

Plume Design, Inc., USA



Ensuring time-to-market and sustainability



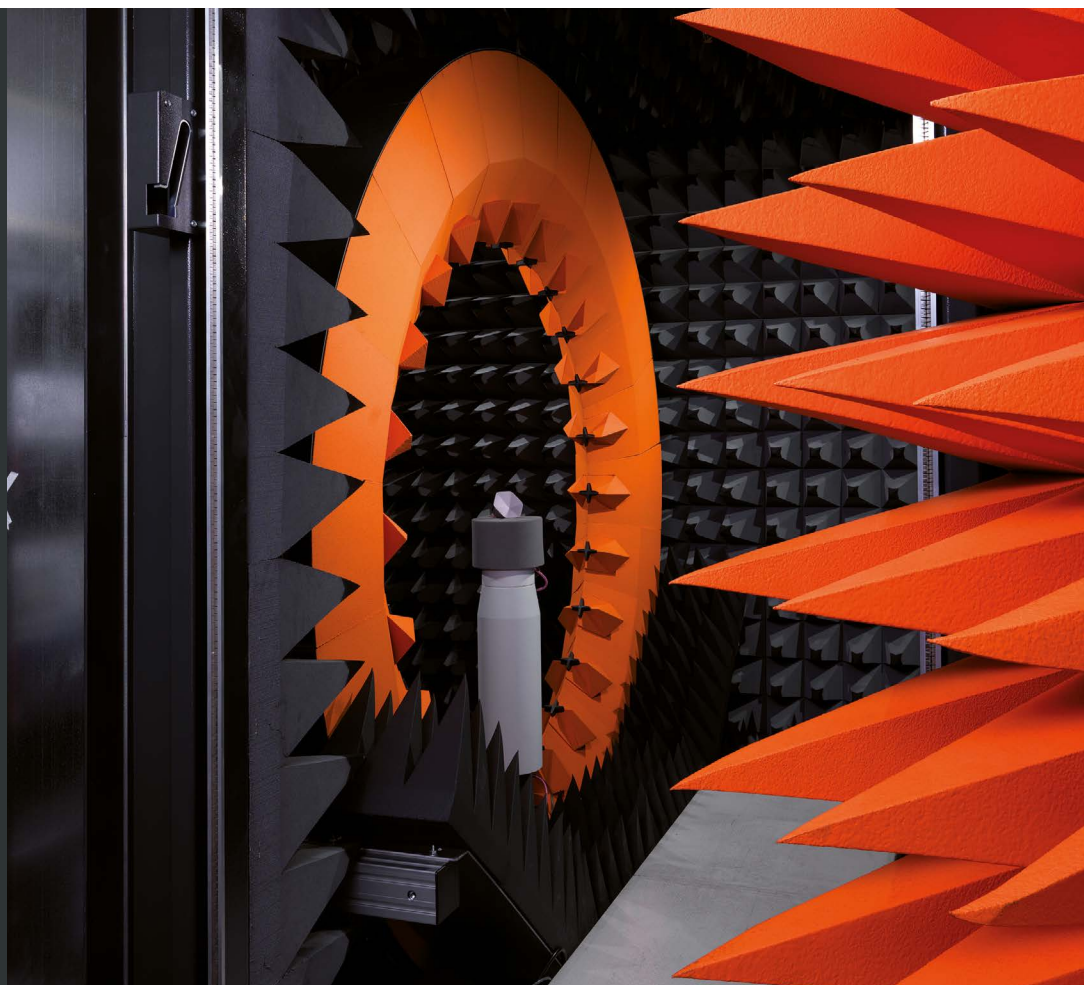
Learn how... Plume is staying ahead of the game, ensuring time-to-market and the sustainability of its IoT products. With the knowledge that antenna performance is key in the success of IoT, Plume has invested in an MVG SG24 to test the OTA wireless performance of its Pods, gain speed and accuracy in product development, and get a head start on next-generation ideas.

