Qualcomm® Snapdragon™ X65 5G Modem-RF System

Qualcomm Snapdragon X65 5G Modem-RF System is the world's first 10 Gigabit 5G and first 3GPP Release 16 modem-to-antenna solution. It is designed with an upgradable architecture to rapidly commercialize 5G Release 16 and extend 5G in mobile broadband, fixed wireless, industrial IoT and 5G private network applications.

Upgradable architecture and ultimate flexibility

Designed with an upgradeable architecture for rapid commercialization of the latest 3GPP Release 16 features into 5G mobile broadband products including smartphones, hotspots, fixed wireless devices as well as private network and industrial IoT applications. Snapdragon X65's expansive feature set, band support and spectrum aggregation capabilities offer ultimate 5G deployment flexibility to operators globally.

Unmatched data speeds and coverage

Break through the 10 Gbps barrier in both 5G non-standalone (NSA) and standlone (SA) modes. This modem-to-antenna solution features an all-new Qualcomm 545 mmWave Antenna Module, next-gen Qualcomm Wideband Envelope Tracking and Qualcomm AI-Enhanced Signal Boost to help achieve unmatched data speeds and coverage.

Leading power efficiency

Combines the power efficiency benefits of a 4 nm process with new Release 16 power-saving features and a tightly integrated[1] modem-RF system, delivering superior power efficiency and all-day battery life.[2]

1 OEMs have flexibility to choose RF components.
2 Battery life varies significantly based on device, settings, usage, and other factors.

Built to extend 5G into more application segments

- Mobile broadband – smartphones, tablets, PCs, mobile hotspots
- Fixed wireless – CPEs, home broadband, routers
- Industrial IoT
- 5G private networks

Features

- 10 Gbps peak speeds in 5G standalone and non-standalone modes
- 3GPP Release 16 support
- Upgradable architecture for rapid feature rollout
- 5G mmWave-sub6 aggregation
- Global 5G band support including the new n259 (41 GHz), n70, n53
- Advanced power-saving tech
  - Qualcomm® 5G PowerSave 2.0
  - Qualcomm® Wideband Envelope Tracking (7th gen)
  - Qualcomm® AI-Enhanced Signal Boost

Specifications

- 5G Chipset: Qualcomm® Snapdragon™ X65 Modem-RF System
- 5G Spectrum: mmWave-sub6 aggregation, sub-6 carrier aggregation (FDD-TDD, FDD-FDD, TDD-TDD), FDD-TDD support for uplink-CA, Dynamic Spectrum Sharing (DSS)
- 5G Modes: FDD, TDD, SA (standalone), NSA (non-standalone)
- 5G mmWave specs: 1000 MHz bandwidth, 10 carriers, 2x2 MIMO
- 5G sub-6 GHz specs: 300 MHz bandwidth, 256-QAM, 4x4 MIMO
- 5G Peak Download Speed: 10 Gbps
- 5G Global Multi-SIM support
- Cellular Technology: 5G NR, LTE, LAA, WCDMA (DB-DC-HSDPA), TD-SCDMA, CDMA 1x, GSM/EDGE, CBRS