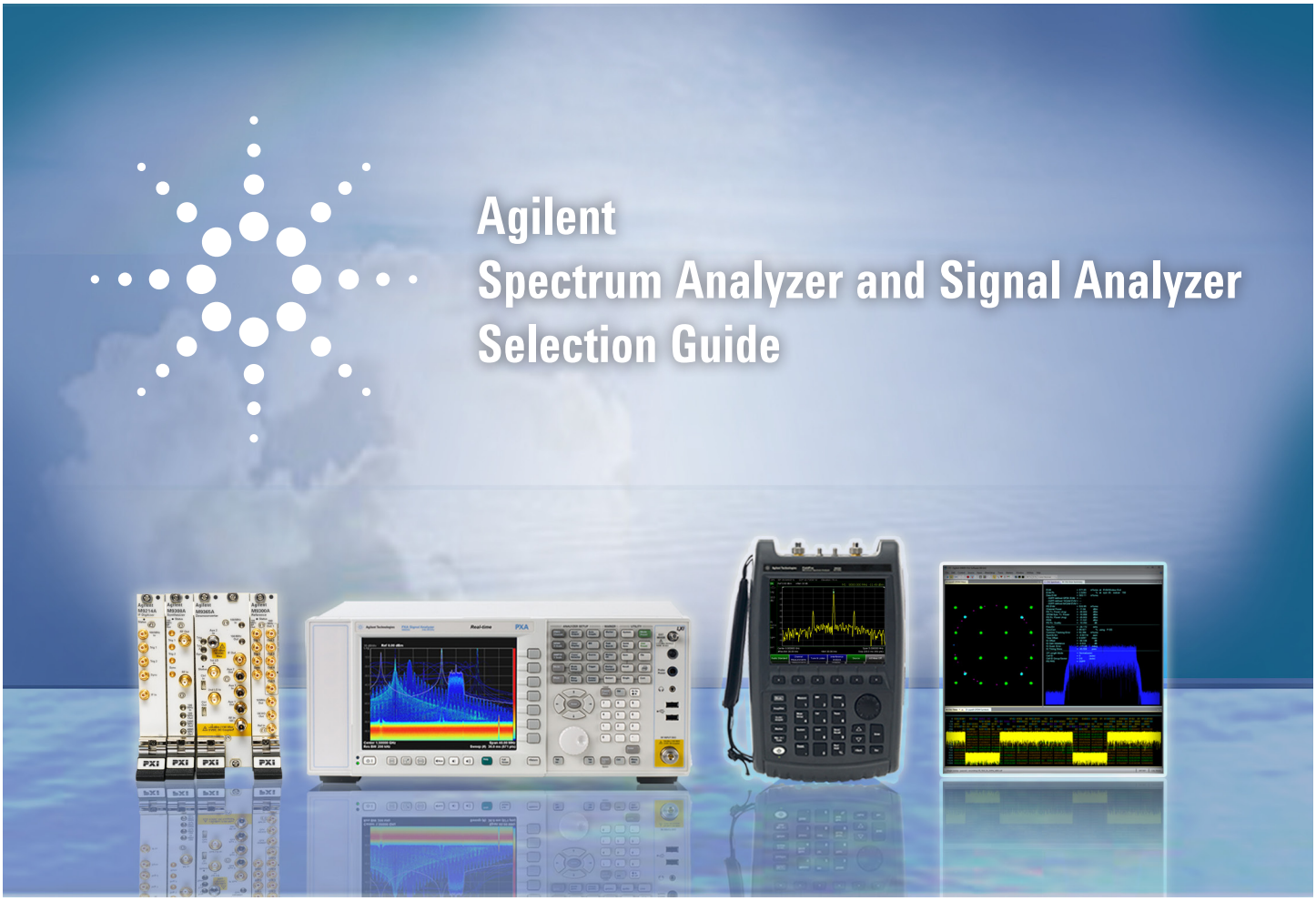
Agilent
Spectrum Analyzer and Signal Analyzer Selection Guide



Anticipate ___Accelerate ___Achieve

Agilent Technologies

Introduction

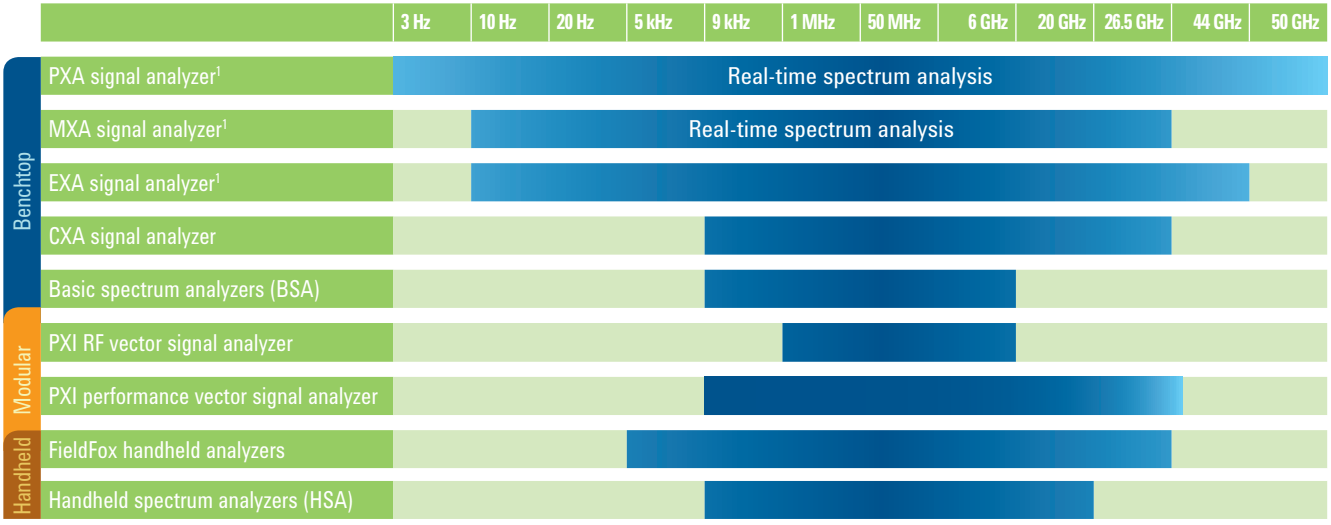
Agilent Technologies' extensive array of signal analyzer products, from DC to 325[1] GHz and beyond, address whatever application you may be working on.

