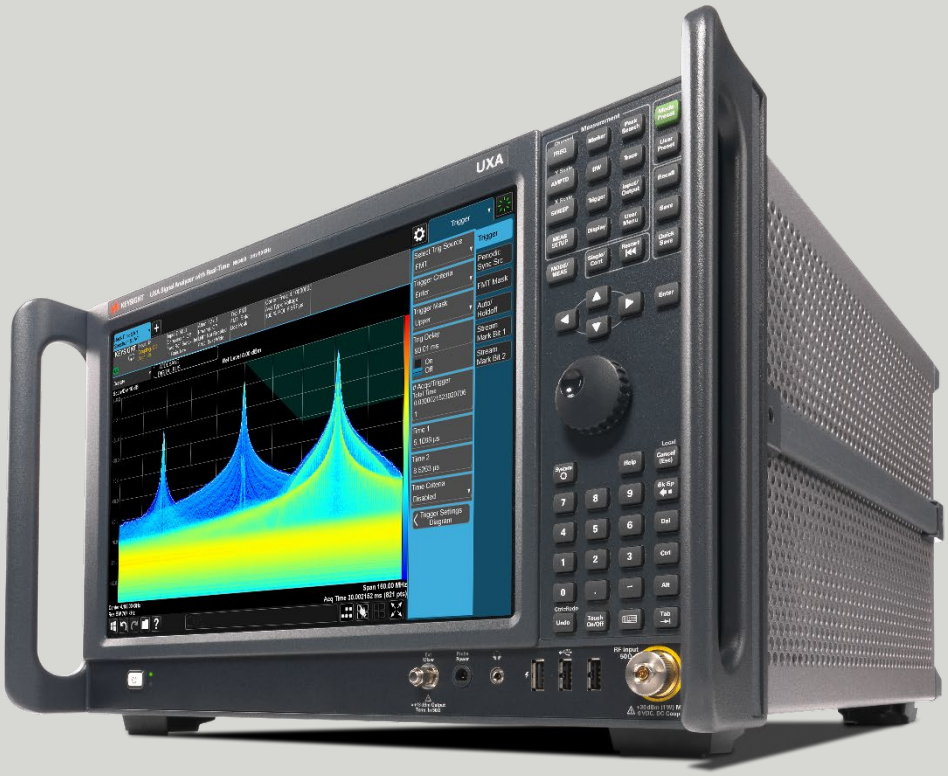
PRODUCT BROCHURE



Signal Analyzers X-Series

KEYSIGHT

Table of Contents

Make an Inspired Connection 3

Design, test and deliver your next breakthrough with the X-Series 4

X-Series Software vs X-Series Signal Analyzer 5

Create Solutions That Get You There Faster 6

Explore virtually every facet of today's most complex signals 7

UXA X-Series Signal Analyzer 9

Summary of UXA Specifications 10

PXA X-Series Signal Analyzer 11

Summary of Key PXA Specifications 13

MXA X-Series Signal Analyzer 14

Summary of Key MXA Specifications 15

Summary of Key EXA Specifications 17

CXA X-Series Signal Analyzer 18

Summary of Key CXA Specifications 19

Confidently Covered by Keysight Services 20

Make an Inspired Connection

Engineering is all about connecting ideas and solving problems. This experience drives the X-Series signal analyzers: they are the benchmark for accessible performance that puts you closer to the answer by easily linking cause and effect.

Across the full spectrum—from CXA to UXA—you'll find the tools you need to design, test and deliver your next breakthrough. Reach for the X-Series and make an inspired connection.

Deliver better results with a common multi-touch interface

With the X-Series, you can perform most operations in two steps or less using the streamlined, multi-touch user interface. To ensure measurement integrity and repeatable results, we use the same proven algorithms in every X-Series signal analyzer.

To protect your engineering investment, we've implemented 100-percent code compatibility across the family, enabling you to leverage test-system software from R&D to design verification to manufacturing.

See and understand device performance with measurement applications and software

Easily meet specific needs by mixing and matching our analyzers, measurement applications and software. The PathWave X-Series Applications are proven, ready-to-use measurements that capture measurement expertise and deliver repeatable results.

Our industry-leading software supports more than 75 signal standards and modulation types, helping accelerate your designs and ensuring that you can measure your signal.

