

Keysight Technologies

M9391A PXIe Vector Signal Analyzer

Product Fact Sheet

Industries and Applications

- Cellular picocell and femtocell test
- RF component manufacturing test
- Wireless transceiver design validation
- WLAN MIMO R&D and design validation
- Military radio test
- Public safety and homeland security radio test

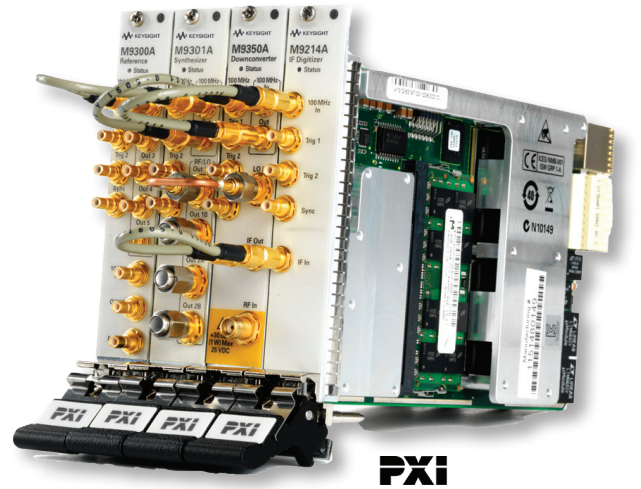
Product Description

The Keysight Technologies M9391A PXIe vector signal analyzer (PXI VSA) is a modular solution that provides frequency coverage from 1 MHz to 6 GHz and works seamlessly with the M9381A PXI VSG. The combined PXI VSA/G provides a complete solution for fast, high quality measurements optimized for RF manufacturing test environments. Keysight's X-series measurement applications, 89600 VSA software and SystemVue further increase the efficiency of the PXI VSA.

The M9391A PXI VSA is MIMO ready, enabling design validation engineers to ensure their WLAN designs perform well under a variety of conditions. MIMO transmitter testing is based on Keysight's industry-recognized 89600 VSA software with full support for PHY-layer measurements including MIMO EVM, cross-channel isolation, and channel flatness.

Main Features and Benefits

Product features	Your benefit
Fast amplitude and frequency switching speed with fasttune	Accelerate test throughput
Embedded power measurement mode	Reduces test times from 3s to less than 600 ms with outstanding linearity
Unique resource manager in X-Series Measurement Applications for modular instruments	Provides fast switching between raw data measurements and standards-based measurements.
License-key based upgrades without returning modules	Purchase what you need today and easily upgrade later
Multiple programmatic interfaces	Easy integration into test environments and reduced development time



Specifications and Characteristics

Hardware	
Frequency range	1 MHz to 3 GHz or 6 GHz
fasttune switching speed	Frequency switching up to 15 μ s, nominal
Phase noise	< -120 dBc/Hz (1 GHz, 20 kHz offset)
Repeatability	<0.05 dB, nominal
Amplitude accuracy	\pm 0.45 dB, typical
Analysis bandwidth	40 MHz (flatness: \pm 0.08 dB, nominal) 100 MHz (flatness: \pm 0.09 dB, nominal) 160 MHz (flatness: \pm 0.17 dB, nominal)
EVM	WLAN 802.11ac -47.5 dB, 5.8 GHz, 160 MHz BW nominal
ACLR	W-CDMA -68.1 dBc, typical (adjacent) W-CDMA -70.7 dBc, typical (alternate)
Channel-to-channel synchronization	\pm 5 ns, nominal
Size	4-slot
2-link configuration	2 x 8
4-link configuration	4 x 4
Data bandwidth (max)	
Slot-to-slot	4 GB/s
System slot-to-user slots	8 GB/s

