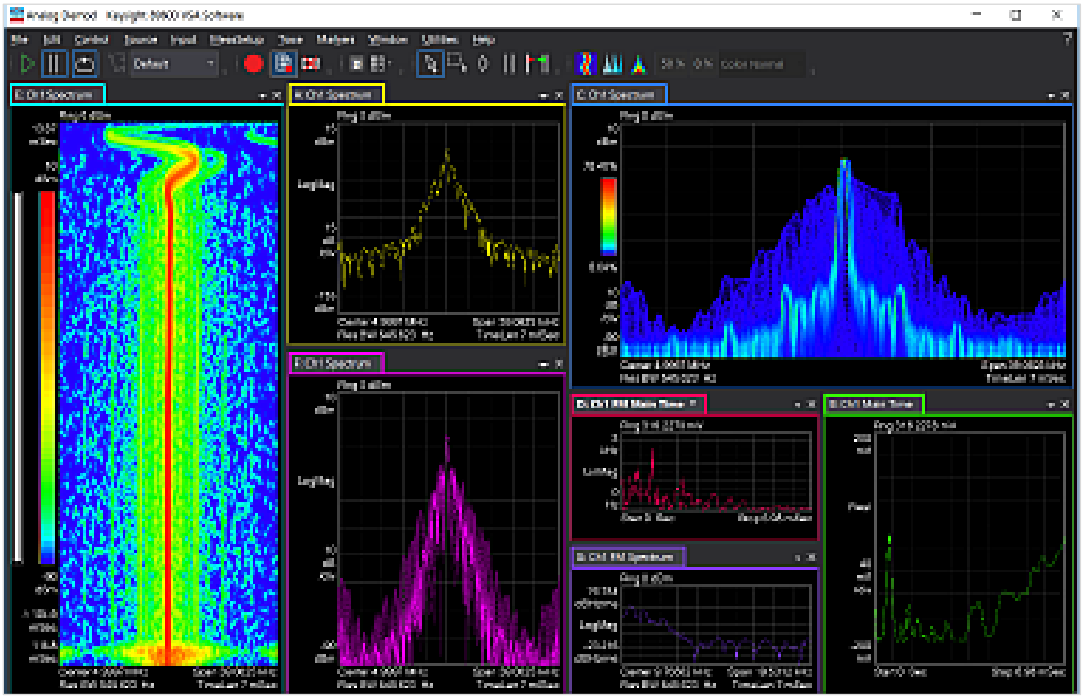
Keysight Vector Signal Analysis (89600 VSA) Software

See Through the Complexity

Development becomes more complex when faster data rates intersect with today's crowded spectral environment. Finding a signal problem is essential—but achieving the clarity to pinpoint the answer is the crucial challenge. Keysight Vector Signal Analysis (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, Keysight Vector Signal Analysis (89600 VSA) helps you see through the complexity.

Configure Your New Software

This step-by-step process will help you configure your new Keysight Vector Signal Analysis (VSA) software when making your initial order. See the upgrade section to learn how to add any of these options after initial purchase.



Beginning with **Step 1**, determine the license type you need.

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Did you know…

Connectivity to over 45 Keysight instrument platforms, is a standard feature of Basic VSA (One of tiered options 89601200C, 89601201C, 89601202C or 89601203C required)

For a complete list of hardware platforms, visit www.keysight.com/find/89600_hardware

Step 1: Choose Basic Vector Signal Analysis and Hardware Connectivity Tiered Option

Model	Description	Additional information
89601200C[2]	Legacy Advanced vector signal analysis all-inclusive with no frequency, bandwidth limits, up to 64 channels support and 512 parallel instances	• Conduct time and frequency domain analysis with up to 409,601 points FFT; Provide flexible traces and displays with simultaneous and multi-measurements • Support analog demodulation of AM, FM, or PM signals • Support stimulus-response measurements like AM/AM, AM/PM, and gain compression for power amplifiers or mixers • Support advanced trigger with selectable level, slope, delay, and hold-off • Record the acquired signal waveforms to playback for troubleshooting • Make group delay measurements using a simple wideband multi-tone stimulus signal • Perform simple and repeatable phase and magnitude channel response analysis • Import/export the multi-tone stimulus definition from/to Keysight N7621B Signal Studio software (channel quality mod analysis) • Support synchronous (simultaneous) or sequenced acquisition mode for multiple measurements • Links to Keysight EDA SystemVue and ADS • Connectivity to more than 45 Keysight hardware platforms and 400 models including X-Series signal analyzer, oscilloscopes, logic analyzers, transceivers, digitizer, vector network analyzer, RF sensor, wirelesses test set, radio test set etc. • Connectivity to Keysight Signal Generators for source control • Power spectrum with PXIe VSA M9393A/M9391A
89601201C[1,2]	Advanced vector signal analysis all-inclusive with no frequency, bandwidth limits, up to 64 channels support and 512 parallel instances	
89601202C[1,3]	Standard vector signal analysis up to 55 GHz center frequency, 2.16 GHz IF/BBIQ bandwidth, up to 4 channels support and 4 parallel instances	
89601203C[1,4]	Essentials vector signal analysis up to 8 GHz center frequency, 160 MHz IF/BBIQ bandwidth, single channel support and single instance	
(one required)		

