NA76xx Series

Vector Network Analyzer

Overview

The NA76xx Series Vector Network Analyzer answers consumer feedback with the latest advances in international test and measurement development. Deviser's newest 4th-generation 2-port network analyzer boasts frequencies spanning 100kHz to 3.0 GHz, 4.5 GHz, 6.0 GHz, and 8.5 GHz, covering the entire wireless LAN communications range - as well as radio and television. It also features full 2-port S-parameter testing, superior measurement accuracy, and excellent stability and test speed. The NA7600 Series is ideal for verifying RF components
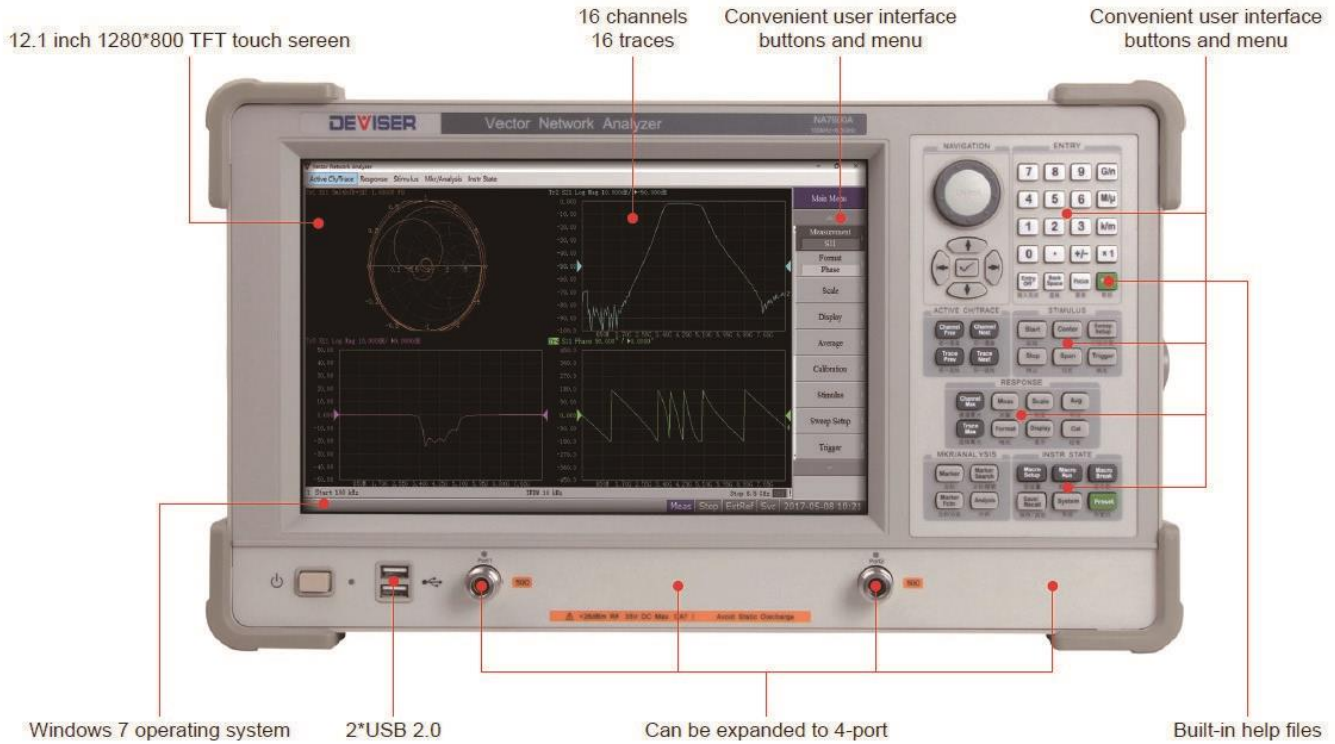
Main Features

- 12.1" 1280x800 TFT touchscreen

- Wide frequency coverage: 100kHz ~ 8.5 GHz

- Broad dynamic range: >125dB

- Low trace noise: <0.005dB rms (at 3kHz IFBW)

- Fast measurement speed: 80 µsec/point

- Powerful analysis and error correction

- Connect with other systems via USB, LAN, and GPIB ports

- Software-enabled updates and measurement options available at any time

- Intelligent assembly line structure enables automated factory production testing

Model Guide

NA7632B	100kHz - 3.0 GHz	50Ω
NA7642A	100kHz - 3.0 GHz	75Ω
NA7662B	100kHz - 4.5 GHz	50Ω
NA7682B	100kHz - 6.0 GHz	50Ω
NA7682A	100kHz - 8.5 GHz	50Ω

12.1 inch 1280*800 TFT touch sereen

16 channels
16 traces

Convenient user interface buttons and menu

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Windows 7 operating system

2*USB 2.0

Can be expanded to 4-port

Built-in help files

Operation

The NA76xx Series Vector Network Analyzer features a 12.1", 1280*800 LCD color touchscreen optimized for ease of use. Multi-window functionality allows users to work with dialog boxes, measurement channels, and traces on the same screen. Drag-and-drop components with the touch screen or mouse, and rename measurement channels and traces for easy analysis.

