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Agilent U7238B MIPI D-PHY Conformance Test Application Software Release Notes

Agilent U7238B Software Version 02.44
Released Date: 19 May 2014
Minimum Infiniium Oscilloscope Baseline Version: 3.21 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02440000.exe

Additions:
- Added HS Clock Instantaneous (UInst)(Min) test.
- Added ULPS Clock Mode test.
- Added Informative test group.
- Added Clock Lane HS Clock Delta UI (UI variation) test.
- Added LP_TX Pulse Width of Exclusive-OR Clock [Initial] and LP_TX Pulse Width of Exclusive-OR Clock [Last] tests.

Modifications:
- Improved test measurement for LP slew rate test by added 400Mhz low pass filter.
- Improved test measurement for LP Escape Rise Time test by added 400Mhz low pass filter.
- Fixed connection diagram issue.
- Updated the "THSPREPARE+ZERO" portion in identifying the start of SYNC pattern to handle glitch in the test signal.

Known issues:
- In loading projects created in MIPI version 02.44, users cannot append the existing results.

Miscellaneous Notes:
- This will be the last version to support Infiniium Oscilloscope Baseline Version 4.20.

Agilent U7238A Software Version 02.43
Released Date: 15 May 2013
Minimum Infiniium Oscilloscope Baseline Version: 3.21 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02430000.exe

Additions:

- Added Switch Matrix feature support.

Modifications:

- Fixed the issue of Vcmtx tests where the worst case value reported is incorrect.

Miscellaneous Notes:

- N/A

Agilent U7238A Software Version 02.42
Released Date: 15 October 2012
Minimum Infiniium Oscilloscope Baseline Version: 3.21 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02420000.exe

Additions:

- Added new "Continuous Data" test mode.
- Added new "Window" triggering option under the Configure tab. This option is now set as the default triggering option instead of the previous "Pattern/State with InfiniiScan" triggering option.
  Related configuration variables:
  a. WindowTriggerHighThreshold
  b. WindowTriggerLowThreshold
  c. TriggerMethod
- Added the CTS Test ID info to all the corresponding tests in the application.
- Added a debug configuration option that can set the threshold used in determining the THS-Prepare start location. This is used in a non-compliance testing mode to enable testing of data signals that are not terminated properly.
  Related configuration variables:
  a. THSprepareStartThreshold
- Added configurable options to set the trigger timeout in the Configure tab of the application.
  Related configuration variables:
  a. TriggerCheck
  b. TriggerTimeout

Modifications:

- Updated the GUI layout on Setup tab.
- The "InfiniiSim" button on the Setup tab has been removed. This same feature is now accessible via the "Tools" window menu of the application.
- Support User Defined Limit (UDL) feature.
- Fixed the issue of TSkew test where the worst case value reported is incorrect.
- Fixed the issue of incorrect VOD tests measurements when the "Scope Sampling Rate" option is set to "20G Sa/s" and the "Signal Scaling Mode" option is set to "AUTO".
- Fixed the issue of tCLK-POST test where sometimes the test will report incorrect values in terms of "fs" range.
- Removed the need for InfiniiScan license option in order to run the application.

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<u>Miscellaneous Notes:</u>
- N/A

Agilent U7238A Software Version 02.41
Released Date: 15 January 2012
Minimum Infiniium Oscilloscope Baseline Version: 3.21 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02410000.exe

Additions:
- N/A

Modifications:
- Optimize software to work with baseline 3.21 and above.
- Improve support for Win7 OS.

Miscellaneous Notes:
- N/A

Agilent U7238A Software Version 02.40
Released Date: 31 August 2011
Minimum Infiniium Oscilloscope Baseline Version: 3.11 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02400000.exe

Additions:
- N/A

Modifications:
- Optimize software to work with baseline 3.10.0005 and above.
- Added support for Win7 OS.

Miscellaneous Notes:
- N/A

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Agilent U7238A Software Version 02.30
Released Date: 19 April 2011
Minimum Infiniium Oscilloscope Baseline Version: 3.00 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02300000.exe

Additions:
- N/A

Modifications:
- Improve HS Clock VOHHS test measurement.
- Improve test result reporting for UIinst test and Data 1st edge to clock alignment test.

Miscellaneous Notes:
- N/A

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Agilent U7238A Software Version 02.20
Released Date: 3 Jan 2011
Minimum Infiniium Oscilloscope Baseline Version: 3.00 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02200000.exe

Additions:
- N/A

Modifications:
- Improve Data 1st edge to clock alignment test behavior.
- Improve Vod, dVod & VOHHS tests. These tests will now show error message when the test patterns are not found.

Miscellaneous Notes:
- N/A

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Agilent U7238A Software Version 02.10
Released Date: 30 Sept 2010
Minimum Infiniium Oscilloscope Baseline Version: 3.00 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02100000.exe

Additions:
- Added TCLK-POST test.
- Added support for DSOX90000 series.