Notes:

1. From VSA 2025 U1 (29.20) release, 89600 VSA software introduces three tiered basic core and hardware connectivity options as 89601201C, 89601202C, and 89601203C designed to balance cost and capability for a wide range of measurement needs.
2. For existing 89600 VSA users, the legacy 89601200C license seamlessly transitions into the Advanced tier (89601201C), providing the same robust capabilities and measurement flexibility. It is fully compatible with 89600 VSA software VSA2019 Update 1 or above releases, including those released following the VSA 2025 U1 (29.20) release. This ensures continuity for existing users while offering access to the latest features.
3. 89600 VSA can support upgrade from 89601202C standard tier to advanced tier together with 89601201U. 89601202C plus 89601201U can increase the capabilities to no limits on center frequency, IF/BBIQ bandwidth, and up to 64 measurement channels and 512 parallel VSA instances. This requires VSA2025 U2 (29.40) or above release.
4. 89600 VSA can support upgrade from 89601203C essential tier to standard tier together with 89601202U. 89601203C plus 89601202U can increase the capabilities to limits on center frequency up to 55 GHz, IF / BBIQ bandwidth up to 2.16 GHz, and up to four measurement channels and four parallel VSA instances). This requires VSA2025 U2 (29.40) or above release.

Try before you buy!

Download Vector Signal Analysis (89600 VSA) software and use it free for 30 days.
Please visit www.keysight.com/find/89600_trial

Step 2: Add Other 89600 VSA Measurement Applications

Model	Description	Note
General purpose		
89601AYAC	Digital modulation analysis	• Analysis of >40 modulation formats, including custom APSK and presets for communication formats like GSM/EDGE, ZigBee FSK, Bluetooth® BR, APCO25, 802.15.3d, and SOQPSK • Proprietary and pre-standard, customized IQ constellation signals. • TEDS modulation analysis • Channel response measurements like phase/magnitude response and multi-tone group delay • Supports Digital Demod, Custom IQ and Flexible Frame measurements
89601BHFC	Custom OFDM modulation analysis	• Proprietary and pre-standard OFDM formats such as WLAN, DAB, DVB-T/H, DVB-SH, ISDB-T and more…
89601PSMC	PowerSuite measurement	• Support PowerSuite SEM and ACP measurements with FFT mode • Support multiple spectrum regions and multiple acquisition with narrow IF bandwidth
Cellular communication		
89601BHNC	5G NR/5G-Advanced modulation analysis	• 5G NR and 5G-Advanced modulation analysis • Pre-5G modulation analysis
89601ULPC	O-RAN ULPI Measurement for 5G NR	• Requires option 89601BHNC for 5G NR/5G-Advanced • Support ULPI (Uplink Performance Improvement) for O-RAN to enhancement massive MIMO
89601BHGC	LTE/LTE-A FDD modulation analysis	• LTE FDD modulation analysis • LTE-Advanced FDD modulation analysis
89601BHHC	LTE/LTE-A TDD modulation analysis	• LTE TDD modulation analysis • LTE-Advanced TDD modulation analysis
89601B7NC	3G modulation analysis bundle	• W-CDMA/HSPA+ modulation analysis • TD-SCDMA/HSPA modulation analysis • cdma2000 modulation analysis • 1xEV-DO modulation analysis • 1xEV-DV modulation analysis
Wireless connectivity		
89601B7RC	Wireless connectivity modulation analysis	• WLAN 802.11a/b/g/j/p modulation analysis • WiMax® modulation analysis
89601BHXC	High throughput WLAN modulation analysis	• WLAN 802.11n/ac modulation analysis • WLAN 802.11ax/be modulation analysis
89601BHTC	IoT modulation analysis	• NB-IoT modulation analysis • RFID modulation analysis • IEEE 802.15.4/4z HRP UWB
Radar analysis		
89601BHQC	Pulse analysis	• Pulsed modulated radar signal analysis • FM linear chirp, frequency hopping signal analysis in advanced radar
89601BHPC	FMCW radar analysis	• For multi-chirp linear FM modulated signals or automotive radar
Other standard formats		
89601101C	Direct Data Connectivity	• Allow user to use their own data input stream for 89600 VSA measurement • DIFI compatible
89601301C	Multi-vendor hardware connectivity	• Connect multi-vendor hardware for modulation analysis
89601BHMC	DOCSIS modulation analysis	• DOCSIS3.1 and 4.0 downstream and upstream modulation analysis
89601EVMC	EVM Improvement with ccEVM and IQ-NC	• Improve EVM performance with Cross-Correlated EVM technology by noise cancellation by multiple receivers working for 5G NR, WLAN, Custom OFDM, FlexFrame, DVB-S2/S2X • Improve EVM performance with IQ Noise Correction (IQ-NC) technology
89601CC1C	Phase Coherent Channel Count Expander up to 8-Port	• Phase Coherent Channel Count Expander Up to 8-Port with Sequential Acquisition
86901CC2C	Phase Coherent Channel Count Expander up to 64-Port	• Phase Coherent Channel Count Expander up to 64-Port with Sequential Acquisition
89601CSDC	Channel sounding analysis	• Perform channel sounding measurement with coded channel sounding reference waveforms
89601DVBC	Satellite Communication	• DVB-S2/S2X modulation analysis and DVB-S2X Super-Frame support with Format 5/6/7

