

Latest Keysight Products - Available NOW

Maximize Your Budget with Rentals of Keysight Test Equipment

Uncertain times may call for different equipment purchasing strategies while you continue to innovate next-generation wireless technologies. Rent our industry-leading RF, MW, and digital test equipment through our rental partners. Find the latest products including **PNA-X Network Analyzers**, **VXG Microwave Signal Generators**, **UXA Signal Analyzers**, and **UXR Infiniium Oscilloscopes** are readily available to get you started with your R&D and design validation. Keysight rental partners offer:

- Overnight delivery! ¹
- Flexible financial terms: use your operating budget, finance, or purchase over time
- Excellent service and support

PNA-X Network Analyzers

Characterize filters and amplifiers accurately with wide dynamic range



Infiniium Real-Time Oscilloscopes

Enable characterization and validation of designs for a broad range of applications



VXG Microwave Signal Generators

Test a variety of digital modulation formats for modern wireless communications systems



FieldFox Handheld Spectrum Analyzers

Perform measurements with one of the lightest instruments in the industry



1. For product in inventory, including but not limited to PNA/ PNA-X Network Analyzers, VXG/ MXG Microwave Signal Generators, UXA/ MXA Signal Analyzers, RCal Receiver Calibrators, ENA Vector Network Analyzers, UXR Infiniium real-time oscilloscopes, MXR Oscilloscopes.

Additional new product introductions available for immediate delivery include the following:

- ENA Vector Network Analyzers
- MXR-Series Oscilloscope
- UXA-Series Signal Analyzers
- MXA-Series Signal Analyzers
- RCal Module

Choose the Leader in Network Analysis

When characterizing active devices, the right mix of speed and performance gives you an edge. In research and development (R&D), the PNA vector network analyzer (VNA) family provides a level of measurement integrity that helps you transform deeper understanding into better designs. On the production line, our PNA network analyzers deliver the throughput and repeatability you need to transform great designs into competitive products.

Every Keysight VNA provides you with expertise in linear and nonlinear device characterization. Choose your PNA/PNA-X network analyzer – and reach for unrivaled excellence in your measurements and designs. [PNA/PNA-X Series Microwave Network Analyzers Selection Guide](#)

Keysight N522xB PNA / N524xB PNA-X Vector Network Analyzers Enhancement

Fast frequency converter measurements with simplified test setup

The new N522xB PNA and N524xB PNA-X vector network analyzers are enhanced with Keysight's proprietary low-spurious DDS (Direct Digital Synthesizers). It achieves extremely low phase noise and low spur levels that allows you to make fast mixer phase and group delay measurements. The new optional third RF source enables you to measure two-tone IMD of a mixer without using an external signal generator.



Figure 1. PNA-X Vector Network Analyzer

New DDS Source: High-performance analog-signal-generator grade phase noise helps save test time and simplify your test configuration.

More Sources: The third RF source on the 4-port PNA-X simplifies measurement configuration of complex measurements and saves bench footprint.

Meet your application needs: Modulation distortion application helps you to measure EVM/NPR of amplifiers, mixers, and frequency converters.

Unmatched Purity and Precision in Signal Generation

Keysight offers the widest selection of signal generators from baseband to 67 GHz, with frequency extensions to 1.1 THz. From basic to advanced functionality, each signal generator delivers benchmark performance in its class to address the requirements in design and manufacture of radio transceivers and their components; and applications ranging from low-frequency navigation signals, through cellular mobile radio, to millimeter wave radar, and satellite systems. Each offers synthesized frequency accuracy and stability, excellent calibrated level accuracy, and remote programmability. Modulation capabilities vary from general-purpose AM, FM, and digital I/Q to standard specific formats such as GSM, W-CDMA, HSPA, LTE, LTE-Advanced, GPS, and WLAN. Keysight provides signal generators in multiple form factors, including benchtop and modular PXI. [Signal Generator Selection Guide](#)

Advanced Signal Generation for Millimeter-Wave Applications

Keysight's VXG microwave signal generator offers the industry's highest output power with ultra-low phase noise for your most demanding wireless and aerospace and defense applications. With the VXG's dual-channel architecture, quickly switch from blocker and interferer tests to dual channel MIMO and beamforming tests.

