



NXP Unleashes All-in-One 5G mMIMO RF Power Amplifier Modules

October 1, 2019

Paris, France – (European Microwave Week 2019) – October 1, 2019 – NXP Semiconductors today announced the broad availability of its comprehensive [RF power multi-chip module \(MCM\) portfolio](#) supporting the development of massive MIMO active antenna systems for 5G base stations. NXP's 5G Airfast solutions bring higher levels of integration that reduce power amplifier size, shorten design cycles, and simplify manufacturing.

"5G infrastructure networks are deploying quicker than previous generations," said Paul Hart, senior vice president and general manager of NXP's Radio Power Solutions. "Our 5G massive MIMO solutions offer a common footprint across frequency and power, enabling a fast time to market for our customers and network mobile operators."

Simplifying 5G base station deployments

NXP's RF power multi-chip modules are 50-ohm in / out, two-stage devices with integrated Doherty that help remove RF complexities, eliminate multiple prototype passes, and improve design predictability. Their pin-compatibility enables a strong design reuse. The reduction of component count avoids testing redundancies while improving yields and decreasing qualification cycle time.

With a 5x reduction in printed-circuit board size compared to traditional RF designs, NXP's integrated solutions help tackle the size and weight challenge of high order mMIMO, such as 64T64R that needs to include 64 power amplifiers per antenna.

Comprehensive portfolio

The [Airfast integrated portfolio](#) includes LDMOS power amplifier modules, GaAs/SiGe pre-driver modules and receiver modules for cellular frequency bands from 2.3 GHz to 3.8 GHz, with output power from 3W to 5 W:

Power amplifier modules:

- AFSC5G37D37 (3.7 GHz band, 37 dBm Avg.)
- AFSC5G35D37 (3.5 GHz band, 37 dBm Avg.)
- AFSC5G35D35 (3.5 GHz band, 35 dBm Avg.)
- AFSC5G26D37 (2.6 GHz band, 37 dBm Avg.)
- AFSC5G23D37 (2.3 GHz band, 37 dBm Avg.)

Pre-driver modules:

- AFLP5G35645 (3.5 and 3.7 GHz bands, 29 dBm Avg.)
- AFLP5G25641 (2.3 and 2.6 GHz bands, 29 dBm Avg.)

Receiver modules:

- AFRX5G372 (LNA+switch for 3.5 to 5 GHz bands)
- AFRX5G272 (LNA+switch for 2.3 and 2.6 GHz bands)

The power amplifier modules are now available from NXP distributors and retailers. They are supported by NXP's new [RF Circuit Collection](#), a digital library of over 400 RF power reference circuits.

See live demonstrations at European Microwave Week 2019 in Paris

See NXP's multi-chip module portfolio for cellular base stations in action at the NXP Stand #B205 from September 29–October 4 at the Paris Expo Porte de Versailles.

NXP's 5G End-to-End Communications Infrastructure Portfolio

NXP offers a robust portfolio of 5G technologies built on innovative LTE, processing and RF solutions expertise. The offerings include the industry's broadest portfolio from DC to mmW frequencies and from 1.8 mW to 1.8 kW output power. Technology leadership spans GaN, LDMOS, SiGe and GaAs. Additionally, NXP's unique in-house technologies for 5G applications, include best-of-class security and performance from the company's Layerscape 5G Access Edge platform. It also delivers open 5G infrastructure solutions, scalable across multiple system types, and adaptable to different implementations or future specification changes.

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