Proven measurement science and expertise are incorporated into all of our signal analyzers and measurement software, ensuring accurate frequency, amplitude, and modulation measurements, including distortion, spurious, phase noise, and 2G to 4G wireless communications signals. And because many of Agilent's benchtop and modular instruments share a common set of software applications, you can be assured of consistent results whether your goal is faster design in R&D or high volume production in manufacturing.

Additionally, for applications that require greater mobility, handheld products offer the ability to take precision out into the field.

A signal or spectrum analysis instrument purchase is an investment that must meet not only today's challenges but also tomorrow's requirements, however selecting the ideal instrument for your business can be complex and time consuming. This selection guide is designed to help you identify the right spectrum or signal analyzer and software to fit your budget, application, and specific measurement needs.

Frequency coverage for Agilent spectrum and signal analyzers



1. Up to 1.1 THz with external mixing

Product Categories

Spectrum analyzers and signal analyzers

Traditionally, spectrum analyzers are referred to as swept-tuned, super-heterodyne receivers that provide a display of amplitude versus frequency. Modern day analyzers offer both swept-tuned and FFT architectures. While the terms spectrum analyzer and signal analyzer are used interchangeably, signal analyzer is a more accurate term for modern day analyzers that provide more comprehensive signal analysis, not only in frequency-domain but also time- and modulation-domains.

Benchtop

Benchtop spectrum and signal analyzers are well-suited for R&D or design verification where analysis and trouble-shooting benefit from interactive analysis. Agilent's benchtop analyzers range from low cost to industry-leading performance with the broadest range of measurement capabilities so you can choose the analyzer that best suits your needs.

Modular PXIe vector signal analyzers

Modular signal analyzers are ideal for applications that require fast, high quality measurements, such as design validation and manufacturing, where quality control, product conformance and test optimization are essential. Modular solutions offer speed, scalability and repeatability, along with the flexibility to configure a solution with a shared processor, frame/chassis, display, and interface. Benefit from Agilent's measurement expertise and application software to reduce your test footprint and maximize test speed for your single or multi-channel solution.

Handheld analyzers

Whether you're looking for value or precision, RF or microwave, we offer rugged, accurate, fast, and easy-to use handheld spectrum analyzers to address challenges faced by field technicians and engineers. Handheld analyzers are optimized for long battery life and minimal weight.

Applications and measurement software

Available for a broad range of communication standards and modulation types, Agilent offers PC- and instrument-based applications and software to address measurement needs from in-depth troubleshooting, to standard-compliant design validation, to high-speed pass/fail testing.

