

# N109228CA OIF CEI 3.1 Compliance Test Application

## N109228CA OIF CEI 3.1 Software Version 5.0.13.0

Release Date:	December 08, 2023
Operating System:	Microsoft Windows 7 and Windows 10
Minimum Instrument Software Version:	A.07.41.27
File Name:	SetupN109228CA_CEI_5.0.13.0.exe
License:	Please see the product data sheet on Keysight.com.

### Modifications/Changes

- Application upgraded to support the F-JSA license.
- Included MATLAB Runtime (MCR) 7.10 as pre-requisite installer.

### Issues Fixed

- Fixed the issue of incorrect eye probability in Eye Measurements at **CEI 28G-VSR Host to Module at TP1a** and **CEI 28G-VSR Host to Module at TP4**.
- Fixed the file transfer issue in Return Loss tests.

### Known Issue

- The CDR will lose lock during Step Size tests if the DUT takes a longer time to disable the output while updating the coefficients.

Workaround: Re-lock the CDR manually before proceeding by clicking the message tab.

## Note / Recommendation

- This is the last version that supports the Microsoft Windows 7 operating system.

## N109228CA OIF CEI 3.1 Software Version 5.0.11.0

Release Date:	14 April 2023
Operating System:	Microsoft Windows 7/ Microsoft Windows 10
Minimum Instrument Software Version:	A.06.92.28
File Name:	SetupInfCEITest05000011.exe
License:	Please see the product data sheet on <a href="https://www.keysight.com">Keysight.com</a> .

### Modifications/Changes

- Updated Keysight License Manager 5.

## N109228CA OIF CEI 3.1 Software Version 5.0.10.0

Release Date:	30 August 2022
Operating System:	Microsoft Windows 7/ Microsoft Windows 10
Minimum Instrument Software Version:	A.06.92.28
File Name:	SetupInfCEITest05000010.exe
License:	Please see the product data sheet on Keysight.com.

### Issues Fixed

- Fixed the issue of app using incorrect channel if run using InfiniiSim.
- Fixed the issue of incorrectly reported result for Normalized Coefficient Step Size tests.
- Fixed the issue of app failing to run if the “Manual Baud Rate” config is selected.

### Known Issues

- Connection diagrams are not updated as per the connected PNA/N1055A.
- Typo error in details of any aborted tests – “Error processing final vaue” instead of value.

## N109228CA OIF CEI 3.1 Software Version 5.0.0.0

Release Date:	6 March 2020
Operating System:	Microsoft Windows 7
Minimum Instrument Software Version:	A.06.50.287
File Name:	SetupInfCEITest05000000.exe
License:	Please see the product data sheet on Keysight.com.

### Issues Fixed

- Fixed Even-odd jitter measurement doesn't work at 28G-MR
- Fixed Error message on every 28G data rate testing
- Fixed incorrect Common-mode voltage test measurement

### New Features / Additions

- Support Normalized Step Size Test in 25G-LR, 28G-SR and 28G-MR.
- Support Loop Bandwidth Tuning
- Support Jitter optimization

### Known Issues

- 1) The 6G/11G TJ and UUGJ tests will not run if PRBS31 is applied first with DCA-M Channel 7C and 7D.

Workaround: Apply PRBS9 first then a message will show up to request user to apply PRBS31.

- 2) The “Adjust True-Complement Skew, Remote Heads” test will not work in FlexDCA v6.50.287. The issue is fixed in FlexDCA v6.55.
- 3) The Exception will happen when clicking on “Copy to Clipboard” in “My Support ID”.

Workaround: Read the Support ID from the screen and type it at notepad instead of using the clipboard

## N109228CA OIF CEI 3.1 Software Version 4.15

Release Date:	4 Oct 2019
Operating System:	Microsoft Windows 7
Minimum Instrument Software Version:	A.06.40.429
File Name:	SetupInfCEITest04150000.exe

- General Comments
  - o The product number is changed from “N1012A” to “N109228CA”.
  - o Support PPKS licenses.