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Most start-up businesses in IoT have one great wireless device idea but don't think about antennas. Connected devices are often so small that you can't buy an antenna off the shelf and hope it works. Antennas should be considered in the design process from Day 1 to guarantee that the connectivity of the device will work seamlessly.

Miro Samardzija

Antenna Engineer, in charge of designing, developing and testing antennas at system level for integration into Wi-Fi products



■ The Challenge: Ensure faster Time-to-Market with Faster Prototype Testing

Plume offers a new system for people wanting fast and consistent connectivity in every corner of their home. Plume works through a set of hexagonal “Pods” designed to plug directly into wall sockets around the home.

Plume aims to deliver the best combination of hardware and software to improve the reliability of Wi-Fi network coverage in the home. With this goal at heart, their products are rigorously tested and retested, from prototyping to production, particularly the antennas.

“The process of developing a prototype requires the device performance to be assessed rigorously with great accuracy, which means iteration is key: reproducible and repeatable performance. It takes about 100 antenna measurements to get a connected object right and fully optimized”, explains Miro Samardzija.

Many start-ups in IoT have the great device idea, but skip-out on the importance of antennas. The antennas and the IoT device form a whole in determining the wireless performance. It is therefore imperative that the antennas, and in particular their interaction with the device, be taken into consideration from the onset of the design process. Doing so is the best guarantee that the connectivity of the device will be seamless. That’s why, across the different stages of the Plume product cycle, from research and development to production, antennas are a vital component to be tested and optimized. Time-to-market also depends on the speed at which product testing is to be carried out and validated. Last but not least, as a prospering IoT company, Plume aims to make sure their finalized products are sound and sustainable.

It was therefore crucial for Plume to be equipped with a reliable solution for fast, standardized, and automated antenna measurements. Included in their requirements were advanced antenna testing features, such as antenna pattern measurements and OTA testing capabilities, to accurately predict real-world wireless device reliability, safety and performance.



■ The Solution

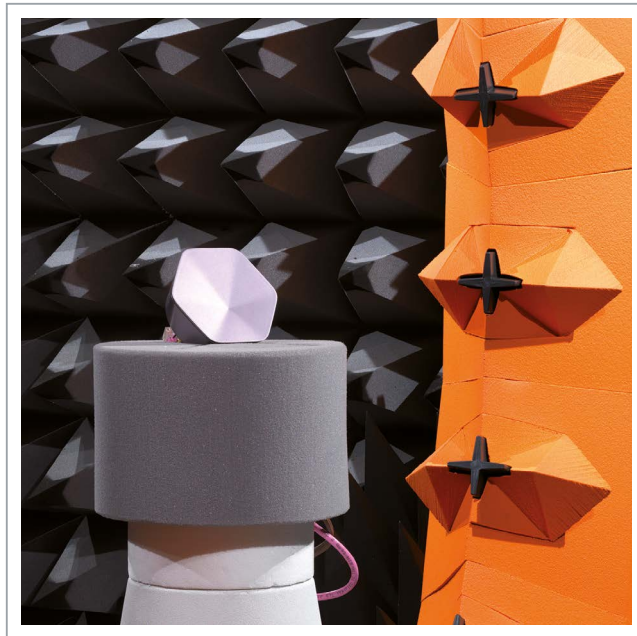
Plume decided to invest in an antenna test system and chamber solution. They chose an MVG SG24 to ensure their capacity to develop and test all of their new and future IoT ideas. The SG 24 measures frequencies from 650 MHz to 6 GHz, with integrated OTA capabilities, fitting their needs for a variety of IoT antenna testing. It has proven ideal for speedy and effective testing of Plume’s devices such as the Pods.

“The more effort we put in design, integration and testing, the better the final product comes out and the better customer satisfaction is. This MVG solution is by far the most reliable and effective solution for our measurement needs”, adds Miro Samardzija.

