

Keysight Technologies

M9381A PXIe Vector Signal Generator

Product Fact Sheet

Industries and applications

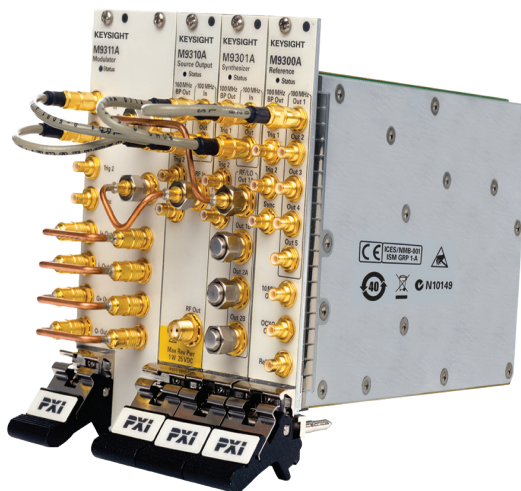
- Cellular picocell and femtocell test
- Handset component test
- Military radio test
- Public safety and homeland security radio test
- Wireless transceiver design validation
- WLAN MIMO R&D and design validation

Product description

The Keysight Technologies, Inc. M9381A PXIe vector signal generator is a compact modular solution that provides frequency coverage from 1 MHz to 3 GHz or 6 GHz. The M9381A reduces test time with fasttune, an exclusive base-band tuning technology innovation, enabling you to switch amplitude and frequency in less than 10 μ s. The M9381A PXI VSG is MIMO ready, enabling design validation engineers to ensure their WLAN designs perform well under a variety of conditions. MIMO receiver testing is supported by Keysight's multi-format signal studio software with full support for 802.11ac standards-based generation.

Main features and benefits

Product features	Your benefit
Fast amplitude and frequency switching speed	Accelerate test throughput
fasttune	Reduce test time
Accurate power linearity	Improve ability for servo loop to converge in fewer steps
License-key based upgrades without returning modules	Purchase what you need today and easily upgrade later
One-step software install and integrated VSG soft front panel	Reduce startup time
Multiple programmatic interfaces	Easy integration into test environments and reduced development time
Calibrated Core Exchange Strategy	Fast repair and turnaround time



Challenge the Boundaries of Test

Keysight Modular Products

Specifications and characteristics

Hardware	
Frequency range	1 MHz to 3.0 GHz or 6.0 GHz
RF switching speed	240 μ s (nom) for frequency and amplitude changes 105 μ s (nom) for amplitude-only changes
fasttune switching speed	10 μ s (nom) for frequency and amplitude changes within RF modulation bandwidth
Phase noise	< -122 dBc/Hz (1 GHz, 20 kHz offset) (typ)
Output power	+19 dBm (at 1 GHz)
Amplitude accuracy	\pm 0.4 to 1 dB
RF modulation bandwidth	40 MHz (flatness: < \pm0.2 dB, typical) 100 MHz (flatness: < \pm0.3 dB, typical) 160 MHz (flatness: < \pm0.5 dB, typical)
Modulation	AM, FM, PM, pulse, multitone
Modulation quality	\leq -70 dBc ACLR for W-CDMA 64 DPCH <0.5% EVM for WLAN 160 MHz 802.11ac
Size	5-slot
Maximum channel-to-channel deviation	20 ns, nominal
Chassis slot compatibility: cPCI (J1), PXI-1, PXIe Hybrid	

Software information

The M9381A PXIe vector signal generator includes instrument drivers, documentation, examples and software tools to help you quickly develop test systems in your application development environment of choice.

Operating systems	Microsoft Windows XP (32-bit) Microsoft Windows Vista SP1 and SP2 (32/64-bit) Microsoft Windows 7 (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 Command Expert	Instrument control for SCPI or IVI-COM drivers
Signal Studio Software	W-CDMA/HSPA+, cdma2000/1xEV-DO, GSM/EDGE/Evo, Bluetooth , Broadcast Radio, TD-SCDMA/HSDPA, Mobile WiMAX, WLAN 802.11a/b/g/n/ac, Digital Video, LTE/LTE-Advanced FDD, LTE/LTE-Advanced TDD, Global Navigation Satellite System
Keysight IO Libraries (version 16.3.16603.3 or newer)	Includes: VISA Libraries, Keysight Connection Expert, IO Monitor
SystemVue Software Connectivity	Electronic design environment for electronic system level (ESL) design

Ordering information

Model	Description
M9381A	PXIe vector signal generator: 1 MHz to 3 or 6 GHz Includes: M9301A PXIe synthesizer, M9310A PXIe source output, M9311A PXIe digital vector modulator One day startup assistance, module interconnect cables software, example programs and product information on CD Return to Keysight Warranty—3 Years

Base configuration

M9381A-F03	Frequency range: 1 MHz to 3 GHz
M9381A-B04	RF modulation bandwidth: 40 MHz
M9381A-M01	Memory: 32 MSa
M9381A-300	PXIe frequency reference: 10 MHz and 100 MHz
Required for warranted specifications	Adds M9300A PXIe frequency reference: 10 MHz and 100 MHz (M9300A module can support multiple M9381A modular instruments)

Configurable options

Frequency

M9381A-F03	1 MHz to 3 GHz
✓M9381A-F06	1 MHz to 6 GHz

RF modulation bandwidth

M9381A-B04	40 MHz
M9381A-B10	100 MHz
✓M9381A-B16	160 MHz

Memory

M9381A-M01	32 MSa
M9381A-M05	512 MSa
✓M9381A-M10	1024 MSa

Other

✓M9381A-1EA	High output power
✓M9381A-UNZ	Fast switching
✓M9381A-UNT	Analog modulation

✓ *Recommended configuration*

www.keysight.com/find/modular

www.keysight.com/find/M9381A

USA: (800) 829-4444

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus.

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Published in USA, August 3, 2014

5991-0282EN

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