Evolve with easily upgradeable instruments

It starts with an optimal combination of price and performance for whichever technology you're pursuing. Later, it's an easy upgrade to new applications and technologies using downloadable PathWave X-Series Applications and instrument options with no downtime via license-key upgrades. Extend longevity to keep your test assets current.



Design, test and deliver your next breakthrough with the X-Series

The five models span a range of price and performance that enables you to configure and optimize the best tool for your needs.

	 N9042B UXA	 N9040B/ 41B UXA	 N9032B PXA	 N9030B PXA	 N9020B/ 21B MXA	 N9010B EXA	 N9000B CXA
Maximum Frequency	110 GHz	110 GHz	50 GHz	50 GHz	50 GHz	44 GHz	26.5 GHz
Maximum Internal Analysis Bandwidth	4 GHz	1 GHz	2 GHz	510 MHz	N9020B: 160 MHz N9021B: 510 MHz	40 MHz	25 MHz
PowerSuite	✓	✓	✓	✓	✓	✓	✓
2 dB Step Attenuator	✓	✓	✓	✓	✓	✓	✓
Precision Frequency Reference	✓	✓	✓	✓	✓	✓	✓
Noise Floor Extension	✓	✓	✓	✓	✓	✓	
Fast Sweep	✓	✓	✓	✓	✓[1]	✓	
External Mixing	✓	✓	✓	✓	✓	✓	
Microwave Preselector Bypass	✓	✓	✓	✓	✓	✓	
Fast Power	✓	✓	✓	✓	✓	✓	
Real-time Spectrum Analysis	✓	✓	✓	✓	✓		
Low Noise Path	✓	✓	✓	✓			
Full Bypass Path	✓	✓	✓	✓			
BBIQ				✓	✓ (N9020B only)		
Tracking Generator							✓

1. N9020B requires B40 or above
✓ Standard Feature
✓ Optional Capability

X-Series Software vs X-Series Signal Analyzer

Below is a list of X-Series software products with its supported X-series signal analyzers.

	Application description	Model[4]	UXA N9042B	UXA N9041B	UXA N9040B	PXA N9032B	PXA N9030B	MXA N9021B	MXA N9020B	EXA N9010B	CXA N9000B
	Core SW (Sweep SA, IQA, SCPI Recorder, etc.)	N9060ES1E[3]	N9042SA 2E	N9041SA 2E	N9040SA 2E	N9032SA 2E	N9030SA 2E	N9021SA 2E	N9020SA 2E	N90410S A2E	Included
	PowerSuite (CHP, SEM, ACP, CCDF, etc.)	N90EMPSMB	✓	✓	✓	✓	✓	✓	✓	✓	✓
	EMI	N/E/W6141EM0E	N	N	N	N	N	N/E	N/E	N/E	N/E/W
	Remote language compatibility	N/E9061EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	
	SCPI language compatibility	N/E/W9062EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	Analog demodulation	N/E/W9063EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	VMA vector modulation analysis	N/E/W9054EM0E	N	N	N	N	N	N/E	N/E	N/E	N/E/W
	VMA custom OFDM	N/E/W9054EM1E	N	N	N	N	N	N/E	N/E	N/E	N/E/W
General purpose	Power Amplifier	N/E9055EM0E	N	N[2]	N	N	N	N/E			
	Channel Quality/ Group Delay	N/E9056EM0E	N		N	N	N	N/E	N/E		
	Pulse analysis	N/E/W9067EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	Phase noise	N/E/W9068EM0E	N	N	N	N	N	N/E	N/E	N/E	N/E/W
	Noise figure	N/E/W9069EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	Measuring receiver application	N9091EM0E					N				
	Avionics	N9092EM0E					N				
	5G NR	N/E9085EM0E	N	N[2]	N	N	N	N/E	N/E		
	5G NR V2X	N/E9085EM4E	N	N	N	N	N	N/E	N/E		
	LTE and LTE-Advanced FDD	N/E/W9080EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	NB-IoT/eMTC	N/E/W9080EM3E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	LTE, LTE-Advanced TDD	N/E/W9082EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	LTE V2X	N/E/W9080EM4E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	Multi-standard radio	N/E9083EM0E		N[2]	N	N	N	N/E	N/E	N/E	N/E/W
Cellular communication	GSM/EDGE/Evo	N/E/W9071EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	cdma (TM)	N/E/W9072EM0E[1]			N		N	N/E	N/E	N/E	N/E/W
	W-CDMA/HSPA+	N/E/W9073EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	1xEV-DO	N/E/W9076EM0E[1]			N		N	N/E	N/E	N/E	N/E/W
	TD-CDMA/HSPA+	N/E/W9079EM0E[1]			N		N	N/E	N/E	N/E	N/E/W
	WLAN - 802.11a/b/ g/j/p/n/af/ah	N/E/W9077EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
	WLAN 802.11ac/ax	N/E9077EM1E	N	N[2]	N	N	N	N/E	N/E	N/E	
	WLAN 802.11be	N/E9077EM2E	N	N[2]	N	N	N	N/E	N/E		
Wireless connectivity	Bluetooth™	N/E/W9081EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W

