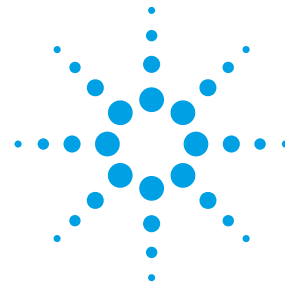


89601B/BN-105 Link to EEs of ADS/SystemVue 89600 VSA Software



Technical Overview

The Option 105 capability is now included as a standard component of Option 200. Option 105 will no longer be orderable after December 2012. Please refer to the 89600 VSA Software technical overview for Option 200/300, literature number 5990-6405EN for more information.
<http://cp.literature.agilent.com/litweb/pdf/5990-6405EN.pdf>



Key Features

- Add the 89600 VSA software's rich complement of powerful displays and measurements to simulations
- Ensure consistent design evaluations by using the same measurement calculation algorithms across the design lifecycle
- Expedite learning process and minimize setup errors with common Agilent graphical user interface
- Add multiple VSA sink and source blocks directly to simulation designs to analyze performance
- Compare multiple simulation runs or compare to actual hardware for consistent evaluation across design lifecycle



Table of Contents

| | |
|------------------------------------|---|
| Dynamic Links to Simulation | 3 |
| Analysis and Troubleshooting | 4 |
| Software Features..... | 7 |
| Ordering Information | 8 |
| Additional Resources | 9 |

Dynamic Links to Simulation

The 89600 vector signal analysis (VSA) software can dynamically analyze data generated by simulation software packages, providing a rich set of visual display and troubleshooting tools. Simulation software packages include:

Agilent EEsof ADS (Advanced Design System) EDA software

ADS is the industry's leading RF, microwave, and high-speed digital electronic design automation software for wireless communications and networking, aerospace and defense, and signal integrity applications.

Agilent SystemVue ESL software

SystemVue is an EDA environment for electronic system-level (ESL) design that enables system architects and algorithm developers to innovate the physical layer (PHY) of next-generation wireless and aerospace/defense communications systems.

The 89600 VSA software supports over 70 signal standards and modulation types and creates a window into what's happening inside your complex wireless devices. The 89600 VSA tools provide views of virtually every facet of a problem, helping you see the "why?" behind signal problems. Whether you're working with emerging or established standards, Agilent's industry-leading 89600 VSA software helps you see through the complexity.

Try before you buy!

Download the 89600 VSA software and use it free for 14 days to make measurements with your analysis hardware, or use our recorded demo signals by selecting **File > Recall > Recall Demo** on the software toolbar and choosing a signal format of interest. Request your free trial license today:

www.agilent.com/find/89600_trial

Overview of dynamic links to simulation technology

Option 105 Dynamic Link to EEsof ADS/SystemVue integrates the 89600 VSA software with Agilent's EEsof Advanced Design System (ADS) electronic design automation software or SystemVue ESL software.

Option 105 adds a stream interface to 89600 VSA software. The stream interface takes in digitized waveforms directly from the simulation program. The full functionality of the 89600 VSA software with all installed modulation analysis options is available to analyze and display the simulated signal. It also provides a source component to source measurement data into the simulation.

Linking simulation designs to the analysis capability of the 89600 VSA offers unprecedented capability. For instance, simulation results can be compared to a previous simulation run or to device performance. Or, the 89600 VSA can measure data from real hardware and source it into a simulation of the next block's design. This "virtual hardware" lets you uncover system problems before hardware even exists. In short, a simulated design can replace real hardware.