Key Specifications Comparison

	Benchtop					Modular		Handheld	
Specifications	**PXA**	**MXA**	**EXA**	**CXA**	**BSA**	**PXI RF VSA**	**PXI µW VSA**	**FieldFox**	**HSA**
	N9030A	N9020A	N9010A	N9000A	N9320B, N9322C	M9391A	M9393A	N993xA N991xA-233	N934xB/C
Performance	★★★★★	★★★★	★★★	★★	★	★★★★	★★★★★	★★★	★★
Frequency range, min-max	3 Hz to 50 GHz	10 Hz to 26.5 GHz	10 Hz to 44 GHz	9 kHz to 26.5 GHz	9 kHz to 7 GHz	1 MHz to 6 GHz	9 kHz to 27 GHz	5 kHz to 26.5 GHz	9 kHz to 20 GHz
Analysis bandwidth Standard RF Optional RF Optional baseband	 10 MHz 25, 40, 85, 160 MHz 25, 40 MHz	 25 MHz 40, 85, 125, 160 MHz 25, 40 MHz	 25 MHz 40 MHz	 10 MHz 25 MHz	 1 MHz	 40 MHz 100 MHz 160 MHz	 40 MHz 100 MHz 160 MHz	 25 MHz	 2 MHz
Overall amplitude accuracy (95%)	± 0.19 dB	± 0.23 dB	± 0.27 dB	± 0.50 dB	± 0.50 dB, ± 0.60 dB	± 0.45 dB	± 0.25 dB	± 0.5 dB	± 1.50 dB
Dynamic range, max third order at 1 GHz	119 dB	116 dB	112 dB 116 dB[1]	111 dB	76 dB, 83 dB	–	120 dB	113 dB	96 dB
Displayed average noise level (DANL) @ 1 GHz	–172 dBm	–166 dBm	–163 dBm –165 dBm[1]	–163 dBm	–145 dBm, –152 dBm	–161 dBm	–168 dBm	–154 dBm	–155 dBm
@ 4 GHz	–172 dBm	–166 dBm	–162 dBm	–159 dBm –161 dBm[2]	– –151 dBm	–166 dBm	–166 dBm	–154 dBm	–150 dBm
Third order intercept (TOI) @ 1 GHz	22 dBm	20 dBm	18 dBm 19 dBm[1]	17 dBm 15 dBm[2]	13 dBm, 15 dBm	18 dBm	31 dBm	15 dBm	11 dBm
Phase noise @ 1 GHz 10 kHz offset	–132 dBc/Hz	–114 dBc/Hz	–105 dBc/Hz –106 dBc/Hz[1]	–110 dBc/Hz	–90 dBc/Hz,	–119 dBc/Hz	–110 dBc/Hz	–111 dBc/Hz	–89 dBc/Hz (30 kHz offset)
1 MHz offset	–146 dBc/Hz	–136 dBc/Hz	–137 dBc/Hz	–130 dBc/Hz	–112 dBc/Hz, –121 dBc/Hz	–134 dBc/Hz	–134 dBc/Hz	–113 dBc/Hz	–119 dBc/Hz
Standard attenuator range/step	70 dB/2 dB	70 dB/2 dB	60 dB/10 dB	50 dB/10 dB 70 dB/10 dB[2]	70 dB/1 dB, 50 dB/1 dB	70 dB/1 dB	42 dB/ 0.25 dB	30 dB/5 dB	50 dB/1 dB
Resolution bandwidth	1 Hz to 8 MHz	1 Hz to 8 MHz	1 Hz to 8 MHz	1 Hz to 8 MHz	10 Hz to 1 MHz	–	1 Hz to 31.25 MHz	1 Hz to 5 MHz	10 Hz to 3 MHz
Battery								•	•

1. *For N9010A Option 532 or 544*
2. *For N9000A Option 513 or 526*

Capability Comparison

	Benchtop					Modular		Handheld		
Measurements/applications	**PXA**	**MXA**	**EXA**	**CXA**	**BSA**	**PXI RF VSA**	**PXI µW VSA**	**FieldFox**	**HSA**	**89600 VSA software**
General purpose										
AM/FM tune and listen	●	●	●	●	●			●	●	
Analog demodulation	●	●	●	●	●	●	●		●	●
EMI precompliance	●	●	●	●						
Enhanced display package (spectrogram plus)	●	●	●	●	●			●	●	●
Stimulus/response measurement	●	●	●	●	●	●	●	●	●	●
Flexible digital modulation analysis	●	●	●	●	●	●	●		●	●
MATLAB	●	●	●	●		●	●			
Noise figure	●	●	●	●						
Phase noise	●	●	●	●						
Pulse	●	●	●	●				●		
Real-time spectrum analysis	●	●								
Remote language compatibility for 856xE/EC and 8566/68	●	●	●							
SCPI language compatibility	●	●	●	●	●	●	●	●	●	●
Cellular communications										
1xEV-DO	●	●	●	●		●	●			●
cdma2000®/cdmaOne	●	●	●	●		●	●			●
GSM/EDGE/Evo	●	●	●	●		●	●			●
iDEN/WiDEN/MotoTalk	●	●	●							
LTE FDD and TDD	●	●	●	●		●	●			●
LTE-Advanced FDD and TDD	●	●	●			●	●			●
Multi-standard radio (MSR)	●	●	●	●						●
TD-SCDMA/HSPA	●	●	●	●		●	●			●
W-CDMA/HSPA+	●	●	●	●		●	●			●
Wireless connectivity										
Wi-SUN (MR-FSK)	●[1]	●[1]	●[1]	●[1]		●[1]	●[1]			●
Bluetooth®	●	●	●	●		●	●			●
Fixed WiMAX™		●	●							●
Mobile WiMAX	●	●	●	●						●
WLAN 802.11a/b/g/n/ac	●	●	●	●		●	●			●
ZigBee	●[1]	●[1]	●[1]	●[1]		●[1]	●[1]			●
Digital video										
CMMB	●	●	●	●						
Digital cable TV	●	●	●	●						
DTMB (CTTB)	●	●	●	●						
DVB-T/H/T2	●	●	●	●						●
ISDB-T/T_{SB}/ T_{mm}	●	●	●	●						●
PowerSuite one-button measurements										
Channel power	●	●	●	●	●			●	●	
Occupied bandwidth	●	●	●	●	●			●	●	
Multicarrier, multi-offset ACP	●	●	●	●	●			●	●	
Multicarrier power	●	●	●	●						
CCDF	●	●	●	●						
Harmonic distortion	●	●	●	●						
Burst power	●	●	●	●						
Intermodulation (TOI)	●	●	●	●	●					
Spurious emissions	●	●	●	●						
Spectrum emission mask	●	●	●	●	●			●	●	

1. *VXA vector signal analysis measurement application provides digital demodulation with standard presets*

X-Series Signal Analysis

We can't predict the future, but Agilent can help you shape it with our future-ready test assets. The X-Series is an evolutionary approach to signal analysis that spans instrumentation, measurements, and software. It gives you the flexibility to satisfy your business and technical requirements across multiple products and programs --now and in the future. The X-Series creates a consistent framework that enables your teams to move at a faster pace. Stay ready, stay in sync, and arrive ahead with the Agilent X-Series.

