

SNAPDRAGON® X80 5G MODEM-RF SYSTEM

World's most advanced 5G modem-RF system, harnessing the power of AI to enable ultimate 5G performance, power, and spectrum flexibility.



Snapdragon X80 5G Modem-RF System is equipped with a future-ready architecture to support 5G Advanced, the next era of 5G connectivity in the global 5G roadmap. With the superior Qualcomm® Advanced Modem-RF Software Suite, fully integrated Snapdragon Satellite support including NB-NTN, and tailored AI algorithms, this leading modem-to-antenna solution empowers OEMs to create next-gen devices supporting R18 5G features across key verticals, including smartphones, mobile broadband, automotive, compute, XR, industrial IoT, fixed wireless access, and 5G private networks.

Unrivaled 5G modem-RF system

Snapdragon X80 is equipped with an architecture to support 5G Advanced in mobile and beyond. Its software upgradability, combined with the Qualcomm Advanced Modem-RF Software Suite, empowers OEMs to create next-gen 5G devices with leading performance.

AI-powered 5G

Snapdragon X80 is equipped with a dedicated AI tensor accelerator powering Qualcomm® 5G AI Suite Gen 3 that intelligently enhances data speeds, quality of service (QoS), latency, coverage, and power efficiency.

Unmatched spectrum flexibility

Snapdragon X80 delivers superior 5G performance and flexibility for operators, featuring 6x carrier aggregation for sub-6GHz bands, as well as switched uplink across FDD and TDD and an unmatched range of advanced features for spectrum utilization.



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



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FEATURES

- Qualcomm® 5G AI Processor Gen 2 with dedicated tensor hardware accelerator
- Qualcomm 5G AI Suite Gen 3 includes:
 - AI-enhanced performance improvements in power handling, coverage, latency, & QoS
 - AI-assisted mmWave beam management – mmWave (SA) range extension for CPE
 - AI-based GNSS Location Gen 3
- Qualcomm Advanced Modem-RF Software Suite includes:
 - Qualcomm® Smart Network Selection Gen 3
 - Context-based performance enhancements for user scenarios
 - On-device, learning-based network selection
 - Non-Linear Interference Cancellation
 - Qualcomm® DSDA Gen 2 – Dual Data with support on global bands
 - Qualcomm® Smart Transmit™ Gen 5 supporting NB-NTN and Supplemental Uplink
 - Switched Uplink (FDD-TDD) – Globally
 - Supplemental Uplink – China
- 6xCA Downlink
- 6xRx for smartphones
- Qualcomm® RF Uplink Optimization – RFFE
- Qualcomm® RF Downlink Boost – RFFE
- Converged mmWave-Sub6 Transceiver
- 3GPP Release 17 and Release 18 support
- Qualcomm® QTM565 mmWave module
- Qualcomm® 5G PowerSave Gen 5
 - Rel 17 PDCCH Skip
 - Qualcomm® Power RF Efficiency Suite – RFFE
- Supports all global 5G bands, from 0.6 to 41 GHz

SPECIFICATIONS

- Modem Name: Snapdragon X80 5G Modem-RF System
- 5G Peak Download Speed: 10 Gbps
- 5G Peak Upload Speed: 3.5 Gbps
- Cellular Modem-RF Specs: 10CC aggregation in mmWave, 6CC aggregation in 5G sub-6GHz
- Performance Enhancement Technologies: Qualcomm 5G AI Processor Gen 2 with dedicated tensor accelerator, Qualcomm 5G AI Suite Gen 3, Qualcomm Advanced Modem-RF Software Suite, Qualcomm Smart Transmit Gen 4 technology, Qualcomm 5G PowerSave Gen 5, Qualcomm RF Downlink Boost, Snapdragon Satellite, Qualcomm® 5G Ultra-Low Latency Suite, Qualcomm RF Uplink Optimization
- Cellular Technology: R18-ready (5G Advanced-ready), 6xCA sub-6 downlink carrier aggregation, 1024-QAM sub-6, FR1 + FR2 CA, 5G NR, Sub-6 GHz, Sub-6 carrier aggregation (TDD-TDD, FDD-FDD, FDD-TDD), Dynamic Spectrum Sharing (DSS), LTE, WCDMA, LAA, GSM/EDGE, CBRS, mmWave, 5G FDD, 5G TDD, 5G SA (standalone), 5G NSA (non-standalone), F + F ULCA, FDD UL MIMO, Switched Uplink
- Multi-SIM: Dual-SIM support Qualcomm DSDA Gen 2 (Dual Data)

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