■ Supplier Chosen with No Compromises

Miro Samardzija explains the reasons behind the supplier selection for this project:

“Plume means no compromises. This is also our spirit when choosing suppliers. MVG was the most understanding of our needs and had the most advanced solutions and expertise. Of course, we talked to other vendors before making our choice. Having used both MVG and its American competitor during the course of my career, I can testify that tech support is excellent at MVG. They were flexible in terms of solution customization. The installation and validation process was efficient, and we appreciate the fact that they remain available for any question or issue.”



THE BENEFITS:

For Plume, the benefits of choosing the MVG SG24 test system are:

- ❶ Cost-saving: budget is controlled, and the expense of measurement services at third-party labs is eliminated.
- ❷ Quick troubleshooting process: easy to test, check, modify and re-test within minutes to get the product exactly right.
- ❸ Customized turn-key solution: tailored to meet Plume's full requirements.
- ❹ High level of measurement repeatability: ensured by the minimalized mechanical movements of the multiprobe system.
- ❺ Excellent technical support: based on proven past experience with MVG.
- ❻ MVG is CTIA-standard compliant and has a strong track record in antenna testing.
- ❼ Software supporting all wireless communication protocols in the CTIA and 3GPP test standards.
- ❽ Sustained wireless performance of devices : error corrections are limited throughout the product cycle.

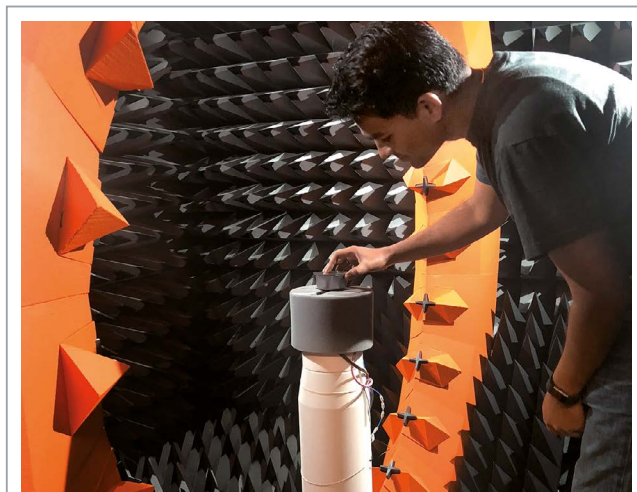
Next steps

"Our current goal is to grow the company and test more new products. This will eventually mean expanding our testing capability. As we are very satisfied with our current SG 24 test system, MVG will be no doubt our preferred supplier for any future testing solution purchase", concludes Miro Samardzija.

Product information

The SG24 chamber is a multi-probe antenna measurement system, ideal for the OTA testing of mobile device conformance at high throughput or high frequencies, particularly for LTE, WiFi 802.11a and WiFi 802.11n protocols, but also for all current protocols.

It is available in 3 sizes. The model used by Plume is compact (C), measuring frequencies from 650 MHz to 6 GHz.



MVG - Meeting the Testing Challenges of a Fully Connected World

The Microwave Vision Group (MVG) has developed unique expertise in the visualization of electromagnetic waves. These waves are at the heart of our daily lives: smartphones, computers, tablets, cars, trains, planes - these devices and vehicles would not work without them. MVG expertise brings measurement solutions to R&D teams for the characterization of antennas and their performance within these devices, and chamber solutions for EMC testing. MVG innovation remains focused on supplying the world with the most advanced EMF measurement technology to date.

WORLDWIDE GROUP, LOCAL SUPPORT

Our teams, in offices around the world, guide and support you from purchase, through design, to delivery and installation. Because we are local, we can assure speed and attention in project follow through. This includes customer support and maintenance once the system is in place. For the exact addresses and up-to-date contact information: www.mvg-world.com/mvg-offices



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www.mvg-world.com
salesteam@mvg-world.com