Future-ready instruments

X-Series signal analyzers are ready to evolve as technology changes. With X-Series instruments, you can move along the performance curve today and tomorrow without rewriting your test code, while optimizing price and performance for whichever technologies you're pursuing. With upgradeable hardware and license-key upgrades for adding functionality or measurement applications, you can keep your test assets current and extend instrument longevity. Take advantage of:

- Upgradeable CPU, memory, solid state drives, I/O ports
- Performance enhancements with Windows 7
- Optional real-time spectrum analysis and bandwidth
- New standard features, including fast sweep (depending on hardware configuration) and enhanced phase noise and third-order intercept (TOI)

Consistent measurement framework

Proven algorithms, 100% code-compatibility, and a common UI across the X-Series create a consistent measurement framework for signal analysis that ensures repeatable results and measurement integrity through all phases of product development. A common, familiar user-interface means increased efficiency and productivity --when you learn how to use one X-Series analyzer, you know how to use them all.

Software and applications

Save time and money with a shared library of applications to measure your signals, whether you're engaged in cellular, wireless connectivity, MILCOM, SATCOM, or general purpose testing. Each application can be easily upgraded as new features and technologies are introduced. With the open Windows OS you can run software such as MATLAB or 89600 VSA. See pages 13 and 14.

CXA
Master the essentials

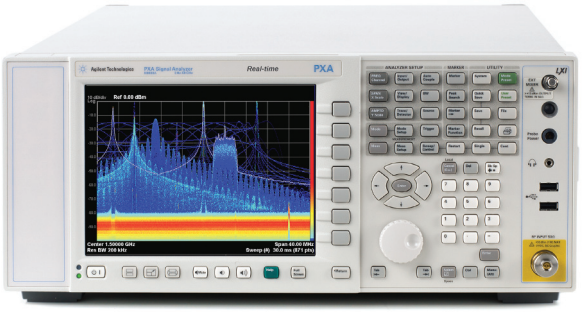
EXA
Balance the challenges

MXA
Accelerate in wireless

PXA
Drive your evolution

Performance, functionality, price

X-Series Signal Analyzers

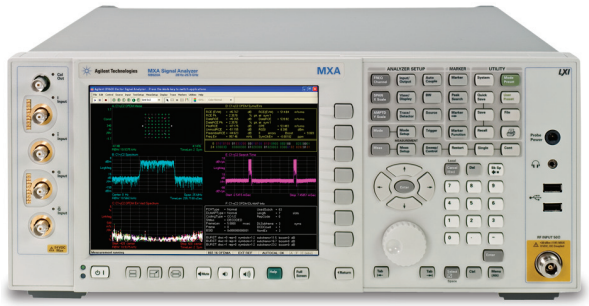


PXA
N9030A

The high-performance PXA signal analyzer is the evolutionary replacement for other performance signal analyzers. Advanced performance, flexibility and expandability enable users to meet demanding applications in aerospace, defense, commercial communications, and more. Remote language compatibility features make it easy to replace existing spectrum analyzers. Adding real-time spectrum analysis (RTSA) capability to new or existing PXAs lets you see, capture and understand the most elusive signals.

- Agilent's exclusive noise floor extension (NFE) technology delivers –172 dBm effective noise floor
- Excellent phase noise performance (–132 dBc/Hz at 10 kHz offset) and third-order intercept (up to +23 dBm)
- Analyze the most complex signals with 160 MHz analysis bandwidth and upgradable RTSA capability

www.agilent.com/find/PXA



MXA
N9020A

The midrange MXA is the optimum choice as you develop new wireless devices and deliver them to manufacturing and the marketplace. It has the flexibility to quickly adapt to your evolving test requirements, today and tomorrow. Address multiple formats, generations and devices with the MXA --and accelerate in wireless. The MXA's enhanced phase noise, optional wide bandwidth, real-time, fast sweep, and fast power measurement capability make the MXA highly versatile.

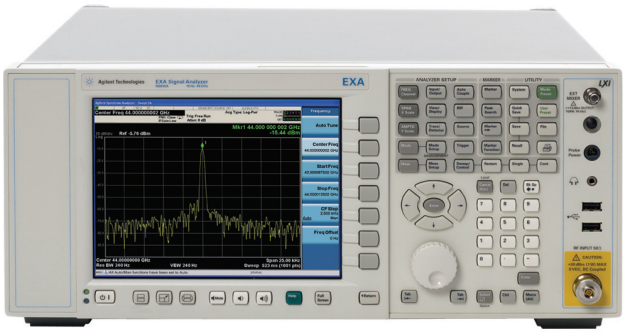
- Best-in-class phase noise performance (–114 dBc/Hz at 10 kHz offset)
- Optional 85, 125, or 160 MHz analysis bandwidth to analyze complex signals within your budget
- Upgradable RTSA capability to capture elusive signals