Modifications:
- Updated test methodology as per MIPI CTS 1.00. (VOHHS, VOD and LP Slew Rate)

Miscellaneous Notes:
- N/A

Agilent U7238A Software Version 02.00
Released Date: 15 Mar 2010
Minimum Infiniium Oscilloscope Baseline Version: 05.71.00 (80000 series),
2.10 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY02000000.exe

Additions:
- Added support for long DSI stream.
- Added filtering to handle continuous clock signals.
- Added InfiniiSim support. (Only for 9000 & 90000 series oscilloscope.)

Modifications:
- N/A

Miscellaneous Notes:
- Added a trouble shooting guide in the CHM help file to assist users.
- This will be the last version to support the 80000 series oscilloscope. Following releases will only support 9000 & 90000 series oscilloscope.

Agilent U7238A Software Version 01.20
Released Date: 30 Oct 2009
Minimum Infiniium Oscilloscope Baseline Version: 05.71.00 (80000 series),
2.01 (9000 series & 90000 series)
File Name: SetupInfMIPI_D-PHY01200000.exe

Additions:
- Added the LP Clock TX Electrical tests.
- Added support for using auto load switch board as fixture.

Modifications:
- Filter for common mode variances tests changed to 8th order butterworth IIR filter.
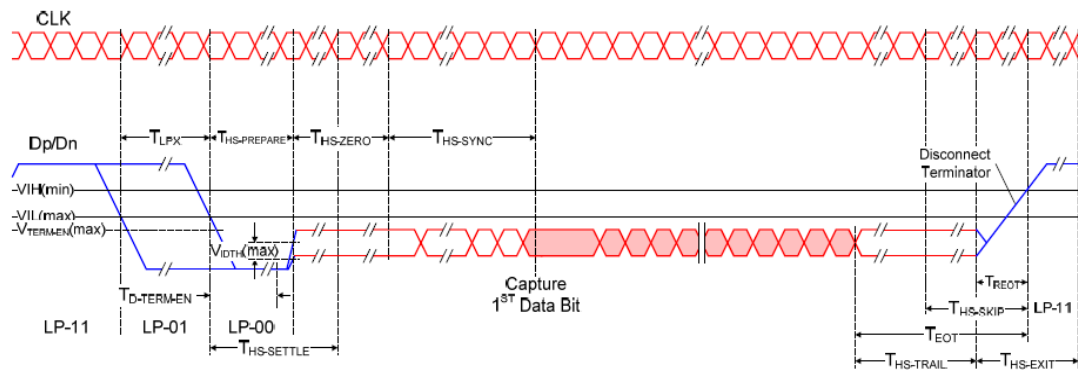
Miscellaneous Notes:

Diagram 1: A Single Analysis Window

1. Data Processing Requirements:
   o At least **2** Analysis Window above should be present for the software to process.
      ▪ The total time length of the 2 Analysis Window should be lesser than the theoretical 200 microseconds (10GSa/s@2Mpts).
   o The HS Burst in the Analysis Window should contain valid SYNC sequence
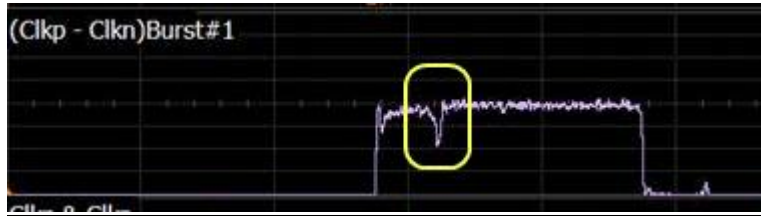   o The HS Burst Payload bits should be random and ideally should not have long 1's and 0's

Diagram 2: Spike noise

2. All noise effects (for example diagram 2) in Timing Test Group are treated as part of the waveform acquisition data for measurement processing.

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Agilent U7238A Software Version 01.10
Released Date: 13 April 2009
Minimum Infiniium Oscilloscope Baseline Version: 05.60.00 (80000 series),
1.40 (90000 series)
File Name: SetupInfMIPI_D-PHY01100000.exe

Additions:
- Added the HS Clock TX Electrical tests.
- Added the Global Operation tests.
- Added the HS Data-Clock Timing tests.
- Added support for four probes.
- Added capability to export waveform data, generated from the signal of the Device Under Test.
- Added support for Device Under Test that does not send LP escape mode repetitively.

Modifications:
- Renamed the HS TX Electrical tests to HS Data TX Electrical tests.
- Addressed the issue of HS TX Electrical tests running slow.
- Addressed the issue of unable to find the HS burst in some Device Under Test variances.

Known issues:
- In loading projects created in MIPI version 01.00, users cannot append the existing results.

Agilent U7238A Software Version 01.00
Released Date: 1 August 2008
Minimum Infiniium Oscilloscope Baseline Version: 05.50.00 (80000 series),
1.20 (90000 series)
File Name: SetupInfMIPI_D-PHY01000000.exe

Initial release.