Keysight M8085A MIPI Receiver Test Solution Plugins

This document contains latest information on the Keysight MIPI D-PHY Editor Plugin, the D-PHY CTS Plugin, the C-PHY Editor Plugin, and the C-PHY CTS Plugin.

Note: C-PHY has been announced for discontinue in June 2022. The official discontinue date is December 2022.

Related Documents

For detailed information, refer to the following documents for these applications:

- "Keysight M8085A MIPI D-PHY Editor User Guide.pdf"
- "Keysight M8085A MIPI D-PHY Receiver Test Software User Guide.pdf"
- "Keysight M8085A MIPI C-PHY Editor User Guide.pdf"
- "Keysight M8085A MIPI C-PHY Receiver Test Software User Guide.pdf"
- "Keysight M8085A MIPI C-PHY Editor v2.1 to v2.5 Transition Guide.pdf"
- "Keysight M8085A Plugins Installation Guide.pdf"

The documents can be found at the following locations:
C:\Program Files\ Keysight\M8070B\Plugins\MipiGeneratorPlugin\doc and
C:\Program Files\ Keysight\M8070B\Plugins\Mipi\doc

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

KEYSIGHT

MIPI D-PHY and C-PHY Editor and CTS Plugins

Required Licenses for Plug-ins

- Keysight M8070B System Software Version 6.0 to 7.2.140.2.

- Following table shows the licenses required for MIPI D-PHY Editor, C-PHY Editor, D-PHY CTS and C-PHY CTS with various versions:

Product	Supported Specification	Features	Required License
C-PHY Editor 2.1	1.0	Maximum bit rate 3 Gbps, Ping Pong and PTRN syntax	M8085A-CN1/CT1
C-PHY Editor 2.5	1.1	Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085A-CNA/CTA + M8085CUCA
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085CE1A or M8085A-CN1/CT1 + M8085CUEA
C-PHY Editor 2.6	1.1	Maximum bit rate 3 Gbps, Ping Pong and PTRN syntax	M8085A-CN1/CT1
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085A-CNA/CTA + M8085CUCA
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085CE1A or M8085A-CN1/CT1 + M8085CUEA
C-PHY Editor 2.6.5	1.1	Maximum bit rate 3 Gbps, Ping Pong and PTRN syntax	M8085A-CN1/CT1
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085A-CNA/CTA + M8085CUCA
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085CE1A or M8085A-CN1/CT1 + M8085CUEA
C-PHY Editor 2.6.6	1.1	Maximum bit rate 3 Gbps, Ping Pong and PTRN syntax	M8085A-CN1/CT1
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085A-CNA/CTA + M8085CUCA

Product	Supported Specification	Features	Required License
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085CE1A or M8085A-CN1/CT1 + M8085CUEA
C-PHY Editor 2.7	1.1	Maximum bit rate 3 Gbps, Ping Pong and PTRN syntax	M8085A-CN1/CT1
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085A-CNA/CTA + M8085CUCA
		Ping Pong, PTRN Syntax, Sequencing and Maximum bit rate 8 Gbps	M8085CE1A or M8085A-CN1/CT1 + M8085CUEA
C-PHY CTS 2.1	1.0	CTS 1.0 support	M8085A-CNA/CTA
C-PHY CTS 2.5	1.1	CTS 1.1 support	M8085CC1A
		CTS 1.1 support	M8085A-CNA/CTA + M8085CUCA
C-PHY CTS 2.6	1.1	CTS 1.0 support	M8085A-CNA/CTA
		CTS 1.0 support	M8085CC1A
		CTS 1.0 support	M8085A-CNA/CTA + M8085CUCA
		CTS 1.1 support	M8085CC1A
		CTS 1.1 support	M8085A-CNA/CTA + M8085CUCA
C-PHY CTS 2.6.5	1.1	CTS 1.0 support	M8085A-CNA/CTA
		CTS 1.0 support	M8085CC1A
		CTS 1.0 support	M8085A-CNA/CTA + M8085CUCA
		CTS 1.1 support	M8085CC1A
		CTS 1.1 support	M8085A-CNA/CTA + M8085CUCA
C-PHY CTS 2.6.6	1.1	CTS 1.0 support	M8085A-CNA/CTA
		CTS 1.0 support	M8085CC1A
		CTS 1.0 support	M8085A-CNA/CTA + M8085CUCA
		CTS 1.1 support	M8085CC1A
		CTS 1.1 support	M8085A-CNA/CTA + M8085CUCA
C-PHY CTS 2.7	1.1	CTS 1.1 support	M8085A-CNA/CTA
		CTS 1.1 support	M8085CC1A
		CTS 1.1 support	M8085A-CNA/CTA + M8085CUCA