www.agilent.com/find/MXA

Key specifications	PXA	MXA	EXA	CXA
Frequency range	3 Hz to 50 GHz	10 Hz to 26.5 GHz	10 Hz to 44 GHz	9 kHz to 26.5 GHz
Phase noise, 1 GHz (10 kHz offset)	–132 dBc/Hz	–114 dBc/Hz	–105 dBc/Hz –106 dBc/Hz[1]	–110 dBc/Hz
Maximum third order dynamic range, 1 GHz	119 dB	116 dB	112 dB 116 dB[1]	111 dB
Displayed average noise level, 1 GHz	–172 dBm	–166 dBm	–163 dBm –165 dBm[1]	–163 dBm
Standard attenuator range/step	70 dB/2 dB	70 dB/2 dB	60 dB/10 dB	50 dB/10 dB 70 dB/10 dB[2]
Overall amplitude accuracy	± 0.19 dB	± 0.23 dB	± 0.27 dB	± 0.50 dB

1. *For N9010A Option 532 or 544*
2. *For N9000A Option 513 or 526*

X-Series Signal Analyzers

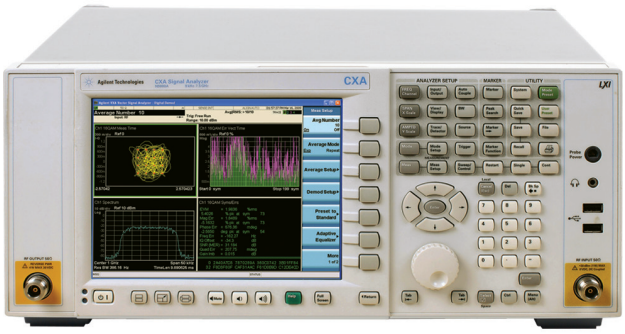


EXA
N9010A

From RF to millimeter wave, whether you're pushing to enhance a product or improve test throughput, your general-purpose signal analyzer should be ready for a wide range of challenges. That's what drives the Agilent EXA signal analyzer—the fast, flexible way to cover diverse needs with a single tool. With the most recent enhancements in phase noise, dynamic range, and sweep speed, the EXA provides a solid mix of speed and performance, and offers the versatility of X-Series measurement applications.

- Widest frequency coverage in its class - 10 Hz to 44 GHz and beyond
- Fast sweep and fast power measurement maximize and enhance yield
- Up to 40 MHz analysis bandwidth

www.agilent.com/find/EXA



CXA
N9000A

A great low-cost signal analyzer surpasses the basics and delivers crucial functionality. That's the strength of the CXA signal analyzer, the leading low-cost tool for essential signal characterization up to 26.5 GHz. Its capabilities provide a foundation for cost-effective testing and seamless integration with the other X-Series models. The CXA is also an excellent teaching tool for RF and microwave technologies and signal analysis.

- Reduce costs and improve throughput in manufacturing test
- Built-in tracking generator for component characterization
- Up to 25 MHz analysis bandwidth
- Additional 75-ohm RF input connector for cable TV measurement

www.agilent.com/find/CXA

Basic Spectrum Analyzers (BSA)

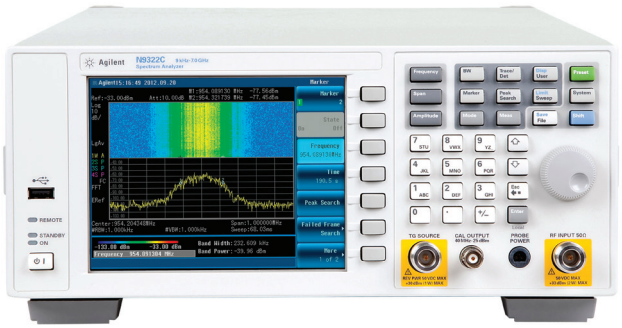
BSA
N9320B

Whatever type of consumer or general-purpose RF electronic devices or components you are manufacturing, spectrum analysis provides essential information on their performance, characteristics, and interaction. And in today's competitive world, you need this analysis to be dependable and affordable.

The N9320B spectrum analyzer is ideal for consumer electronics manufacturing, and bench repair.
It provides:

- Fast sweep speed in narrow resolution bandwidths
- Rugged body, large display, and 3U height
- AM/FM tune and listen
- AM/FM, ASK/FSK demodulation analysis
- Tracking generator: 100 kHz to 3 GHz

www.agilent.com/find/n9320b



BSA
N9322C

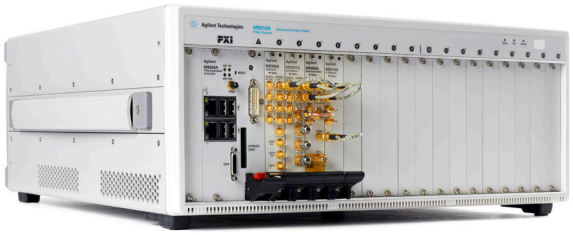
Given the dynamic nature of RF devices, using the N9322C spectrum analyzer that can evolve with your needs is simply prudent. Beyond its feature rich standard base, the N9322C supports an array of value-added capabilities that can be added when needed.

