

# Keysight M809228XA OIF-CEI 28G VSR/SR Compliance Test Plugin

This document contains latest information on the Keysight OIF-CEI 28G VSR/SR Plugin.

## Related Document

For detailed information, refer to the following document for this application:

- “OIF-CEI-28G User Guide.pdf”

This document can be found at the following location after you install the plugin:

*C:\Program Files\Keysight\M8070B\Plugins\OIFPlugin\doc*

The M8070B documents can be located by clicking *Start > All Programs > Keysight M8070B > Keysight M8070B Documentation*. Alternatively, you can also visit [www.keysight.com/find/m8070b](http://www.keysight.com/find/m8070b) to find the latest versions of M8070B documents.

## Installation Steps

To install the Keysight OIF-CEI 28G VSR/SR plugin, perform the following steps:

- Start the M8070B software. To do so, go to *Start Menu > All Programs > Keysight M8070B*.
- Click *Utilities > Plugin Manager*.
- Click on the Install Plugin from File button. A File Open dialog is displayed.
- Locate the OIF-CEI plugin file (\*.M8KP) to install and click OK. On the successful installation of OIF-CEI plugin, a message is displayed.

- Install the required licenses via the Keysight License Manager (if not done before). To know about the required licenses, refer to the release information in the last section of this document or see the OIF-CEI-28G User Guide.
- Restart the M8070B software. You should now find the new plugin in the *Applications* menu of the M8070B software.

## Getting Started

To access the installed OIF-CEI 28G VSR/SR plugin, perform the following steps:

1. Click *Start > All Programs > Keysight M8070B > Keysight M8070B*.
2. From the M8070B user interface menu, click *Application* to view the list of all installed plugins.
3. Select the OIF-CEI-03.1 plugin. The OIF-CEI user interface is displayed.
4. After starting the application, you must set up the system for VSR Host Testing or SR Testing. Refer to the OIF-CEI-28G User Guide for detailed instructions.

## OIF-CEI 28G VSR/SR Compliance Test Plugin

### Release V2.5.300.8

Released Date:	October 9, 2020
Operating System:	Microsoft Windows 7 (64 bit) SP1, Microsoft Windows 8 (64 bit) Microsoft Windows 8.1 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
MATLAB Runtime Required:	R2017a (9.2), 64-bit Download from <a href="#">here</a> .
Oscilloscope Required:	One of the following: 86100D with 86108B plugin N1000A with N1060A plugin N1000A with 86108B plugin DCA-M oscilloscope + CDR FlexDCA Software Version A.06.55.69 or above
Noise Source Required for SR Testing:	M8195A with Software Version 4.0.0.0 or above
Software Pre-requisites:	Keysight IO Library rev. 18.1 or above AXIe Chassis Firmware (Embedded System Module (ESM) from Keysight Technologies) greater than or equal version 1.3.41
Plugin Requirements:	<p><b>One of the following oscilloscopes</b></p> <ul style="list-style-type: none"> <li>• Keysight 86100D with options ETR plus Keysight 86108B with options HBW, 232, PTB, JSA, PT2, CA2, and DC2</li> <li>• Keysight N1000A with options PLK plus Keysight N1060A Precision Waveform Analyzer with options 050/ 085, 232/264, PTB, and JSA (Optional)</li> <li>• Keysight N1000A with options PLK plus Keysight 86108B with options HBW, 232, PTB, JSA, PT2, CA2, and DC2</li> <li>• N1092C or N1092E DCA-M - LOJ, PLK, FS1 (Optional); CDR options - N1076A-232,N1076B-232,N1077A-232,N1078A-232,N1076B-264,N1078A-264</li> <li>• N1094A or N1094B DCA-M - LOJ, PLK, 050, FS1 (Optional); CDR options - N1076A-232,N1076B-232,N1077A-232,N1078A-232,N1076B-264,N1078A-264</li> </ul> <p>and N1010100A Research and Development Package or options 200, 201, and SIM</p>

**Victim Generator & Analyzer/Crosstalk Generator**

Either

M8070ADVB-1xx

M8045A-G32/G64,0G2,0G3,0G4

M8046A-A32/A64

M8046A-0A4/0A5/N1076A-232/N1076B-232/N1077A-

232/N1078A-232/N1076B-264/N1078A-264

Or

M8070ADVB-1xx

Victim Generator and Analyzer - M8041A-

G16,C16,0G2,0A2,0G3;M8062A-C32,G32,0G4,0A4

Crosstalk Generator (for VSR Host test, not needed for

SR Test) - M8041A-G16,0G2;M8062A-G32,0G4

**M8195A for Noise Generation for SR Tests (Not  
needed for VSR Host Test)**

M8195A-002/004,16G

**Keysight OIF-CEI 28G VSR/SR Plugin options**

M809228XA-1FP or M809228XA-1FT

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File Name:

OIFPlugin.m8kp

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## Enhancements

- VSR Host Stressed Eye Calibration: In Debug mode make minimum and maximum peaking value adjustable.

## Defects Fixed

- VSR Host Stressed Eye Calibration: Standard compliant peaking value range is only 1 to 2 dB.