Application description	Model[4]	UXA N9042B	UXA N9041B	UXA N9040B	PXA N9032B	PXA N9030B	MXA N9021B	MXA N9020B	EXA N9010B	CXA N9000B
Qualcomm Bluetooth High-Speed Link	N/E/W9081SP1E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W
Short range communication and IoT	N/E/W9084EM0E	N	N[2]	N	N	N	N/E	N/E	N/E	N/E/W

1. This multi-touch measurement application only supports SCPI command only as remote control
2. Currently this measurement application has only been qualified for N9041B Input 1 Port
3. Keysight launch Signal Analyzer Core SW with XA2023 (XA33) release. It will redeem the license as N9060ES1E as date coded version. You need keep the Core SW license subscribed to get the latest new features like SCPI recorder function.
4. Keysight launch tiered X-app models with N-models for UXA/PXA/PXE, E-models for MXA/EXA/MXE, and W-models for CXA. The higher tiered application models can run at the lower platforms, which means N-models can run on all platforms, E-models can run on MXA/EXA/MXE and CXA, and W-models can only run on CXA.
5. This option is only supported with R20 or above analysis bandwidth working with 5G NR and VMA measurement applications.

✓N means X-apps NxxxxEMxE models; E means X-app ExxxxEMxE models; W means WxxxxEMxE models

Create Solutions That Get You There Faster

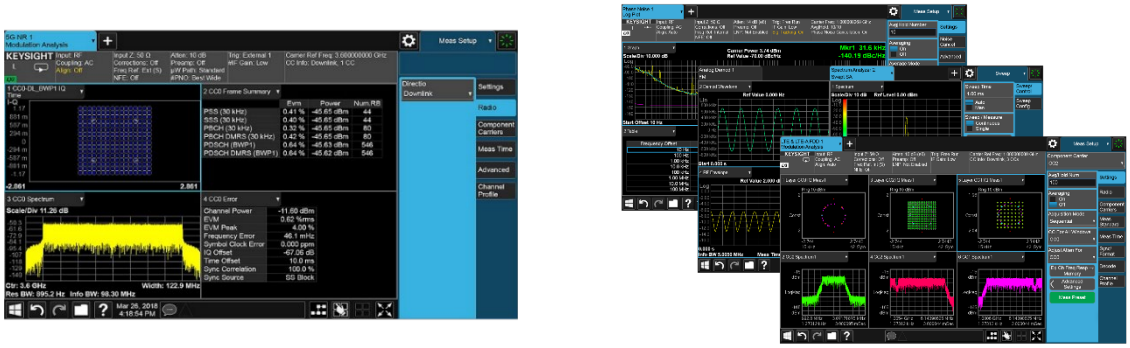
Whether you're assessing transmitters, troubleshooting receivers or analyzing over-the-air signals, the flexibility of X-Series hardware and software lets you create the optimum solution. Our signal analyzers are the foundation, built on Keysight measurement science and measurement integrity. Tight integration with PathWave X-Series Applications and software puts advanced analysis and fresh insights at your fingertips.



See and understand more with applications

The PathWave X-Series Applications are proven, ready-to-use measurements for signal analysis. Capturing measurement expertise and delivering repeatable results, the applications let you see and understand the performance of your devices and designs:

- Get essential measurements and troubleshooting views that simplify complex operations
- Utilize applications that range from parametric to standards-compliant wireless measurements
- Phase noise, noise figure, pulse analysis, analog/digital demodulation
- 5G NR, LTE/LTE-Advanced, W-CDMA, and more
- Believe cross-platform results from applications that use the same algorithms in every X-Series model
- Choose from multiple types of licenses including node-locked, transportable, floating, or enterprise



PathWave X-Series Applications allow you to see and understand the performance of your devices and designs. Convenient drop-down windows enable you to quickly configure a 5G NR transmitter measurement, including 256QAM demodulation.