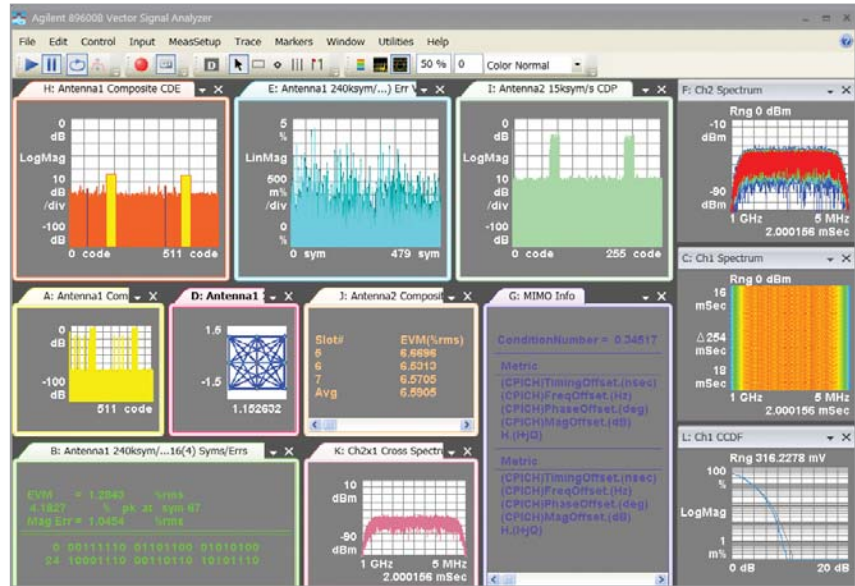
Software-defined radios (SDRs) benefit from using the 89600 VSA to make measurements in a simulation, as well as source data measured from logic analyzers, oscilloscopes, and spectrum analyzers. This capability provides consistent analysis across the design and troubleshooting life-cycle of an SDR system.

Now Available- 89600 VSA software for simulation environments (89601BE)

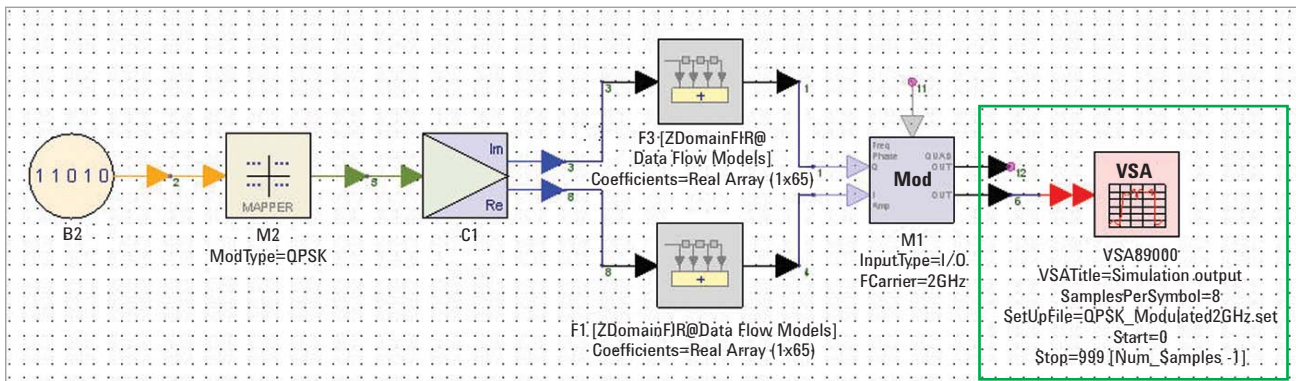
This special product caters to those who primarily work in simulation environments, for example with EDA tools such as Agilent ADS.

Analysis and Troubleshooting

Put the power of the 89600 VSA software's rich visualization toolset to work for you. With the VSA sink component installed, you gain access to every display format available for the measurement options installed, right on the same PC running ADS or SystemVue simulations. The link dynamically updates the instrument's measurement display as the simulation provides new time-series data to the 89600 VSA software.