Instantly recall saved measurement settings with the NA76xx Series' multiple configuration profiles. Customize your settings once, then simply touch or click the saved profile at a later date to restore them - saving valuable on-site testing time and reducing OPEX.

Help

Forgotten a feature? With the NA76xx Series' built-in help files, you can access complete instructions at any time. Just press the [Help] button on the front panel to launch the manual. Operation mastery is a step away, even for less experienced technicians.
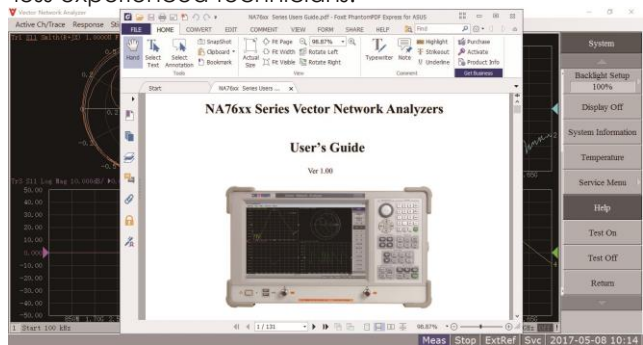
and performance comparable to world-class equipment

The NA76xx Series Vector Network Analyzer answers consumer feedback with the latest advances in international test and measurement development. It offers broad functionality and performance specs on par with world-class brands at a much lower price point.

Wide dynamic range

The NA76xx Series sports over 125dB of dynamic range for supreme measurement accuracy. The NA7682A's noise floor can reach <-115dB (typical <-120dB) under optimal conditions (0dBm output, RBW = 10Hz), where a popular competing analyzer reaches only <-108dB.
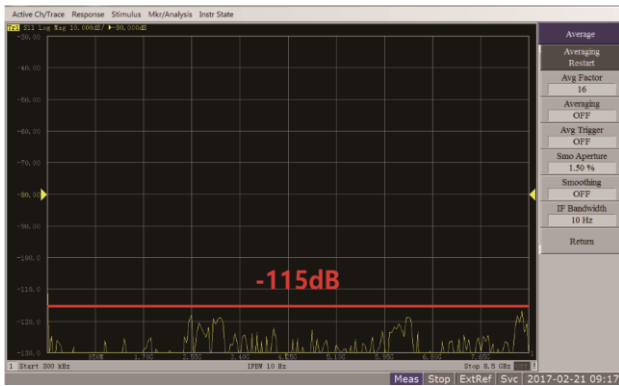

Fast measurement speed

With exceptional measurement speed, NA76xx Series models can increase productivity and overall technician efficiency. High stability

Low trace noise

The NA76xx Series can compete with leading products worldwide for trace noise, which is under 0.0005dB rms (when RBW = 3kHz). This helps minimize errors and produce best-quality measurement data for various applications.
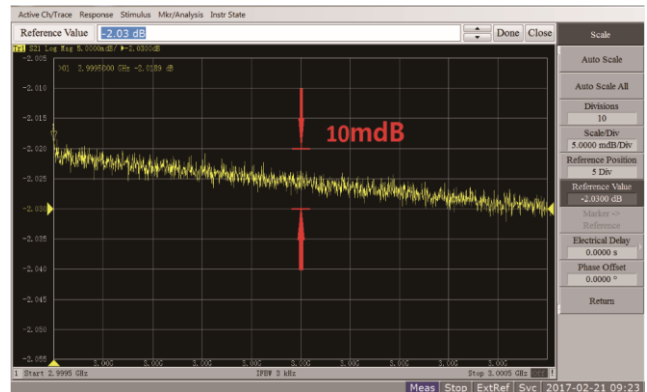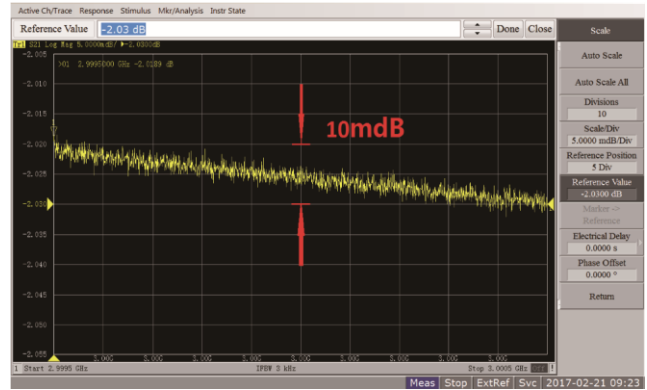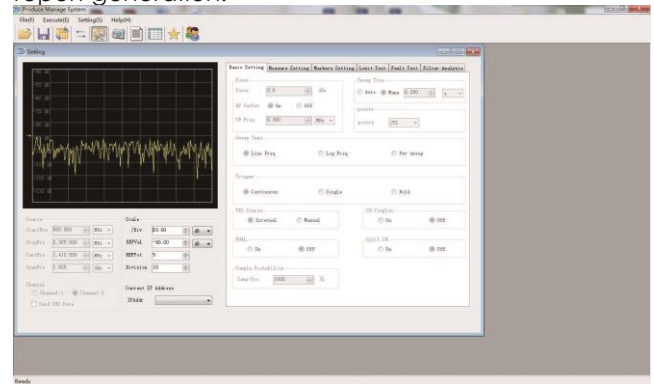