Explore virtually every facet of today's most complex signals

The 89600 PathWave 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. With support for more than 75 signal standards and modulation types, the 89600 PathWave VSA lets you measure your signal:

- Quantify spectral performance with high-resolution, FFT-based measurements
- Analyze time-domain signals using timing features, CCDF, and more
- Characterize today's most advanced modulation schemes with rich marker functions and views such as constellation, EVM and decoded bits
- Quickly confirm signal problems with the ability to display multiple simultaneous views
- Capture and review short-lived signal events with multi-domain digital persistence and cumulative-history traces

To help you pinpoint the root cause of signal problems, the 89600 PathWave VSA also provides capture/playback capabilities that enable detailed post-processing analysis with advanced triggering and post-capture tune-and-zoom.



Perform pulse measurements and obtain complete results including power, time, frequency, phase and modulation with the PathWave X-Series Application.



Use 89600 PathWave VSA software to gain deeper insights of DOCSIS 3.1 downstream signals through MER/BER summaries, PLC decoding information, and peak MER traces on the constellation, subcarrier and symbol domains.

Download your next insight

Keysight software is downloadable expertise. From first simulation through first customer shipment, we deliver the tools your team needs to accelerate from data to information to actionable insight. Start with a 30-day free trial.

www.keysight.com/find/X-Series_trial OR www.keysight.com/find/89600vsa

UXA X-Series Signal Analyzer

Maximize the performance of your most sophisticated designs

The UXA is the flagship of our X-Series signal analyzers, delivering wide-open performance and deeper views of elusive and wideband signals. With its 14.1-inch screen, the UXA enables you to see more and take your design farther.

The ultimate performance of the UXA lets you characterize today's most challenging signals—fast-hopping, wideband, transient—in 5G, 802.11ax/ay, satellite, radar, EW, and more. You'll be able to fully understand the purity of your design with industry-leading phase noise and wide spurious-free dynamic range.



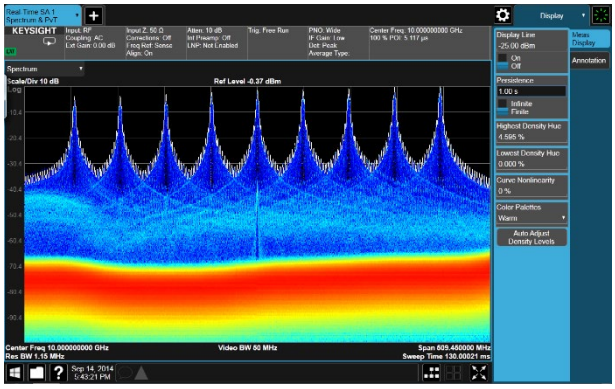
- Push the envelope in current- and next generation radar and EW systems
- Analyze bandwidth-hungry emerging standards such as 5G, satellite communications, and radar
- Diagnose subtle design issues in LOs and frequency synthesizers



Wide-open performance to take your designs farther

Summary of UXA Specifications

Frequency Range	**Minimum**: 2 Hz	**Maximum**: N9040B: 8.4, 13.6, 26.5, 44, or 50 GHz N9041B: 90 or 110 GHz (Up to 1.1 THz with external mixing) N9042B: 26.5, 44, 50 GHz
Analysis Bandwidth	N9040B/41B: 25 MHz (standard), 40, 255, 510 MHz, and 1 GHz N9042B: 1, 1.5, 2, 4 GHz	
Displayed Average Noise Level (DANL)	-174 dBm at 2 GHz with preamplifier and Noise Floor Extension turned on	
Third-order Intermodulation (TOI) Distortion	+23 dBm at 2 GHz	
Phase Noise (10 kHz offset)	-136 dBc/Hz at 1 GHz; -126 dBc/Hz at 10 GHz	
Amplitude Accuracy	±0.16 dB	
Spurious-free Dynamic Range (SFDR)	-78 dBc nominal over 510 MHz bandwidth	
Real-time Bandwidth	N9040B: Up to 510 MHz N9041B: Up to 255 MHz N9042B: Up to 2 GHz	
Probability of Intercept (POI)	N9040B/41B: Minimal signal duration of 3.51 µs for 100% POI and full amplitude accuracy N9042B: Minimal signal duration of 227 ns for 100% POI and full amplitude accuracy	



Real-time spectrum analysis bandwidth up to 2 GHz.



