

RFS works with Nokia to launch a new antenna platform to support simplified 5G network roll-out



Lannion, France, March 7th, 2023 – Radio Frequency Systems (RFS), a global designer and manufacturer of end-to-end wireless connectivity solutions, today announced it has collaborated with Nokia, to integrate its passive antenna technology with Nokia’s 5G Massive MIMO radios, in a compact design to further enhance 5G base station capabilities.

The solution is a compact base station antenna, which integrates an RFS passive antenna with a Nokia 5G NR massive MIMO radio in the same antenna system to create the Nokia IPAA+ (Interleaved Passive Active Antenna) radio solution, which is integrated by Nokia. In addition to a smaller form factor and lighter weight, the interleaved design addresses some of the challenges of tower loading, but also maintains 2G/3G/4G antenna performance characteristics.

The modular architecture of the antenna system is designed to ensure easy installation. The antenna can be deployed as a full passive/active solution or rolled out in stages, with any upgrades simple to install on site. Modules are robust and can be easily lifted and quickly fitted without needing specialist equipment.

Driven by a demand for 5G introduction with low visual impact, zero additional tower space and optimized wind load, RFS developed its passive platform antenna to enable the integration of passive and active elements. This will result in simplified deployment and lower Total Cost of Ownership (TCO).

This development builds on collaborations to combine passive and active components. Both passive and active modules can be customized to support various configurations including 2G/3G/4G and 5G and covering all cellular frequency bands from 700 MHz up to 3800 MHz. In addition, the smooth introduction of the active module allows the straightforward introduction of 32TRX or 64TRX Massive MIMO radios.

The first solution comprises:

- Passive module covering all cellular frequency bands from 700 MHz up to 2700 MHz supporting MIMO 2T2R, 4T4R.
- Active massive MIMO radio 32TRX or 64TRX in the 3.5 GHz band.

Jean-Pierre HAREL, BSA R&D Manager at RFS, commented: “Over the past few years we have been focusing on designing integrated passive active solutions that push the capabilities of base station equipment designed to meet the real world needs of our operator customers. We have worked closely with Nokia to combine its expertise on active equipment with our long heritage in designing passive solutions to deliver a best-in-class solution that meets the needs of our customers and helps serve the ever-increasing demand for data capacity.”



About RFS

Radio Frequency Systems (RFS) is a global designer and manufacturer of cable, antenna and tower systems, plus active and passive RF conditioning modules, providing total-package solutions for wireless infrastructure.

RFS serves OEMs, distributors, system integrators, operators and installers in the broadcast, wireless communications, land-mobile and microwave market sectors. As an ISO compliant organization with manufacturing and customer service facilities that span the globe, RFS offers cutting-edge engineering capabilities, superior field support and innovative product design. RFS is a leader in wireless infrastructure.

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