RNVNA

Telemeter Electronic

Multiport Network Analysis Solution

The innovative RNVNA software allows for multiport use with the 1-Port CMT network analyzers. The RNVNA software application runs on a user's desktop, laptop, or tablet PC and links multiple reflectometers together into a customizable multiport network analysis solution. Utilizing the portability, versatility, and low cost of existing USB reflectometers and taking advantage of the convenience and ubiquity of USB connections, RNVNA allows a user access to a portable, modular multiport network analysis solution without the need for external RF switches or other hardware. Users can use just two reflectometers for two-port solutions or up to 16 reflectometers for a 16-port network analysis solution. The RNVNA software application is compatible with Copper Mountain Technologies' line of existing single-port USB VNAs, allowing for a frequency range from 1 MHz up to 18 GHz. All models being used for RNVNA must be the same. RNVNA uses existing USB reflectometer functionality to take vector reflection parameters and scalar transmission parameters.

RNVNA consists of a set of 1-Port VNAs plugged into a powered USB hub, which works as a power source and gives an opportunity to connect all reflectometers to the PC.

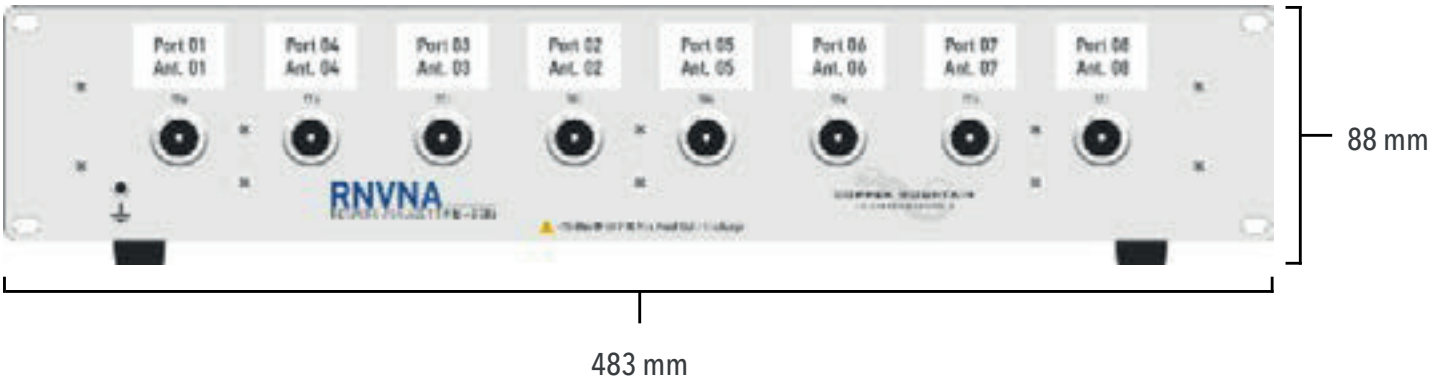
All the reflectometers reference frequency can be optionally interconnected by means of FD-16 distributor to provide the system with the common reference frequency. It allows to improve accuracy and speed up the measurement. Also, the reflectometers can be connected to a common trigger bus with a TD-16 distributor, which gives the possibility to significantly speed up the measurement, as the reflectometers can quickly synchronize with each other, bypassing more latent USB bus.

RNVNA software differs from the RVNA software used by CMT's 1-port analyzers. It allows users to manage multiple RVNAs performing required measurements. A free version of the RNVNA software is available for systems using up to three 1-port VNAs. Additional pricing tiers are available based on the number of reflectometers in the system.

RNVNA shelf is designed as a 19-inch rack mounting system. One shelf can house up to eight reflectometers, and two shelves configuration can support up to 16.

**HW description refers to RNVNA with R60 reflectometers.*

RNVNA Specifications[1]



Measurement Speed[2]

Number of ports	TD-16 and FD-16 sync	USB port sync
8	170us	1.4ms
16	200us	3.2ms

System & Power

Operating system	Windows 7 and above
CPU frequency	1.0 GHz
RAM	2 GB
Interface	USB 2.0
Connector type	Mini USB B
Power consumpion	15 W max (16 ports)

