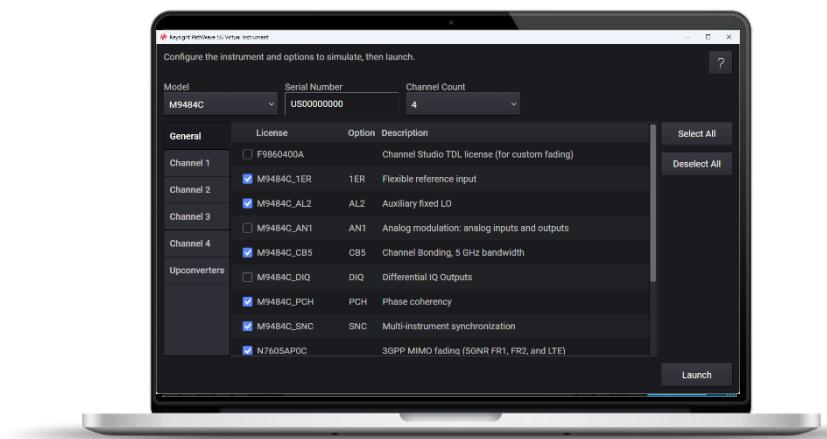


# N7688SIMC

## Signal Generator Virtual Instrument

### Key Features

- Various platforms available for instrument simulation: M9484C VXG, N5186A MXG vector signal generators and N5185A MXG analog signal generator
- Configurable whole set of options before virtual instrument launch
- Basic hardware emulation with configurable options (free)
- Graphic user interface for all general functions and embedded applications (free)
- SCPI programming capability (require N7688SIMC license)

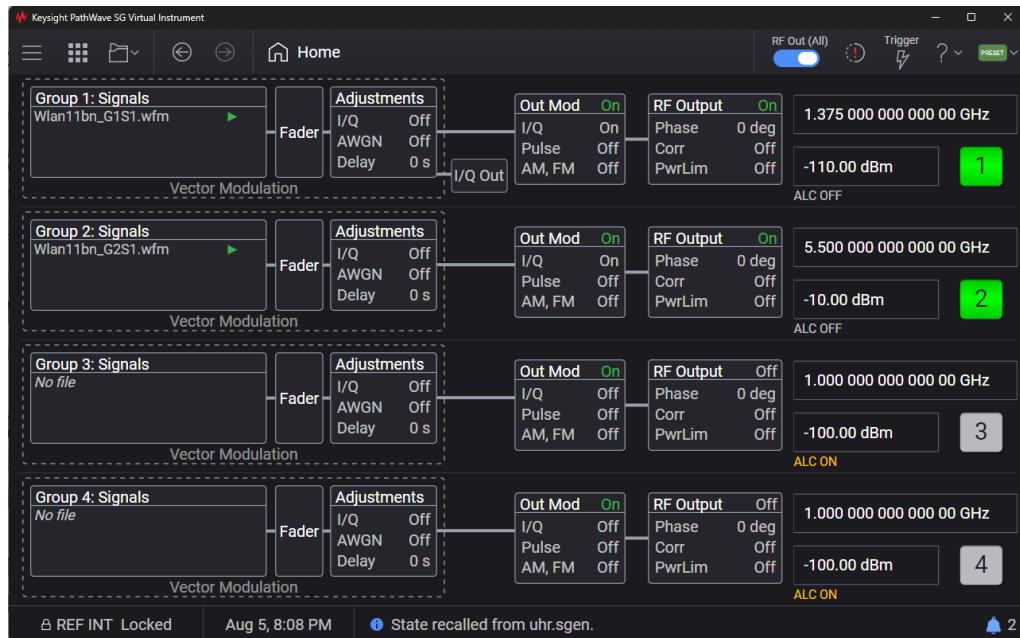


# Introduction

The N7688SIMC Signal Generator (SG) Virtual Instrument (VI) is a PC-based software, which can simulate the Keysight signal generators, including M9484C VXG, N5186A MXG vector signal generators and N5185A MXG analog signal generator.

