

Increasing Over-The-Air Testing Capabilities

▲ About Taoglas

Taoglas is a trusted provider of antennas, advanced IoT components, and custom IoT design services that help customers navigate complex RF and wireless systems and bring connectivity solutions to market on time the first time.

Founded in 2004, the company has grown from its heritage in antennas to providing engineering resources, state-of-the-art test chambers, and pre-certification centers worldwide.

The Taoglas team has experience with various application areas, giving them a deep understanding of the complexities involved in each. They offer an extensive portfolio of advanced components for their customers, or they can leverage their engineering expertise to create a custom antenna design that meets their unique needs.



“Working with Anritsu has been a wonderful experience. The team are incredibly knowledgeable and helpful in their approach. Using Anritsu’s products has resulted in a quicker turnaround in our product testing, leading to reduced project timelines for our customers.”

Neil Woodhouse
Engineering Manager, Taoglas

▲ The Challenge

Taoglas found it could not rely on the quality of connection between its existing test equipment and its anechoic chamber. This was leading to longer test durations, in turn increasing the length of customers’ product testing programmes.

Because devices are tested “Over The Air” (OTA) inside the chamber, there can be a significant pathloss between the antenna of the device under test and the measurement antenna. Achieving accurate measurements also requires rotating the device under test around multiple axis points, changing the pathloss characteristics.



▲ The Solution

Anritsu's MT8821C Radio Communication Analyzer was adopted to emulate the cellular network. The MT8821C can emulate all cellular network technologies - 2G, 3G, 4G, including cellular IoT Technologies LTE Cat-M1 and NB-IoT - and connect the device under test to perform the measurement. To maintain a stable connection and make the whole measurement process quick and reliable, the MT8821C Radio Communication Analyzer provides a high dynamic range at its radio front end. This ensures connection is maintained even when pathloss is changing, and also provides a high output power to mitigate possible high pathloss in the over-the-air environment.



▲ The Outcome

The solution gave Taoglas the confidence to increase its OTA testing capabilities. Trust in the equipment's reliability and consistency, as well as a straightforward integration with the help of Anritsu's team, contributed to a more streamlined process and faster, more accurate results for customers.

The new solution helps the Taoglas Engineering team identify issues and sources of noise on active customer boards at an early stage, ensuring customers do not submit faulty devices for expensive carrier certification testing.

In addition, the Taoglas IoT team greatly expanded its IoT service offering, allowing them to monitor mobile network connections made with the device under test at a protocol level.

▲ Featured Solution

Designed for R&D into mobile devices (UE), such as smartphones, tablets and M2M/IoT modules, the MT8821C builds on the technologies of its popular predecessor, the MT8821C used worldwide by UE and chipset vendors. It operates as a base station simulator using standard call processing sequences compliant with test standards to support a versatile test lineup, starting with RF tests.



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