Product	Supported Specification	Features	Required License
		CTS 1.1 support	M8085CC1A
		CTS 1.1 support	M8085A-CNA/CTA + M8085CUCA
D-PHY Editor 2.1	1.2	Max bit rate 5Gbps	M8085A-DN1/DT1
D-PHY Editor 2.5	2.0	Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085A-DNA/DTA + M8085DUCA
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085DE1A or M8085A-DN1/DT1 + M8085DUEA
D-PHY Editor 2.6	2.0	Maximum bit rate 5 Gbps, Ping Pong and Sequencing	M8085A-DN1/DT1
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085A-DNA/DTA + M8085DUCA
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085DE1A or M8085A-DN1/DT1 + M8085DUEA
D-PHY Editor 2.6.5	2.0	Maximum bit rate 5 Gbps, Ping Pong and Sequencing	M8085A-DN1/DT1
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085A-DNA/DTA + M8085DUCA
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085DE1A or M8085A-DN1/DT1 + M8085DUEA
D-PHY Editor 2.6.6	2.0	Maximum bit rate 5 Gbps, Ping Pong and Sequencing	M8085A-DN1/DT1
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085A-DNA/DTA + M8085DUCA
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085DE1A or M8085A-DN1/DT1 + M8085DUEA
D-PHY Editor 2.7	2.1	Maximum bit rate 5 Gbps, Ping Pong and Sequencing	M8085A-DN1/DT1

Product	Supported Specification	Features	Required License
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085A-DNA/DTA + M8085DUCA
		Ping Pong, 2 Channel Mode, Sequencing and Maximum bit rate 16 Gbps	M8085DE1A or M8085A-DN1/DT1 + M8085DUEA
D-PHY CTS 2.1	1.2	CTS 1.2 support	M8085A-DNA/DTA
D-PHY CTS 2.5	2.0	CTS 2.0 support	M8085DC1A
			M8085A-DNA/DTA + M8085DUCA
D-PHY CTS 2.6	2.0	CTS 1.2 support	M8085A-DNA/DTA
		CTS 1.2 support	M8085DC1A
		CTS 1.2 support	M8085A-DNA/DTA + M8085DUCA
		CTS 2.0 support	M8085DC1A
		CTS 2.0 support	M8085A-DNA/DTA + M8085DUCA
D-PHY CTS 2.6.5	2.0	CTS 1.2 support	M8085A-DNA/DTA
		CTS 1.2 support	M8085DC1A
		CTS 1.2 support	M8085A-DNA/DTA + M8085DUCA
		CTS 2.0 support	M8085DC1A
		CTS 2.0 support	M8085A-DNA/DTA + M8085DUCA
D-PHY CTS 2.6.6	2.0	CTS 1.2 support	M8085A-DNA/DTA
		CTS 1.2 support	M8085DC1A
		CTS 1.2 support	M8085A-DNA/DTA + M8085DUCA
		CTS 2.0 support	M8085DC1A
		CTS 2.0 support	M8085A-DNA/DTA + M8085DUCA
D-PHY CTS 2.7	2.1	CTS 2.1 support	M8085A-DNA/DTA
		CTS 2.1 support	M8085DC1A
		CTS 2.1 support	M8085A-DNA/DTA + M8085DUCA
		CTS 2.1 support	M8085DC1A
		CTS 2.1 support	M8085A-DNA/DTA + M8085DUCA

Installation Steps

To install the MIPI M8085A MIPI D-PHY & C-PHY plugins, perform the following steps:

- If you have installed previous versions of the D-PHY or C-PHY plug-ins, please uninstall them beforehand.

- Close the M8070B if it is running.

- Run the "PlugInInstaller_MIPI_x.x.x.x.exe".

- Accept the disclaimer and follow the steps of the installation wizard.

- Install the licenses above via the Keysight License Manager (if not done before).

- Start the M8085A software plug-ins. To do so, click Start Menu > Keysight M8070B. You should now find the new plugins in the Applications menu of the M8070B software.

Note that shortcuts are not auto-generated for the M8085A plug-ins. To access the M8085A plug-ins as a shortcut from the desktop,

1. Go to *C:\Program Files\Keysight\M8070B\bin*.

2. Right-click *Keysight.M8070B.exe* and click **Create Shortcut**.

3. Click **Yes** on the *Shortcut* prompt.

4. Go to Desktop. Right-click *Keysight.M8070B – Shortcut* and click **Properties**.

5. Modify Target field to *"C:\Program Files\Keysight\M8070B\bin\Keysight.M8070B.exe" /IgnoreAwg*.

6. Click Apply.

Launch the *Keysight.M8070B – Shortcut* to access the M8085A plug-ins from the desktop shortcut.

Getting Started

1. Start M8070B System Software

   o For D-PHY: Start the MIPI D-PHY Editor Plugin or the MIPI D-PHY CTS PlugIn by selecting it on the Application menu of the menu bar.
   o For C-PHY: Start the MIPI C-PHY Editor Plugin or the MIPI C-PHY CTS PlugIn by selecting it on the Application menu of the menu bar.

2. Start the controller software for the AWGs.

3. After starting the application, you need to go through the configure steps and target hardware:

   o The real-time oscilloscope (can be found in the Keysight Connection Expert)
   o The hislip connection numbers to the AWGs can be found via the controller software of the AWGs. The M8195A soft front panel displays this information in the *Help* > *About* screen. The IP address is either the "localhost" or the IP address of the remote PC on which the controller software of the AWGs is running. The PC on which M8070B and the AWG controller software is running must be on the same network.

Release Version 2.7.6.0

Release Date:	October, 2022
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070B System Software Version 6.0 to 7.2.140.2
	Keysight M8195A Firmware Version 3.6.0.0 or above with options 004, 16G, AMP, and SEQ.
D-PHY Plugin Requirements:	Keysight M8070B System Software Version 6.0 to 7.2.140.2
	Keysight M8195A Firmware Version 3.6.0.0 or above with options 004, 16G, and SEQ.
	Keysight Infiniium Oscilloscope Software version 6.40.01001
File Name:	PlugInInstaller_MIPI_2.7.6.exe

Changes

- N/A.

