

RF Vector Transceivers

CATALOG



Table of Contents

3

Keysight RF Vector Transceivers

4

Introduction

5

Wireless Test Sets

6

Multiband Vector Transceivers

7

Multiport RF Vector Transceivers

8

Modular Transceivers

9

Software and Accessories

10

Keysight Support Services

Keysight RF Vector Transceivers

One family. 3 classes.



WIRELESS TEST SETS

VT4-class

- 7.3 GHz Maximum frequency
- 800 MHz Maximum bandwidth



MULTIBAND VECTOR TRANSCEIVERS

VT5-class

- 6 GHz to 49.2 GHz Maximum frequency
- 600 MHz to 1.2 GHz Maximum bandwidth



RF VECTOR TRANSCEIVERS

VT7-class

- 7.25 GHz Maximum frequency
- 200 MHz Maximum bandwidth per port

Introduction

Keysight RF Vector Transceivers — from basic to high-level MIMO and 5G testing

Keysight RF vector transceivers are now offered in three capability classes across wireless test sets, multiband, and multiport RF transceivers. Wireless test sets include the VT4-class, multiband includes the VT5-class, and multiport include the VT7-class. Explore our wide range of RF vector transceivers, including both benchtop and modular platforms, designed to generate, receive, and analyze complex RF signals for a wide variety of applications like 5G / 6G, radar, and satellite systems, both in the lab or on the production floor. With a wide variety of RF vector transceivers to choose from, understanding which capabilities best suit your application needs can help you make more informed decisions about how to maximize the benefits of your RF vector transceiver and unlock its full potential. That's why we offer a comprehensive library of [RF vector transceiver resources](#).



Get better insights with repeatable and accurate results

An RF vector transceiver is critical for testing wireless devices and 5G infrastructure equipment. Whether you are working in research and development or manufacturing, you need reliable, repeatable, and accurate testing across multiple standards. Keysight resources cover the basics and complex applications to help you fully utilize the capabilities of RF vector transceivers.

Here are a few examples of the resources you will find to help you select the RF vector transceiver that is right for you:



Wireless Test Sets

Comprehensive testing of wireless devices

Keysight wireless test sets are now offered in one capability class, the VT4-class, and include the E6600 Series wireless test sets. These test sets streamline R&D and manufacturing testing of wireless devices that support multiple standards — including 5G New Radio (NR), Wi-Fi® 802.11ax, and WLAN — all within a single platform. Optimized for high-volume production, these test sets deliver high throughput through higher-level hardware capabilities and robust software automation, reducing delays and maximizing efficiency. Their modular, scalable design adapts to evolving test requirements while simplifying setup and integration. Choose one of our popular configurations or build one specific to your application.

> [Learn more about our wireless test sets](#)

Automation-ready

Enables fast, automated device calibration and final verification through high-speed hardware sequencing and software automation, ideal for high-throughput manufacturing.

Multistandard support

Supports various standards like 5G NR, LTE, Wi-Fi 802.11ac / ax, WLAN, *Bluetooth*®, and *Zigbee*® for efficient testing of complex, multi-radio wireless devices.

Modular architecture

Supports up to 32 ports and four transceivers within a single chassis, enabling simultaneous multidevice or multiport testing for maximum throughput and efficiency.

Built-in switching

Internal switching simplifies test setups by eliminating the need for external hardware, enabling flexible configurations, and supporting multiple devices and antennas.



Maximum frequency	7.3 GHz
Maximum bandwidth	800 MHz
Number of ports per transceiver	4 to 8
Number of transceivers	1, 2, 3, 4

[View popular configurations](#)

Multiband Vector Transceivers

Wideband RF transceiver testing

Keysight multiband RF vector transceivers are now offered in one capability class, the VT5-class, and include the S9100A-S9130A multiband RF vector transceivers. These transceivers provide broad frequency coverage and wide bandwidth, enabling comprehensive testing of 5G infrastructure equipment, including transmit, receive, fading simulation, and over-the-air (OTA) scenarios. They support both 5G frequency range 1 (FR1, sub-6 GHz) and frequency range 2 (FR2, mmWave) bands in a compact, scalable system that streamlines setup and adapts to evolving needs. Leverage the extensive Keysight software portfolio for signal generation and analysis and streamlined automation. Choose one of our popular configurations or configure one specific to your application.