High stability

NA76xx Series analyzers boast excellent overall stability, easily enduring time and temperature without distorting accuracy. Users can expect consistently low amplitude and phase drift when measuring S-parameters, and

Powerful analysis tools

- **Time-Domain Analysis (by option only)**
  Calculate transmission and reflection characteristics, including distance-to-fault.

- **Data Transformation**
  Includes multiple forms of impedance and admittance transformation.

- **Filter Analysis**
  Auto-calculate insertion loss, bandwidth (3 and 6dB), band ripple, band suppression, Q value, rectangular coefficient, and other parameters.

- **Limit Alerts**
  Set custom Pass/Fail thresholds on your measurement for instant feedback when signal levels are stronger or weaker than anticipated.

- **Cursor Point Analysis**
  Drag the wheel to move, drag the cursor point, or automatically search for data. Each trace supports up to 10 cursor points.

Single-station automatic test

Set qualified limit lines on the measurement to generate autoalerts. The instrument will notify users of a passing or failing measurement.
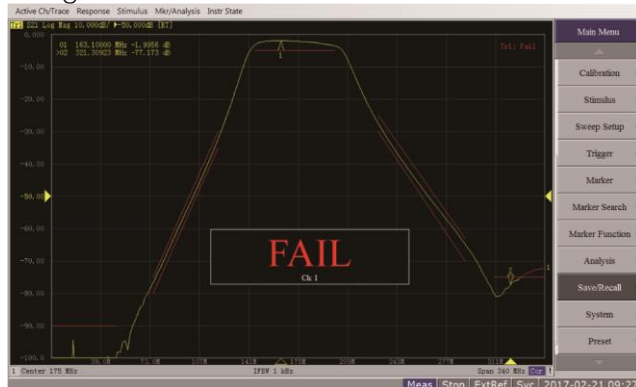

Multi-station auto test

Connect a PC to the analyzer's LAN port to use the VNA Workbench management software. Monitor and set various test parameters, set measurement limits, and save test data to a database for further analysis and report generation.

Built-in VBA programming environment - user can control test fixtures and conduct detailed data analysis

