

Software
Release Notes

Keysight
M938x PXIe
Vector
Signal Generator



Notices

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Manual Part Number

M9300-90008

Published By

Keysight Technologies
Ground Floor and Second Floor, CP-11
Sector-8, IMT Manesar – 122051
Gurgaon, Haryana, India

Edition

Edition 2.1, December, 2015

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Version 2.1

Version 2.1.87.1

Release Date: December 2015

Critical Fixes

- Fix interaction between applications using shared Reference or shared Synthesizer that may result in self test failures.
- Fixed regression introduced in 1.4.405.1 which caused StartPlaybackOn10MHzClock synchronization to fail after performing PowerSearch.

Version 2.1.85.0

Release Date: July 2015

Enhancements

- Added support for eight PXIe VSGs in two chassis sharing a single controller. The following configurations are supported:
 - Time-synchronous multi-channel operations using independent Local Oscillators (LOs).
 - Time-synchronous and phase coherent multi-channel operations using output from a single LO routed through a V2802A LO Distribution Network to split the signal to the eight channels.
- Added support for multichannel synchronized ArbRestart for up to four channels in a single chassis.
- Added the SCPI command :CALibration:LO:LEVel

Version 2.0

Version 2.0.332.0

Release Date: May 2015

Enhancements

- Updated help file, added IVI-2014 Compliance, rebranded as Keysight Technologies.
- Added support for a maximum of 4 PXI VSGs in a single chassis sharing a single controller.
- Added MultiChannelSync IVI interface, enabling improved multichannel timing synchronization.
- Added phase synchronous operation via M9301A Synthesizer sharing capability, along with new IVI method and properties:
 - Calibration2.LOLevelAlignment.AlignLoLevel
 - Modulation3.BasebandPhase adjustment
 - Modules.Synthesizer3.SharedRole
 - Modules.Synthesizer.OutputPort
- Added Multichannel example program to demonstrate time and phase synchronous operation.
- Added Reference3.AlignExternalReferenceAnd10MHzOut method to align phase of the 10 MHz Output with the External Reference input.
- Added ArbMemory IVI interface to enable manual management of ARB memory usage.
- Added Triggers.ExternalTrigger3.ArbRestart property.
- Enhanced SCPI interface with additional commands including multichannel operation.

Critical Fixes

- Fix to enable using Modules.Reference.ProgrammableOutputTrigger properties when sharing M9300A Reference between multiple instruments.

Version 1.4

Following section provides information on various M938x 1.4.x versions released.

Version 1.4.400.0

Release Date: July 2014

Enhancements

- Added SCPI interface with support for commonly used commands
- Added support for Signal Studio 802.154g Wi-SUN
- Improved Seed Performance
- M9300A FPGA 1.0.1.0 available – Optional, not currently required for any new software features

Critical Fixes

- Fix enabling Modules.Reference.ProgrammableOutputTrigger properties to take effect.
- Fix to eliminate undesired Apply() performed within List.End() which previously could result in unintended signal output.

Version 1.4.405.1

Release Date: January 2014

- Fix to List mode operation with external trigger timeout enabled.

Version 1.3

Version 1.3.300.0

Release Date: October 2013

Enhancements

- Added support for Signal Studio envelop tracking waveforms, N7624B-KFP(-KTP) and N7625B-KFP(-KTP)
- Expanded Synchronization Output Trigger functions to include the use of backplane triggers 0-7
- M9311A Modulator FPGA was updated to improve trigger jitter (FPGA version 1.0.0.4)
- Added external triggering delay capability (see Modulation2.BasebandDelay and Triggers2.ExternalTrigger2.Delay)

Critical Fixes

- Fix to improve Power Search accuracy
- Fixes to improve Fixture Loss performance
- Fixes IVI Config Store to remember options and "simulate" mode
- Fix BackPlaneReferenceEnabled value to be unaffected by Reset

Version 1.2

Version 1.2.525.1

Release Date: May 2013

Critical Fixes

- Fix to prevent problems caused by simultaneous creation/initialization of the M9300 Reference when it is shared by \geq two multi-module instruments.
- Fix to prevent the RF power from being turned on unexpectedly during the learn phase of a List.
- Fix to shorten application startup time by preventing Windows signature verification on application startup.