The SG VI software provides flexible configurations for hardware options and channels, with available embedded applications, like 5G NR, LTE-A FDD/TDD, WLAN, Custom Modulation, GNSS, NR-V2X and Avionics. The SG VI software offers the same user experience as the MXG/VXG instrument firmware version A.17, which is very helpful and useful when the physical instrument is not available or limited to access.

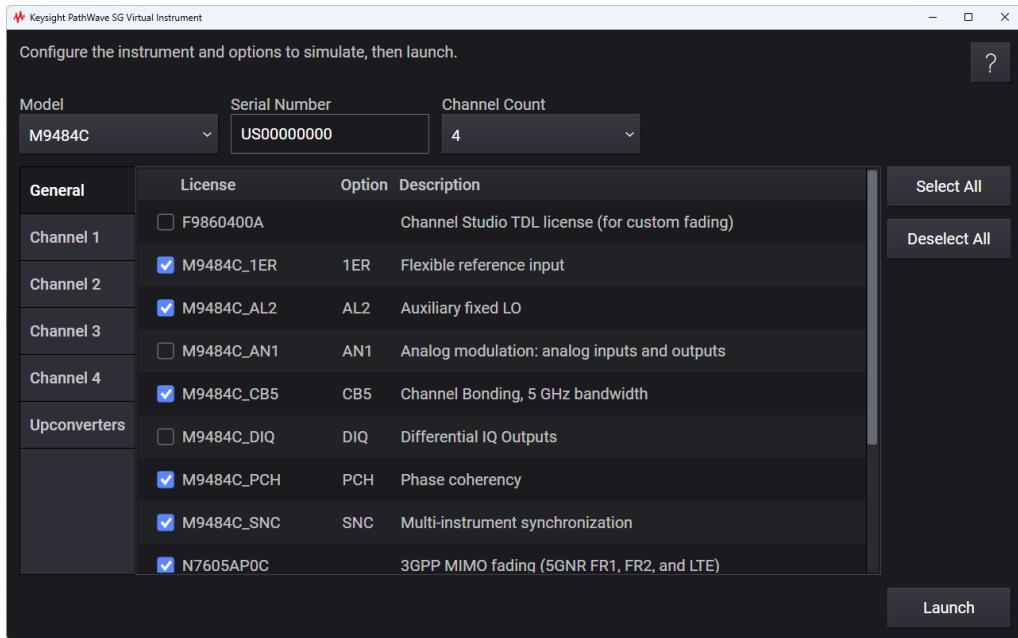
You can freely download and install it on your PC (Windows 10 or Windows 11, 64 bits required). The software is free of charge when you view the GUI, generate the waveform, save or recall the setup files, similar to Keysight Signal Studio. You can also upgrade it with a valid license N7688SIMC to enable SCPI commands programming capability.