Step 3: Select Desired License Type, License Term and Subscription

Each of the following license types are offered as perpetual or subscription licenses as shown in the table below. A valid support contract is included with subscription licenses. For perpetual license, a separate support contract is required to access Keysight technical support and software updates.

License type	Description
Node-locked	Allows you to use the license on one specified instrument/computer.
Transportable	Allows you to use the license on one instrument or computer at a time. This license may be transferred to another instrument or computer using Keysight's online tool.
USB Portable	Allows you to move the license from one instrument/computer to another by end-user only with certified USB dongle, which is purchased separately.
Floating	Allows you to access the license on networked instruments/computers from a server, one at a time. For concurrent access, multiple licenses may be purchased. Three types of floating license are available: **Single Site**: 1-mile radius from the server; **Single Region2**: Americas; Europe; Asia; Worldwide (export restriction identified in End User License Agreement (EULA))
Perpetual	Software license can be used in perpetuity
Subscription	Software license is time limited to a defined period, such as 12 months.

Note: Americas (North, Central, and South America, Canada); Europe (European Continent, Middle Eastern Europe, Africa, India); Asia (North and South Asia Pacific Countries, China, Taiwan, Japan)

Subscription	Description
KeysightCare support subscription	Perpetual licenses are sold with a 3, 6, 12 (default), 24, 36, or 60-month software support subscription. Support subscriptions can be renewed for a fee after that.
	Subscription licenses already include a software support subscription through the term of the license.

Step 4: Confirm 89600 VSA Ordering Information

Software license type and term	Software license	Support subscription
Node-locked perpetual	SW1000-LIC-01	SW1000-SUP-01
Node-locked subscription	SW1000-SUB-01	Included
Transportable perpetual	SW1000-LIC-01	SW1000-SUP-01
Transportable subscription	SW1000-SUB-01	Included
USB Portable perpetual	SW1000-LIC-01	SW1000-SUP-01
USB Portable subscription	SW1000-SUB-01	Included
Floating perpetual (single site)	SW1000-LIC-01	SW1000-SUP-01
Floating subscription (single site)	SW1000-SUB-01	Included
Floating perpetual (single region)	SW1000-LIC-01	SW1000-SUP-01
Floating subscription (single region)	SW1000-SUB-01	Included
Floating perpetual (worldwide)	SW1000-LIC-01	SW1000-SUP-01
Floating subscription (worldwide)	SW1000-SUB-01	Included

Upgrade your existing software

All Keysight Vector Signal Analysis (VSA) software options can be added after initial purchase and are license-key enabled. Some require the latest software version. To learn more and upgrade your software, visit www.keysight.com/find/89600_upgrades

To determine if you already have a licensed measurement option: For transportable licenses, go to the 89600 VSA toolbar and select **Utilities > Licenses… > Options**. The options you have installed are indicated with a Yes.

