



RFS takes active steps to address 5G infrastructure challenges with APA

RF technology expert develops interleaved Active Passive Antenna system in response to operator demand ahead of 5G evolution

Munich, Germany – February 19, 2018 – Radio Frequency Systems (RFS), a global designer and manufacturer of total-package solutions for wireless and broadcast infrastructure, today announced its new Active Passive Antenna (APA) system. Designed to help operators overcome the technical and economic challenges associated with the evolution to 5G, and continued network modernization in relation to LTE-Advanced, RFS' APA system will be demonstrated for the first time at Mobile World Congress 2018.

The new APA system uniquely interleaves a 5G active antenna with a passive base station antenna under the same radome. It is being developed in response to operator demand to combine the antennas for 3.5GHz mMIMO with existing passive systems, thereby addressing the significant challenge they face in relation to cell site restraints when looking to deploy new active antennas in dense urban areas.

RFS' interleaved APA system has a number of benefits:

- Simplifies the evolution to 5G, allowing operators to easily deploy active antennas and thereby introduce support for new spectrum bands to existing macro sites without needing to increase the overall antenna count per sector (and minimizing visual impact).
- Lowers Total Cost of Ownership due to shared chassis and RF components between the two antenna systems and reduced windload.
- More efficiently tackles the common heat dissipation issue associated with active antenna technology. RFS' APA system takes advantage of the design and housing of the existing passive antenna to act as the heat exchange for the active antenna, driving efficiency, increasing reliability and reducing overall weight by downsizing the bulky heatsinks that are typically needed.

"Operators will have many different options for deploying 5G active antennas, but for dense urban locations where space is a considerable issue, APA technology is a very efficient approach," said Herbert Merz, CEO at RFS. "Investment into infrastructure is going to grow considerably with 5G and so will deployment complexity. This new approach will help to streamline that evolution."

The APA is effectively a two-in-one system housed in a form factor that's the same size as the systems operators have already deployed. By interleaving the two antennas using RFS' longstanding heritage and expertise, it's been able to minimize distortion while ensuring consistent high performance of both systems. For operators, APA technology will therefore allow them to prepare for 5G's evolution while also improving their 4G and LTE-A networks to support ever-increasing demand for 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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