Chassis slot compatibility: PXIe Hybrid, PXIe

Software Information

Operating systems	Microsoft Windows XP (32-bit) Microsoft Windows 7 (32/64-bit) Microsoft Windows Vista SP1 and SP2 (32/64-bit)
Standard compliant drivers	IVI-COM, IVI-C, LabVIEW, MATLAB
Application development environments (ADE)	Visual Studio (C/C++, C#, VB.NET), LabVIEW, LabWindows/CVI, MATLAB, VEE
Keysight IO Libraries (version 16.3 or newer)	Includes: VISA Libraries, Keysight Connection Expert, IO Monitor
Keysight Command Expert	Instrument control for SCPI or IVI-COM drivers
89600 VSA Software (version 16.01 or newer)	89600B-200 Basic VSA software 89601B-B7T cdma2000®/1xEV-DO 89601B-B7U W-CDMA/HSPA+ 89601B-B7R WLAN 802.11 89601B-B7X TD-SCDMA/HSDPA 89601B-BHD LTE FDD 89601B-BHG LTE FDD - Adv 89601B-BHE LTE TDD 89601B-BHH LTE TDD - Adv
X-Series Measurement Applications for Modular Instruments	M9071A GSM/EDGE/Evo M9072A cdma2000®/cdmaOne M9073A W-CDMA/HSPA+ M9076A 1xEV-DO
Transportable perpetual license	M9077A WLAN 802.11a/b/g/n/ac M9079A TD-SCDMA/HSDPA M9080A LTE FDD M9082A LTE TDD

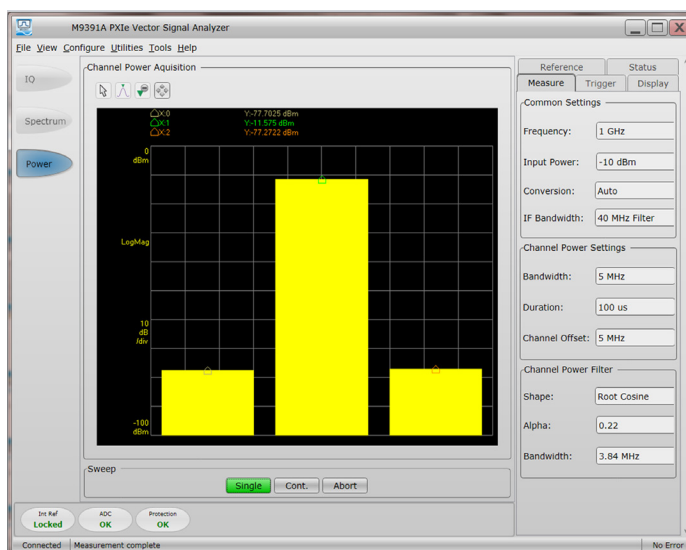


Figure 1. Keysight M9391A vector signal analyzer soft front panel.



Ordering Information

Model	Description
M9391A	PXIe vector signal analyzer: 1 MHz to 3 or 6 GHz Includes: M9301A PXIe synthesizer, M9350A PXIe downconverter, M9214A PXIe IF digitizer One day startup assistance, module interconnect cables software, example programs and product information on CD Return to Keysight Warranty—3 Years

Base configuration

M9391A-F03	Frequency range: 1 MHz to 3 GHz
M9391A-B04	Analysis bandwidth: 40 MHz
M9391A-M01	Memory: 128 MSa
M9391A-300	PXIe frequency reference: 10 MHz and 100 MHz Adds M9300A PXIe frequency reference: 10 MHz and 100 MHz (M9300A module can support multiple M9391A modular instruments)

Configurable options

Frequency

M9391A-F03	1 MHz to 3 GHz
✓ M9391A-F06	1 MHz to 6 GHz

Switching speed

✓ M9391A-UNZ	Fast switching
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Analysis bandwidth

M9391A-B04	40 MHz
M9391A-B10	100 MHz
✓ M9391A-B16	160 MHz

Memory

M9391A-M01	128 MSa
M9391A-M05	512 MSa
✓ M9391A-M10	1024 MSa

✓ Recommended configuration

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