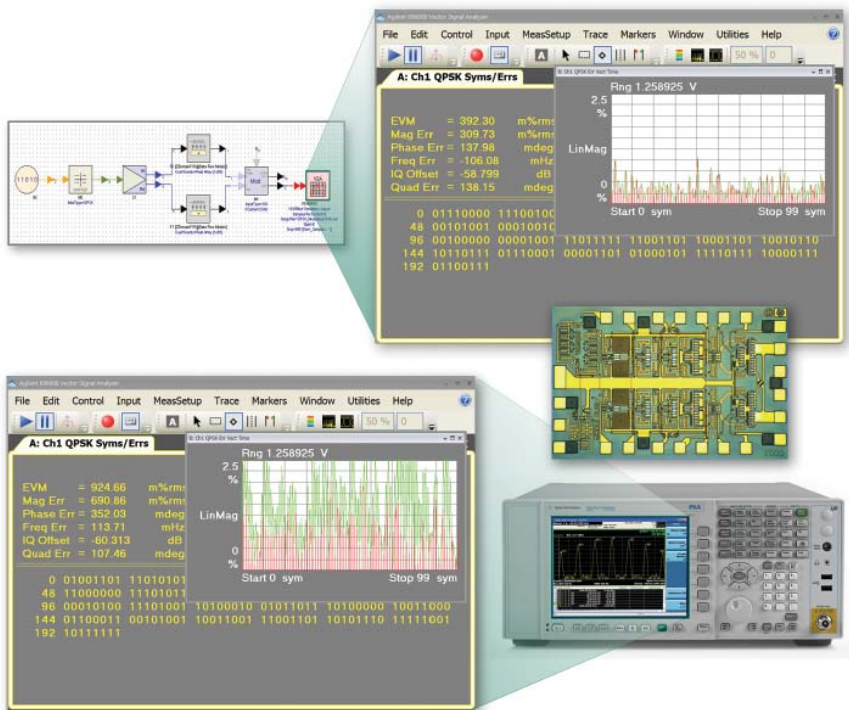
Up to 20 displays each with 20 markers can be viewed per 89600 instance in the simulation design. Innovative display formats, like cumulative history, spectrogram, and digital persistence offer insight into a signal's behavior over time.



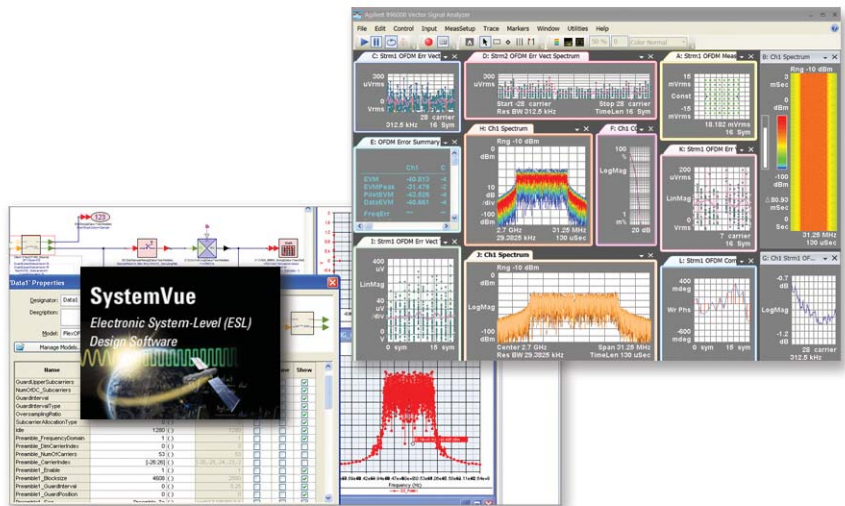
Option 105 provides both a real time source element and visualization sink to add to your simulations. Here the VSA simulation setup includes a few basic parameters and a saved instrument setup file.

Avoid surprises when transitioning from design to test. Since you're using the same measurement algorithms and displays used by the test equipment, there's no question whether any differences measured on prototypes are due to differences between measurement hardware and simulation tools. Use any differences noted to refine simulation models for future use. Or, input measured data taken as simulation input to the next block.

Save time by using the same off-the-shelf tools for simulation and test. Use the 89600 VSA software's powerful troubleshooting toolset so that the early design team is free to work on product designs--not on measurement algorithms or display development. And using the same graphical user interface in simulation and test means that there is no learning curve related to the introduction of new tools as the design transitions through its development life cycle.