Fixed Issues

- Fixed issue of wrong PRBS9 pattern in the Alternate Calibration sequence.

Release Version 2.7.5.0

Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070B System Software Version 6.0 to 7.2.140.2
	Keysight M8195A Firmware Version 3.6.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070B System Software Version 6.0 to 7.2.140.2
	Keysight M8195A Firmware Version 3.6.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_2.7.5.exe

Changes

- Relaxed the impedance measurement in Amplifier Calibration.

Fixed Issues

- Fixed issue of Transition Time calibration at low speed (i.e., 216 Mbps)
- Fixed Granularity issue at date rate < 1Gbps

Release Version 2.7.3.2

Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070B System Software Version: from S6.0 and above.
	Keysight M8195A Firmware Version: V3.6.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070B System Software Version: from S6.0 and above.
	Keysight M8195A Firmware Version V3.6.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

Changes

- Increased configurability for maximum possible data (sample) rate.

Fixed Issues

- Fixed issue with the D-PHY Continuous Clock mode.

- Fixed issue with the inverted 'HS Init' and 'Exit Disturbance' pattern bits.

- Fixed issue with the PRBS Sequence when 'LSB First' option is checked.

- Fixed issue with Eye Opening Calibration for 'Test 2.3.3 Jitter Tolerance Data0' in C-PHY CTS.

- Fixed issue with the initial step for 'Test 2.3.8 HS RX Clock-to-Data Skew' in D-PHY CTS, where jitter is no longer being applied.

Release Version 2.7.0.0

Released Date:	July, 2019
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070B System Software Version: from S6.0 and above.
	Keysight M8195A Firmware Version: V3.6.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070B System Software Version: from S6.0 and above.
	Keysight M8195A Firmware Version V3.6.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

Common Changes

- Introduced support for Keysight M8070B System Software Version: S6.0 or above

- Removed support for M8190A AWG model.

- Removed support for Reference Termination Board (RTB) probes for Oscilloscopes.

- Modified the following features in 'Connection Setup' on the user interface:

    o Model: drop-down field grayed out, displays 'M8195A' only as the supported AWG model
    o Probe: drop-down field grayed out, displays 'Keysight N7010A' only as the supported probe

D-PHY Editor

- Removed support for older specification versions; specification version 2.10 only supported.

- Introduced support for new sequences in D-PHY signal generation:

    o Alternate Calibration sequence
    o Preamble Sequence

o HS-Idle Sequence

- Introduced support for Multi S-parameter files for de-embedding.

- Enhanced support for In-System Calibration in Dual Channel mode.

- Enhanced support for Low Power data rates as low as 1 Mbps.

- Added the following features to 'Data Pattern' on the user interface:

    o Preamble: added check box to select and apply Preamble sequence to the HS Data Burst
    o Sequence: added the HsAlternateCal.seq and HsIdle.seq files in C:\ProgramData\BitifEye\ValiFrame\Pattern\DPhy to support Alternate Calibration sequence and Hs-Idle sequence, respectively

- Added the following parameters to 'Protocol Timings' on the user interface:

    o TX-AlternateCal Duration
    o TX-HsIdlePost Duration
    o TX-HsIdleClkHs0 Duration
    o TX-HsIdlePre Duration
    o Preamble Steps

- Added the 'Multi S-Parameter Files' parameter to 'Disturbances' on the user interface.

- Introduced the following SCPI commands:

    o :PLUGin:DPHYplugin:PROTocol:IDLPost:DURation[?]
    o :PLUGin:DPHYplugin:PROTocol:IDLClk:DURation[?]
    o :PLUGin:DPHYplugin:PROTocol:IDPRe:DURation[?]
    o :PLUGin:DPHYplugin:EMBedding:PATH:SPArameters[?]
    o :PLUGin:DPHYplugin:PROTocol:ALTCal:DURation[?]
    o :PLUGin:DPHYplugin:PATTern:PREAmble[?]
    o :PLUGin:DPHYplugin:PROTocol:PRSTep:DURation[?]

C-PHY Editor

- Removed support for older specification versions; specification version 1.10 only supported.

- Introduced support for Multi S-parameter files for de-embedding.

- Introduced support for Multipliers to enhance T3-PREBEGIN and T3-POST pattern definitions.

- Enhanced support for Low Power data rates as low as 1 Mbps.

- Enhanced support for use of Nyquist FIR filter on the M8195A AWG SFP.

- Added the following parameters to 'Protocol' on the user interface:

    o T3-PREBEGIN Multiplier
    o T3-POST Multiplier

- Added the 'Multi S-Parameter Files' parameter to 'Disturbances' on the user interface.

- Introduced the following SCPI commands:

  o :PLUGin:CPHYplugin:EMBedding:PATH:SPArameters[?]
  o :PLUGin:CPHYplugin:PROTocol:PREAmble:BEMultiplier:PATTern[?]
  o :PLUGin:CPHYplugin:PROTocol:POMultiplier:PATTern[?]

D-PHY CTS

- Removed support for older specification versions; specification version 2.10 only supported.

- Introduced support for new sequences in D-PHY signal generation:

  o Alternate Calibration sequence
  o Preamble Sequence
  o HS-Idle Sequence

- Introduced support to define Multi S-parameter files for de-embedding.

