Keysight D9040MPHC MIPI® M-PHY® Compliance Application

KEYSIGHT TECHNOLOGIES

Programmer's Reference

Notices

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In This Book

This book is your guide to programming the Keysight Technologies D9040MPHC MIPI® M-PHY® Compliance Application.

- Chapter 1, “Introduction to Programming,” starting on page 7, describes compliance application programming basics.
- Chapter 2, “Configuration Variables and Values,” starting on page 9, Chapter 3, “Test Names and IDs,” starting on page 53, and Chapter 4, “Instruments,” starting on page 73, provide information specific to programming the D9040MPHC MIPI® M-PHY® Compliance Application.

How to Use This Book

Programmers who are new to compliance application programming should read all of the chapters in order. Programmers who are already familiar with this may review chapters 2, 3, and 4 for changes.

Contents

1 Introduction to Programming

This chapter introduces the basics for remote programming a compliance application. The programming commands provide the means of remote control. Basic operations that you can do remotely with a computer and a compliance app running on an oscilloscope include:

- Launching and closing the application.
- Configuring the options.
- Running tests.
- Getting results.
- Controlling when and were dialogs get displayed
- Saving and loading projects.

You can accomplish other tasks by combining these functions.

Remote Programming Toolkit

The majority of remote interface features are common across all the Keysight Technologies, Inc. family of compliance applications. Information on those features is provided in the N5452A Compliance Application Remote Programming Toolkit available for download from Keysight here: www.keysight.com/find/rpi. The D9040MPHC MIPI® M-PHY® Compliance Application uses Remote Interface Revision 6.10. The help files provided with the toolkit indicate which features are supported in this version.

In the toolkit, various documents refer to "application-specific configuration variables, test information, and instrument information". These are provided in Chapters 2, 3, and 4 of this document, and are also available directly from the application's user interface when the remote interface is enabled (View>Preferences::Remote tab::Show remote interface hints). See the toolkit for more information.

2 Configuration Variables and Values

The following table contains a description of each of the D9040MPHC MIPI® M-PHY® Compliance Application options that you may query or set remotely using the appropriate remote interface method. The columns contain this information:

- GUI Location – Describes which graphical user interface tab contains the control used to change the value.
- Label – Describes which graphical user interface control is used to change the value.
- Variable – The name to use with the SetConfig method.
- Values – The values to use with the SetConfig method.
- Description – The purpose or function of the variable.

For example, if the graphical user interface contains this control on the **Set Up** tab:

- Enable Advanced Features

then you would expect to see something like this in the table below:

Table 1 Example Configuration Variables and Values

GUI Location	Label	Variable	Values	Description
Set Up	Enable Advanced Features	EnableAdvanced	True, False	Enables a set of optional features.

and you would set the variable remotely using:

```
ARSL syntax
-----------
arsl -a ipaddress -c "SetConfig 'EnableAdvanced' 'True'"
```

```
C# syntax
---------
remoteAte.SetConfig("EnableAdvanced", "True");
```

Here are the actual configuration variables and values used by this application:

NOTE Some of the values presented in the table below may not be available in certain configurations. Always perform a "test run" of your remote script using the application's graphical user interface to ensure the combinations of values in your program are valid.

NOTE The file, "ConfigInfo.txt", which may be found in the same directory as this help file, contains all of the information found in the table below in a format suitable for parsing.