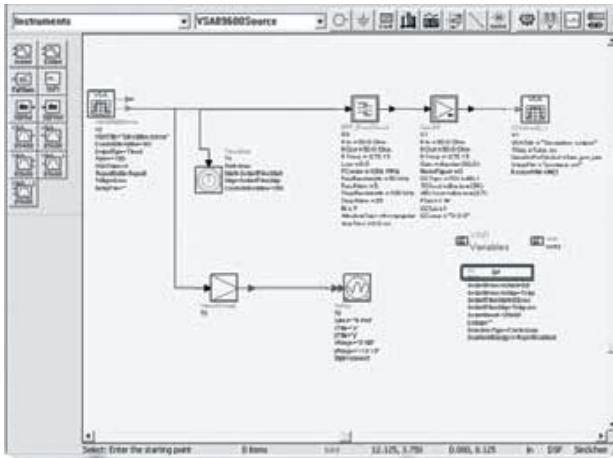


Whether you are analyzing a simulation or physical hardware, the 89600 VSA software tracks expected performance and uncovers errors. Here, the EVM values are only slightly different, but the error vector time trace indicates a filtering problem compared to simulated values.



When using SystemVue, ADS, or test instruments, the measurements, displays and UI are identical, minimizing user setup errors and learning curve.

Choose the solution optimized for working with Agilent test equipment. The 89600 VSA software is designed to work with over 30 Agilent hardware platforms, linking your simulation design to the real world for digital and analog baseband or IF, all the way up through RF and microwave.



Use "virtual hardware" to make measurements and evaluate your system even before actual hardware is realized

Measurements from actual prototype hardware can be fed into a design simulation



Use Connected Solutions to download a simulation signal to an Agilent signal generator to stimulate your DUT

DUT

Any supported front-end measurement platform

Use any of the supported Agilent front ends to make measurements on your device. You can also compare it to measurements you made on the simulated DUT

Use the 89600 VSA software and Connected Solutions to create "virtual hardware" where the simulation acts as a missing design block — allowing you to uncover system problems before hardware even exists.

Software Features

| Overall features | |
|--|---|
| Description | This capability is now standard in the 89600 VSA software and links the 89600 VSA with design simulations running on Agilent EEs of ADS or SystemVue ESL, providing real-time, interactive analysis of results. When a simulation is run, the 89600 software is automatically launched. |
| Available components | The sink component analyzes waveform data from a simulation. Its user interface and measurement functions are the same in this mode as for hardware-based measurements. The VSA source component outputs measurement data to a simulation. Its input data can be from a recording or hardware. Front-end hardware need not be present when using either component unless live measurements are to be sourced into a simulation. |
| Source component | |
| ADS version required | ADS 2001 or later |
| SystemVue version required | SystemVue 2008 or later |
| VSA input modes | Data from: hardware, recording |
| VSA analysis range | Dependent on input mode and hardware installed |
| Sink component | |
| ADS version required | ADS 1.5 or later |
| SystemVue version required | SystemVue 2008 or later |
| VSA input modes | 1-4 channels, I + jQ |
| VSA analysis range | |
| Carrier frequency | DC to > 1 THz |
| T_{step} (sample time) | < 10^{-12} to > 10^3 seconds |
| Number of VSAs that can run concurrently | 64 |

Ordering Information

Software licensing and configuration

Choose from two license types:

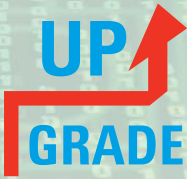
- **PC/instrument license:** Order 89601B if the software license will reside on a PC/instrument. The license can be transferred to another PC/instrument at any time.
- **Floating license:** Order 89601BN if the software license will reside on a server to be accessed by multiple users, one at a time.

Hardware configuration

The 89600 VSA software supports over 35 instrument platforms including spectrum analyzers, oscilloscopes, logic analyzers and modular instrument systems with its hardware connectivity option (89601B/BN-300).