Gain maximum insight with the ability to view multiple screens simultaneously on the UXA's 14.1-inch multi-touch display.

PXA X-Series Signal Analyzer

Accelerate innovation insight with benchmark performance in signal analysis

The PXA is the benchmark for performance that accelerates innovation in demanding applications. With measurement options that range from excellent to exceptional, the PXA puts you in the lead. The new N9032B PXA, offers superior performance in a compact design, while speeding the measurements up to 40% faster.

Analyze the latest signals with up to 2 GHz analysis bandwidth and better than 78 dB SFDR and reveal previously hidden signals with Noise Floor Extension (NFE). To see your device's true behavior, get industry-leading phase noise performance by adding the Keysight-proprietary DDS-based LO.

Accelerate innovation in your most demanding applications





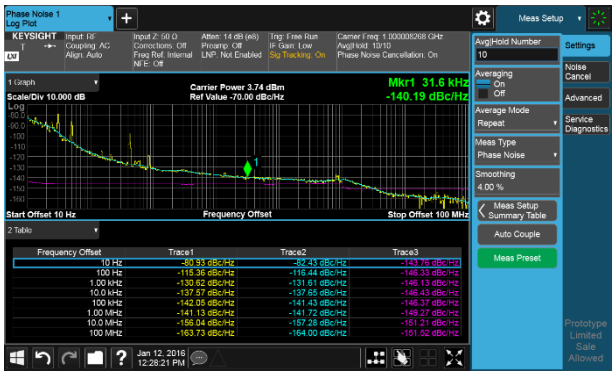
- Scale performance by tailoring instrument options to meet your needs and maximize value
- Record, analyze and simulate real-world scenarios with gap-free streaming up to 255 MHz
- Meet stringent data security requirements with a removable solid-state drive and other optional features
- Validate challenging wideband OFDM signals with 2 GHz analysis bandwidth and DDS LO for exceptional phase noise
- Simplify migration with a highly code-compatible, form/fit/function replacement for legacy spectrum analyzers
- Get faster time to actionable insight, with the new powerful CPU, that speeds measurements up to 40% faster
- Maintain and increase performance in integrated systems, with the 4U-high form factor design in the new N9032B PXA



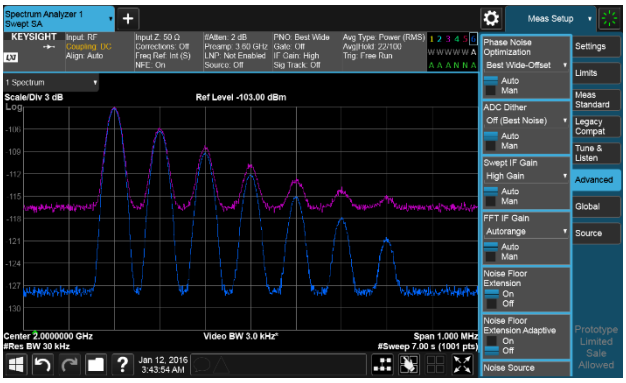
Develop and deliver new wireless devices

Summary of Key PXA Specifications

Frequency Range	**Minimum**: 2 Hz	**Maximum**: N9030B: 3.6, 8.4, 13.6, 26.5, 44, and 50 GHz (Up to 1.1 THz with external mixing) N9032B: 8.4, 13.6, 26.5, 44, and 50 GHz (Up to 1.1 THz with external mixing)
Analysis Bandwidth	N9030B: 25 (standard), 40, 85, 160, 255, and 510 MHz N9032B: 1, 1.5, and 2 GHz	
Displayed Average Noise Level (DANL)	-174 dBm at 2 GHz with preamplifier and Noise Floor Extension on	
Third-order Intermodulation (TOI) Distortion	+23 dBm at 2 GHz	
Phase Noise (10 kHz offset)	-136 dBc/Hz at 1 GHz; -124 dBc/Hz at 10 GHz	
Amplitude Accuracy	±0.19 dB	
Spurious-free Dynamic Range (SFDR)	-78 dBc nominal over 510 MHz bandwidth	
Real-time Bandwidth	N9030B: Up to 510 MHz N9032B: Up to 2 GHz	
Probability of Intercept (POI)	N9030B: Minimal signal duration of 3.51 µs for 100% POI and full amplitude accuracy N9032B: Minimal signal duration of 227 ns for 100% POI and full amplitude accuracy	



Get exceptional phase noise performance with optional direct digital synthesis local oscillator (DDS LO).



