Signal, Spectrum, and Wireless Analyzers

CATALOG



KEYSIGHT

Table of Contents

3
Keysight Benchtop Signal and Spectrum Analyzers

4
Introduction

5
Benchtop Signal and Spectrum Analyzers

9
Modular Signal, Spectrum, and Wireless Analyzers

10
Handheld Spectrum Analyzers

11
Wireless Analyzers

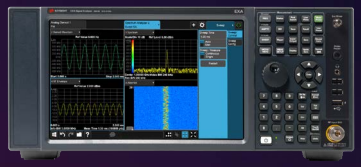
12
Audio Analyzers

13
Software and Accessories

14
Keysight Support Services

Keysight Benchtop Signal and Spectrum Analyzers

One family. Three performance grades. 4 classes.



ESSENTIAL

XA1, XA3-class

- 4 GHz to 50 GHz Maximum frequency
- 1 MHz to 510 MHz Maximum analysis bandwidth



EXPERT

XA5-class

- 32 GHz to 55 GHz Maximum frequency
- 40 MHz to 2 GHz Maximum analysis bandwidth



PRO

XA6, XA7-class

- 50 GHz to 110 GHz Maximum frequency
- 1 GHz to 8 GHz Maximum analysis bandwidth

Introduction

Keysight Signal and Spectrum Analyzers — from troubleshooting to complex RF testing

Keysight benchtop signal and spectrum analyzers are now offered in five capability classes across three performance grades. Essential, our most affordable entry-level signal and spectrum analyzers, can be configured as one of two classes — XA1 or XA3 — for the widest range of everyday measurements. Expert includes the XA5-class, extending the frequency range, real-time spectrum analysis, and multi-channel options. Pro includes XA6 and XA7-class, taking bandwidths to 8 GHz with real-time spectrum analysis. A comprehensive library of signal and spectrum analyzers are available to help you find the performance grade and class best suited to your lab.

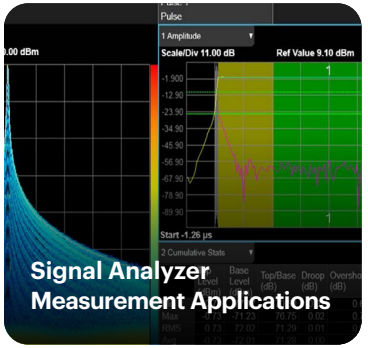


Get accurate signal measurements with signal and spectrum analyzers

To analyze signals in applications like wireless communications, radar, or satellite systems, precise and reliable measurements are critical. Keysight resources cover both basic and enhanced techniques to help you master signal and spectrum analyzers. These resources ensure you can accurately measure and interpret signals, ensuring optimal signal integrity and performance for your projects.







Benchtop Signal and Spectrum Analyzers

Keysight benchtop signal and spectrum analyzers enable you to troubleshoot and debug designs, perform higher-level RF analysis, and ensure compliance with next-generation standards like 5G New Radio (NR), Wi-Fi 6E / 7, and Narrowband IoT (NB-IoT). Select the analyzer performance you need based on maximum frequency and analysis bandwidth and phase noise. Explore our wide range of benchtop signal and spectrum analyzers from Essential to Pro performance grades to find the one that is right for your application.







	Essential **XA1, XA3-class**	Expert **XA5-class**	Pro **XA6, XA7-class**
Maximum frequency	**4 GHz to 50 GHz**	**32 GHz to 55 GHz**	**50 GHz to 110 GHz**
Maximum analysis bandwidth	**1 MHz to 510 MHz**	**40 MHz to 2 GHz**	**1 GHz to 8 GHz**
Phase Noise @ 1 GHz (10 kHz offset)	**-130 dBc/Hz to -90 dBc/Hz**	**-136 dBc/Hz to -114 dBc/Hz**	**-135 dBc/Hz**
DANL @ 1 GHz	**-167 dBm to -152 dBm**	**-171 dBm to -166 dBm**	**-174 dBm to -168 dBm**
Real-time spectrum analysis	**Varies**	**Varies**	**Varies**
Brands included	**BSA, CXA, EXA, MXA, and MXE models**	**PXA, PXE, and SA6210A models**	**UXA and SA6320A models**
	Explore	Explore	Explore

Essential Benchtop Signal and Spectrum Analyzers

Elevated capabilities in entry-level signal analyzer

Keysight Essential signal and spectrum analyzers come in two classes. The XA1-class includes BSA, CXA, and EXA models, and the XA3-class includes the MXA and MXE models. They go far beyond standard expectations, providing enhanced capabilities in an affordable entry-level model. They deliver the dynamic range, phase noise, and signal fidelity that you need for general-purpose testing including RF spectrum analysis, signal monitoring, and transmission / reflection measurements. The XA3-class offers real-time signal analysis for continuous acquisition of RF signals and deliver precise signal measurement and interference detection up to a max frequency of 50 GHz for general-purpose measurement and millimeter-wave applications. Choose one of our most popular configurations or build the one you need for your application.

Learn more about our Essential benchtop signal and spectrum analyzers

Low phase noise

Detect weak signals and ensure signal integrity in high-frequency communication, radar, and aerospace applications due to a stable internal reference oscillator.

