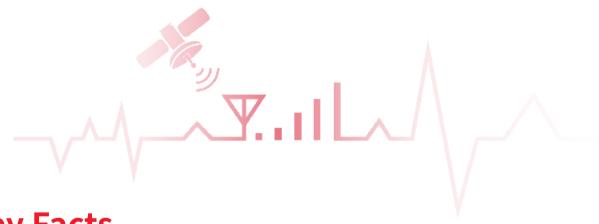


#### BN100 USB Vector Network Analyzer

#### **Overview**



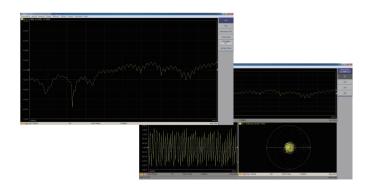
BN100 USB Vector Network Analyzer offers wide dynamic range, low noise level, high resolution scanning with laboratory and research grade performance. BN100 covers frequency range from 1MHz to 6.5GHz with 2-port and 2-path that competitive with most of the bench-top VNAs on the market. BN100 USB VNA provides measurement convenience by offering end user excellent performance and attractive price. BN100 VNA is suitable for laboratory, manufacturing and many other safety testing environment.



## **Key Facts**

- Frequency Range: 1MHz to 6.5GHz
- Large dynamic range: >117dB (IFBW=10Hz), 121dB typ.
- Low Noise Level: <-120 dBm (IFBW=10 Hz)
- Low Trace Noise: 10 mdB rms (IFBW=3 kHz)
- High Measurement Speed: 120 μs/point (IFBW=30 kHz)
- Effective directivity: >42dB
  Support standard VISA

Low Power Consumption: 18W



#### **Innovative Features & Benefits**



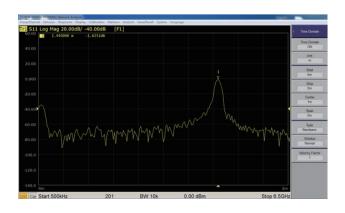
- Capable of replacing bench-top VNA
- Minimum budget requirement
- Suitable for laboratory, manufacturing and research and development purposes
- Compact design, implementation simplicity and various system upgrade

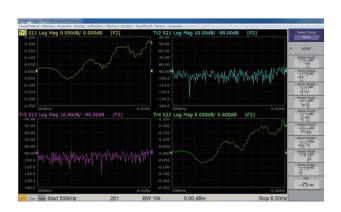
## **Applications**

Benefits from its attractive price and compact design, T6 USB VNA is suitable for price sensitive users, also it has attracted attention from system integrator. In China, one of the most famous university, Nanjing University of Aeronautics and Astronautics (NUAA) has purchased T6 for different applications: for its small size, It's quite easy for professors to do demonstration to students how to use VNA, and also they tried to integrate T6 into their application.

#### **Innovative Features & Benefits**

- Multiple analysis options (such as time domain analysis and circuit simulation function)
- Support standard VISA communication protocol
- Efficient communication interface for multi-types testing instruments





# **Control Elements**



# **Specifications**

Testing Range	Description	
Impedance	50Ω	
Test port connector	N-type, female	
Number of test port	2	
Frequency range	1MHz to 6.5GHz	
Noise Level	< -120dBm (IFBW=10 Hz)	
Frequency accuracy	5ppm	
Frequency resolution	10Hz	
Number of measurement points	2 to 10001	
Measurement bandwidths	1Hz to 50kHz	
Dynamic range (IFBW 10Hz)	117dB, typ121dB	
Measurement parameters	S11, S21, S12, S22	
Testing Accuracy		
Transmission measurement accuracy(magnitude/phase)		
+5 dB to +10 dB	0.2dB/2°	
-50 dB to +5 dB	0.1dB/1°	
-70dB to -50dB	0.5 dB/3°	
-90dB to -70dB	2.5 dB/8°	
Reflection measurement accuracy(magnitude/phase)		
-15dB to 0dB	0.4dB/3°	
-25dB to -15dB	1.0dB/6°	
-35dB to -25dB	3.0dB/20°	
Trace stability		
Trace Noise(IFBW 3kHz)	10mdB rms	
Temperature Stability	0.02dB/°C	
Effective System Data <sup>1</sup>		
Effective directivity	42dB	
Effective source match	40dB	
Effective load match	42dB	
<sup>1</sup> Applied over them temperature range of 23 ° C $\pm$ 5 ° C after 40 minutes of warming-up, with less than 1 ° deviation from the full two-port calibration temperature, at output power of -5dBm and IF bandwidth 10Hz.		
Test port output	Description	
Match(W/O system error correction)	18 dB	
Power range	-50dBm to +5dBm	
Power accuracy	±1.5 dB	
Power resolution	0.05dB	
Test port input		
Match(W/O system error correction)	18 dB	
Max input level	+23 dBm	
Max input voltage	+35 V	
Noise level	-120 dBm	

## BN100 USB Vector Network Analyzer

General Data	
External reference input	SMA female; 10 MHz; 2 dBm $\pm$ 3 dB
External reference output	SMA female; 10 MHz; 3 dBm $\pm$ 2 dB
Operating temperature range	+5° C to +40° C
Storage temperature range	-45° C to +55° C
Operating humidity	90% (25° C)
Operating atmospheric pressure	84 to 106.7 kPa
Calibration interval	3 years
Power supply	110/220 ± 22 V (AC), 50 Hz
Power consumption	18W
Dimensions(W $\times$ H $\times$ D) mm	180×50×290
Weight	2.3 kg
Guarantee	1 year

# **Ordering List**

Model	Description
BN100	2 port USB vector network analyzer (1MHz to 6.5GHz)
Option	Description
BN100/TW-1	Extention guarantee for 3 years

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#### SANKO TECHNOLOGIES SDN.BHD.

- Add: NO.K-9-3,BAY AVENUE LORONG BAYAN INDAH 2 11900 BAYAN LEPAS PULAU PINANG MALAYSIA
- Tel: 6 012-420 2883
- Mail: order@sanko.my

