800 MHz bandwidth, 8 carriers, 2x2 MIMO
- Sub-6 GHz: 200 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 7.5 Gbps
- Uplink: Up to 3 Gbps
- Multimode support: 5G NR, LTE including CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

Wi-Fi & Bluetooth
- FastConnect 6800 Subsystem
  - Wi-Fi Standards: Wi-Fi 6 (802.11ax), 802.11ac Wave 2, 802.11a/b/g/n
  - Wi-Fi Spectral Bands: 2.4 GHz, 5 GHz
  - Peak speed: 1.73 Gbps
  - Channel Utilization: 20/40/80 MHz
  - 8-stream sounding (for 8x8 MU-MIMO)
  - MIMO Configuration: 2x2 (2-stream)
  - MU-MIMO (Uplink & Downlink)
  - 1024 QAM (2.4 & 5 GHz)
  - OFDMA (2.4 and 5 GHz)
  - Dual-band simultaneous (DBS)
  - Wi-Fi Security: WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal
- Integrated Bluetooth
  - Bluetooth Version: Bluetooth 5.2
  - Bluetooth audio: aptX Voice audio for super wide band voice calls, aptX Adaptive audio for robust, low latency, high quality audio, Qualcomm “TrueWireless” Technology

Camera
- Qualcomm Spectra™ 480 Image Signal Processor
- Dual 14-bit ISPs
- Up to 2 Gigapixels per Second
- Hardware accelerator for computer vision (CV-ISP)
- Up to 200 MP Photo Capture
- Up to 25 MP dual camera @ 30 FPS with Zero Shutter Lag
- Up to 64 MP single camera @ 30 FPS with Zero Shutter Lag
- Rec: 2020 color gamut, video capture
- Up to 10-bit color depth video capture
- 4K Video Capture + 64 MP Photo
- 8K Video Capture @ 30 FPS
- Slow-mo video capture at 720p @ 960 FPS
- HEIF, HEIC photo capture, HEVC video capture
- Video Capture Formats: HDR10+, HDR10, HLG, Dolby Vision
- 4K Video Capture @ 120 FPS
- 4K HDR Video Capture with Portrait Mode (Bokeh)
- Multi-frame Noise Reduction (MFNR)
- Real-time object classification, segmentation and replacement

Audio
- Hexagon for hardware accelerated voice signal processing
- Qualcomm Aaptic™ audio codec (Up to WCD9385)
  - Total Harmonic Distortion + Noise (THD+N), Playback: -106dB
  - Native DSD support, PCM up to 384 kHz/32-bit
  - Customizable “Golden Ears” filter
- Qualcomm Aaptic smart speaker amplifier (up to WSA8815)

Display
- On-Device Display Support:
  - 4K @ 60 Hz
  - QHD+ @ 144 Hz
- Maximum External Display Support: up to 4K @ 60 Hz
- 10-bit color depth, Rec. 2020 color gamut
- HDR10 and HDR10+ CPU

CPU
- Kryo 585, Octa-core
- Up to 3.2 GHz
- 64-bit Architecture

Visual Subsystem
- Adreno 650 GPU
- Vulkan® 11 API support
- HDR gaming (10-bit color depth, Rec. 2020 color gamut)
- Physically Based Rendering
- API Support: OpenGL® ES 3.2, OpenCL™ 2.0 FP, Vulkan 11
- Hardware-accelerated H.265 and VP9 decoder
- HDR Playback Codec support for HDR10+, HDR10, HLG and Dolby Vision

Security
- Qualcomm® Secure Processing Unit: Mobile Payment, Dual SIM/ Dual Standby
- Qualcomm® 3D Sonic Sensor and Qualcomm 3D Sonic Max
- Biometric Authentication: Fingerprint, Iris, Voice, Face

Charging
- Quick Charge 4+ technology

Location
- GPS, Glonass, BeiDou, Galileo, QZSS, NavIC capabile, and SBAS
- Dual Frequency Support
- Low Power Geofencing and Tracking
- Sensor-assisted Navigation
- Near Field Communications (NFC): Supported

Memory
- Support for LP-DDR4x memory up to 2750 MHz
- Support for LPDDR4x memory up to 2133 MHz
- Memory Density: up to 16 GB

General Specifications
- Full Suite Snapdragon Elite Gaming features
- 7 nm Process Technology
- USB Version 3.1; USB Type-C Support
- Part Number: SM8250-AC