

Keysight Technologies

M9381A PXIe Vector Signal Generator

Product Fact Sheet

Industries and applications

- Power amplifier and front-end-module design validation and manufacturing
- Radio transceiver design validation and production test
- MIMO & multi-channel device test

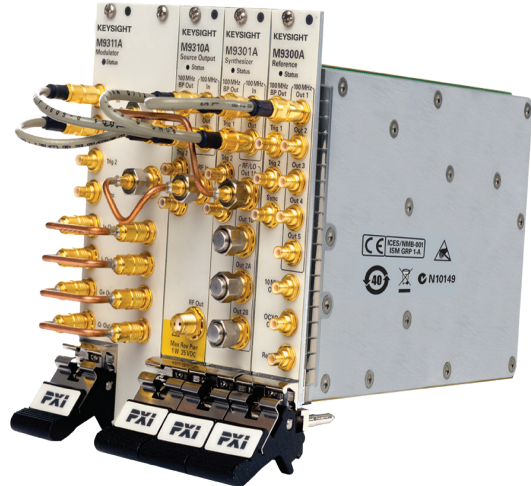
Product description

The Keysight Technologies M9381A PXIe vector signal generator (PXI VSG) is a compact modular instrument that provides frequency coverage from 1 MHz to 6 GHz and works seamlessly with the M9391A PXIe vector signal analyzer (PXI VSA). The PXI VSG reduces test time with fast amplitude and frequency switching and versatile list mode optimized for manufacturing test.

Based on a flexible, multi-channel ready platform, the M9381A quickly generates modulated test signals to validate receiver and component performance under a variety of conditions. Keysight's Signal Studio and Waveform Creator software simplify and streamline signal creation and generation, covering you from basic analog and digital modulation to the latest wireless standards, including LTE-Advanced and 802.11ac.

Main features and benefits

Product features	Your benefit
Fast amplitude and frequency switching speed	Accelerate test throughput
Accurate power linearity	Improve ability for servo loop to converge in fewer steps
Multi-channel ready	Scale solution to fit your test needs with support for up to 8x8 MIMO
License-key based upgrades without returning modules	Purchase what you need today and upgrade later
Multiple programmatic interfaces	Quickly integrate into test environments, reducing development time
Calibrated Core Exchange Strategy	Minimize downtime with fast repair and turnaround time



Specifications and characteristics

Hardware	
Frequency range	1 MHz to 3.0 GHz or 6.0 GHz
RF modulation bandwidth	40 MHz, 100 MHz or 160 MHz
RF switching speed	240 μ s, nominal (frequency and amplitude changes) 105 μ s, nominal (amplitude-only changes)
Phase noise	-122 dBc/Hz, typical (1 GHz, 20 kHz offset)
Output power	+19 dBm (at 1 GHz)
Amplitude accuracy	\pm 0.15 dB, typical
Modulation	AM, FM, PM, pulse, multitone
EVM	-47.8 dB, nominal (WLAN 802.11ac, 160 MHz)
ACLR	-70 dBc, typical (W-CDMA, 64 DPCH)
Channel-to-channel synchronization	Timing alignment: \leq 1 ns, nominal Phase alignment: \leq 1°, nominal
Size	5-slot
Chassis slot compatibility: PXIe Hybrid, PXIe	

Software information

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

Operating systems	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 IO Libraries (recommended version 17.0 or newer)	Includes: VISA Libraries, Keysight Connection Expert, IO Monitor
Keysight Command Expert	Instrument control for SCPI or IVI-COM drivers
Signal Studio Software	N7600B W-CDMA/HSPA+ N7601B cdma2000®/1xEV-DO N7602B GSM/EDGE/Evo N7606B <i>Bluetooth</i> ® N7609B Global Navigation Satellite System N7610B 802.15 4g / Wi-SUN N7611B Broadcast Radio N7612B TD-SCDMA/HSDPA N7615B Mobile WiMAX™ N7617B WLAN 802.11a/b/g/n/ac N7623B Digital Video N7624B LTE/LTE-Advanced FDD N7625B LTE/LTE-Advanced TDD M9950A Extension from 4 to 8 channels
SystemVue Software Connectivity	Electronic design environment for electronic system level (ESL) design
Waveform Creator Software (version 2.0)	M9099T options: AYA: Digital modulation DCS: DOCSIS 3.1 SVM: SystemVue DFW: File-based write and more...

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Ordering information

Model	Description
M9381A	PXIe vector signal generator Comprised of: <ul style="list-style-type: none">– M9301A PXIe synthesizer– M9310A PXIe source output– M9311A PXIe modulator Includes, one day startup assistance, module interconnect cables, software, example programs and product information on CD.
M9381A-300	Adds: <ul style="list-style-type: none">– M9300A PXIe frequency reference: 10 MHz and 100 MHz A single M9300A can support multiple M9381A instruments.
Options description	
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
M9381A-012	Phase coherency
✓Included as standard option	
+ Recommended configuration	

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