- Enhanced support for In-System Calibration in Dual Channel mode.

- Enhanced support for Low Power data rates as low as 1 Mbps.

- Added the 'Multi S-Parameter Files' parameter under 'Configuration' panel.

- Modified the 'Specification' drop-down field to display version '2.10' only.

- Added HsAlternateCal.seq and HsIdle.seq files to the folder C:\ProgramData\BitifEye\ValiFrame\Pattern\DPhy, which can be accessed using the 'HS' field, to support Alternate Calibration sequence and Hs-Idle sequence, respectively.

- Added the following parameters to 'Protocol Timings' on the user interface:

  o TX-AlternateCal Duration
  o TX-HsIdlePost Duration
  o TX-HsIdleClkHs0 Duration
  o TX-HsIdlePre Duration
  o TX-HsPreamble Steps

- Support to customize the 'Oscilloscope Bandwidth' for jitter calibrations when 'Expert Mode' is selected under 'Configuration' panel.

- Streamlined Connection Diagrams for all jitter calibrations, all other calibrations and all tests.

- Removed e-Spike calibration and the following e-Spike tests:

  o Test 2.1.6 LP-RX Input positive Pulse Rejection e_spike Clock
  o Test 2.1.6 LP-RX Input negative Pulse Rejection e_spike Clock
  o Test 2.1.6 LP-RX Input positive Pulse Rejection e_spike Data
  o Test 2.1.6 LP-RX Input negative Pulse Rejection e_spike Data

- Split 'Test 2.3.8 – HS-RX Clock-to-Data-Skew and Jitter Tolerance' into:

o Test 2.3.8.1 HS-RX Skew-Amplitude Test for Data Rates 1.5Gbps and lower (Clock and Data)

o Test 2.3.8.2 Jitter and Eye Diagram Tolerance for Data Rates from 1.5Gbps to 2.5Gbps Data.

o Test 2.3.8.3 Jitter and Eye Diagram Tolerance for Data Rates from upper 2.5Gbps to 4.5Gbps Data.

- Added new test 'Test 2.4.12 T_HsIdlePost T_HsIdleClkHs0 T_HsIdlePre Data Compliance Procedure' along with sub-tests 'Test 2.4.12a T_HsIdlePost - Data Procedure', 'Test 2.4.12b T_HsIdleClkHs0 - Data Procedure' and 'Test 2.4.12c T_HsIdlePre - Data Procedure'.

C-PHY CTS

- Removed support for older specification versions; specification version 1.10 only supported.

- Introduced support for Multi S-parameter files for de-embedding.

- Introduced support for Multipliers to enhance T3-PREBEGIN and T3-POST pattern definitions.

- Enhanced support for Low Power data rates as low as 1 Mbps.

- Streamlined Connection Diagrams for all calibrations, all Semi-automated tests and all other tests.

- Enhanced support for use of Nyquist FIR filter on the M8195A AWG SFP.

- Modified the 'Specification' drop-down field to display version '1.10' only.

- Added the following parameters to 'Timings' on the user interface:

o T3-PREBEGIN Multiplier
o T3-POST Multiplier

- Added the 'Multi S-Parameter Files' parameter under 'Configuration' panel.

- Support to customize the 'Oscilloscope Bandwidth' for jitter calibrations when 'Expert Mode' is selected under 'Configuration' panel.

- Added a new 'Eye Opening Calibration' parameter named 'Calibration Method' with options 'ExplicitClockRecoveryEye' and 'CombinedCPHYEye'. The 'HS Sequence File' parameter is dependent on the option selected for Calibration Method.

- Removed e-Spike Calibration Data and the following e-Spike tests:

o Test 2.1.5 LP-RX Input pos. Pulse Rejection e_spike Data
o Test 2.1.5 LP-RX Input neg. Pulse Rejection e_spike Data

Fixed issues

- Fixed support for the mixed hardware configuration for M8195A AWG model in D-PHY Editor.

Release V2.6.6.4

Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ.
	Keysight M8195A Firmware Version: V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

Fixed issues

- Fixed issue with unavailability of e-Spike during LPHS transitions of data lane.
- Fixed issue with the D-PHY Continuous Clock mode.
- Fixed issue with the inverted 'HS Init' and 'Exit Disturbance' pattern bits.
- Fixed issue with the PRBS Sequence when 'LSB First' option is checked.
- Fixed issue with the 'Calibrate' feature in D-PHY Editor and C-PHY Editor.
- Fixed issue with D-PHY granularity in Jitter Calibrations at 3.5 Gbps in D-PHY CTS.

Release V2.6.6.0

Released Date:	April, 2019
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ.
	Keysight M8195A Firmware Version: V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

Fixed issues

- Fixed issue with Eye Opening Calibration for 'Test 2.3.3 Jitter Tolerance Data0' in C-PHY CTS.

- Fixed issue with the initial step for 'Test 2.3.8 HS RX Clock-to-Data Skew' in D-PHY CTS, where jitter is no longer being applied.

Release V2.6.5.0

Released Date:	February, 2019
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ.
	Keysight M8195A Firmware Version: V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

Changes

D-PHY Editor

- Introduced support for Large Amplitude and Small Amplitude modes by adding parameters, 'AWG Offset' and 'AWG Amplitude' under 'Data Pattern', to customize AWG Output Amplifier.