## Release V2.5.100.6

Released Date:	August 25, 2020
Operating System:	Microsoft Windows 7 (64 bit) SP1, Microsoft Windows 8 (64 bit) Microsoft Windows 8.1 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
MATLAB Runtime Required:	R2017a (9.2), 64-bit Download from <a href="#">here</a> .
Oscilloscope Required:	One of the following: 86100D with 86108B plugin N1000A with N1060A plugin N1000A with 86108B plugin DCA-M oscilloscope + CDR FlexDCA Software Version A.06.55.69 or above
Noise Source Required for SR Testing:	M8195A with Software Version 4.0.0.0 or above
Software Pre-requisites:	Keysight IO Library rev. 18.1 or above AXIe Chassis Firmware (Embedded System Module (ESM) from Keysight Technologies) greater than or equal version 1.3.41
Plugin Requirements:	<p><b>One of the following oscilloscopes</b></p> <ul style="list-style-type: none"> <li>• Keysight 86100D with options ETR plus Keysight 86108B with options HBW, 232, PTB, JSA, PT2, CA2, and DC2</li> <li>• Keysight N1000A with options PLK plus Keysight N1060A Precision Waveform Analyzer with options 050/ 085, 232/264, PTB, and JSA (Optional)</li> <li>• Keysight N1000A with options PLK plus Keysight 86108B with options HBW, 232, PTB, JSA, PT2, CA2, and DC2</li> <li>• N1092C or N1092E DCA-M - LOJ, PLK, FS1 (Optional); CDR options - N1076A- 232,N1076B-232,N1077A-232,N1078A- 232,N1076B-264,N1078A-264</li> <li>• N1094A or N1094B DCA-M - LOJ, PLK, 050, FS1 (Optional); CDR options - N1076A- 232,N1076B-232,N1077A-232,N1078A- 232,N1076B-264,N1078A-264</li> </ul> <p>and N1010100A Research and Development Package or options 200, 201, and SIM</p> <p><b>Victim Generator &amp; Analyzer/Crosstalk Generator</b> Either M8070ADVB-1xx M8045A-G32/G64,0G2,0G3,0G4 M8046A-A32/A64 M8046A-OA4/OA5/N1076A-232/N1076B-232/N1077A- 232/N1078A-232/N1076B-264/N1078A-264</p>

Or

M8070ADVB-1xx

Victim Generator and Analyzer - M8041A-

G16,C16,0G2,0A2,0G3;M8062A-C32,G32,0G4,0A4

Crosstalk Generator (for VSR Host test, not needed for SR Test) - M8041A-G16,0G2;M8062A-G32,0G4

**M8195A for Noise Generation for SR Tests (Not needed for VSR Host Test)**

M8195A-002/004,16G

**Keysight OIF-CEI 28G VSR/SR Plugin options**

M809228XA-1FP or M809228XA-1FT

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File Name:

OIFPlugin.m8kp

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## Enhancements

- Possibility to select RJ Low Pass Filter. This allows to use a lower RJ Low Pass Filter when more total Jitter is needed in Debug mode.

## Defects Fixed

- VSR Test uses wrong UUGJ
- Reporting of CTLE peaking is offset by one in the logger

## Release V2.5.20.4

Released Date:	July 24, 2020
Operating System:	Microsoft Windows 7 (64 bit) SP1, Microsoft Windows 8 (64 bit) Microsoft Windows 8.1 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
MATLAB Runtime Required:	R2017a (9.2), 64-bit Download from <a href="#">here</a> .
Oscilloscope Required:	One of the following: 86100D with 86108B plugin N1000A with N1060A plugin N1000A with 86108B plugin DCA-M oscilloscope + CDR FlexDCA Software Version A.06.55.69 or above
Noise Source Required for SR Testing:	M8195A with Software Version 4.0.0.0 or above
Software Pre-requisites:	Keysight IO Library rev. 18.1 or above AXIe Chassis Firmware (Embedded System Module (ESM) from Keysight Technologies) greater than or equal version 1.3.41
Plugin Requirements:	<p><b>One of the following oscilloscopes</b></p> <ul style="list-style-type: none"> <li>• Keysight 86100D with options ETR plus Keysight 86108B with options HBW, 232, PTB, JSA, PT2, CA2, and DC2</li> <li>• Keysight N1000A with options PLK plus Keysight N1060A Precision Waveform Analyzer with options 050/ 085, 232/264, PTB, and JSA (Optional)</li> <li>• Keysight N1000A with options PLK plus Keysight 86108B with options HBW, 232, PTB, JSA, PT2, CA2, and DC2</li> <li>• N1092C or N1092E DCA-M - LOJ, PLK, FS1 (Optional); CDR options - N1076A- 232,N1076B-232,N1077A-232,N1078A- 232,N1076B-264,N1078A-264</li> <li>• N1094A or N1094B DCA-M - LOJ, PLK, 050, FS1 (Optional); CDR options - N1076A- 232,N1076B-232,N1077A-232,N1078A- 232,N1076B-264,N1078A-264</li> </ul> <p>and N1010100A Research and Development Package or options 200, 201, and SIM</p> <p><b>Victim Generator &amp; Analyzer/Crosstalk Generator</b> Either M8070ADVB-1xx M8045A-G32/G64,0G2,0G3,0G4 M8046A-A32/A64 M8046A-OA4/OA5/N1076A-232/N1076B-232/N1077A- 232/N1078A-232/N1076B-264/N1078A-264</p>