For floating licenses, check with your network manager to determine the Option 89601200C quantity in your system.

Configuration Example

In this example with 89600 VSA, 5 people can use the 89600 VSA software at the same time because of quantity of 5 option 89601201C floating licenses have been purchased. This means that at any one time, two users can make LTE/LTE-A FDD measurements because two LTE/LTE-A FDD option 89601BHGC licenses have been purchased, three users can make 5G NR/5G-Advanced measurements because one 5G NR/5G-Advanced option 89601BHNC license has been purchased, and two more users can use 89600 VSA software to make basic time and spectrum measurements (without LTE/LTE-A FDD or 5G NR/5G-Advanced).

Model-License	Description	Quantity
89601201C-1NP	Basic vector signal analysis and hardware connectivity, floating (single site) perpetual license	5
89601BHGC-1NP	LTE/LTE-A FDD modulation analysis, floating (single site) perpetual license	2
89601BHNC-1NP	5G NR/5G-Advanced modulation analysis, floating (single site) perpetual license	3

Update and Subscription Service

Protect your software investment

A 12-month subscription to 89600 VSA software must be included with each 89601201C, 89601202C, or 89601203C basic core and hardware connectivity initial purchase. You may also purchase additional KeysightCare support subscription at the time of initial purchase or after the initial purchase, to gain immediate access to the latest features and enhancements for the 89600 VSA software (2025 Update 1.0 or higher), after the initial 12-month subscription period expires. To check that your software and license are up to date, follow these steps:

Check the version number of your software by selecting Help > About in the 89600 VSA software toolbar and comparing that to the current version number found at www.keysight.com/find/89600_updates.

If you do not have the current version of the Keysight Vector Signal Analysis (VSA) software, check your license version (YYYY.MMDD) by selecting Utilities > Licenses… in the 89600 VSA software toolbar. Compare this to the license version required for the current version available at www.keysight.com/find/89600_updates.

If your license version is greater than or equal to the current license version, no new license is need. Simply download and install the new software version.

If your license version is lower than the current version, please contact Keysight to renew the 89601200C, 89601201C, 89601202C or 89601203C KeysightCare support subscription to update your software.

Current license	Renew KeysightCare support subscription	Note
89601200C (Legacy)	Extend 89601200C version date	Please contact Keysight to extend the 89601200C license version date
89601201C (New)	Extend 89601201C version date	Please contact Keysight to extend the 89601201C license version date
89601202C (New)	Extend 89601202C version date	Please contact Keysight to extend the 89601202C license version date
89601203C (New)	Extend 89601203C version date	Please contact Keysight to extend the 89601203C license version date
89601xxxC	Extend 89601xxxC feature license version date	Please contact Keysight to extend the 89601xxxC feature license version date

PC Requirements

Any laptop, desktop or Windows-based instrument may be used to run Keysight Vector Signal Analysis (VSA) software, as long as it meets or exceeds the following minimum requirements. For a list of the most current requirements, see www.keysight.com/find/89600-pc

Operating system	Windows 10 Professional, or Enterprise or Educational (64-bit for 89600 version above v22.0) or Windows 11
CPU	1 GHz (>2 GHz recommended)
RAM	2 GB (16 GB recommended)
Video RAM	128 MB minimum (1 GB recommended)
Windows experience index	>5 (recommended)
Hard disk	3 GB minimum available
Additional drives	DVD or network access to load the software; license transfer requires network access or a USB memory stick
Interface support	LAN, GPIB, USB For USB portable license, a USB port is necessary for license activation with a dongle (USB hardware key).
Browser	Internet explorer v9.0 or higher required for more reliable context sensitive online help functionality

Floating License Server Requirements

Keysight Vector Signal Analysis (VSA) floating license requires loading a vendor daemon on a license server. This server may be the same PC running Keysight Vector Signal Analysis (VSA) software. Full installation instructions and support are provided for compatible server operating systems: Windows 10 (x64, 64-bit), Windows 10 (x86, 32-bit), Linux Red Hat (64-bit) (VSA version above v22.0), Windows 11 (VSA Version 2024 Update 1.0 or above)

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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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