Accurately measure low-level signals to reduce measurement noise by up to 10 dB with Noise Floor Extension (NFE).

MXA X-Series Signal Analyzer

Drive forward in wireless with wider bandwidth and real-time analysis

The MXA is the optimum choice as you take new-generation wireless devices to market. It has the flexibility to quickly adapt to evolving test requirements, today and tomorrow.

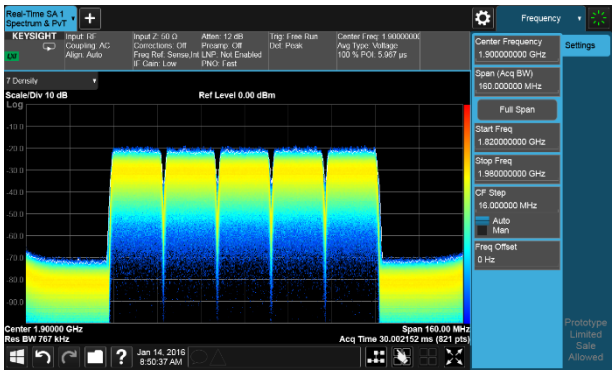
In R&D, characterize signals from virtually any wireless device quickly and confidently with up-to-date parametric or RF functional tests. To shorten design verification test times, the intuitive multi-touch interface minimizes measurement complexity, even when working with cutting-edge devices. In 5G manufacturing, the MXA helps you increase throughput and yield while minimizing costs with the fastest, most accurate signal and spectrum measurements in a midrange benchtop analyzer.



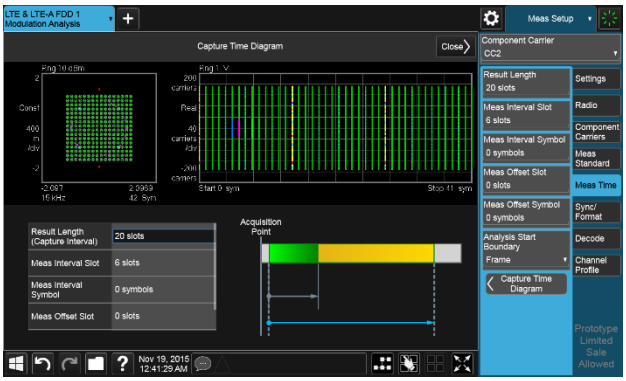
- Measure with greater confidence using best-in-class phase noise performance
- Use one instrument to analyze signals in baseband and RF subassemblies
- Get more complete signal characterization by capturing longer I/Q samples
- Test multi-channel base-station power amplifiers
- Accurately analyze complex signals such as 5G NR with EVM as low as 1% (–40 dB)

Summary of Key MXA Specifications

Frequency Range	**Minimum**: 10 Hz	**Maximum**: N9020B: 3.6, 8.4, 13.6, 26.5, 32, 44, 50 GHz, mixers to 1.1 THz N9021B: 8.4, 13.6, 26.5,32, 44, 50 GHz, mixers to 1.1 THz
Analysis Bandwidth	N9020B: 25 (standard), 40, 85, 125, and 160 MHz N9021B: 255 or 510 MHz	
Displayed Average Noise Level (DANL)	-172 dBm at 2 GHz with preamplifier and Noise Floor Extension on	
Third-order Intermodulation (TOI) Distortion	N9020B: +21 dBm at 2 GHz N9021B: +21 dB	
Phase Noise (10 kHz offset)	N9020B: -114 dBc/Hz at 1 GHz; -108 dBc/Hz at 10 GHz N9021B: -129 dBc/Hz at 1 GHz; -120 dBc/Hz at 10 GHz	
Amplitude Accuracy	N9020B: ±0.23 dB N9021B: ±0.41 dB	
W-CDMA ACP Dynamic Range	73 dBc (78 dBc with noise correction on)	
Spurious-free Dynamic Range (SFDR)	N9020B: -72 dBc (nominal) over 160 MHz bandwidth N9021B: -75 dBc (nominal) over 510 MHz bandwidth	
Real-time Bandwidth	N9020B: Up to 160 MHz N9021B: Up to 510 MHz	
Probability of Intercept (POI)	Minimal signal duration of 3.51 µs for 100% POI and full amplitude accuracy	



Debug transmitter designs for elusive transients with real-time spectrum analysis.



