

# Keysight M9393 PXle Performance Vector Signal Analyzer

Version 2.1

**Version 2.1.1006.3**

Released Date:	March 2020
Requirements category (operating system):	Microsoft Windows 7, 10
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.1.1006.3.exe

## Enhancements

- H01 option updates.
- Security settings updates.

## Critical Fixes

- New M9365A FPGA bits with header and speed setting fixes.
- Updated to the latest version v1.0.5.4 M9155CH40 fundamental dlls to address Win10 connection issues
- Updated to the latest version v2.5.5.0 of the M916x attenuator / M9169E 50 GHz switched attenuator fundamental dlls to address Win10 connection issues

**Version 2.1.968.3**

Released Date:	June 2018
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.1.968.3.exe

## Enhancements

- Added support for detector type Peak.
- Further enhanced 89600 VSA control with M9203A 1 GHz module.

## Critical Fixes

- New M9214A IF Digitizer FPGA bits to fix issues with dither setup being ignored with board rev numbers greater than 2.

## Version 2.1.910.2

Released Date:	May 2017
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.1.910.2.exe

## Enhancements

- When the M9393A driver is initialized with “ExternalDigitizer=true” or “ExternalDigitizer=1” in the option string, M9214A IF Digitizer is no longer required in the PXI chassis.
- A new M9393 wideband IF hardware extension for the 89600 VSA has been added that allows a M9393A to be paired with a M9203A digitizer to obtain measurement bandwidth up to 1 GHz.

## Critical Fixes

- New FPGA bits with improved stability.

## Version 2.1.875.1

Released Date:	August 2016
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.1.875.1.exe

## Enhancements

- Support for list mode with external attenuator module added.

## Critical Fixes

- Corrected external attenuator module identification.

- Corrected selection of external attenuator module in simulation mode.
- Corrected field alignment backwards compatibility with 1.x factory calibration data.
- Corrected resource locking for the M9300 Reference module.

## Version 2.1.855.0

Released Date:	March 2016
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.1.855.0.exe

## Enhancements

- Support for attenuator type selection using the Attenuator IVI property.

- Support for controlling the RF input path using the AttenuatorMode IVI property.
- Support for Noise Correction in FFT Acquisition Mode using the NoiseCorrection IVI interface.
- M9300A FPGA 1.0.4.0 available – Optional, not currently required for any new software features.

## Version 2.0

### Version 2.0.225.1

Released Date:	29 January 2016
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.0.225.1.exe

### Enhancements

- Enhanced self-tests and corrections for installed hardware options.
- Enhanced support for external applications software.
- Increased IF frequency range to [200 MHz, 800 MHz] for external wideband digitizers.

### Version 2.0.200.0

Released Date:	6 November 2015
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-2.0.200.0.exe

### Enhancements

- Support for extended frequency range (3.6 GHz - 50 GHz) using option M9365A-FRX. Use of M9169E Programmable Attenuator is recommended for range control, automated field alignments, and self test.
- Support for wideband IF (up to 800 MHz) using option M9365A-WB1 and use of an external wideband digitizer, such as M9202A or M9703A.
- Limited (setup) support for data streaming using the M9202A wideband digitizer. All streaming controls are available from the M9392A VSA Soft Front Panel and IVI interfaces.
- Support for peer-to-peer IQ data transfer from the M9214A Digitizer module to another module that supports peer-to-peer data transfer, such as the M9451A module, using the PeertoPeerPort IVI interface.

- Enhanced self-tests for extended frequency ranges with or without the M9169E Step Attenuator.
- 89600: Power Spectrum speed improvements.

## Version 1.2

### Version 1.2.1019.1

Released Date:	19 September 2015
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-1.2.1019.1.exe

### Critical Fixes

- Corrected frequency scaling for Soft Front Panel FFT Acquisition mode
- Increased maximum value for Soft Front Panel IQ averaging period to match IVI maximum
- Fixed intermittent glitch on narrowband time trace after using FFT Acquisition mode

### Version 1.2.1016.0

Released Date:	23 May 2015
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-1.2.1016.0.exe

### Enhancements

- Support for M9415A Peer To Peer operation. Not supported via IVI.
- Support for M9415A Noise Correction in FFT Acquisition Mode. Not supported via IVI.

### Critical Fixes

Defect	Description
385288	LO Feedthrough causes IF Overloads when using Noise Corrections
391319	Interaction with M90XA prevents newer M90XA versions from running

## Version 1.1

### Version 1.1.522.2

Released Date:	20 March 2015
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-1.1.522.2.exe

### Enhancements

- Field calibration enhancement to improve expected input level accuracy.

### Critical Fix

Defect	Description
361207	Fixture Loss Enabled is now set to False on Reset (previously was unchanged)

### Version 1.1.518.1

Released Date:	13 February 2015
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-1.1.518.1.exe

### Enhancements

- 89600 VSA Software allows driver sharing using M9000 resource manager for multichannel configurations.

### Critical Fixes

Defect	Description
353338	Issue starting system if locale uses comma as decimal separator
357918	LO Nulling intermittently fails on some systems
369709	Issue with field calibration resulting in -0.2 dB flatness error on some units

Defect	Description
335725	89600: error reported when IF Dither enabled and Span/RBW ratio too large
353408	89600: error reported when switching between IF Mag & External Trigger in Sequenced Mode
353905	89600: minimum gate length limited to 100 ns in zero span
355118	89600: added VBW limiting in zero span
356920	89600: channel filter was not set correctly for non-power spectrum measurements
359033	89600: allow higher Span to RBW ratio based on physical memory available

## Version 1.1.240.0

Released Date:	25 September 2014
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-1.1.240.0.exe

## Enhancements

- LabVIEW driver for AgM9393.
- Added IF Dither mode for Stepped Spectrum. See IAgM9393Ex2. SteppedSpectrumAcquisition2.IFDither.
- Added multi-channel synchronization. See IAgM9393.MultiChannelSync.
- Documentation updates.

## Critical Fixes

Defect	Description
337258	89600: Overlap Percentage error with Gate Trigger and Power Spectrum
339914	Comprehensive alignment failed if initial instrument state is Stepped Spectrum and

Defect	Description
	conversion is image protect

## Version 1.0

### Version 1.0.80.1

Released Date:	12 August 2014
Requirements category (operating system):	Microsoft Windows 7
Requirements category (other):	Keysight IO Libraries Suite
File Name:	M9393_Setup-1.0.80.1.exe

## Critical Fixes

### Software Defects Fixed

Defect	Description
335782	Alignments fail if conversion mode is not set to Auto
337060	Alignments fail if multiple instances of M9393 in the same process
338698	Corrected trigger qualification of wideband burst trigger for IVI and 89600
332857	89600: Reconnecting to M9393 from 89600 fails in certain sequences
335725	89600: Large span to RBW ratios may generate errors
331064	89600: Certain triggered measurements stall if trigger not received in 1 sec
332469	89600: Incorrect power reading at certain settings when using average detector
336180	89600: Corrected handling of trigger delay limits
339074	89600: Minimum span can be less than 800 Hz
337258	89600: Overlap Percentage error with Gate



Defect	Description
	Trigger and Power Spectrum
339305	Trigger Delay and Holdoff is incorrect or causes errors when used with 89600

#### Documentation Defects Fixed

Defect	Description
320892	RF Attenuation Change is not proportional to Mixer Level Offset change
338088	Document how to do calibration with 89600 and M9393 hardware
338101	Alert user that no signal should be present on the M9393A during calibration