- Time gated sweep
- Tracking generator with built-in VSWR bridge
- Power meter mode, supporting Agilent U2000 Series/U2020 X-Series USB power sensors
- AM/FM, and ASK/FSK signal analysis
- Signal monitoring with spectrogram recording and playback
- Channel scanner for simultaneous channel power measurement of up to 20 channels
- AM/FM IBOC and xDSL measurements with enhanced DANL and phase noise performance

www.agilent.com/find/n9322c

Key specifications	N9320B	N9322C
Frequency range	9 kHz to 3 GHz	9 kHz to 7 GHz
Phase noise at 1 GHz, 10 kHz offset	–90 dBc/Hz	–90 dBc/Hz
Maximum third order dynamic range, 1 GHz	76 dB	83 dB
Displayed average noise level, 1 GHz	–145 dBm	–152 dBm
Standard attenuator range/step	70 dB, in 1 dB steps	50 dB, in 1 dB steps
Overall amplitude accuracy	± 0.5 dB	± 0.6 dB

PXIe Vector Signal Analyzers



PXIe RF vector signal analyzer M9391A

The M9391A PXIe vector signal analyzer provides fast, high quality measurements optimized for design validation and manufacturing test environments. It can be easily combined with additional PXIe VSAs to create a multi-channel signal analyzer, as well as the M9381A PXIe vector signal generator. Use it with the same portfolio of world-class software used for bench top instruments, including the X-Series measurement applications, 89600 VSA, SystemVue and Signal Studio software to get consistent measurement results you can trust.

- Analysis bandwidth up to 160 MHz
- Reduce test time from 3 s to < 300 ms with unique embedded power measurement mode and faster power servos convergence with outstanding linearity
- Rapid frequency and amplitude switching with fastune baseband adjustments up to 15 µs, nominal
- Real-time hardware resampling pinpoints answers faster with extremely fast modulation analysis
- Repeatability of < 0.05 dB, nominal
- Compact multi-channel VSA configurations; A 4-channel VSA occupies 13 slots in one 18-slot chassis
- EVM with 4-channel configuration
  WLAN 802.11ac: –46 dB (5.8 GHz, 80 MHz BW)
  LTE-FDD: –50.1 dB (0.9 GHz, 10 MHz BW)

www.agilent.com/find/M9391A

PXIe performance vector signal analyzer M9393A

The M9393A PXIe performance vector signal analyzer delivers fast, accurate measurements from 9 kHz to 27 GHz for design validation and manufacturing of transmitters and components for aerospace, defense and commercial wireless applications. Combine with 89600 VSA software and X-Series measurement applications for enhanced signal analysis and standards-based test.

- Analysis bandwidth up to 160 MHz
- Fast frequency tuning in less than 150 µs within 1 kHz and 0.1 dB
- Quickly characterize spurs and harmonics across 27 GHz in less than 1 second at 10 kHz resolution bandwidth with hardware and software optimized for speed
- High-speed embedded hardware accelerated power, spectrum, and IQ measurements
- Accelerate test with low latency, high throughput PXIe architecture

www.agilent.com/find/M9393A

Key specifications	M9391A	M9393A
Frequency range	1 MHz to 6 GHz	9 kHz to 27 GHz
Phase noise, 1 GHz (10 kHz offset), nominal	–119 dBc/Hz	–110 dBc/Hz
Maximum third order dynamic range, 1 GHz	18 dBm	31 dBm
Displayed average noise level, 1 GHz, nominal	–161 dBm	–168 dBm
Standard attenuator range/step	70 dB/1 dB	42 dB/0.25 dB
Overall amplitude accuracy, typical	± 0.45 dB	± 0.25 dB
Chassis slot compatibility	PXIe, PXI Hybrid	PXIe, PXI Hybrid
Size	4-slot	5-slot

FieldFox Handheld Analyzers

FieldFox spectrum and combination analyzers N9935/36/37/38A and N9913/14/15/16/17/18A

Measuring up and earning a spot in your kit is the driving idea behind Agilent's FieldFox portable analyzers, available in frequencies up to 26.5 GHz. Carry the precision of our microwave models: they deliver Agilent-quality measurements wherever you need to go. Boost your readiness with an RF unit: every operating mode is flexible enough to meet the needs of novices and experts alike. And count on the durability of handheld analyzers designed to withstand your toughest working conditions.

- Get precision measurements that agree with benchtop results
- Meets MIL-PRF-28800F Class 2 and MIL-STD-810G, Method 511.5, Procedure 1, operation in explosive environments (type tested)
- Meets IP53 dust and water ingress tests (type tested)
- Compact and lightweight (3.0 kg/6.6 lbs.)

www.agilent.com/find/FieldFox

FieldFox spectrum analyzers
FieldFox spectrum analyzers are optimized to excel in the dynamic spectral environment seen commonly in the field.

- Unprecedented amplitude accuracy of ± 0.5 dB with InstAlign - no warm up required
- Interference analysis and spectrogram
- Full-band tracking generator and preamplifier

FieldFox combination analyzers
For maximum functionality, FieldFox combination analyzers integrate the measurement capabilities needed in a single, compact instrument.