[Learn more about our multiband RF vector transceivers](#)

Full-spectrum 5G testing

Supports end-to-end 5G testing across FR1 (sub-6 GHz) and FR2 (mmWave) bands in a single system, minimizing rack space and simplifying test setups.

Wide instantaneous bandwidth

Enables single-measurement capture and analysis of complex wireless signals, improving test speed, accuracy, and support for technologies like multiple-input multiple-output (MIMO), and beamforming.

Integrated and scalable

Combines critical test functions, including transmit, receive, fading simulation, and over-the-air (OTA) testing, into a single scalable system, ensuring interoperability and optimized workflows.

Multichannel synchronization

Enables tight timing and phase alignment across multiple transmit and receive paths, important for complex wireless testing like multi-antenna systems and phased array validation.



Maximum frequency	6 GHz to 49.2 GHz
Maximum bandwidth	600 MHz to 1.2 GHz
Wireless standard	High IF, FR1, FR2, 5G NR

[View popular configurations](#)

Multiport RF Vector Transceivers

High-channel density, signal generation, and analysis

Keysight multiport RF vector transceivers are now offered in one capability class, the VT7-class, and include the E6400A Series and S9160A multiport RF vector transceivers. These transceivers deliver scalable, high-performance 5G testing with up to 64 phase and time-coherent RF transceivers, simplifying MIMO and beamforming validation. Supporting frequencies up to 7.25 GHz and 200 MHz of bandwidth per port, the platform supports a wide range of deployment scenarios without requiring hardware changes. High signal fidelity ensures accurate testing of complex modulation schemes, while the modular architecture makes it easy to upgrade as wireless standards evolve. Choose one of our popular configurations or configure one specific to your application.

[Learn more about our multiport RF transceivers](#)

High-channel density

Supports up to 64 phase and time coherent transceivers, streamlining MIMO and beamforming tests by reducing complexity, rack space, and synchronization challenges.

Broad application support

Supports 3GPP 5G NR base station and O-RAN Radio Unit conformance tests using a single hardware platform, reducing setup complexity, test time, and cost.

High signal fidelity

Low phase noise, high spectral purity, and low error vector magnitude (EVM) enable reliable testing of massive MIMO and beamforming applications.

Standards-compliant software

Generates and analyzes signals to comply with the latest standards like 5G and O-RAN, enabling accurate, repeatable testing across real-world conditions.



Maximum frequency	7.25 GHz
Maximum bandwidth per port	200 MHz
Maximum number of transceivers	16 to 64
Bundled with software	No, Yes

[View popular configurations](#)

Modular Transceivers

Scalable signal generation and analysis for wireless testing

Keysight modular PXIe vector transceivers enable flexible, scalable signal generation and analysis, ideal for manufacturing testing of wireless devices, RF power amplifiers, and front-end modules.

When paired with PXIe controllers, frequency references, and frequency synthesizers to create a complete test system. Our modular PXIe vector transceivers deliver precise, synchronized performance and streamlined automation to accelerate throughput and production workflows.

With models supporting maximum frequencies from 60 MHz to 26.5 GHz and bandwidth up to 1.2 GHz, select the modular signal generator that is right for your application.

[See catalog](#)

Maximum frequency	6 GHz to 26.5 GHz
Bandwidth	160 MHz to 1.2 GHz



Software and Accessories

Explore the wide range of signal analysis and generation software available for our RF vector transceivers. Keysight RF vector transceiver software, tailored for various applications and standards, including 5G NR, MIMO, massive MIMO, O-RAN, and OTA testing, provides broad wireless standard coverage and efficient automation for high-throughput test sequencing. Pair your RF vector transceiver software with accessories, including a mmWave remote radio head or power sensor, to make the right measurements for your application.



Power your RF vector transceiver with a wide range of specialty software:

- standards-compliant signal generation and analysis
- test sequencer automation
- pulse radar analysis
- Open RAN Radio Unit (O-RU) testing and validation
- noise figure measurements
- power amplifier measurements

[Explore software](#)



Get more functionality out of your wireless test set by pairing it with the right accessories, including:

- mmWave remote radio head
- common interface unit
- embedded controller
- power sensors
- cabling
- chassis
- rack-mount kit

[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.

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