System PSystem Performanceerformance

Dynamic range (IFBW = 3kHz)	-90dB (<300kHz) -105dB (0.3 MHz ~ 6 GHz) -108dB (6 GHz ~ 8.5 GHz)
Dynamic range (IFBW = 10kHz)	-100dB (<300kHz) -130dB (0.3 MHz ~ 6 GHz) -121dB (6 GHz ~ 8.5 GHz)
Directivity	46dB (<3 GHz) 42dB (3 ~ 6 GHz 38dB (6 ~ 8.5 GHz)
Source match	40dB (<3 GHz) 36dB (3 ~ 6 GHz 35dB (6 ~ 8.5 GHz)
Load match	46dB (<3 GHz) 40dB (3 ~ 6 GHz 36dB (6 ~ 8.5 GHz)
Reflection tracking	0.03dB (<3 GHz) 0.04dB (3 ~ 6 GHz 0.06dB (6 ~ 8.5 GHz)
Transmission tracking	0.03dB (<3 GHz) 0.06dB (3 ~ 6 GHz 0.1dB (6 ~ 8.5 GHz)
Measuring points	-60 ~ +60dBmV
Measurement speed	80dB (30kHz RBW)
Frequency range	100kHz ~ 3 GHz (NA7632A, B) 100kHz ~ 4.5 GHz (NA7642A) 100kHz ~ 6 GHz (NA7662A) 100kHz ~ 8.5 GHz (NA7682A)
Resolution	1 Hz
Frequency accuracy	± 2ppm @ 5°C ~ 40°C
Phase noise @ 10kHz	-85dBc/Hz (100kHz ~ 3 GHz) -82dBc/Hz (3 GHz ~ 8.5 GHz)
Harmonics (+5dBm output)	-25dBc (<5 MHz), -30dBc (≥5 MHz)
Level accuracy	±1dB
Source power range	-55dBm ± 10dBm (100kHz ~ 4.5 GHz) -55dBm ± 8dBm (4.5 GHz ~ 6 GHz) -55dBm ± 6dBm (6 GHz ~ 8.5 GHz)
Output power resolution	0.05dB
Maximum input	+10dBm (100kHz ~ 4.5 GHz) +13dBm (4.5 GHz ~ 6 GHz) +13dBm (6 GHz ~ 8.5 GHz)
Damage level	+26dBm ± 35 VDC
Noise floor (RBW = 3kHz)	-80dB (<300kHz) -95dB (0.3 MHz ~ 6 GHz) -92dB (6 GHz ~ 8.5 GHz)
Noise floor (RBW = 10kHz)	-90dB (<300kHz) -120dB (0.3 MHz ~ 6 GHz) -115dB (6 GHz ~ 8.5 GHz)
Trace Noise (0dBm input, magnitude RBW = 3kHz)	8mdBrms (<300kHz) 5mdBrms (0.3 MHz ~ 6 GHz) 6mdBrms (6 GHz ~ 8.5 GHz)
Trace Noise (0dBm input, phase RBW = 3kHz)	0.060° rms (<300kHz) 0.040° rms (0.3 MHz ~ 6 GHz) 0.045° rms (6 GHz ~ 8.5 GHz)
Stability (magnitude)	± 0.005dB/°C (<3 GHz) ± 0.01dB/°C (3 GHz ~ 6 GHz)± 0.02dB/°C (6 GHz ~ 8.5 GHz)

Generaleneral

IFBW		1, 1.5, 2, 3, 4, 5, 7; 10, 15, 20, 30, 40, 50, 70; 100, 150, 200, 300, 400, 500, 700; 1kHz, 1.5kHz, 2kHz, 3kHz, 4kHz, 5kHz, 7kHz; 10kHz, 15kHz, 20kHz, 30kHz, 40kHz, 50kHz, 70kHz
Front panel	Display	12.1" 1280x800 TFT touchscreen
	RF port	Type-N (f), 50Ω
	USB	2x Type-A USB 2.0
Rear panel	External trigger input	Type BNC (f) Input level: 0.5V (low threshold), 2.1V (high threshold) Input level Pulse width: ≥2us Polarity: positive or negative
	External reference input	Type: BNC (f) Input Frequency: 10MHz±10ppm Input level: -3~+10dBm
	Internal reference output	Type: BNC (f) Output Frequency: 10MHz ±1ppm Signal type: Sinewave Output level: 0dBm±3dB Output impedance: 50Ω
	Video output	15-pin, D-SUB
	GPIB interface	24-pin, D-SUB (type D-24, f). Compatible w/ IEEE488
	USB interface	1x Type-A USB 3.0, 3x Type-A USB 2.0
	LAN	2x RJ-45; 10/100/1000 Base-T
	Parallel port	25-pin, D-SUB; LPT print
	Serial port	9-pin D-SUB; compatible with RS-232
	Power supply	Frequency: 47 ~ 63 Hz Voltage: 90 ~ 254 VAC Power: 150VA max
EMC	RF emission	EN 61326-1:2013 EN 61326-2-1:2013 CISPR 11:2009 CISPR 16-1 series Group 1, Class A
	Anti-interference level	EN 61326-1:2013 EN 61326-2-1:2013
	ESD	IEC 61000-4-2:2008 ±4kV CD / ±8kV AD
	RF electromagnetic field	IEC 61000-4-3:2006 + A1 + A2 3 V/m, 80 ~ 1000 MHz 80% AM, 1kHz
Safety		IEC 61010-1:2006 / EN 61010-1:2006
Operating environment	Temperature	+5°C ~ +40°C
	Calibration	23°C ± 5°C
	Humidity	2x Type-A USB 2.0
	Altitude	0 ~ 2000m
	Vibration	Standards: IEC 60068-2-6, 0.21G max, 5Hz ~ 500Hz
Storage environment	Temperature	-10°C ~ +60°C
	Humidity	Type-N (f), 50Ω
	Altitude	2x Type-A USB 2.0
	Vibration	Standards: IEC 60068-2-64, 0.5g max, 5Hz ~ 500Hz
	Impact	Standards: IEC 60068-2-27, 40g max
Size & weight	Dimensions	17.5" x 10.4" x 13.0" (445mm x 265mm x 330mm)
	Weight	24.3 lb (11kg)

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