Perform advanced demodulation analysis of the latest standards and formats.

Enhance signal analysis with premium capabilities at a cost-effective price

The EXA is your first, best choice when you need maximum value in signal analysis up to millimeter-wave frequencies. It helps you find the answer faster, whether you're seeking tighter design margins or shorter test times.

With the EXA, you can save test time in your spurious response measurements with the fast sweep capability. To optimize mixer levels and maximize achievable dynamic range, the EXA is available with either a 2 dB/step mechanical attenuator (all frequency bands) or a 1 dB/step electronic attenuator (up to 3.6 GHz).



Cost-effective signal analysis up to millimeter-wave frequencies

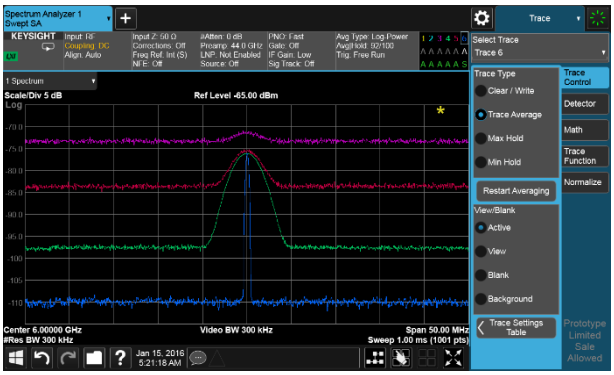
- Maximize speed, efficiency, throughput and value in signal analysis
- Enhance test margins and reduce error budgets with excellent performance
- Address multiple test needs with a variety of general-purpose measurement applications and frequency coverage
- Meet present and future test needs with upgradeable capabilities
- Increase system uptime with standard two-year calibration cycle

Summary of Key EXA Specifications

Frequency Range	**Minimum:** 10 Hz	**Maximum**: 3.6, 7, 13.6, 26.5, 32 or 44 GHz (Up to 1.1 THz with external mixing)
Analysis Bandwidth	25 (standard) and 40 MHz	
Displayed Average Noise Level (DANL)	-172 dBm at 2 GHz with preamplifier and Noise Floor Extension on	
Third-order Intermodulation (TOI) Distortion	+19 dBm at 2 GHz	
Phase Noise (10 kHz offset)	-109 dBc/Hz at 1 GHz; -102 dBc/Hz at 10 GHz	
Amplitude Accuracy	±0.27 dB	
W-CDMA ACP Dynamic Range	68 dBc (73 dBc with noise correction on)	



Achieve the optimal balance of price and performance with general-purpose measurements and enhanced phase noise.



Accurately characterize signals close to the noise floor without compromising sweep speed.

CXA X-Series Signal Analyzer

Master the essentials of signal characterization

The CXA is today's leading low-cost tool for essential signal characterization. Its capabilities provide a solid foundation for cost-effective testing in general-purpose and educational applications.

Address your versatile needs - Cost-reduction, throughput, and more

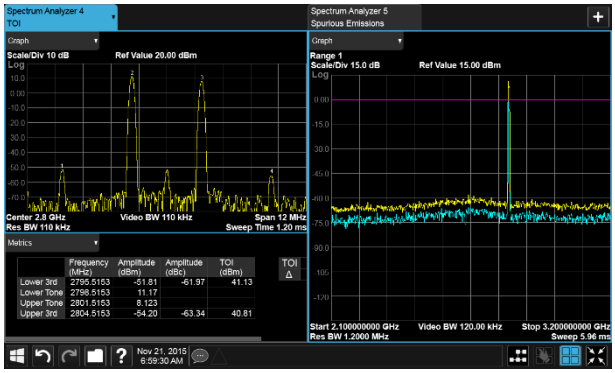
As with all X-Series signal analyzers, PowerSuite provides one-touch measurements of channel power, adjacent channel power (ACP), occupied bandwidth (OBW), and more. The built-in tracking generator enables cost-effective stimulus/response measurements using a single instrument. For added flexibility, you can quickly and easily reconfigure the CXA with measurement applications that fit changing testing requirements through license-key upgrades.



