Use the Right Vector Network Analyzer for the Job

Keysight E5071C ENA users chose their platform because they needed the absolute best tool of its time for the job. But much has changed since then. Today's devices are becoming highly integrated, requiring more than S-parameter measurements. As device characterization demands more measurement types, higher frequencies, and tighter tolerances, you need to adapt to the current situation and future-proof against new challenges. Gain deeper confidence in your measurements wherever you are with proven hardware and advanced software.

Find the Model Tailored to Your Exact Needs

The E5081A ENA-X vector network analyzer (VNA) offers advanced integrated noise receivers, direct receiver access, and modulated distortion software on a single test setup, enabling component characterization under high power, complex modulation schemes up to 44 GHz. These features consolidate the design verification setup necessary to conduct reliable characterization, minimizing test cycle time.

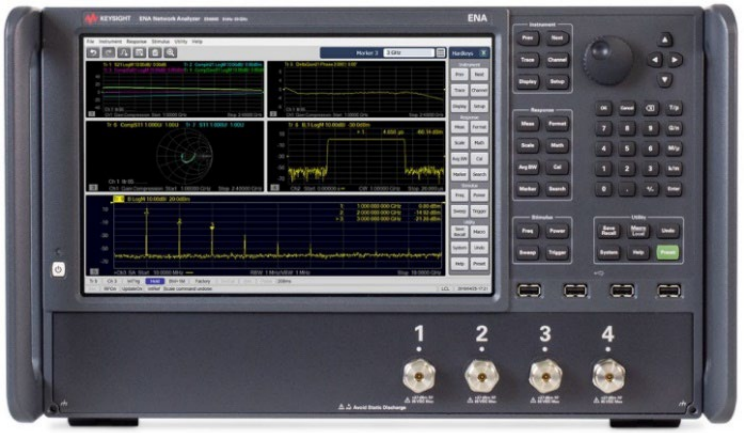
The E5080B ENA VNA brings excellent performance up to 53 GHz and flexibility to a mid-range platform. It provides complete passive and active component characterization in a single instrument.

Keysight P50xxB Streamline Series network analyzers bring high-end performance of benchtop instruments into a compact form factor. It's easy to share these instruments between test locations to make the same measurements reliably.

The M980xA PXIe VNA is a completely independent VNA with 2-, 4- or 6-ports, and the modules are easily configured as a true multiport VNA. A VNA with up to 50-ports can be configured in a single chassis for multiport applications.

More Information: www.keysight.com/find/vna

E5081A ENA-X cuts test cycle time up to 50% by providing network analysis and EVM measurements on a single test setup.



E5080B ENA provides key improvement in performance and advanced software applications. It is more than just a VNA upgrade over the E5071C – it's a workflow update.

P50xxB with 2-, 4- or 6-ports is packaged in a compact chassis and controlled by an external computer.

M980xA PXI VNA meets the most demanding multiport challenges with a true multiport architecture.

Keysight Trade-in

VNA key trade-in benefits

Stretch your budget with great Keysight credits

Migrate to the latest technology – sooner

Enhance your competitive edge

Performance Comparisons – ENA-X / ENA / Streamline Series VNA / PXI VNA vs. E5071C ENA

