### Agilent 89600 Vector Signal Analyzers 89610A, dc to 40 MHz 89640A, dc to 2.7 GHz

New software adds 3G analysis tools, improved operation with Agilent's Advanced Design System (ADS) electronic design software, spectrogram features and more



- Speed analysis of 3G communications devices and improve your time to market
- Troubleshoot system designs even before hardware exists
- Analyze burst and hopping signals more effectively with a new spectrogram display



Agilent Technologies

## New 3G analysis tools help you analyze complex signals

The power of a vector signal analyzer (VSA) is its ability to analyze complex, time-varying signals. The 89600 VSA tests a wide variety of digital and analog communications standards. New software enhancements improve these capabilities by adding EDGE demodulation and a new CDMA modulation analysis option, B7N, that demodulates and analyzes W-CDMA and cdma2000, forward and reverse links. Measurements include code-domain power and time, spectrum, phase, and magnitude error. Results are viewable by channel or by a composite of channels. In addition, a new code-domain error measurement provides a histogram of error vector magnitude versus channel number.

### Test your design before you have hardware, and after too

You don't have to wait for all the hardware in a block diagram to come together to begin system evaluation. The 89600 VSA can uncover RF and DSP problems throughout the radio block diagram — even before hardware exists.

Agilent's automated design software (ADS) lets you use 89600 software analysis tools, without the VSA hardware, to evaluate your virtual design's response to analog/RF simulations. The new software revision will evaluate multiple points in your block diagram at the same time. When the prototype hardware is available, use the same 89600 software analysis tools, with the VSA hardware, to verify actual performance. You make the measurements the same way you did during simulation, with the same analysis algorithms – reducing measurement uncertainty and increasing your design cycle efficiency.

#### Links to other Agilent products provide thorough design analysis tools Link the 89600, or just its meas-

urement software, to other Agilent products for even better results.

Do you have an Agilent E4406A VSA transmitter tester? If so, you need only purchase 89600 software to create an 89600 VSA system – use the E4406A as the system's RF signal acquisition hardware. Now you have two high-performance instruments – a superior multi-format standards compliant transmitter tester and a high performance flexible digital demodulation and analysis tool.

#### **89600 key specifications**

	89640A	89610A
Frequency range:	dc to 2.7 GHz	dc to 40 MHz
Analysis bandwidth	36 MHz	39 MHz
RBW range:	<1 Hz to 10 MHz	<1 Hz to >10 MHz
Phase noise (20 kHz offset):	<-97 dBc/Hz	<-120 dBc/Hz
Sensitivity:	-159 dBm/Hz @ 1 GHz	-152 dBm/Hz (-31 dBm range)
3rd order dynamic range:	70 dBc	70 dBc
Amplitude accuracy:	±2.0 dB	±0.8 dB
Frequency accuracy:	100 ppb	100 ppb

For more information contact your local Agilent Technologies representative or visit our Web site: www.agilent.com/find/89600

For more assistance with your test & measurement needs or to find your local Agilent office go to: www.agilent.com/find/assist

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

Copyright © 2001 Agilent Technologies Printed in USA, February 22, 2001 5988-1957EN



# Agilent Technologies

Do you own an Agilent E4433A signal generator? Use it to stimulate your device under test with real-world signals captured and downloaded from an 89600 VSA.

#### High-speed spectrogram display for signal monitoring

Improve your ability to intercept burst and hopping signals with this high-speed scrolling display. Plus, use tools like spectrogram markers to measure frequency, amplitude, and duration of signals over time.

#### Upgrade your 89600 VSA

Upgrade your 89600 with these and future software enhancements by purchasing 89601AS software support services. Contact your Agilent representative for details.

#### Performance

The 89640A VSA features high-speed spectrum analysis and flexible digital modulation troubleshooting tools for R&D applications. See the following table for key specifications.