- Introduced support for In-System Calibration data generated from Keysight IQ Tools by adding a new parameter 'In-System AWG Calibration Enabled', which can be modified by enabling 'Use Deembedding' parameter under 'Disturbances'.

- Introduced four new SCPI commands:

    o   :PLUGin:DPHYplugin:EMBedding:ENABled[?]
    o   :PLUGin:DPHYplugin:INSCal:ENABled[?]

o :PLUGin:DPHYplugin:PATTern:AAmp:VOLTage[?]

o :PLUGin:DPHYplugin:PATTern:IDLe:VOLTage[?]

C-PHY Editor

- Introduced support for DSI protocol version 1.1 for the 'Frames' mode, by adding a drop-down option to toggle between version 1.0 and 1.1, when DSI is selected.

- Introduced support for In-System Calibration data generated from Keysight IQ Tools by adding a new parameter 'In-System AWG Calibration Enabled', which can be modified by enabling 'Use Deembedding' parameter under 'Disturbances'.

  o :PLUGin:CPHYplugin:EMBedding:ENABled[?]

  o :PLUGin:CPHYplugin:INSCal:ENABled[?]

  o :PLUGin:CPHYplugin:PATTern:DSIVersion[?]

D-PHY CTS

- Added the option to enable/disable the 'In-System Calibration' values under 'Configuration' panel. Selecting this option enables the 'In-System Calibration' parameter for various calibration procedures.

- Introduced support for Large Amplitude and Small Amplitude modes.

- Split 'Calibration' procedures into 'Calibration Large LP Amplitude' and 'Calibration Small LP Amplitude' procedures.

- Included Skew, Amplifier and Level calibrations under 'Calibration Large LP Amplitude'.

- Included Level and Data-Rate-dependent calibrations under 'Calibration Small LP Amplitude'.

- Added 'Rise Time – Eye Height' Calibration under 'Calibration Small LP Amplitude'.

- Support to customize the following additional parameters: 'In-System Calibration', 'Min. Eye Height', 'Oscilloscope Bandwidth' and 'Use Deembedding'; when 'Expert Mode' is selected under 'Configuration' panel.

C-PHY CTS

- Added the option to enable/disable the 'In-System Calibration' values under 'Configuration' panel. Selecting this option enables the 'In-System Calibration' parameter for various calibration procedures.

- Introduced support for DSI protocol version 1.1, by adding a drop-down option to toggle between version 1.0 and 1.1, when DSI is selected.

- Removed 'Sinusoidal Jitter Calibration' procedure, which is no longer required for 'Test 2.3.3 Jitter Tolerance Data0'.

Fixed issues

- Fixed issue with Eye Opening Calibration for 'Test 2.3.3 Jitter Tolerance Data0' in C-PHY CTS.

- Fixed issue with 'Test 2.3.8

![KEYSIGHT logo]

Beta Release V2.6.0.2

Released Date:	August, 2018
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
D-PHY Plugin Requirements:	Keysight M8070A System Software Version S4.x.x.x with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

> **NOTE**
> This version is a Beta version of the software targeting some specific issues fixed for D-PHY Editor and D-PHY CTS only. It is highly recommended to use this software only after prior consultation with Keysight Technologies.

> **NOTE**
> Do not use version S5.x.x.x and S3.x.x.x of Keysight M8070A System Software for any release. It is recommended to use only S4.x.x.x version.

Changes

D-PHY Editor

- Allow to set the output amplitude of the AWG.
- Allow to enable/disable In-System Calibration for enabled De-embedding.
- D-PHY CTS
- Improved the De-embedding functionality.

- Support for De-Embedding of In System calibration file. This file must be generated manually either by customer or Support, using IQ Tools.

- To improve the waveform quality for HS Tests 2.3.2, 2.3.8 and 2.3.9, procedures are run in two modes:
  - o Large Amplitude mode: LP Tests, Behavioral Tests, HS Timer Tests and HS Tests 2.3.1 and 2.3.4 to 2.3.7 with all required calibrations.
  - o Small Amplitude mode: HS Tests 2.3.2, 2.3.8 and 2.3.9, with all required calibrations. The output amplitude of the AWG has been reduced to 400 mV. LP High level is set to 740 mV as opposed to 1.2 V in the Larger Amplitude mode.

- To optimize the eye height, which depends on the HS transition time (Rise Time – Eye Height Calibration), a new calibration is added for the Small Amplitude mode.

Known Limitations

- Applicable only for D-PHY CTS and D-PHY Editor.

- Use only 1xM8195A module in Four Channel Mode.

NOTE	Don't use this version with other configurations as it will result in a crash or some unpredictable behavior.

Release V2.6.0.0

Released Date:	May, 2018
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from S3.5.108.6, and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version: V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070A System Software Version: from S3.5.108.6 and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version V3.5.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

Additional Features

D-PHY Editor

- Support for High Speed Test Modes using PRBS Macro with different seeds per lane

C-PHY Editor

- Support for High Speed Test Modes using PRBS Macro with different seeds per lane

D-PHY CTS

- Support for calibration with N7010A Active Probes in addition to RTB

- Support for Jitter/ ISI / Eye Opening calibration with direct SMA connection (remove 1169A Probe)

- Updated the Jitter Tolerance Test (2.3.8) and Hysteresis Test (2.1.4) to the latest CTS for D-PHY 2.0 draft version

C-PHY CTS

- Support for calibration with N7010A Active Probes in addition to RTB

- Support for Jitter/ ISI / Eye Opening calibration with direct SMA connection (remove 1169A Probe)

- Updated the Jitter Tolerance Test (2.3.3) and Hysteresis Test (2.1.4) to the latest CTS for C-PHY 1.1 draft version

- Use Auxiliary High-Speed clock for Jitter Calibrations

Known Limitations

- Keysight IO Libraries Suite version 18.2 does not work for multi-module configurations.