**Figure 1.** The M9484C VXG front panel user interface on N7688SIMC SG VI

# Virtual Instrument Configuration

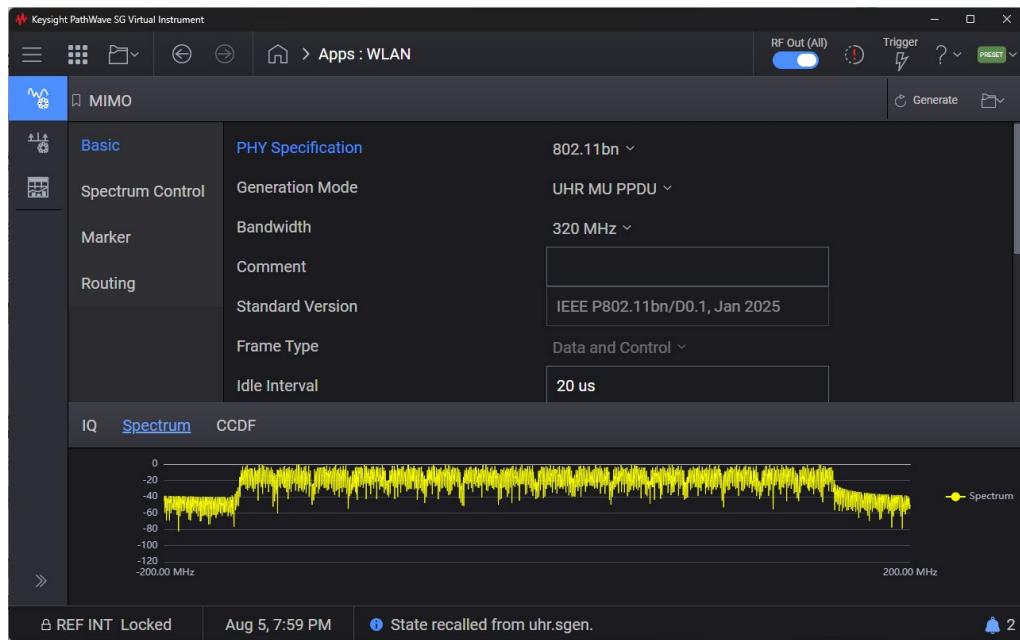
After installing the SG VI software, double click the PathWave Signal Generator icon  on your PC desktop to open the software. The flexible SG VI configuration allows you to select the desired hardware model and channel numbers for your virtual instrument, as well as hardware options and software options.



**Figure 2.** N7688SIMC SG VI configuration user interface

## Free GUI Operations

You can easily perform all GUI operations on the SG VI software. Through the GUI, you can launch any embedded application or general function, view or adjust the parameter settings, check the Help content, generate the waveform, and save setup similar to Keysight Signal Studio. You can also recall setup files saved by the signal generator. All parameter settings will be automatically set. It saves your time of doing configuration.



**Figure 3.** N7688SIMC SG VI recalls WLAN 802.11bn user interface

## SCPI Programming & Debugging

After installing a valid N7688SIMC license, the SG VI software allows you to use the SCPI programming function. You can program with SCPI commands supported by the A.17 firmware, no need to find a real instrument. You can also take advantage of the SCPI Recorder function on the N7688SIMC SG VI, to record your GUI operations and save as SCPI script for automation test or for trouble shooting.

## License Requirements

The N7688SIMC license is required to enable the SCPI programming function. No license is required to access the GUI, including embedded applications or general functions.

# Conclusion

N7688SIMC Signal Generator Virtual Instrument emulates the functionality of the M9484C VXG and N5186A/N5185A MXG, giving you the same user experience with the real instrument. You can create and manipulate the waveforms on the PC for various testing and analysis purposes, without the need for dedicated physical equipment. The SG VI software simulation optimizes your capabilities to:

- Demonstrate the latest features to customers, anywhere, anytime, without any effort to find actual instrument units. Customers can always stay up-to-date with new features and take a first-hand look timely, without waiting for actual instruments
- Easily work on SCPI test automation (SCPI script programming and debugging), without relying on real instruments. It provides extra value in the remote working environment today
- Troubleshoot the issue using the recorded setup files, without the need for a specific model instrument
- Walk you through the entire user interface of real instruments, convenient and cost-efficient for education purposes

# Additional Information

To learn more about compatible hardware and required configurations, please visit:

[www.keysight.com/find/M9484C](http://www.keysight.com/find/M9484C)

[www.keysight.com/find/N5186A](http://www.keysight.com/find/N5186A)

[www.keysight.com/find/N7688SIMC](http://www.keysight.com/find/N7688SIMC)

Click [Signal Generator Virtual Instrument](#) to download the software and start your free-trial.

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at [www.keysight.com](http://www.keysight.com).



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