## A.04.12 Release Notes, July 2018

(Differences from Release A.04.11)

### Issues Fixed

- Fixed Total Jitter test do not give correct result when run with Waveform Tests.
- Fixed Common Mode Voltage issue.
- Fixed issue unable to upload results on Cygnet.
- Fixed Differential Voltage Pk- Pk tests run with other patterns.
- Fixed run error in Total Jitter for 11G-SR when RemoveCable/Fixture S-Parameter is set to ON.
- Fixed Crosstalk 28G-VSR H2M test run with non- compliant pattern when run in group.
- Fixed UBHPJ test asks for PRBS9 pattern which is not required for calculating its results.
- Fixed issue unable to detect pattern if it is changed during the test run.
- Fixed invalid trail issue in Total Jitter test.
- Fixed Total Jitter test gets aborted if run with different tests.
- Fixed J2 and J9 Jitter tests are failing in giving results.

### Enhancements

- Add N1046A support.
- Add DCA-M support.
- Add N1060A support.
- Add Cygnet support.
- Add N1076/77A support.
  
- Changed Configure Tab Settings
  - o Added Channels for N109x.

- Added Variable Equalization Level.

## A.04.11 Release Notes, October, 2016

(Differences from Release A.04.00)

### Issues Fixed

- Fixed a defect that would occasionally failed at EW test.
- Fixed a defect that caused config settings unable to restore when the saved project is re-opened.
- Fixed a defect that caused the Baud Rate unable to report correctly when using N1045A/55A.
- Fixed a defect that caused Eye Opening tests failed when using IPTB.
- Fixed a defect that prevents “De-embedded” operator to turn on in 11G-MR/LR TJ measurement when “Remove Cable/Fixture S-Parameter” is ON.
- Fixed a defect in Adjust True-Complement Skew, Cables utility.
- Fixed a defect that caused Jitter Tests 25G-LR –FIR off/on fail when results are appended to previous trials.
- Fixed a defect that caused Output Differential Voltage, 25G-LR measurement crashes when run standalone or in group.
- Fixed a defect that caused Adjust True-Complement Skew, Manually Enter Values utility runs even 86108B is installed.
- Fixed a defect that caused Jitter Transfer Bandwidth/Peaking, 11G-SR issue three setup prompts when tests are run individually.

### Enhancements

- Provided debug option to use PRBS9 instead of PRBS31 for differential voltage pk-pk.
- Allowed user to enter fixed RJ for 25G-LR UBHPJ measurement.
- Added ability for user to increase number of waveforms used for EW and EH measurements in Normal and Debug mode.



- Allowed De-skew utilities performed at different bandwidth.
- Added user defined S-Parameter filenames and path.
  
- Changed Configure Tab Settings
  - o Added User Defined S-Parameter for S2P Channel A
  - o Added User Defined S-Parameter for S2P Channel B
  - o Added User Defined S-Parameter for S4P Channel A and B
  - o Added Auto Adjust Pattern Number of Jitter
  - o Added Channel Bandwidth Setting
  - o Added Type of Pattern
  - o Added Fixed RJ Value
  - o Renamed *CTLE Peaking Value Maximum* to *CTLE Peaking Value, maximum for user selected range*
  - o Renamed *CTLE Peaking Value Minimum* to *CTLE Peaking Value, minimum for user selected range.*
  - o Renamed *JSA Peaking* to *JSA Peaking for Second Order*
  - o Added SIRC Functionality on 86108B and N1045A
  - o Added SIRC Channel Response
  - o Added SIRC Channel BW
  - o Added Source for Return Loss tests

## A.04.00 Release Notes, August, 2014

(Differences from Release A.02.00)

### Modifications / Changes

- Added support for IA #OIF-CEI 3.1
- Removed the ability to run all tests from the Set Up tab.
- Changed all UBHPJ tests to query BUJ in Jitter Mode to report results.
- Reduced the number of waveforms for CM noise test from 100 to 30.
- For VSR eye opening tests, report the equivalent number of hits measured.
- Added support for N1055A module to perform all waveform, eye, and jitter measurements.