		E5081A ENA-X	E5080B ENA	P50xxB Streamline Series VNA	M980xA PXIe VNA	E5071C ENA
Specifications						
Min frequency		10 MHz	9 kHz / 100 kHz	9 kHz / 100 kHz	9 kHz / 100 kHz	9 kHz / 300 kHz
Max frequency		20 / 44 GHz	4.5 / 6.5 / 9 / 14 / 18 / 20 GHz 26.5 / 32 / 44 / 53 GHz	4.5 / 6.5 / 9 / 14 / 20 GHz 26.5 / 32 / 44 / 53 GHz	4.5 / 6.5 / 9 / 14 / 20 GHz 26.5 / 32 / 44 / 53 GHz	4.5 / 6.5 / 8.5 / 14 / 20 GHz
Number of ports		2 / 4	2 / 4	2 / 4 / 6	2 / 4 / 6	2 / 4
Number of configurable ports		2	0	0	0	0
Max number of ports for full calibration		4	4	12	66	4
Connector type		3.5-mm (m), 2.4-mm (m)	Type-N (f), 3.5-mm (m), 2.4-mm (m), 1.85-mm (m)	3.5-mm (f), 2.4-mm (f), 1.85-mm (f)	3.5-mm (f), 2.4-mm (f), 1.85-mm (f)	Type-N (f), 3.5-mm (m)
Dynamic range (10 Hz IFBW)	@ 4 GHz	143 dB (port 1 and 2)	140 dB	140 dB	140 dB	123 dB
	@ 20 GHz	134 dB (port 1 and 2)	126 dB	126 dB	126 dB	96 dB
Trace noise @ 4 GHz		0.0015 dBrms (10 kHz IFBW)	0.0015 dBrms (10 kHz IFBW)	0.0015 dBrms (10 kHz IFBW)	0.0015 dBrms (10 kHz IFBW)	0.003 dBrms (70 kHz IFBW)
Power sweep range	@ 4 GHz	-80 to 16 dBm (port 1 and 2)	-60 to 10 dBm	-60 to 10 dBm	-60 to 10 dBm	-55 to 10 dBm
	@ 20 GHz	-80 to 11 dBm (port 1 and 2)	-60 to 4 dBm	-60 to 4 dBm	-60 to 4 dBm	-25 to 0 dBm
IF bandwidth		1 Hz to 15 MHz	1 Hz to 15 MHz	1 Hz to 15 MHz	1 Hz to 15 MHz	10 Hz to 1.5 MHz
Typical performance						
Temperature stability @ 4 GHz		0.005 dB/deg.C	0.005 dB/deg.C	0.005 dB/deg.C	0.005 dB/deg.C	0.005 dB/deg.C
Cycle time (2-port cal, narrow span, 201 points)		2 ms (1 MHz IFBW)	2 ms (1 MHz IFBW)	2 ms (1 MHz IFBW)	2 ms (1 MHz IFBW)	9 ms (500 kHz IFBW)
Hardware features						
Display		12.1 inch touchscreen, WXGA	12.1 inch touchscreen, WXGA	Not applicable	Not applicable	10.4 inch touchscreen, XGA
Configurable test set		Yes (port 1 and 2)	No	No	No	No
Low noise receivers for noise figure measurements		Yes (port 1 and 2)	No	No	No	No
Upconverter for modulation distortion analysis		Yes	No	No	No	No
Internal pulse modulators		Yes	Yes	Yes	Yes	No
Internal pulse generators		Yes	Yes	Yes	Yes	No
Internal second source		Yes	Yes	Yes	No	No
High stability timebase		Yes	Yes	No	No	Yes
AUX ports for DC measurements		Yes	Yes	No	No	Yes
Internal DC sources		Yes	Yes	No	No	No
Internal bias tees		No	Yes	No	No	Yes
Display interface		DisplayPort and VGA	DisplayPort and VGA	No	No	VGA
I/O interface		USB/LAN/GPIB/Handler IO	USB/LAN/GPIB/Handler IO	No	USB	USB/LAN/GPIB/Handler IO

	E5081A ENA-X	E5080B ENA	P50xxB Streamline Series VNA	M980xA PXIe VNA	E5071C ENA
Application software					
Automatic fixture removal	Yes	Yes	Yes	Yes	No
Enhanced time domain analysis with TDR	Yes	Yes	Yes	Yes	Yes
Real-time S-parameter and power measurement uncertainty	Yes	Yes	Yes	Yes	No
Basic pulsed-RF measurements	Yes	Yes	Yes	Yes	No
Noise figure measurements	Yes (with low-noise receivers)	Yes (with standard receivers)	Yes (with standard receivers)	Yes (with standard receivers)	No
Impedance analysis	No	Yes	No	No	No
Modulation distortion analysis (ex. EVM, ACP)	Yes	No	No	Yes	No
Scalar mixer calibrated measurements	Yes	Yes	Yes	Yes	Yes
Vector mixer calibrated measurements (SMC + phase)	Yes	Yes	Yes	Yes	No
Embedded LO capability	Yes	Yes	Yes	Yes	No
Gain compression application	Yes	Yes	Yes	Yes	No
Intermodulation distortion (IMD) measurements	Yes	Yes	Yes	Yes	No
Source phase control	Yes	Yes	Yes	Yes	No
Differential and I/Q device measurements	Yes	Yes	Yes	Yes	No
Spectrum analysis	Yes	Yes	Yes	Yes	No
True-mode stimulus	Yes	Yes	Yes	Yes	No
Multiport calibrated measurements (n > 4)	No	No	Yes	Yes	No
Banded millimeter-wave network analysis	No	No	Yes	Yes	No
Transportable, USB, networking (floating) licenses	Yes	Yes	No	Yes	No
VNA simulator	Yes	Yes	Yes	Yes	No

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