Note that no hardware iconnectivity option is required to work with Agilent EEsof software products. However, hardware may be required to acquire data that can be sourced into simulations.

www.agilent.com/find/89600_hardware

| | |
|--|---|
| Keep your 89600 VSA software up-to-date | You can upgrade! |
| With rapidly evolving standards and continuous advancements in signal analysis, the 89601BU/BNU software update and subscription service offers you the advantage of immediate access to the latest features and enhancements available for the 89600 VSA software. www.agilent.com/find/89601BU |  <p>All 89600 VSA software options can be added after your initial purchase and are license-key enabled. For more information please refer to www.agilent.com/find/89600_upgrades</p> |

1. You must order any additional options needed to make modulation measurements on the signals of interest. See the configuration guide for a complete listing of available options and their supported formats.

Additional Resources

www.agilent.com

Literature

89600 VSA Software, Brochure, literature number 5990-6553EN

89600 VSA Software, Configuration Guide, literature number 5990-6386EN

89600 VSA Software Opt 200 Basic VSA and Opt 300 Hardware Connectivity, Technical Overview, literature number 5990-6405EN

Software Defined Radio Measurement Solutions, Application Note, literature number 5989-6931EN

Web

www.agilent.com/find/89600vsa
www.agilent.com/find/systemvue
www.agilent.com/find/ads
www.agilent.com/find/sdr

Microsoft is a U.S. registered trademark of Microsoft Corporation.



myAgilent

www.agilent.com/find/myagilent

A personalized view into the information most relevant to you.



www.axiestandard.org

AdvancedTCA[®] Extensions for Instrumentation and Test (AXIe) is an open standard that extends the AdvancedTCA for general purpose and semiconductor test. Agilent is a founding member of the AXIe consortium.



Agilent Advantage Services is committed to your success throughout your equipment's lifetime. To keep you competitive, we continually invest in tools and processes that speed up calibration and repair and reduce your cost of ownership. You can also use Infoline Web Services to manage equipment and services more effectively. By sharing our measurement and service expertise, we help you create the products that change our world.

www.agilent.com/find/advantageservices



www.agilent.com/quality



www.lxistandard.org

LAN eXtensions for Instruments puts the power of Ethernet and the Web inside your test systems. Agilent is a founding member of the LXI consortium.

Agilent Channel Partners

www.agilent.com/find/channelpartners

Get the best of both worlds: Agilent's measurement expertise and product breadth, combined with channel partner convenience.

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus

Americas

| | |
|---------------|----------------|
| Canada | (877) 894 4414 |
| Brazil | (11) 4197 3600 |
| Mexico | 01800 5064 800 |
| United States | (800) 829 4444 |

Asia Pacific

| | |
|--------------------|----------------|
| Australia | 1 800 629 485 |
| China | 800 810 0189 |
| Hong Kong | 800 938 693 |
| India | 1 800 112 929 |
| Japan | 0120 (421) 345 |
| Korea | 080 769 0800 |
| Malaysia | 1 800 888 848 |
| Singapore | 1 800 375 8100 |
| Taiwan | 0800 047 866 |
| Other AP Countries | (65) 375 8100 |

Europe & Middle East

| | |
|----------------|----------------------------------|
| Belgium | 32 (0) 2 404 93 40 |
| Denmark | 45 45 80 12 15 |
| Finland | 358 (0) 10 855 2100 |
| France | 0825 010 700* *0.125 €/minute |
| Germany | 49 (0) 7031 464 6333 |
| Ireland | 1890 924 204 |
| Israel | 972-3-9288-504/544 |
| Italy | 39 02 92 60 8484 |
| Netherlands | 31 (0) 20 547 2111 |
| Spain | 34 (91) 631 3300 |
| Sweden | 0200-88 22 55 |
| United Kingdom | 44 (0) 118 927 6201 |

For other unlisted countries:

www.agilent.com/find/contactus

Revised: October 11, 2012

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2012
Published in USA, November 19, 2012
5990-6410EN



Agilent Technologies