High dynamic range

Accurately measure complex real-world scenarios with weak or strong signals and interference across a wide frequency range.

Enhanced signal analysis

Analyze and troubleshoot complex signals with support of more than 75 signal standards and modulation types to ensure signal quality, spectral emissions, and compliance.

Fast sweep speeds

Rapid spectrum analysis and transient signal detection, as fast as 1 millisecond per point, boosting efficiency in time-sensitive tests.

Class	Included Brands	Range of Performance Specifications				
		Maximum Frequency	Maximum Analysis Bandwidth	Phase Noise @ 1 GHz (10 kHz Offset)	DANL @ 1 GHz	Real Time Spectrum Analysis
XA1	BSA, CXA, and EXA models	4 GHz to 44 GHz	1 MHz to 40 MHz	-110 dBc/Hz to -90 dBc/Hz	-165 dBm to -152 dBm	No
XA3	MXA and MXE models	44 GHz to 50 GHz	160 MHz to 510 MHz	-130 dBc/Hz to -114 dBc/Hz	-172 dBm to -163 dBm	Yes

View popular configurations

Expert Benchtop Signal and Spectrum Analyzers

Complex signal analysis in an engineering-grade analyzer

Keysight XA5-class Expert signal and spectrum analyzers include the PXA, PXE, and SA6210A models. They build upon our Essential models with additional features like much wider analysis bandwidth, real-time spectrum analysis (RTSA) for continuous acquisition of RF signals, and multi-channel analysis. Measurement setup is simple with the multi-touch user interface, customizable views, and application-specific software in our Expert models that enable fast and accurate signal analysis with the touch of a button. Choose one of our most popular configurations or build the product you need for your application.

Learn more about our Expert benchtop signal analyzers

Real-time signal analysis

Capture intermittent or transient signals as short as picoseconds with real-time spectrum analysis.

Wide analysis bandwidth

Accurately measure signal characteristics and detect interference, spectral emissions, or harmonics across a wide range of frequencies.

Multi-touch interface

Perform most operations in two steps or less using the multi-touch user interface to ensure measurement integrity.

Remote software upgrades

Integrated Windows OS enables you to download measurement applications and instrument options with no downtime via license-key upgrades.

Class	Included Brands	Range of Performance Specifications				
		Maximum Frequency	Maximum Analysis Bandwidth	Phase Noise @ 1 GHz (10 kHz Offset)	DANL @ 1 GHz	Real Time Spectrum Analysis
XA5	PXA, PXE, and SA6210A models	32 GHz to 55 GHz	40 MHz to 2 GHz	-114 dBc/Hz to -136 dBc/Hz	-171 dBm to -166 dBm	Varies

View popular configurations

Pro Benchtop Signal and Spectrum Analyzers

Highest performance in a benchtop signal analyzer

Keysight Pro signal and spectrum analyzers come in two classes. The XA6-class include the SA6320A models, and the XA7-class include the UXA models. They are ideal for next-generation research and development and high-speed compliance testing to the latest standards like 5G NR (FR1 and FR2), Wi-Fi 6E / 7, and 802.11 ad/ay. Built upon our Expert models, Pro signal analyzers push the limits of performance with our highest frequency coverage, ultra-wide bandwidth, and lowest noise floor — designed to tackle your most difficult measurement challenges, including tight design margins and complex modulations. Choose one of our most popular configurations or build the one you need for your application.

Learn more about our Pro benchtop signal analyzers

Highest frequency coverage

High-precision analysis of higher-level communication systems, radar, and aerospace applications that require broad-spectrum testing.

Ultra-wide bandwidth

Wide analysis bandwidth up to 8 GHz allows simultaneous capture and analysis of multiple signals across broad frequency ranges for complex wireless and radar testing.

Lowest noise floor

Ultra-low noise with optional noise floor extension enabling the detection of weak signals with exceptional clarity and minimal interference through two-stage filter processing.

Precise signal clarity

Internal converters designed specifically for RF and microwave applications provide precise measurement in sensitive environments for minor frequency variations.

Class	Included Brands	Range of Performance Specifications				
		Maximum Frequency	Maximum Analysis Bandwidth	Phase Noise @ 1 GHz (10 kHz Offset)	DANL @ 1 GHz	Real Time Spectrum Analysis
XA6	SA6320A	67 GHz	8 GHz	—	—	No
XA7	UXA models	50 GHz to 110 GHz	1 GHz to 4 GHz	-135 dBc/Hz	-174 dBm to -168 dBm	Yes

View popular configurations

Modular Signal, Spectrum, and Wireless Analyzers

Benchtop capabilities in a compact form factor

Keysight modular signal and spectrum analyzers provide you the power of a benchtop signal analyzer in a compact, flexible form factor, helping you save valuable rack space. Get the same performance as our Essential signal analyzers in a high-density PXIe® module.

Select the modular signal analyzer that is right for your application.