  Workaround: For multi-module configurations, use Keysight IO Libraries Suite version 18.0.

Beta Release V2.4.9.16

Released Date:	March, 2017
Operating System:	Microsoft Windows 7 (64 bit) SP1,
	Microsoft Windows 8 (64 bit)
	Microsoft Windows 8.1 (64 bit)
	Microsoft Windows 10 (64 bit)
Display resolution:	Minimum requirement 1024 x 768
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from S3.5.104.4, and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version: V3.2.208.0 (Beta) or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070A System Software Version: from S3.5.104.4 and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version: V3.2.208.0 (Beta) or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

NOTE	The plugins for the MIPI D-PHY Editor and CTS & C-PHY Editor and CTS are released as Beta Version 2.4.9.16. While the MIPI D-PHY Editor and C-PHY Editor plugins are ready to use, the MIPI D-PHY CTS and C-PHY CTS plugins must not be used as they are not fully functional.

Additional Features

D-PHY Editor

In addition to the features supported in version 2.1, the MIPI D-PHY Editor Plugin supports the following features:

- SSC (Spread Spectrum Clocking) with M8195A

    o "If signals are being generated using different modules of M8195A, an additional jitter is visible between the signals as soon as SSC is switched on. This jitter is proportional to the SSC amplitude. However, this behavior will be improved in the final version of the MIPI D-PHY Editor Plug-in."

- Higher Data Rates

    o 6 Gbps with M8190A

    o 8 Gbps with M8195A 4-channel mode

    o 16 Gbps with M8195A 2-channel mode

- De-Emphasis

C-PHY Editor

Several enhancements and modifications have been made to the user interface, the remote interface and the operational mode in the current version of the MIPI C-PHY Editor plugin. Refer to the *Keysight M8085A MIPI C-PHY Editor User Guide.pdf* to understand the usage of the plugin. Refer to the *Keysight M8085A MIPI C-PHY Editor v2.1 to v2.5 Transition Guide.pdf* to understand the changes made to the plugin. These documents can be found in the *MIPI PlugIn Doc* folder.

In addition to the features supported in version 2.1, MIPI C-PHY Editor Plugin supports the following features:

- Advanced sequencing to allow CSI and DSI Data Sequences

- Support for higher Data Rates

    o 6 Gbps with M8190A

    o 8 Gbps with M8195A

- Support for multi-lanes (up to 3 lanes)

- Advanced Emphasis

Missing Features

C-PHY Editor

The following features will be made available in the final release version of the MIPI C-PHY Editor Plugin.

- SSC (Spread Spectrum Clocking) with M8190A
- Continuous data transmission (interrupt free in case of parameter changes)

Changes

D-PHY Editor

- Updated 'Keysight M8085A MIPI D-PHY Editor Plug-in' User Guide.

C-PHY Editor

- Updated 'Keysight M8085A MIPI C-PHY Editor Plug-in' User Guide.
- Introduced 'Keysight M8085A MIPI C-PHY Editor v2.1 to v2.5' Transition Guide.

Release V2.1.0.7

Released Date:	December 23, 2016
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
Software Pre-requisites:	Keysight IO Library rev. 17.2 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 3.5.0.2, and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version: 3.2.0.0 or above with options 004, 16G, AMP and SEQ.
D-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 3.5.0.2 and above with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.3 or above with options 002, 12G, AMP and SEQ
	Keysight M8195A Firmware Version: 3.2.0.0 or above with options 004, 16G, AMP and SEQ.
File Name:	PlugInInstaller_MIPI_x.x.x.x

NOTE	If you are a C-PHY CTS v 1.5.0.0 user, you must not upgrade to M8070A 3.0 and C-PHY plugin.

NOTE	Keysight M8070A System Software version should be S3.5.0.2 or above.

New Features and Changes

D-PHY Editor

- Added Spread Spectrum Clocking (SSC) feature in the Settings Panel. SSC is supported by only M8195A module and controlled by two properties named SSC frequency and SSC deviation.
- Updated 'Keysight M8085A MIPI D-PHY Editor Plug-in' User Guide.

Defect Fixes

C-PHY CTS

- Fixed the interpretation of eye height in the eye-opening tolerance test (value is single ended not differential).

D-PHY CTS

- Fixed the eye-opening calibration, specifically for a calibration of two points.

Release V2.1.0.2

Changes

D-PHY Editor

- Updated the subsection 2.5.3 Disturbances Group in 'Keysight M8085A MIPI D-PHY Editor Plug-in' User Guide.

Release V2.1.0.1

Defect Fixes

D-PHY CTS

- Improvements made to the pattern calculation time for Test 2.2.1 Init. Period T_INIT and Test 2.2.2 ULPS Exit TWakeup.

