

Amboise, April 2017

Airrays GmbH & Amphenol Antenna Solutions Active Antenna.



Amboise (France), April 2017 – Airrays GmbH and Amphenol Antenna Solutions (AAS), have successfully presented their active antenna at MWC in Barcelona. This solution is a tangible technological step forward in the perspective of the migration to 5G. It embeds advanced digital beamforming and FD-MIMO schemes for optimum capacity gain. Its CPRI interface to the baseband unit enables easy integration in existing RAN infrastructure and can also be interfaced with gateway to the IP network. Last but not least, the Total Cost of Ownership of this solution is superior to any kind of capacity solution like small cell or macrocell layers.



Airrays GmbH and AAS have partnered to develop a Large Scale Antenna (LSA) product. From an architectural standpoint, the objective has been to use a modular structure and distributed power amplifiers (PA). Indeed, with LSA, each transmitter can have a lower output power and a higher antenna gain. The dipoles are fed by small PAs providing the right adjusted power level to each element. The number of modules and their arrangement can be adapted to the horizontal and vertical beam scanning requirements. Thus, the key advantages of the LSA are: multiple cells can be projected from one site, arrays of multiple sizes can be created thanks to its modularity and large uptilt and downtilt ranges can be achieved for building coverage (from the outdoor). The LSA is a flexible solution for capacity overlay in dense cellular network environment.

The active antenna offers CPRI connectivity to the baseband unit, for easy operation with any OEM. Trials can easily be engaged with any OEM for interoperability. Moreover, field trial with Carriers are underway, in order to evaluate the solution in real conditions, especially to evaluate the capacity add-on.

Maximum attention has been paid to the Total Cost of Ownership of this solution. The solution has a small footprint and offers propagation conditions that leads to minimum site acquisition efforts by reducing the number of sites. The selection of the architecture and its small PAs contributes to more cost effectiveness while controlling the power consumption. So less site acquisition constraints versus traditional small cell capacity layers, better cell dimensioning versus macro or small cells, LSA is a new generation of solution for network design and return on investment.

The LSA roadmap already includes several frequency bands, in TDD or FDD mode. We anticipate to increase the number of independent beams, among other features evolution for capacity. We anticipate to offer several options for the interface to the baseband unit also. And more to come.

Finally, Airrays GmbH and AAS active antenna solution is an ideal bridge from 4G to 5G, offering much more capacity in various form factors and various applications. It is also easy to integrate in existing cellular networks.



About Airrays GmbH

Airrays is a startup company based in Dresden, Germany specializing in active antenna technology for mobile communication. Airrays antennas enable very high capacity gains and energy savings with smaller form factors compared to state of the art antennas. Airrays core competences are the integration and calibration of a large number of active elements in a single radio unit. With its products Airrays addresses the 4G and upcoming 5G mobile communications infrastructure market.

About AAS

Amphenol Antenna Solutions is a division of Amphenol Corporation, a \$6.2 billion revenue NYSE company supplying to diverse markets including the mobile networks, automotive, military/aerospace, information technology and industrial sectors. Amphenol Corporation was founded in 1932 and employs over 45,000 worldwide with product development and manufacturing operations in 30 countries.

Amphenol Antenna Solutions (AAS) was established with the singular focus of designing and manufacturing high performance antennas. Today, the company is a leading global solutions provider for wireless infrastructure systems, offering over 6,000 products with best in class performance.

AAS specializes in BTS and Small Cell antennas for Macro, iDAS and oDAS systems but also offers a complete line of site solutions, including transmission line products and RET system components. The company operates from seven strategically located factories to serve the global market and remains committed to ***Connecting People + Technology.***

For more information, contact :

Dr. Albrecht Fehske

Director Sales & Marketing

[Email:albrecht.fehske@airrays.com](mailto:albrecht.fehske@airrays.com)

Arnaud Baron

Marketing Director EMEA-APAC

[Email:abaron@amphenol-antennas.com](mailto:abaron@amphenol-antennas.com)