- Dual-channel, multi-touch, millimeter-wave vector signal generator with 2 GHz RF bandwidth in a single instrument
- High output power to compensate for system loss and enable 5G power amplifier and over-the-air (OTA) testing
- Phase coherent LO and baseband synchronization for multi-user or beamforming MIMO OTA testing
- PathWave Signal Generation software to accelerate your design and test workflow

4 GHz Channel Bonding made possible with Keysight VXG, for wideband satellite test, digital pre-distortion, automotive radar, 6 G research and Radar & EW!

- Combine dual 2 GHz VXG channels into a single, coherently combined 4 GHz wide signal
- After initial setup, configure as one signal and PathWave Signal Generation will manage what plays on each channel



Figure 2. M9384B VXG

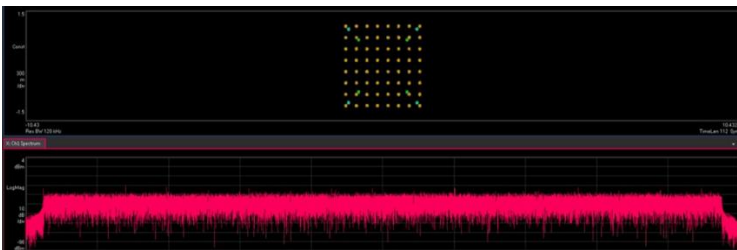


Figure 3. 4 GHz continuous BW

Spectrum Analyzer and Signal Analyzer Results You Can Trust

Keysight spectrum and signal analyzers provide reliable results, whether you need deep-dive measurements for solving tough problems in research and development (R&D) or quick and simple measurements for manufacturing.

- Easily troubleshoot with one-button measurements and the broadest set of application-specific software for industries such as 5G, IoT, automotive, and more
- Get results you can trust built on proven measurement science and a commitment to measurement integrity — whether you are optimizing your test for performance or throughput
- Achieve greater longevity of your test assets with upgradeable features, performance, and code compatibility

Find the Spectrum Analyzer That's Right for You

Choose from advanced benchtop, handheld, general purpose, and scalable modular analyzers, all with the broadest set of application-specific software. [X-Series signal analyzers Selection Guide](#)

Breakthrough Signal Analysis for 5G and Satcom

At mmWave frequencies, signal quality is more susceptible to impairments such as modulation errors, phase noise, and distortion. The new N9042B UXA X-Series signal analyzer provides the industry's widest analysis bandwidth and deepest dynamic range to help you solve your most difficult mmWave challenges.

- 2 Hz to 110 GHz unbanded, preselected frequency range
- 11 GHz maximum analysis bandwidth
- 4 GHz of calibrated analysis bandwidth to test high-throughput communications designs (when paired with Keysight VXG Signal Generator)
- Best EVM residuals and sensitivity lets you more accurately characterize your transmitters
- Best swept DANL enables you to see small signals near noise and quickly find spurs without having to narrow RBW and slow sweep speed
- Best dynamic range enables you to see small signals in the presence of large ones
- Industry's best frequency extenders – unbanded and preselected up to 110 GHz. You no longer need to manage band breaks and images using external harmonic mixers
- Remote head format moves the measurement to the device under test
- Order of magnitude improvement in accuracy by compensating for path losses with the world's first RCal receiver calibrator (Keysight U9361)



Figure 4. N9042B UXA with V3050A Frequency Extender for 5G NR

Carry Precision Into the Field With the Industry's Most Integrated Handheld Analyzer

Keysight's FieldFox portable analyzers are equipped to handle your toughest working environments during routine maintenance, in-depth troubleshooting, and anything in between. Choose the software-enabled Keysight FieldFox configuration that best meets your needs. [FieldFox Handheld Analyzers Selection Guide](#)

- Get frequency coverage up to 54 GHz with precision comparable to benchtop results.
- Configure FieldFox as a cable and antenna analyzer (CAT), vector network analyzer (VNA), spectrum analyzer, or an all-in-one combination analyzer.
- Make 5G field test a reality with wide analysis bandwidth up to 120 MHz.
- Capture small, interfering signals with wideband, real-time analysis.
- Perform measurements with one of the lightest instruments in the industry — 30% lighter than any other



Figure 5. 5G field test using FieldFox handheld analyzers

Oscilloscope Measurements You Can Count On

Whether you design, debug, or perform compliance tests, you need proven measurement technology to be successful. Our oscilloscope hardware, with industry-leading signal integrity, high effective number of bits (ENOB), and the fastest waveform update rates, captures the true performance of your device under test. Couple this with superior protocol decoding, analysis, and compliance software, and you're guaranteed to get measurements you can trust.