Factory Adjustment

Recommended factory adjustment interval	3 Years

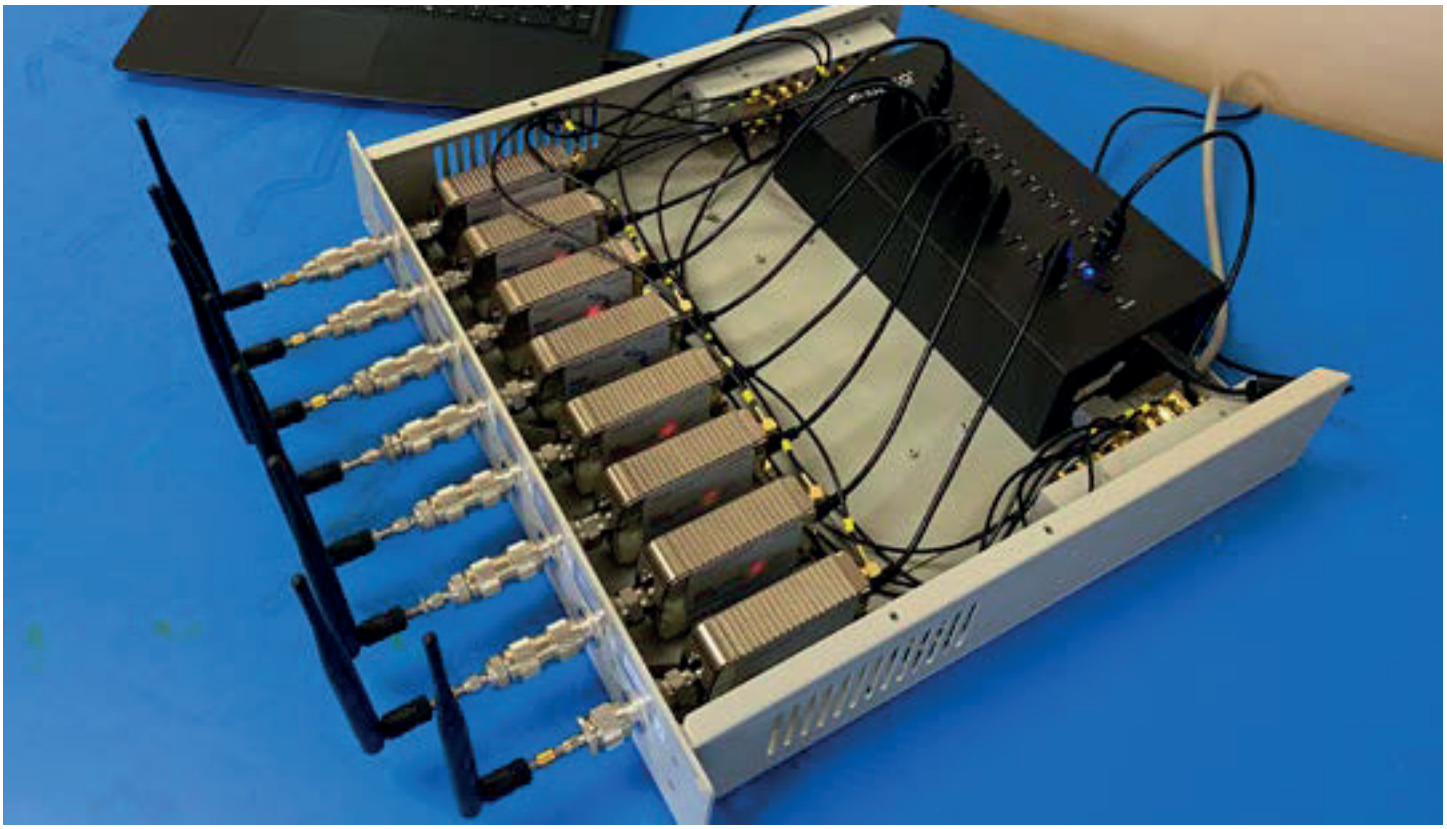
Atmospheric Tolerances

Operating temperature	+5 °C to +40 °C (41 °F to 104 °F)
Storage temperature	-50 °C to +70 °C (-58 °F to 158 °F)
Humidity	90 % at 25 °C (77 °F)
Atmospheric pressure	70.0 kPa to 106.7 kPa

Dimensions

Weight	0.35 kg (12.3 oz)
Length	161
Width	65
Height	28

[1] All specifications subject to change without notice. [2] Measurement speed is provided for R60 device *© Copper Mountain Technologies - www.coppermountaintech.com - Rev. 2020Q2*



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