

# M9383B VXG-m

## Microwave Signal Generator

This configuration guide contains information to help you configure your M9383B VXG-m microwave signal generator to meet your requirements. Ordering optional capabilities at the time of purchase provides the lowest overall cost.



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## Hardware

### Select options for VXG-m microwave signal generator channel 1

| Step 1. Add first channel (required)  |   |
|---|---|
| M9383B-001  | Add channel 1   |
| Requires the following options:<br>M9383B-F44<br>M9383B-D21<br>M9383B-600<br>M9383B-ST6<br>M9383B-1EB | Frequency range, 1 MHz to 44 GHz<br>RF bandwidth, 2 GHz with 256 MSa memory<br>Enhanced high performance reference<br>Enhanced low phase noise<br>High output power from 20 GHz to 44 GHz |
| Step 2. Select vector system features on channel 1 (optional)   |   |
| M9383B-M05  | Baseband generator memory upgrade to 512 MSa  |
| M9383B-M10  | Baseband generator memory upgrade to 1024 MSa   |
| M9383B-EXT  | Wideband differential external IQ inputs  |
| M9383B-DIQ  | Differential IQ outputs   |
| Step 3. Select general performance features on channel 1 (optional)                                   |   |
| M9383B-PCH  | Phase coherency for N channels  |
| Step 4. Select analog modulation on channel 1 (optional)  |   |
| M9383B-PMR  | Pulse modulation  |

### Select options for VXG-m microwave signal generator channel 2

| Step 1. Add second channel (optional)   |   |
|---|---|
| M9383B-002  | Add channel 2   |
| Requires the following options:<br>M9383B-F44<br>M9383B-D21<br>M9383B-600<br>M9383B-ST6<br>M9383B-1EB | Frequency range, 1 MHz to 44 GHz<br>RF bandwidth, 2 GHz with 256 MSa memory<br>Enhanced high performance reference<br>Enhanced low phase noise<br>High output power from 20 GHz to 44 GHz |
| Step 2. Select vector system features on channel 2 (optional)   |   |
| M9383B-M05  | Baseband generator memory upgrade to 512 MSa  |
| M9383B-M10  | Baseband generator memory upgrade to 1024 MSa   |
| M9383B-EXT  | Wideband differential external IQ inputs  |
| M9383B-DIQ  | Differential IQ outputs   |
| Step 3. Select analog modulation on channel 2 (optional)  |   |
| M9383B-PMR  | Pulse modulation  |

## Select Controller

| Step 1. Select embedded controller (required)        |  |
|--|--|
| M9037A   | High-performance embedded controller, Gen3 |
| Step 2. Upgrade from standard memory size (required) |  |
| M9037A-M16   | Memory upgrade from 4 GB to 16 GB RAM      |
| Step 3. Select an operating system (required)        |  |
| M9037A-W16   | Windows 10 (64-bit)                        |

## Select Chassis and Accessories

| Step 1. Select a chassis <sup>1</sup> (required)                 |  |
|--|--|
| M9043A <sup>2</sup>  | 18-slot PXIe chassis with integrated high performance reference                            |
| Step 2. Choose a rack mount kit (optional)                       |  |
| Y1215C   | Flush mount adapter  |
| Y1216B   | Recess mount adapter kit   |
| Step 3. Choose an air inlet kit <sup>3</sup> (optional)          |  |
| Y1214B   | Air inlet kit (recommended for rack mounted systems with less than 1U space below chassis) |
| Step 4. Select other accessories for the M9383B VXG-m (optional) |  |
| 11904C <sup>4</sup>  | Adapter, 2.4 mm (m) to 2.92 mm (f), DC to 40 GHz   |

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<sup>1</sup> An appropriate number of slot blockers and EMC filler panels will be included with your order.

<sup>2</sup> Only available as part of a fully assembled M9383B.

<sup>3</sup> Available in 1-slot, 2-slot or 3-slot options depending on the chassis configuration

<sup>4</sup> One 11904C adapter is included with each channel of your M9383B VXG-m order to help interface with the 2.4 mm (f) RF output. Additional adapters of interest can be found [here](#).

