



## arQana Technologies partners with Rohde & Schwarz in the characterization of next-generation Power Amplifier Modules for Wireless Infrastructure Small Cells



**Taipei, TAIWAN, January 12, 2022** – arQana Technologies highlights two recent small cell power amplifiers designed for 5G wireless infrastructure in conjunction with Rohde & Schwarz Test & Measurement equipment.

With the rapid development of 5G technology, fabless semiconductor supplier arQana Technologies (arQana) is harnessing its advantages in architecture and technology to address the dynamic and evolving 5G ecosystem and its complex new challenges by continuously updating its IP portfolio. The company is partnering with Rohde & Schwarz (R&S), a leading international instrumentation company, to enter the 5G Small Cell market with a series of highly efficient power amplifiers.

### **The company makes its debut in the Small Cell market**

ARQSP3337-4 and ARQSP4450-4 are 4W high-efficiency DPD power amplifiers based on GaAs technology, designed to support the wireless infrastructure market in major 5G NR FR1 bands: n48, n77, n78, and n79 with fully matched input/output architecture in a compact 16-pin 5 × 5 mm<sup>2</sup> LGA package.

The PAs are ideally suited for indoor small cell architecture with 0.25 W conducted power per antenna port. These products offer highly competitive specifications, targeting an operating bandwidth of more than 100 MHz and an average output power of +28 dBm. Under our specified test conditions, users can observe a Power Gain of 35 dB, Power Added Efficiency (PAE) above 20 %, and ACLR below -50 dBc with digital pre-distortion (DPD) used for linearization.

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**High-performance Instrumentation aids Product Development and Accelerates Time-to-Market**  
With R&S' high-performance vector signal generator SMW200A and vector signal analyzer FSW26, which support high bandwidth modulation (2GHz) and demodulation (8.3GHz), R&S provides the best-in-class measurement tools for power amplifier R&D engineers. The Crest Factor Reduction function of SMW200A helps to easily generate signals with an 8.5 dB peak-to-average ratio. The easy setup of Digital pre-distortion on FSW helps to accomplish complex tests with little effort while accelerating product development and time-to-market.

*"We are excited to collaborate closely with R&S and demonstrate best-in-class results with our products and their equipment," says Henrik Andersen, VP Engineering of arQana Technologies. "R&S unique approach to digital pre-distortion (DPD) and CFR enables us to quickly tune our products to the sweet spot of linearity, power, efficiency, and targeted bandwidth that our customers demand."*



Rohde & Schwarz SMW200A Vector Signal Generator and FSW Signal & Spectrum Analyzer (Photo: arQana Technologies)

## Best Partners in Building the Future Together

arQana Technologies and R&S are actively working to provide the best solutions for Small Cell and O-RAN customers now facing 5G challenges, especially on critical power amplifiers. ARQSP3337-4 and ARQSP4450-4 Power Amplifiers are part of arQana's high-efficiency [4 W Power Amplifier RF](#)

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[product line](#), designed for 4G LTE and 5G NR Wireless Infrastructure, to support all major 3GPP bands.

Product Name	Frequency Range (GHz)	5G Bands
ARQSP1819-4	1.8 – 1.9	n3, n39
ARQSP2122-4	2.1 – 2.2	n1
ARQSP2324-4	2.3 – 2.4	n30, n40
ARQSP2527-4	2.5 – 2.7	n7, n38, n41
ARQSP3337-4	3.3 – 3.7	n48, n77, n78
ARQSP3742-4	3.7 – 4.2	n77
ARQSP4450-4	4.4 – 5.0	n79

The ARQSP3337-4 and ARQSP4450-4, High-Efficiency Power Amplifiers will be readily available for customer sampling in Q1-2022.

To order these Power Amplifiers and for more info on arQana products, contact us.

#### About arQana Technologies

arQana Technologies, with offices in Taiwan and Belgium, is a fabless semiconductor component supplier for the Wireless Telecommunications Infrastructure market. As the world is evolving fast towards 5G with new architectures and technical challenges ahead, arQana has been transforming its IP portfolio into a range of key high-performing products in different semiconductor technologies, to support the 5G market and ecosystem.

Find out more on arQana Technologies at [argana-tech.com](http://argana-tech.com).

#### About Rohde & Schwarz

Rohde & Schwarz is a market-leading supplier of test and measurement solutions for RF components and the wireless industry, offering a comprehensive portfolio of Test & Measurement instruments and systems for the development, production, and acceptance testing of components and consumer devices. Other important T&M markets include the automotive industry, the aerospace & defense sector, all industrial electronics segments as well as research and education.

To learn more about Rohde & Schwarz, visit [rohde-schwarz.com](http://rohde-schwarz.com).

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