D-PHY Editor

- The granularity errors are removed in Pure HS Mode for data rate 1.39 Gbps

Release V2.1.0.0

New Features and Changes

C-PHY Editor

- Added Embedding/De-embedding parameters.

- Supports the latest AWG firmware SW V3.1.8.2 for extended delay range.

C-PHY CTS

- Added the missing Behavioral Sequence File under Sequences in Parameters.

- Changed the pass conditions for Test 2.3.2 V_IDTH/V_IDTL Sensitivity Data under HS Tests.

D-PHY Editor

- Added 'Set Min. Timings' under Protocol Timings to set the minimum duration for parameters operating at specified data rates.

- Supports the latest AWG firmware SW V3.1.8.2 for extended delay range.

- Set default voltage level to 1.2 V

- Improvements to waveform.

D-PHY CTS

- Added 'Set Min. Timings' under Protocol Timings to set the minimum duration for parameters operating at specified data rates.

- Differential Amplitude Cal Clock under Calibration supports Windows XP scope.

- Minimum Tested Value for Test 2.2.1 Init. Period TINIT under Behavioral Tests has been changed from 0 ps to 1 μs.

- Selection of oscilloscope channels for calibration is allowed for M8195A module.

Defect Fixes

C-PHY Editor

482501: Modified the implementation of High Speed Duty Cycle Distortion under Impairments in Parameters.

- Fixed signal deformity.

D-PHY Editor

484118   Fixed glitches in the waveforms at low data rate in pure HS mode.

D-PHY CTS

- Corrected the connection diagrams and connection instructions for tests.

Known Limitations

D-PHY CTS

- Test 2.2.1 Init. Period TINIT under Behavioral Tests fails with pattern length set to zero.

Release V2.0.1.4

New Features

- Improvement in the CTS test the number of recalculation of test pattern.
- C-PHY Editor multi-lane support.
- Modified the upper limit of LP to 125 Mbps.

Release V2.0.0.0 (Beta) C-PHY Editor v1.5.1.2

New Features

- Added support for M8195A single lane.
- D-PHY Editor is installed by separate D-PHY Editor plugin installer.

Known Limitations

- Scope is not restored to its previous state after completion of calibration.
- Workaround: Manually set scope to its Factory State
- ISI is not being applied on all three lanes. Lane 1 looks fine, Lane 2's HS Symbol is unaffected by applied ISI, and LAN 3's all HS & LP symbols is unaffected by applied ISI.
- Trigger is not working.
- Fall Time is not working in ping-pong mode.
- Workaround: It is working in normal mode, need to stop and restart the frame generation.
- GUI Stuck if any ping pong mode operation is kicked off while DAC values calculation is under progress.
- Workaround: Launch a new instance of M8070A after killing the old one from process manger.
- Progress bar restart the progress after completing almost 95%.

Release V1.5.0.0 (New Features and Defect Fix)

New Features

C-PHY Feature

- Sequence added for High Speed End and Low Power End.

Defect Fixes

C-PHY

448964   Glitch in triggered startup mode when trigger start state is set to LP000.

The C-PHY requirements, other features, and limitations are similar to release V1.4.2.2.

Release V1.4.7.10 (New Features and Defect Fix)

New Features

C-PHY Feature

- Restart sequence without re-computing the patterns.

D-PHY Feature

- Added a new trigger type "Triggered (HS only)" under AWG Setup functional block.

Defect Fixes

C-PHY

438153   M8085A-CT1/DT1: Issuing API STOP command causes error when already stopped.PLUG:CPHY:STAR 'name' generates error. Cannot start C-PHY traffic programmatically.

435649   Stop button doesn't stop data pattern. To stop data, we need to do STOP -> START (then wait few seconds) -> STOP.

The C-PHY/D-PHY requirements, other features, and limitations are similar to release V1.4.2.2.

Release V1.4.4.6 (Defect Fix)

This release only includes a defect fix. The C-PHY/D-PHY requirements, features, and limitations are similar to release V1.4.2.2.

Defect Fixes

438195   PLUG:CPHY:STAR 'name' generates error. Cannot start C-PHY traffic programmatically.

Release V1.4.2.2

Released Date:	September 17, 2015
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
Software Pre-requisites:	Keysight IO Library rev. 17.1 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: 2.5.x.x with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
D-PHY Plugin Requirements:	Keysight M8070A System Software Version: 2.5.x.x with options 0TP/0NP and DT1
	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
File Name:	MipiGeneratorPlugin.m8kp

NOTE   Currently the M8085A MIPI plugin is only compatible with M8190A and not with its successor M8195A.

Features

C-PHY Features

- Allow parameterized eye closure with ISI scaling parameter.

- DCD support per line for High Speed symbol to achieve eye closure.

- Pulse width support per line for Low Power symbols to detect pulses with minimum required duration.

- Hysteresis support per line to add sinusoidal noise on low power symbols.

- S6P Files are supported to emulate ISI on individual lines.

- Triggered startup mode, to enable the C-PHY plugin to provide a static LP Stop signal.

- Separate LP amplitudes per line.

- De-Skew on complement outputs without re-cabling the normal outputs.

- Read-only skew calibration values.

D-PHY Features

- Parameter name HS Common-Mode Level and HS Differential Output Voltage under Signal Levels is replaced by Offset and Amplitude for Data and Clock lane. User guides are updated accordingly with better description.

- Data Rate and Sample rate can be set to a higher number of significant digits.

