



Qualcomm® QRU100 5G RAN Platform

Highly integrated, powerful, and power-efficient design for Open RAN Radio Units

With the accelerated growth in mobile data traffic, together with industry transition to Open and Virtualized Networks (O-RAN and vRAN), network operators are seeking platforms that address user experience demands of their subscribers, while streamlining deployments and bringing down total cost of ownership. The Qualcomm QRU100 5G RAN Platform delivers a high-performance, O-RAN compliant, energy-efficient 5G solution for Massive MIMO Radio Units to address modern operator demands.

The Qualcomm QRU100 5G RAN Platform features support for Massive MIMO, scalable for 64TR and 32TR Radio Units to enhance coverage and improve cell-edge data speeds, as well as increase the overall capacity of the network. This will also enable enhanced speed in the rollout of 5G networks with high-performance, O-RAN compliant infrastructure products.

As a result, the Qualcomm QRU100 5G RAN Platform will simplify and lower total cost of ownership of 5G deployments and will help drive the transition toward modern networks.

Highlights

Comprehensive, High-Performance Modem-RF Solution for Massive MIMO Radio Units

The Qualcomm QRU100 5G RAN Platform is designed for superior radio performance, including high-power, high-capacity operation. The platform features a comprehensive 5G Modem-RF System, including baseband and transceiver modules. This high-performance and power-efficient solution supports Massive MIMO capabilities, with a configuration of up to 64T64R to improve network coverage and capacity.



O-RAN Compliant Design with Architectures Flexibility

The Qualcomm QRU100 5G RAN Platform is an O-RAN compliant solution that supports a range of baseband functions and future enhancements, including uplink performance improvement.

This flexibility provides OEMs and operators with deployment versatility and facilitates scalable and cost-effective 5G RAN networks. This will provide operators with tremendous flexibility to deploy unprecedented peak speeds with available spectrum resources.



Advanced Cellular Technologies

The Qualcomm QRU100 5G RAN Platform applies leading 5G mobile expertise to support feature-rich cellular infrastructure that combines powerful performance with leading power efficiency. It supports advanced features that include multi-operator RAN sharing, dynamic spectrum sharing (DSS), and digital beamforming. This platform supports Massive MIMO scalable for 64TR and 32TR configurations.

Furthermore, the platform offers a highly optimized and flexible Crest Factor Reduction (CFR)/Digital Pre-Distortion (DPD) architecture, delivering an end-to-end, complete DPD solution to address various Power Amplifier (GaN and LDMOS) characteristics and challenges, as well as multiple carriers in both contiguous and non-contiguous scenarios.



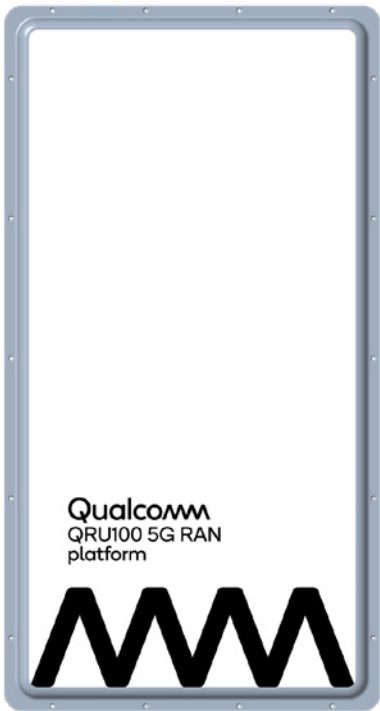
Target Applications

- Public 5G Networks
- Private 5G Networks

Features

- Multi-operator RAN sharing
- Dynamic spectrum sharing (DSS)
- Digital beamforming
- Supports all O-RAN 7.x split functions and is compatible with future split (for example, 7.3)
- Maximum modulation of DL 1024 QAM, UL 256 QAM
- RU + RFIC Architecture
- Scalable solution for 64T64R and 32T32R
- 16 layers
- Bandwidth FR1 of 400MHz
- Advanced DPD end-to-end solution, with highly optimized and flexible architecture
- Integrated 300 Gbps Ethernet
- Software upgradable to support ULPI and other enhancements

Product Image



Related Products

The [Qualcomm® X100 5G RAN Accelerator Card](#) offloads server CPUs from compute-intensive L1 processing, improving performance per watt for virtualized Distributed Units (vDU).

Ordering Information

Product	Part Number
Qualcomm QRU100 5G RAN Platform	QRU100

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