Or

M8070ADVB-1xx

Victim Generator and Analyzer - M8041A-

G16,C16,0G2,0A2,0G3;M8062A-C32,G32,0G4,0A4

Crosstalk Generator (for VSR Host test, not needed for SR Test) - M8041A-G16,0G2;M8062A-G32,0G4

**M8195A for Noise Generation for SR Tests (Not needed for VSR Host Test)**

M8195A-002/004,16G

**Keysight OIF-CEI 28G VSR/SR Plugin options**

M809228XA-1FP or M809228XA-1FT

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File Name:

OIFPlugin.m8kp

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## Enhancements

- Added support for more oscilloscopes for the calibration procedures:
  - DCA-M oscilloscopes (N1092C/N1092E/N1094A/N1094B) + Clock Recovery (N1076B/N1077A/N1078A)
  - N1000A DCA-X Wide-Bandwidth Oscilloscope Mainframe + N1060A Precision Waveform Analyzer plugin
  - N1000A DCA-X Wide-Bandwidth Oscilloscope Mainframe + 86108B Precision Waveform Analyzer plugin
- Added support for clock recovery devices - N1076B/N1077A/N1078A (if M8046A in-built clock recovery is not used)
- Updated the plugin for M8046A Equalizer support



## Release V2.0.0.0

Released Date:	March 18, 2019
Operating System:	Microsoft Windows 7 (64 bit) SP1, Microsoft Windows 8 (64 bit) Microsoft Windows 8.1 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
MATLAB Runtime Required:	R2015b (9.0), 64-bit Download from <a href="#">here</a> .
Oscilloscope Required:	86100D with 86108B plugin. FlexDCA Software Version 5.61 or above
Noise Source Required for SR Testing:	M8195A with Software Version 3.0.4.3 or above
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above AXIe Chassis Firmware (Embedded System Module (ESM) from Keysight Technologies) greater than or equal version 1.3.41
Plugin Requirements:	Keysight M8070B System Software Version: 6.0 or above Keysight Advanced Measurement Package (M8070ADVB) with option 1FP/1TP/1NP/1UP Keysight M8041A with options G16, C16, OG2, OA2, and OG3 Keysight M8062A with options G32, C32, OG4, and OA4 Keysight M8045A with options G32, OG2, OG3, and OG4 Keysight M8046A with option A32 Keysight 86100D with options ETR, 200, 201, and SIM Keysight 86108B with options HBW, 232, JSA, PT2, CA2, and DC2 Keysight OIF-CEI 28G VSR/SR Plugin options M809228XA-1FP or M809228XA-1FT

## Notes

- Maintenance release for M8070B compatibility.
- Support of M8046A built-in clock recovery for performing VSR and SR tests.

## Release V1.0.0.0

Released Date:	July 7, 2017
Operating System:	Microsoft Windows 7 (64 bit) SP1, Microsoft Windows 8 (64 bit) Microsoft Windows 8.1 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
MATLAB Runtime Required:	R2015b (9.0), 64-bit Download from <a href="#">here</a> .
Oscilloscope Required:	86100D with 86108B plugin. FlexDCA Software Version 5.61 or above
Noise Source Required for SR Testing:	M8195A with Software Version 3.0.4.3 or above
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above AXIe Chassis Firmware (Embedded System Module (ESM) from Keysight Technologies) greater than or equal version 1.3.41
Plugin Requirements:	Keysight M8070A System Software Version: 3.6 or above with options OTP Keysight M8041A with options G16, C16, OG2, OA2, and OG3 Keysight M8062A with options G32, C32, OG4, and OA4 Keysight M8045A with options G32, OG2, OG3, and OG4 Keysight M8046A with option A32 Keysight 86100D with options ETR, 200, 201, and SIM Keysight 86108B with options HBW, 232, JSA, PT2, CA2, and DC2 Keysight OIF-CEI 28G VSR/SR Plugin options M809228XA-1FP or M809228XA-1FT
File Name:	OIFPlugin.m8kp

### Features

- First release of Keysight OIF-CEI 28G VSR/SR Plugin. The plugin provides the following calibrations and tests for 28G-SR and 28G-VSR Host compliance.

#### VSR Host Testing

Calibrations	Crosstalk Amplitude Crosstalk Transition Time Amplitude UUGJ UBHPJ SJ Stressed Eye
Tests	Stressed Input Voltage Tolerance

SR Testing

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Calibrations	Amplitude Direct Connection Amplitude UUGJ UBHPJ SJ Transmitter Common Mode Noise Integrated Crosstalk Noise
Tests	Stressed Input Voltage Tolerance

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This information is subject to change without notice.

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