- Make measurements quickly with CalReady and QuickCal; no need for a cal kit
- Base is a cable and antenna analyzer; Option 233 adds spectrum analyzer capability
- Optional vector network analyzer capability for full two-port S-parameters

Key specifications	FieldFox spectrum analyzers N9935/36/37/38A with Opt 233	FieldFox combination analyzers N9913/14/15/16/17/18A
Frequency range (min. to max.)	5 kHz to 26.5 GHz	5 kHz to 26.5 GHz
Phase noise, 1 GHz (10 kHz offset)	–111 dBc/Hz	–111 dBc/Hz
Maximum third order dynamic range, 1 GHz	113 dB	113 dB
Displayed average noise level, 1 GHz	–154 dBm	–154 dBm
Standard attenuator range/step	30 dB/5 dB	30 dB/5 dB
Overall amplitude accuracy	± 0.5 dB	± 0.5 dB

Handheld Spectrum Analyzers (HSA)

HSA
N9340B, N9342C, N9343C, N9344C

If you are making essential spectrum analyzer measurements in the field, the Agilent HSA family makes your job easier. Covering frequencies up to 20 GHz, the HSAs have the features you need for operating in tough field environments and the measurement performance gives you confidence the job's been done right. The Agilent HSA portable analyzers let you automate routine tasks to save time and ensure consistent results.

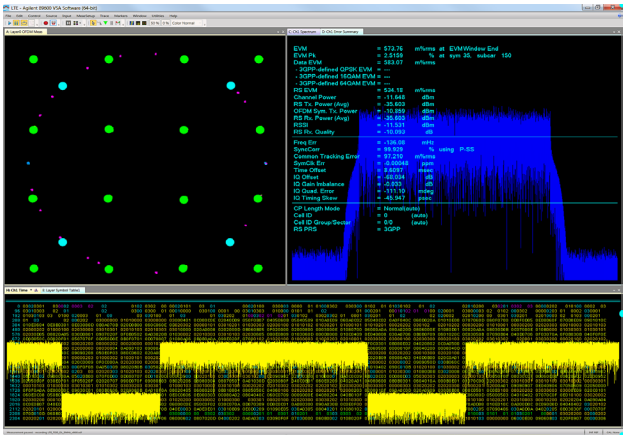
- Built-in tracking generator and cable and antenna tester [1]
- Spectrum monitor and interference analyzer
- Innovative task planner enables routine test automation [2]
- Channel scanner [2]
- High accuracy power measurement with Agilent U2000 Series USB power sensor
- Peak power and pulse profiling with Agilent U2020 X-series power sensors [2]
- Built-in GPS receiver and GPS antenna [2]
- AM/FM and ASK/FSK modulation analysis

www.agilent.com/find/hsa

Key specifications	N9340B	N9342C	N9343C	N9344C
Frequency range	9 kHz to 3 GHz	9 kHz to 7 GHz	9 kHz to 13.6 GHz	9 kHz to 20 GHz
Phase noise, 30 kHz offset	–87 dBc/Hz	–89 dBc/Hz	–89 dBc/Hz	–89 dBc/Hz
Maximum third order dynamic range, 1 GHz	89 dB	96 dB	95 dB	95 dB
Displayed average noise level, 1 GHz	–159 dBm	–162 dBm	–155 dBm	–155 dBm
Standard attenuator range/step	51 dB/1 dB	50 dB/1 dB	50 dB/5 dB	50 dB/5 dB
Overall amplitude accuracy	± 1.5 dB	± 1.5 dB	± 1.3 dB	± 1.3 dB

1. *Cable and antenna tester is currently only available on N9342C.*
2. *Currently available only on N9342C/N9343C/N9344C.*

89600 VSA and WLA Software



89600 VSA software
89601B

The 89600 VSA software is a comprehensive set of tools for demodulation and vector signal analysis. These tools enable you to explore virtually every facet of a signal and optimize your most advanced designs. As you assess the tradeoffs, the 89600 VSA software helps you see through the complexity.

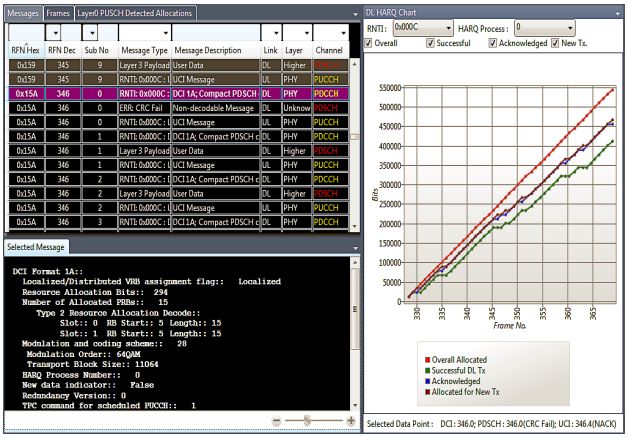
Measure your signal: supports more than 75 signal types

- AM, FM, PM, BPSK, QPSK, QAM, FSK, VSB, SOQPSK, APCO 25, custom APSK, custom OFDM, custom IQ
- LTE and LTE-Advanced FDD/TDD, W-CDMA/HSPA+, GSM/EDGE/Evo, cdma2000, TD-SCDMA
- 802.11a/b/g/n/ac, WiMAX, *Bluetooth*, ZigBee, RFID, Wi-SUN

Explore virtually every facet of today's most complex signals

- Verify signal performance quickly with multiple simultaneous views in time, frequency and modulation domains
- Pinpoint the answers to signal problems with advanced troubleshooting tools including trace-to-trace marker coupling, record/playback, and multi-measurements
- Produce consistent, comparable results at the simulation, prototype and design-validation stages
- Choose the right front-end for your application: the 89600 VSA software supports more than 40 Agilent measurement platforms

www.agilent.com/find/89601B



89600 WLA software
89620B

Deepen your understanding of link behavior with Agilent's 89600 WLA software, the MAC-layer complement to the 89600 VSA. Wireless-link analysis decodes control messages and correlates them with the PHY-layer signals they manage, giving you greater visibility into the complexities of MAC/PHY interaction. Expand your toolkit with 89600 WLA—and see inside the link.