See catalog

Maximum frequency	**26.5 MHz to 50 GHz**
Maximum analysis bandwidth	**10 MHz to 160 MHz**
Phase Noise @ 1 GHz (10 kHz offset)	**-110 dBc/Hz**
DANL @ 1 GHz	**-158 dBm to -163 dBm**



Handheld Spectrum Analyzers

Rugged and portable for comprehensive RF field testing

Keysight FieldFox handheld spectrum analyzers include the handheld analyzers. They are a versatile tool for RF field testing, offering comprehensive capabilities in spectrum analysis, vector network analysis, power measurements, and pulse generation. With over 25 license key-activated software options, remotely upgrade your analyzer to meet your field-testing needs. Key measurement capabilities include:

Spectrum analysis

Identify interference, verify signal coverage, optimize performance, and use gapless IQ data for spectrum monitoring, demodulation, and 5G NR quality metrics.

Vector network analysis

Perform in-depth troubleshooting and maintenance for RF cables and antennas, identifying faults with time-domain reflectometry, and measuring S-parameters.

Power measurements

Make accurate, user-definable channel power measurements with the built-in power meter. Pair with an external USB peak power sensor to efficiently characterize pulsed RF signals.

Signal generation

Generate analog modulations and user-defined pulse sequences with the built-in pulse signal generator.



VNA capabilities	**Model dependent**
Maximum frequency	**10 GHz to 54 GHz**
Maximum analysis bandwidth	**40 MHz to 120 MHz**

View popular configurations

Learn more about our handheld spectrum analyzers

Wireless Analyzers

Configurable test platform that captures and decodes

Keysight XA30-class wireless analyzers include WaveJudge models, offering end-to-end 5G solutions for modem, chipset, and radio access network (RAN). Provide field interoperability testing, enable fast debugging, and accelerate deployment. Our wireless analyzers provide problem-solving capabilities inside the wireless network through deep analysis tools that provide visibility into events spanning multiple layers. Locate protocol exchange errors not found in end equipment logs and understand how the PHY layer affects upper-layer performance.

Select the wireless analyzer that is right for your application.

Frequency range	**380 MHz to 6 GHz, 2 GHz to 11.4 GHz, 500 MHz to 8 GHz**
Chassis ports	**4 to 8**
Real-time	**LTE, eMTC, NB-IoT, 5G SA**

View popular configurations



Audio Analyzers

Configurable audio test solutions

Keysight AZ2-class audio analyzers include the U8903B. Designed for multi-function and high-performance measurements, Keysight's audio analyzer offers low residual distortion of less than -110 dB and an analysis bandwidth of 1.5 MHz. This ensures you achieve the highest resolution available for two-channel measurements. With versatile options including *Bluetooth*® audio measurements, digital audio, and voice quality analysis, our audio analyzer is fully configurable to meet your specific application needs. Experience precision and flexibility in audio testing.

Maximum frequency	**80 kHz**
Maximum analysis bandwidth	**1.5 MHz**
Phase noise @1 GHz (10 kHz offset)	**-110 dB**

View popular configurations



Software and Accessories

Find compatible software and accessories for your signal, spectrum, and wireless analyzer

Explore the wide variety of application-specific software for Keysight signal and spectrum analyzers. Characterize RF components with spectrum, waveform, amplitude, phase, gain amplitude, gain phase, and group delay measurements. Keysight signal analysis software integrates seamlessly with our analyzers, providing powerful tools for automated testing, signal analysis, and data visualization. Plus, we have various accessory options, such as external mixers, frequency extenders, and probes, making them suitable for a wide array of applications, from basic signal testing to more complex, high-frequency analysis. These software and accessory options offer the flexibility you need to tailor your signal and spectrum analyzer to your specific testing needs.





Discover our comprehensive signal and spectrum analyzer software options, including:

- vector signal analysis
- enhanced modulation analysis
- group delay measurements
- noise power ratio measurements
- time domain analysis
- noise figure measurement
- power amplifier measurement
- 5G NR measurement application

Explore software

Get more functionality out of your signal and spectrum analyzer by pairing it with the right accessories, including:

- noise source
- USB power sensor
- dynamic range USB average power sensor
- USB thermocouple power sensor
- USB peak power sensor
- LAN peak and average power sensor
- differential active probe

Explore accessories

Keysight Support Services

Explore the services that are right for you

Keysight Support Services can reduce your learning curve, enhance your uptime, guarantee the accuracy of your testing equipment, and provide the expertise you require, precisely when and where you need it.

Maximize your instrument uptime, quickly optimize your test measurements, and get the answers you need at our fastest available times. KeysightCare curated support plans bundle critical services with prioritized response and turnaround times. **High-performance instruments include one year of KeysightCare Assured.**

Explore support services



Calibration

Ensure your test system performs to specification and meets local and global standards.



Repair

Restore equipment to original functionality and specifications with trained technicians.



KeysightCare

Innovate at speed with curated support plans and prioritized response and turnaround times.



Education

Make measurements quickly with eLearning and in-house, instructor-led training.



Keysight Support

Get 24x7 access to service requests, case management help, and technical articles.

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.

This information is subject to change without notice.
© Keysight Technologies, 2025 – 2026, Published in USA, May 21, 2026, 7125-1016.EN