## Software

### Included software

#### Step 1. Start with the M9383B VXG-m base configuration

The VXG-m base configuration includes the following software:

- PathWave General Purpose Signal Generation
- Keysight IO Libraries Suite including Connection Expert
- Sample waveforms and programming examples

### PathWave Software Tools

#### Step 2: Add PathWave Software Tools<sup>5,6</sup> (optional)

|           |   |
|-----------|---|
| N7631APPC | PathWave Signal Generation for 5G NR  |
| N7621APPC | PathWave Signal Generation for basic multitone                              |
| N7642APPC | PathWave Signal Generation for IQ based AM, FM, phase modulation            |
| N7653APPC | PathWave automatic channel response correction and S-parameter de-embedding |

### Signal Studio and MATLAB

#### Step 3: Add Signal Studio<sup>7</sup> and MATLAB Software (optional)

| Cellular Communications |   |
|-------------------------|---|
| N7600EMBC               | Signal Studio for W-CDMA/HSPA+, waveform playback                   |
| N7601EMBC               | Signal Studio for cdma2000/1xEV-DO, waveform playback               |
| N7602EMBC               | Signal Studio for GSM/EDGE/Evo, waveform playback                   |
| N7612EMBC               | Signal Studio for TD-SCDMA/HSPA, waveform playback                  |
| N7624EMBC               | Signal Studio for LTE/LTE-Advanced/LTE-A Pro FDD, waveform playback |
| N7625EMBC               | Signal Studio for LTE/LTE-Advanced TDD, waveform playback           |
| N7630EMBC               | Signal Studio Pro for Pre-5G, waveform playback                     |
| N7631EMBC               | Signal Studio Pro for 5G NR, waveform playback                      |

<sup>5</sup> For more information, see Signal Studio brochure, literature number [5989-6448EN](#).

<sup>6</sup> PathWave software tools can be used to create, download, and playback waveforms through the VXG-m graphical user interface.

<sup>7</sup> Signal Studio license can be used to playback exported waveforms offline.

### Step 3 (continued): Add Signal Studio<sup>3</sup> and MATLAB Software (optional)

| Wireless Connectivity                         |   |
|---|---|
| N7606EMBC                                     | Signal Studio for Bluetooth, waveform playback  |
| N7610EMBC                                     | Signal Studio for IoT, waveform playback  |
| N7615EMBC                                     | Signal Studio for mobile WiMAX, waveform playback   |
| N7617EMBC                                     | Signal Studio for WLAN 802.11, waveform playback  |
| Audio/Video Broadcasting, Public Safety       |   |
| N7611EMBC                                     | Signal Studio for broadcast radio, waveform playback  |
| N7623EMBC                                     | Signal Studio for digital video, waveform playback  |
| N7640EMBC                                     | Signal Studio for LMR, waveform playback  |
| Detection, Positioning, Tracking & Navigation |   |
| N7609EMBC                                     | Signal Studio for Global Navigation Satellite System (GNSS), waveform playback <sup>8</sup> |
| General RF & Microwave                        |   |
| N7608EMBC                                     | Signal Studio Pro for Custom Modulation, waveform playback                                  |
| N7650B  | Signal Studio Waveform License (5-, 50-pack license)  |
| N6171A  | MATLAB software   |

## Services

### Select warranty, calibration, and start-up assistance (optional)

The base VXG-m configuration includes the following services:

- One day of start-up assistance
- 1-year return to Keysight warranty

### Warranty

|              |  |
|--------------|--|
| R-51B-001-3C | Extended Warranty – Return to Keysight – 3 years |
| R-51B-001-5C | Extended Warranty – Return to Keysight – 5 years |

<sup>8</sup> Real-time signal generation is not supported.

## Global Warranty

Keysight provides the peace of mind that today's high-tech industry requires. Your investment is protected by Keysight's global reach in more than 100 countries (either directly or through distributors). The warranty gives you convenient standard coverage for the country in which the product is used, eliminating the need to ship equipment back to the country of purchase. Keysight's warranty service provides:

- All parts and labor necessary to return your investment to full specified performance
- Recalibration for products supplied originally with a calibration certificate
- Return shipment

## One Day Start-up Assistance

To give you the most value from your investment, your Keysight purchase includes Startup Assistance, a service that includes consultation from an expert application engineer. He or she will help you configure the system and offer training on topics most beneficial to you, anything from theory and basic usage to new features and benefits or even more advanced training specific to your application. Startup Assistance provides a customized consultation, getting you to the results you need more quickly.

## Related Literature

For more detailed product and specification information, refer to the following literature and web pages:

| Description  | Publication Number |
|--|--------------------|
| Simplify Signal Creation with Signal Studio Software, Brochure | 5989-6448EN        |

Learn more at: [www.keysight.com](http://www.keysight.com)

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](http://www.keysight.com/find/contactus)

