



Qualcomm® 5G Fixed Wireless Access Ultra Gen 3 Platform

The Qualcomm 5G Fixed Wireless Access (FWA) Ultra Gen 3 is a highly integrated platform aimed to drive global adoption and help bridge the digital divide.

Welcome to the future of wireless connectivity with the Qualcomm 5G FWA Ultra Gen 3. This highly-integrated platform is set to revolutionize global 5G FWA deployment, offering a range of groundbreaking features that drive unmatched design flexibility, low power consumption, and compact size. With its innovative, AI-enhanced motorized reflector providing a 360-degree field of view, this new platform delivers unparalleled performance. Its fully integrated architecture includes a 5G modem-RF with support for Sub-6GHz and mmWave frequencies, a GNSS receiver, and Tri-Band Wi-Fi 7, ensuring advanced connectivity options.

Robust mmWave performance starts with our third-generation mmWave module, the Qualcomm® QTM567 mmWave Antenna Module, and is enhanced by Qualcomm® RF Sensing Suite technology which helps provide a reliable and robust mmWave connection in indoor environments.

Highlights

High-performance mmWave 5G platform

A novel motorized reflector assembly delivers high RF performance using a single, powerful mmWave Antenna Module with a 360-degree field of view. Built-in AI learns and adapts to changing environmental conditions while our third-generation Qualcomm QTM567 mmWave Antenna Module provides enhanced mmWave coverage and range.



A global FWA accelerator

The smaller size, improved power profile, innovations, and related cost savings introduced in the Qualcomm 5G FWA Ultra Gen 3 position it well for supporting connectivity needs around the world. This platform is designed to provide the same level of connectivity as its predecessor with a single Qualcomm QTM567 mmWave module, with up to 45% less power consumption. Other globally applicable highlights include regional operating system support, extended-range mmWave and extended-range Sub-6GHz, spectrum band support compatible to the requirements of every major region, and advanced spectrum aggregation and dual connectivity across Sub-6GHz and mmWave.



Breakthrough next-generation connectivity features

The fully-integrated platform architecture features the Snapdragon® X75 5G modem-RF with 5G Sub-6GHz and mmWave, a GNSS receiver, and Tri-Band Wi-Fi 7 with an optional 10 GB Ethernet attach. Excellent 5G speeds and flexibility are supported by: 3GPP Rel-17 5G modem, 10 CC aggregation (mmWave), 256 QAM support on 10 100MHz-carriers, 5X carrier aggregation (Sub-6), FDD Uplink MIMO, Uplink CA with FDD+FDD, and eight Rx with support for 2 CC aggregation.

Unmatched power efficiency comes from architectural changes, supplemented by Qualcomm® 5G PowerSave Gen 4.





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The Qualcomm 5G FWA Ultra Gen 3 platform leverages wireless connectivity to extend broadband internet access more affordably to homes, schools, and businesses previously underserved in both urban and rural areas. FWA can be quickly set up to mobilize or relocate networks for shorter-term use. It also enables wireless remote access to controlling devices for remote operation.

Features

- Integrated 3GPP Rel-17 5G modem (2G to 5G and including GNSS) with support for Sub-6GHz and mmWave connectivity, a quad-core CPU, and Tri-Band Wi-Fi 7.
- Extended-range mmWave and Sub-6GHz with eight receiver antennas and support for power class 1.5 (PC 1.5)
- Sub6-mmWave convergence (one transceiver)
- Eight Rx enhancements – FDD, 2CC (F+T)
- Excellent carrier aggregation and dual-connectivity supports Qualcomm Tri-Band Wi-Fi 7 with expert Multi-Link Operation (MLO) for blazing-fast lower latency, reliable connections, and mesh capability for seamless coverage
- Quad-core CPU and hardware acceleration boosts
- Enhanced self-install capabilities facilitated by Qualcomm® Dynamic Antenna Steering Gen 2 technology
- Qualcomm RF Sensing Suite to enable and accelerate indoor mmWave Customer Premises Equipment (CPE) deployments
- Support for 5G Dual-SIM Dual-Active (DSDA) and Dual-SIM Dual-Standby (DSDS) configurations
- Flexible software architecture with support for multiple frameworks, including OpenWRT and RDK-B
- Global 5G band support including n259 (41GHz), n70, and n53

Specifications

Modem Name	Snapdragon X75 5G Modem-RF System
mmWave Name	Qualcomm QTM567 mmWave Antenna Module
Cellular Technology	Sub-6 carrier aggregation (TDD-TDD, FDD-FDD, FDD-TDD), Sub-6GHz, 5G FDD, 5G TDD, 5G NR, Dynamic Spectrum Sharing (DSS), mmWave, mmWave-Sub-6GHz aggregation, SA (standalone), NSA (non-standalone), WCDMA (DB-DC-HSDPA), WCDMA (DC-HSUPA)
Cellular Modem-RF Specs	800MHz bandwidth (mmWave), Eight carriers (mmWave), 2x2 MIMO (mmWave), 300MHz bandwidth (Sub-6GHz), 4x4 MIMO (Sub-6GHz)
5G Peak Download Speed	10 Gbps
5G Peak Upload Speed	3.7 Gbps
Performance Enhancement Technologies	Qualcomm 5G PowerSave Gen 4, Qualcomm Dynamic Antenna Steering Gen 2, Dual-layer polarization in downlink and uplink (mmWave), Beam tracking (mmWave), Beam forming (mmWave), Beam steering (mmWave), Wide Scan Angle (mmWave), Qualcomm® 5G Ultra-Low Latency Suite, Qualcomm® Smart Transmit™ Gen 4 technology, Qualcomm® 5G RF Sensing Suite
Wi-Fi Generation	Wi-Fi 7, Wi-Fi 6E, Wi-Fi 6, Wi-Fi 5, Wi-Fi 4
Wi-Fi Standards	802.11be, 802.11ax, 802.11ac, 802.11n, 802.11g, 802.11b, 802.11a
Wi-Fi Spectral Bands	6GHz, 5GHz, 2.4GHz
Spatial Streams	Up to 12
Peak QAM	Up to 4K QAM
Wi-Fi Features	Simultaneous & Alternating Multi-Link, Adaptive Interference Puncturing, OFDMA (UL/DL), MU-MIMO (UL/DL)

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