### Additions / New Features

- Added new CEI 28G-MR Medium Reach Tests
  - o Baud Rate, 28G-MR
  - o Common Mode Noise, 28G-MR
  - o Differential Return Loss, 28G-MR
  - o Differential Resistance, 28G-MR
  - o Differential Termination Mismatch, 28G-MR
  - o Even Odd Jitter, 28G-MR
  - o Output Common Mode Voltage, 28G-MR
  - o Output Differential Voltage, 28G-MR
  - o Output Fall Time, 28G-MR
  - o Output Rise Time, 28G-MR
  - o Single Ended Output Voltage, 28G-MR
  - o Total Jitter, 28G-MR

- Uncorrelated Bounded High Probability Jitter, 28G-MR
- Uncorrelated Bounded Gaussian Jitter, 28G-MR
  
- Added new CEI-28G Very Short Reach Host to Module at TP1a Tests
  - Crosstalk Diff Voltage, pk- pk, 28G- VSR H2M
  - Crosstalk Transition Time (rise), 28G-VSR H2M
  - Crosstalk Transition Time (fall), 28G-VSR H2M
  
- Added new CEI- 28G Very Short Reach Module to Host at TP4 Tests
  - Crosstalk Diff Voltage, pk- pk, 28G- VSR M2H
  - Crosstalk Transition Time (rise), 28G-VSR M2H
  - Crosstalk Transition Time (fall), 28G-VSR M2H
  
- Added new Utility
  - Adjust True-Complement Skew, Manually Enter Values
  
- Changed Configure Tab Settings
  - Added Measurement Time, Jitter on Long Patterns
  - Added Manual Baud Rate
  - Added Config for S- parameter 4- port numbering
  - Renamed *CTLE State for VSR Waveform Tests* to *CTLE Applied for VSR Waveform*
  - Renamed *Channels* to *Channels for N1045/55ATests*
  - Renamed *Pattern for TJ in 6G/11G Interfaces* to *Pattern for UUGJ/TJ in 6G/11G Interfaces*
  - Renamed *CTLE Peaking for VSR* to *CTLE Peaking Value for VSR Test*

- Removed Source for UUGJ and TJ

## A.03.00 Release Notes

- Revision number A.03.00 was never used. Version A.02.00 was directly followed by A.04.00.

## A.02.00 Release Notes, May, 2013

(Differences from Release A.01.00)

### New Features / Additions

- Support for OIF CEI Draft 9
- Expanded capabilities for use of CTLE with VSR interface.
- Remove effect of measurement channel
- Support for N1045A 60 GHz Remote Sampling Head module
- Support for 54754A TDR/TDT module (For electrical channel input only. TDR/TDT capability is not used.)
- Added two new CEI 28G-VSR Host to Module at TP1a tests:
  - o Diff to CM Conversion Loss, 28G-VSR H2M
  - o Common Mode Return Loss, 28G-VSR H2M
- Added two new CEI 28G-VSR Module to Host at TP4 tests:
  - o Diff to CM Conversion Loss, 28G-VSR M2H
  - o Common Mode Return Loss, 28G-VSR M2H
- Added three new utilities:
  - o Adjust True-Complement Skew, N1045A
  - o Optimize Eye Opening for VSR M2H Using CTLE, automated
  - o Optimize Eye Opening for VSR, user selected range of values
- Added the following Configure tab settings:
  - o Channel for N1045A
  - o CDR State
  - o Trigger Divide Ratio
  - o CTLE State for VSR Waveform Tests

- CTLE Peaking Value, minimum for user selected range
- CTLE Peaking Value, maximum for user selected range
- Samples Taken for Eye Mode
- Source for UUGJ and TJ
- Verify Pattern Length, Jitter
- Fixed Pattern Length
- Remove Cable/Fixture S-parameters
- S-parameter Bandwidth Limit
- S-parameter Filter Type
- Renamed the following Configure tab settings:
  - *From* CTLE Peaking for VSR *to* CTLE Peaking Value for VSR Tests
  - *From* JSA Peaking *to* JSA Peaking for Second Order
- Removed the following Configure tab settings:
  - Channel
  - Samples Taken
  - Samples for VSR Eye Opening
  - JSA Bandwidth





## A.01.10 Release Notes, March, 2013

(Differences from Release A.01.00)

### Modifications / Changes

- N1012A updated to work with FlexDCA version A.02.00.
- N1012A A.01.10 is compatible with FlexDCA version A.02.00 and is not compatible with FlexDCA version A.01.81.
- Fixed minor problem that affected pattern detection in jitter measurements.

## A.01.00 Release Notes, July, 2012

Initial Release

Notes / Recommendations

- Software version A.01.00 requires FlexDCA version A.01.81 and is not compatible with any other FlexDCA version.