Version 1.2.500.0

Release Date: April 2013

Keysight IO Libraries Suite version 16.3.16603.3 or later is required for the M9381A, M9380A and M9300A products.

Enhancements

- Phase Lock Loop (PLL) Mode enhancement: The "Normal" option (default) should be adequate for most measurements. The "Best Wide Offset" option sets the M9301A Synthesizer's PLL for narrow bandwidth, which can yield better ORFS and EVM measurements for wide modulation. Note, however, that this option increases the M9301A Synthesizer's settling time by approximately 10%. Driver impact: Modules.Synthesizer.PLLMode property (IVI), Get/Set AttributeVilnt32_Modules VIs (LabVIEW).
- Reference sharing enhancement: Reference Sharing is now enabled by default. The M9300A Reference module can be shared by more than one instance of the AgM938x driver. If you connect to a hardware configuration that includes a currently connected M9300A (either independently or as part of another hardware configuration) the latest instance of the AgM938x driver will take control of the M9300A. You will see no warning or error message. If you would prefer to be keep the reference control with the first instance of the AgM938x driver so that a subsequent instance will not take control of the reference module unintentionally, set the *OptionString* parameter to `ShareReferenceVisaSession=0`. Driver impact Initialize property (IVI), Initialize With Options VI (LabVIEW). Added enum (STATUS_EVENT_REFERENCE_STATE_CHANGED) to the Event parameter in AgM938x and AgM9300 drivers to track when sharing the Reference module across processes or sessions and

the state of the module configuration was changed by another controlling entity. (WIT 179482)

- Garbage collection enhancement: Driver impact Added System.GcTimingOptimizationEnabled property (IVI), added GC_TIMING_OPTIMIZATION_ENABLED attribute (LabVIEW). Indicates whether the hardware driver should change the .NET garbage collector state to optimize hardware settling times. Default = TRUE. For details, see the respective driver documentation.
- IQ Arb information management enhancement: New functionality was added to get or edit parameter information in an ARB that has been uploaded into an M9381A instrument. Driver impact: Added Modulation.IQ.ArbInformation and Modulation.IQ.EditArbInformation methods (IVI), added IQ Arb Information and IQ Edit Arb Information VIs (LabVIEW).
- List management enhancement: Driver impact Added List.Exists method (IVI), added List Exists VI (LabVIEW). Enables you to check to see if a specific list exists.
- M9381A SFP enhancement: Added the Sync Output Trigger control to the M9381A SFP (Arb tab). This trigger is generated in synch with ARB playback. (WIT 178526)Options are:
 - None (default). No trigger is generated
 - Per Arb. The synchronization trigger is generated at the beginning of the ARB on each repetition of playing the ARB.
 - Marker n. If you would like to generate the trigger based on the marker attached to the ARB, choose Marker 1, 2, 3, or 4.

Version 1.1

Version 1.1.199.3

Release Date: December 12, 2012

Enhancements

- Changed the defaults of the Synchronization Output Trigger to be Enabled = true and Pulse Width = 1.0e-5 (10 μ s).

Critical Fixes

- Fixed implementation of Driver.Modules.Item.Nonvolatile.* to avoid corrupting nonvolatile memory contents.

Version 1.1.196.2

Release Date: November 1, 2012

Enhancements

- Miscellaneous cosmetic improvements to the Soft Front Panels for enhanced usability

Critical Fixes

- Added self-test checks for more robust instrument error checking

Version 1.1.186.1

Release Date: September 26, 2012

- Minor licensing update.

Version 1.1.184.0

Release Date: August 27, 2012

- Initial public software release.

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Edition 2.1, December, 2015



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