



**MilliBox**

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## PRESS RELEASE

**FOR IMMEDIATE RELEASE**

### **MilliBox Demonstrate MBX33 – GIM04-300x mmWave test solution Live for the First Time with Extreme Waves 5G Dual-Pol./Dual-Beam Phased Array and Copper Mountain Technologies USB VNA at IMS2022**

DENVER CO JUNE 21, 2022 --- MilliBox showcases MBX33 with GIM04-300x at its booth 7101 for the first time at IMS2022. MBX33 is a 2 meter far field mmWave anechoic chamber with large cavity designed to test larger Devices Under Test (DUT) with the convenience and affordability of benchtop setups. GIM04-300x is a member of the modular mmWave and THz phased array antenna positioner GIM04 featuring 3 axis of position control, Azimuth, Elevation and Polarization and a DUT width capacity of 300mm.

The DUT used for this live demonstration is the 22-27 GHz 8 x 8 active phased array from Extreme Waves Inc., G-2602-8x8. With its innovative and proprietary dual-polarization dual-beam antenna design, the full DUT beamforming capabilities are controlled directly from a remote PC application, including phase and gain control for the 64 dual-polarization silicon beamformer channels and the dual up/down-converters with wide IF bandwidth.

The measurement instrument used in this demonstration is the USB VNA from Copper Mountain Technologies (CMT), Cobalt C4209 with 2 CobaltFx FET1854 frequency extender modules with capabilities between 18 GHz and 54 GHz. The VNA is controlled from a PC where the MilliBox controller resides, giving a one screen view of all aspects of this Over-The-Air measurement setup.

“This demonstration is incredibly powerful at showing what a modular, affordable benchtop mmWave antenna test setup should look like in anyone’s lab” says Jeanmarc Laurent the creator of MilliBox,

“Having the DUT control, the VNA control and the positioner control all under one screen shows a unprecedented level of integration and is the most elaborate real-life demonstration we have ever done, thank to the contribution of our partners at Extreme Waves and CMT”.

The demonstration consists of steering the DUT beam in any possible direction then displaying the captured 3D beam pattern in real time over the entire VNA trace in a single position sweep.

### **About Extreme Waves Inc.**

[Extreme Waves Inc.](http://www.extreme-waves.com) was founded in 2020 and is based in San Diego, California. Extreme Waves develops high-performance phased-arrays and transceivers for SATCOM, 5G, and point-to-point communication links at 8-110 GHz. The company portfolio also includes low and medium power X, Ku and Ka-band radars (pulsed and FMCW) with multiple phase centers. SiGe and CMOS chip design services and chip design reviews are also available for partners. Its customer list includes medium and large commercial and defense companies in the US, and several federal laboratories. For more information visit [www.extreme-waves.com](http://www.extreme-waves.com)

### **About Copper Mountain Technologies**

[Copper Mountain Technologies](http://www.coppermountaintech.com) develops innovative RF test and measurement solutions for engineers all over the world. It is based in Indianapolis with sales offices in Singapore, London, and Miami. The company pioneered metrology-grade USB VNAs in 2011 and continues to push for innovation and change in the industry, offering a broad range of USB vector network analyzers, calibration kits, and accessories for 50 Ohm and 75 Ohm impedance from 9 kHz to 110 GHz. CMT VNAs are compatible with third-party frequency extenders up to 330 GHz.

The VNAs use software for Windows® or Linux® operating system on an external computer, PC, or tablet. CMT VNAs are used by engineers in defense, automotive, materials measurement, medical, broadcasting, telecommunications, and many other industries. All CMT VNAs include application and automation support, and years of our engineering expertise at your disposal. For more information visit [www.coppermountaintech.com](http://www.coppermountaintech.com).

### **About MilliBox**

[MilliBox](http://millibox@milliwavess.com) with its product line of mmWave and THz phased array antenna testing systems was created by mmWave IC pioneers Chinh Doan and Jeanmarc Laurent in 2018 and is based in San Jose, California. With over 200 setups installed worldwide, MilliBox established itself as the leader in modular, flexible and affordable benchtop over-the-air mmWave antenna test solutions. MilliBox products are carefully designed and responsibly manufactured in the USA. For more information contact [millibox@milliwavess.com](mailto:millibox@milliwavess.com)



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