Whether you need high signal integrity, a portable form factor, or an affordable oscilloscope, we've got you covered. With our broad range of oscilloscopes, you are sure to find the right scope no matter where you are in the development cycle.

Confidently Measure with a Keysight Award Winning Oscilloscope

Developing next generation technology requires world-class signal integrity from your test equipment. Achieve design insights you never thought possible with the highest bandwidth, highest ENOB, and lowest noise floor. Keysight's breakthrough technology enables you to conquer even the most difficult measurement and design challenges.

- 5 to 110 GHz of bandwidth, with the most comprehensive set of probing, analysis applications, and measurements for advanced technologies
- Most accurate oscilloscope at any bandwidth - lowest noise, highest ENOB, and 10-bit vertical resolution enable you to see the truest representation of your signal
- Solve problems faster with hardware-accelerated measurements and analysis
- EVM performance for wideband mmWave measurements that rivals even the best signal analyzers
- Protect your investment with a fully upgradeable, multipurpose platform capable of time domain, frequency domain, and phase noise measurements - the last oscilloscope you will ever need to purchase

For more information read [Infiniium UXR-Series Oscilloscopes Datasheet](#)



Figure 6. UXR1004A 100 GHz, 4-channel UXR-Series-real time Infiniium oscilloscope

Infiniium MXR-Series of Real-Time Oscilloscopes

See More. Do More. Save Time.

The Infiniium MXR-Series oscilloscopes are your window into the intricate interactions of complex designs. Offering illuminating views of all your crucial signals, the MXR-Series helps you go from symptom to root cause to resolution in minutes instead of hours. Leveraging the same hardware acceleration ASIC as the Infiniium UXR-Series, the MXR-Series accelerates eye plots and triggering with the excellent signal integrity that you've come to expect from Keysight. The MXR-Series also lets you future-proof your budget because it is fully upgradeable, including the number of channels and bandwidth. Buy what you need today and add more to your MXR-Series oscilloscope later.

- 500 MHz to 6 GHz on all 4 or 8 analog channels
- Faster test speeds than ever before with ASICs from the Infiniium UXR-Series
- Accurate measurements with effective number of bits (ENOB) up to 9.0, noise as low as 43 μ V
- 8-in-1 instrument integration: oscilloscope, logic analyzer, protocol analyzer, DVM, counter, real-time spectrum analyzer, bode plotter, and waveform generator in one unit
- Full HD 1920 x 1080 resolution on a 15.6-inch display that can be extended or duplicated to a large monitor
- Upgradeable in every possible way with dozens of options to make testing faster, easier, and less prone to human error



Figure 7. MXR Real-Time Oscilloscopes

Plus, your equipment is expertly calibrated and serviced by our partners, so you can focus on what matters most. Download the [RF and Microwave Rental Products Catalog](#) and [High Performance Digital Rental Products Catalog](#) to learn more.

Contact Keysight Premier Rental Partners to Get a Quote Now!

Premier Rental Partners

Americas

- Electro Rent: <http://www.electrorent.com/us/manufacturers/keysight-technologies>
- TRS-RenTelco: <http://www.trsrentelco.com/keysight>

Europe, Middle East, India and Africa

- Electro Rent: <http://www.electrorent.com/us/manufacturers/keysight-technologies>
- TRS-RentalTec: <https://rentaltec.com/keysight>

Asia Pacific

- Orix Rentec: www.orixrentec.jp/index.html
- SMFL Rental Company Limited: <http://www.smfl-r.co.jp/english>
- Yokogawa Rental & Lease: <http://www.yrl.com/index.html>
- Lotte Rental: <http://www.lotterental.com>

To Learn More

- PNA-X Network Analyzers
- Infiniium Real-Time Oscilloscopes
- VXG Microwave Signal Generators
- FieldFox Handheld Spectrum Analyzers
- ENA Vector Network Analyzers
- UXA-Series Signal Analyzers
- MXA-Series Signal Analyzers
- RCal Module

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RIGHT Instrument. FLEXIBLE Terms.
FAST Delivery.

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