- Automatic clock pattern generation transitioning to LP stop state between HS bursts.

Important Notes

C-PHY

- Starting data generation when using a loop pattern type of PRBS 2^18-1 takes approximately 10 minutes until run mode is initialized. In case ISI is additionally activated initial startup time will take around 30 minutes.

- Even if ISI is disabled in run mode unnecessary recalculation will occur when changing the S-Parameter file path.

Known Limitations

C-PHY

- Using different duty cycle distortion settings per line will introduce a skew between them.

C-PHY and D-PHY

- Using different rise/fall time settings per lane will introduce a skew between them.

- Before waveform playback starts AWG voltage level will be at its amplifier offset level. This level needs to correspond to the LP stop state level. Otherwise devices might see a wrong start value instead of the correct LP stop level depending on the output amplifier offset

setting. As a workaround for this issue the amplifier offset setting in the MIPI plugin should be set to the desired LP stop state level.

- Context sensitive help is not working. As a workaround, all information related to C-PHY and D-PHY can be found at the following location:
C:\Program Files (x86)\Agilent\M8070A\Plugins\MipiGeneratorPlugin\doc

Defect Fixes

C-PHY

428335   A continuous loop pattern of LP-HS-LP-HS causes a glitch after sync word.

C-PHY/D-PHY

429089   Pressing stop button doesn't toggle the AWG outputs to OFF

428101   Floating licenses are checked out, even if not used.

438195   PLUG:CPHY:STAR 'name' generates error. Cannot start C-PHY traffic programmatically.

Release V1.3.0.0

Released Date:	April 02, 2015
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
Software Pre-requisites:	Keysight IO Library rev. 17.1 or above AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.2.2 to 2.1.50.2 with options 0TP/0NP and CT1 Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
D-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.9.6 to 2.1.50.2 with options 0TP/0NP and CT1 Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)

File Name:	M8085A_MIPI_Setup.exe

> **NOTE** Currently the M8085A MIPI plugin is only compatible with M8190A and not with its successor M8195A.

D-PHY Features

- Automatic clock generation with single transition from LP to HS on clock lane and quadrature phase relationship to user pattern on data lane

- Speed mode transitions from LP to HS on clock lane and LP to HS and vice versa on data lane

- Support for single ended ISI adjustable per lane from S2P or S4P files where the S21 parameter is taken.

- Support for adding e-Spike impairment to waveform adjustable per lane.

- Restart of waveform playback without pattern recalculation and download. (Fast but can contain non-continuous patterns when changing parameters in run mode)

- Separate voltage level adjustability for LP and HS signals on normal and complement line.

Release V1.2.8.4 (Beta)

Released Date:	February 26, 2015
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
Software Pre-requisites:	Keysight IO Library rev. 17.1 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.2.2 to 2.1.50.2 with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
D-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.9.6 to 2.1.50.2 with options 0TP/0NP and CT1

	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
File Name:	M8085A_MIPI_Setup.exe

NOTE	Currently the M8085A MIPI plugin is only compatible with M8190A and not with its successor M8195A.

D-PHY Features

- Support for one clock and one data lane

- Pattern generation for LP and HS pattern with separately definable patterns per lane

- Support of sequence playback with separately definable init pattern occurring once and loop pattern running indefinitely. It is also possible to change certain parameters on the fly without sequence restart.

- Adjustable HS and LP amplitudes per lane

- Adjustable transition times per link

- Adjustable sinusoidal jitter per lane

- Adjustable bounded uncorrelated jitter (RJ) per lane

Release V1.2.3.2 (Beta)

Released Date:	February 02, 2015
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
Software Pre-requisites:	Keysight IO Library rev. 17.1 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.2.2 to 2.1.50.2 with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
File Name:	M8085A_CPhy_Setup_V1.2.3.2_Beta.exe

> **NOTE** Currently the M8085A MIPI plugin is only compatible with M8190A and not with its successor M8195A.

C-PHY Features

- Use S-Parameters defined in Touchstone file format to add Intersymbol Interference distortion to the generated waveform.

Release V1.1.6.0

Released Date:	November 24, 2014
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
Software Pre-requisites:	Keysight IO Library rev. 17.1 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.2.2 to 2.1.50.2 with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
File Name:	M8085A_CPhy_Setup_1.1.6.0.exe

NOTE   Currently the M8085A MIPI plugin is only compatible with M8190A and not with its successor M8195A.

C-PHY Features

- Support for changing parameters while signal generation is active (Ping Pong Mode)
- eSpike impairment for low power mode now available

Release V1.0.0.0

Released Date:	October 10, 2014
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
Software Pre-requisites:	Keysight IO Library rev. 17.1 or above
	AXIe Chassis Firmware (Embedded System Module (ESM) from Agilent Technologies) greater than or equal version 1.3.41
C-PHY Plugin Requirements:	Keysight M8070A System Software Version: from 1.5.2.2 to 2.1.50.2 with options 0TP/0NP and CT1
	Keysight M8190A Firmware Version: 5.0 or above with options 002, 12G, AMP, SEQ, FSW (and 0G2 for full PRBS support)
File Name:	M8085A_CPhy_Setup_1.0.0.0.exe

NOTE   Currently the M8085A MIPI plugin is only compatible with M8190A and not with its successor M8195A.

C-PHY Features

- First release of C-PHY Plugin