

Copper Mountain Technologies: Founded by VNA Users for VNA Users



n 2011, Copper Mountain Technologies (CMT) launched the industry's first metrology-grade USB VNA, offering a 21st-century alternative to vector network analyzers (VNAs) that have been used for S-parameter measurements since the 1960s. CMT identified that the bulky size, quickly aging built-in computers with outdated operating systems and the high cost of these instruments limited their accessibility for engineers as well as their use in many types of newly emerging applications outside of the traditional lab. Helping engineers solve problems with portable, affordable and very precise and metrologically supported VNA solutions was a muchneeded and very attractive opportunity. Assisting engineers in solving their problems remains central to the CMT business model, and the company has changed the VNA industry by creating a new category of metrology-grade VNAs: USB VNAs with product and applications support that goes "beyond the box."

Today CMT offers more than 30 VNA models and various applicable test accessories. The company is head-quartered in Indianapolis, where it manufactures many of its products. As a member of the Conexus Indiana Advanced Industries Council, CMT collaborates with the state of Indiana and other council members in advanced manufacturing initiatives. They have an R&D office and service center in Cyprus along with regional sales offices in Singapore, London and Miami. From these locations, CMT has provided cost-effective metrology-grade, portable USB VNAs to thousands of engineers in close to 100 countries around the world.

CMT differentiates with solutions that maximize engineering productivity. VNA software includes advanced features at no additional cost and a dedicated and highly engaged support team staffed with RF engineers helps customers identify optimized solutions. These solutions involve recommendations on measurement methodology, automation scripts and custom software development, in addition to measurement hardware to solve customer-

specific challenges. CMT also collaborates with customers in creating custom VNA modules for applications where a standard VNA does not meet the need. As its customer base grows, CMT continues to expand its technical team in R&D and Service, where it has seen 100 percent growth since 2020 in the calibration team with two ANAB-accredited labs in the U.S. and Europe. The company is expanding its manufacturing capabilities to respond to specialized customer needs. CMT has more than doubled its facility square footage since 2020 with expansion in Indianapolis and the addition of the Cyprus office.

As equipment and testing needs become more sophisticated, testing is shifting away from traditional stationary testing to solutions that provide better SWaP-C. CMT's innovative USB VNAs enable RF engineers to benefit from this trend and expand VNA usage to a broader range of applications. CMT application-specific VNAs serve secured, IoT, smart device, connected transportation, automotive, medical device and diagnostic, 5G and other applications. The VNAs from CMT are easily embedded and integrated into whole test solutions, enabling innovative technology beyond traditional VNA uses.

The CMT product portfolio is diverse. The company offers 50 Ω VNAs in various port and frequency combinations up to 44 GHz. Their 6- to 16-port 9 GHz Multiport VNAs are one of the newest product offerings. CMT also has mmWave frequency extension systems. CMT 2- and 4-port VNAs can be utilized with CMT frequency extender modules for coaxial measurements from 18 to 54 GHz, waveguide systems in the WR15 to WR6 bands or other brands of frequency extenders up to 330 GHz. CMT also offers a range of 75 Ω analyzers and a host of 50 Ω and 75 Ω accessories.

The company's engineers use their own products every day and understand what engineers need. The traditional values of respect for customers and helping them achieve their objectives remain foundational elements of CMT's corporate mission.

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