Get greater visibility into LTE protocol/PHY interaction

- Decode and verify the MAC, RLC, and RRC-layer messages across multiple radio frames
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For X-Series signal analyzers:
www.agilent.com/find/X-Series_apps

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Choosing Measurement Software and Applications

X-Series measurement applications provide embedded format-specific, one button measurements for X-Series and modular analyzers. With fast measurement speed, SCPI programmability, pass/fail testing and simplicity of operation, these applications are ideally suited for design verification and manufacturing.

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Migrating from Legacy Spectrum Analyzers

Whether you are working in the aerospace and defense or communications industries, technologies evolve but one thing stays the same: the need to ensure readiness of your test system.

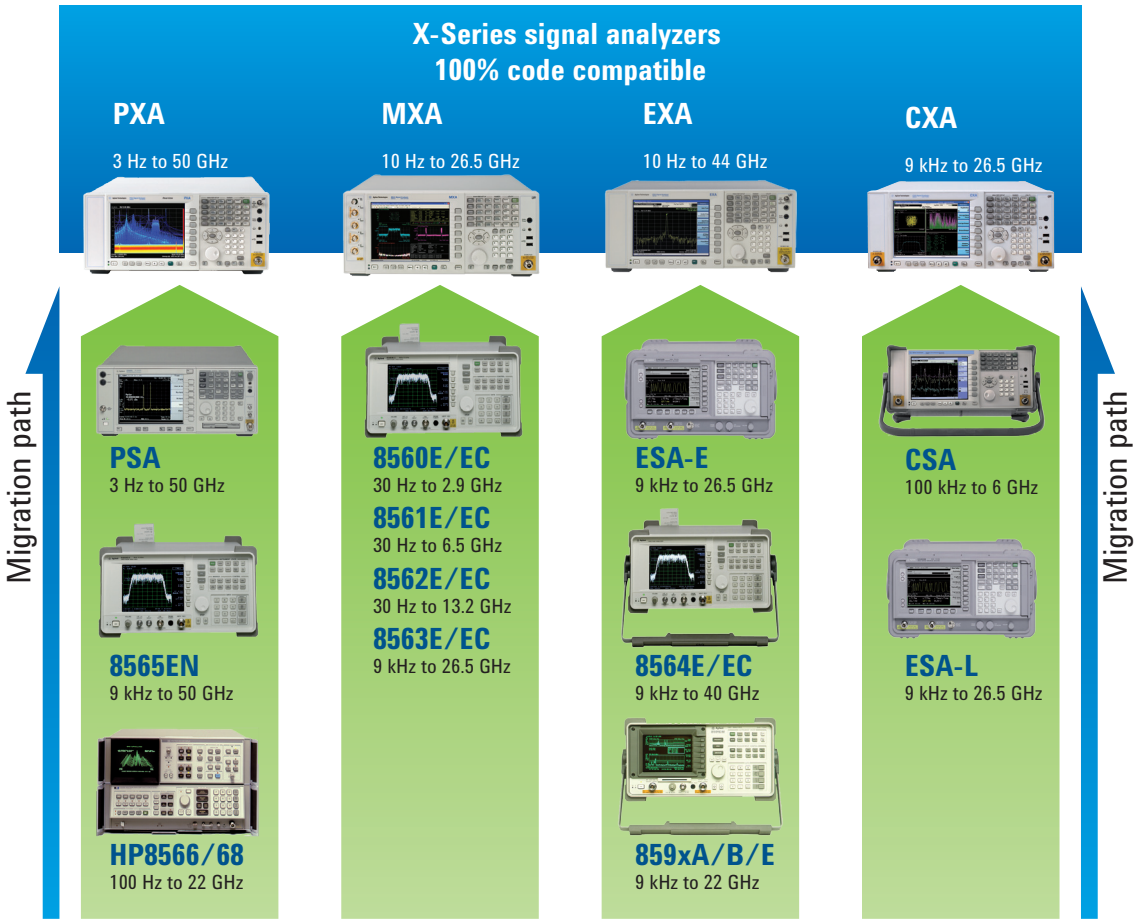
Carefully planned instrument migration and modernization can maximize your test-system efficiency, performance, and readiness, while minimizing risk and potential disruptions, keeping you at the leading edge in the competitive marketplace. The Agilent X-Series signal analyzers were designed as evolutionary replacements to their in-class benchtop predecessors. Take advantage of the X-Series' performance, flexibility, speed, modern connectivity, and backward compatibility in replacing the legacy HP/Agilent spectrum analyzers to achieve seamless migration and avoid the need to rewrite test software.

Which migration path is right for you?

Visit our signal analyzer migration page to learn more about migrating from legacy spectrum analyzers to the X-Series signal analyzer that's right for you. **www.agilent.com/find/SA_migration**

If you are interested in moving to a handheld spectrum analyzer, please visit **www.agilent.com/find/hsa**

If you are considering converting your test sytems to modular, please visit **www.agilent.com/find/pxi**



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