- Adds dependable signal analysis to manual and automated manufacturing test systems
- Leverage test-system software written for any X-Series signal analyzer
- Perform essential measurements such as spur searches and distortion analysis
- Accelerate product development and design enhancement while staying within budget
- Enhance theory with practical skills in classrooms and teaching labs

Summary of Key CXA Specifications

Frequency Range	**Minimum**: 9 kHz	**Maximum**: 3.0, 7.5, 13.6 and 26.5 GHz
Analysis Bandwidth	10 (standard) and 25 MHz	
Displayed Average Noise Level (DANL)	-163 dBm at 2 GHz with preamplifier on	
Third-order Intermodulation (TOI) Distortion	+17 dBm at 2 GHz	
Phase Noise (10 kHz offset)	-110 dBc/Hz at 1 GHz	
Amplitude Accuracy	±0.5 dB	
W-CDMA ACP Dynamic Range	66 dBc (73 dBc with noise correction on)	



Simplify complex tasks using limit lines and built-in distortion analysis measurements.



Perform essential signal characterization on signals with built-in markers and trace functions.

Confidently Covered by Keysight Services

Prevent delays caused by technical questions, or system downtimes due to instrument maintenance and repairs with Keysight Services. Keysight Services are here to support your test needs with expert technical support, instrument repair and calibration, software support, training, alternative acquisition program options, and more.

A KeysightCare agreement provides dedicated, proactive support through a single point of contact for instruments, software, and solutions. KeysightCare covers an extensive group of instruments, application software, and solutions and ensures optimal uptime, faster response, faster access to experts, and faster resolution.

Keysight Services

Offering	Benefits
KeysightCare 	KeysightCare provides elevated support for Keysight instruments and software, with access to technical support experts that respond within a specified time and ensure committed repair and calibration turnaround times (TAT). KeysightCare offers multiple service agreement tiers, including KeysightCare Assured, Enhanced, and Application Software Support. See the KeysightCare data sheet for details.
KeysightCare Assured	KeysightCare Assured goes beyond basic warranty with repair services that include committed TAT and unlimited access to technical experts.
KeysightCare Enhanced	KeysightCare Enhanced includes all the benefits of KeysightCare Assured plus Keysight's accurate and reliable calibration services, accelerated, and committed TAT, and technical response.
Keysight Support Portal & Knowledge Center	All KeysightCare tiers include access to the Keysight Support Portal where you can manage support and service resources related to your assets such as service requests, and status, or browse the Knowledge Center.
Education Services	Build confidence and gain new skills to make accurate measurements, with flexible Education Services developed by Keysight experts. Including Start-up Assistance.
Alternative product acquisition	
KeysightAccess	Reduce budget challenges with a subscription service enabling you to get the instruments, software, and technical support you want for your test needs.

Recommended Services

Maximize your test system up-time by securing technical support, repair, and calibration services with committed response and turnaround times. 1-year KeysightCare Assured is included in every new instrument purchase. Obtain multi-year KeysightCare upfront to eliminate the need for lengthy and tedious paperwork and yearly requests for maintenance budget. Plus, you benefit from secured service for 2, 3, or 5 years.

Service	Function
KeysightCare Enhanced*	**Includes Tech Support, Warranty and Calibration**
R-55B-001-1	KeysightCare Enhanced – Upgrade 1 year
R-55B-001-2	KeysightCare Enhanced – Extend to 2 years
R-55B-001-3	KeysightCare Enhanced – Extend to 3 years (Recommended)
R-55B-001-5	KeysightCare Enhanced – Extend to 5 years (Recommended)
KeysightCare Assured	**Includes Tech Support and Warranty**
R-55A-001-2	KeysightCare Assured – Extend to 2 years
R-55A-001-3	KeysightCare Assured – Extend to 3 years
R-55A-001-5	KeysightCare Assured – Extend to 5 years
Start-Up Assistance	
PS-S10	Included – instrument fundamentals and operations starter
PS-S20	Optional, technology & measurement science standard learning

* Available in select countries. For details, please view the datasheet. R-55B-001-2/3/5 must be ordered with R-55B-001-1.

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.

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