Table 2 Configuration Variables and Values

GUI Location	Label	Variable	Values	Description
Configure	Acquisition Points	AcqPoints	100E+3, 200E+3, 500E+3, 1E+6, 2E+6, 4E+6, 5E+6, 6E+6, 8E+6, 10E+6	Enter the acquisition points to capture at least one cycle including PREPARE and STALL state. The actual sampling window length when running all the tests (excluding the jitter tests) is determined based on this acquisition points value together with the corresponding sampling rate used. Sampling Window = [Acquisition point] / [Sampling Rate] For example; If the acqusition points is set to 5 Mpts and the sampling rate used is 40GSa/s, then the Sampling Window = 125 us The sampling rate used is automatically set in the application based on the following criteria. For 90000 Series, 90000 X-Series, 90000 Q-Series, V-Series, Z-Series: [Burst Data] For data rate less than 10 Mbps, Sampling Rate = 2.5 GSa/s For data rate less than 50 Mbps, Sampling Rate = 5 GSa/s For data rate less than 1.5 Gbps, Sampling Rate = 10 GSa/s For data rate less than 2 Gbps, Sampling Rate = 20 GSa/s For data rate of 2 Gbps and above, Sampling Rate = 40 GSa/s For data rate of 6 Gbps and above, Sampling Rate = 80 GSa/s [Continuous Data] The Sampling rate will be set up to maximum of 80GSa/s, depending on the scope capability. For UXR-series: [Burst Data] For data rate less than 10 Mbps, Sampling Rate = 2 GSa/s For data rate less than 50 Mbps, Sampling Rate = 4 GSa/s For data rate less than 1.5 Gbps, Sampling Rate = 16 GSa/s For data rate less than 2 Gbps, Sampling Rate = 32 GSa/s For data rate less than 6 Gbps, Sampling Rate = 64 GSa/s For data rate of 6 Gbps and above, Sampling Rate = 128 GSa/s [Continuous Data] The Sampling rate will be set up to maximum of 128GSa/s, depending on the scope capability.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Acquisition length [UI]	RJDJAcqLen	(Accepts user-defined text), 10000, 20000, 30000, 40000, 50000, 100000, 150000, 200000, 250000, 300000, 350000, 400000	For TJ and DJ tests under HS Continuous Data mode. This option is used to set the single acquisition length in terms of UI. The actual sample points equivalent to then number of UI specified will be calculated based on the value used in the "HS Data Rate" option(maximum number of sample points is limit at 10Mpts for efficiency and responsiveness when running the jitter measurements).
Configure	CRPAT Packet Bit Length	TestPatternLength	(Accepts user-defined text), 1280, 1320, 3584, 30240	Enter the bit length for CRPAT test patterns. This value is used to determined the sample length when performing DJ tests under HS Burst Data mode. For example; HS Burst Data Rate = 1248 Mbps CRPAT Packet Bit Length = 1320 Sample length used in HS Burst DJ test = 1/1248000000 * 1320 = 1.058 us
Configure	CTLE Optimization Criterion	CTLEOptimizationCriterion	Eye Width, Eye Height, Eye Area	Specify the CTLE Optimization Criterion used to determine the optimal CTLE setting among all CTLE setting stated in CTLE Setting File. When the "Eye Width" is selected, the optimal CTLE setting will be determined based on the largest eye width. When the "Eye Height" is selected, the optimal CTLE setting will be determined based on the largest eye height. When the "Eye Area" is selected, the optimal CTLE setting will be determined based on the largest eye area where Eye Area = π x (Eye Height/2) x (Eye Width/2) By default, the option of "Eye Area" will be used. This config is applicable for 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) tests only.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	CTLE Outer Voltage Check Range(V)	CTLEOuterVoltageCheckRange	(Accepts user-defined text), 60e-3	Specify the voltage range to be applied for CTLE Outer voltage checking where the outer voltage of eye diagram must within VDIF_AC maximum - (CTLE Outer Voltage Check Range). By default, the value of 60mV will be used. Example, for large amplitude(LA) signal with VDIF_AC maximum of 310mV, the eye diagram generated after applying CTLE must fullfill the requirement of - Vmax of eye diagram must be less than (310mV - 60mV) and - |Vmin| of eye diagram must be less than |(-310mV + 60mV)| The CTLE setting will not be considered as optimum CTLE setting if this requirement is not fullfiled. This config is applicable for 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) tests only.
Configure	CTLE Setting File	CTLESettingFile	(Accepts user-defined text), Default	Specify the CTLE Setting file to be used when performing test. When the "Default" is selected, the default CTLE Setting file will be used when performing test. The default CTLE Setting file path is: C:\ ProgramData\Keysight\Infiniium\Apps\ MIPI_M-PHYTest\app\CTLE\ CTLESettingFile.txt Each CTLE setting from CTLE Setting File will be applied and the best CTLE setting will be selected based on the largest eye height. User may specify custom CTLE Setting file by providing the full path of the file (*.txt) which contain the same format as the default CTLE Setting file. This config is applicable for 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) tests only.
Configure	Clock Recovery Method [Burst Data Mode]	ClockRecoveryMethod	FIXed, SOPLL	Clock recovery method for eye diagram and jitter related tests. This applies to all Burst Data mode test.
Configure	Clock Recovery Method [Continuous Data Mode]	ClockRecoveryMethod_ContData	FIXed, SOPLL	Clock recovery method for eye diagram and jitter related tests. This applies to all Continuous Data mode test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	DFE Eye Diagram Position	DFEEyeDiagramPosition	NO DELAY, Centered	Specify the eye diagram position after applying DFE equalization. When the "NO DELAY" is selected, the delay parameter will be set to zero. When the "Centered" is selected, the eye will be centered based on the left crossing point and right crossing point measured using histogram measurement. By default, the option of "Centered" will be selected. This config is applicable for 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) tests only.
Configure	DFE Voltage(V)	DFEVoltage	(Accepts user-defined text), Auto	Specify the DFE Voltage to be applied for DFE equalization. When the "Auto" is selected, the Infiniium will determine the tap values through optimization. By default, the option of "Auto" will be selected. User may enter the DFE voltage to be applied. This config is applicable for 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) tests only.
Configure	DIF-N State Duration (UI)	DIFNStateDuration	(Accepts user-defined text), 9, 20	Enter the DIF-N state duration in UI. This value is used in trigger acquisition for all tests excluding the jitter and TEYE tests.
Configure	DIF-P State Duration (UI)	DIFPStateDuration	(Accepts user-defined text), 9, 20	Enter the DIF-P state duration in UI. This value is used in trigger acquisition for jitter and TEYE tests only.
Configure	Damping Factor (for 2nd Order PLL)	DampingFactor	(Accepts user-defined text), 0.707, 1	For 2nd Order PLL only.
Configure	Data Rate Mode	DataRateMode_fOffset	AUTO, SEMI	Specify the data rate mode used for data rate measurement. For "Fully Automatic" mode, the data rate is found by searching the waveform for the narrowest data pulse. For "Semi-Autimatic" mode, the data rate algorithm starts by searching around the nominal data rate specify in "Nominal HS Data Rate" configuration option in Set Up tab and then automatically finds the data rate. This config is only applicable for HS-TX tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	HS Data Eye Filter	HSDataEyeFilter	1, 0	This option is used to enable/disable HS Data Eye filtering where the SYNC regions from all the burst data will be removed before generating an eye diagram. For the filter to work, the HS burst data stream must contain DIF-P, DIF-N, valid SYNC pattern and Marker0 pattern.
Configure	Hysteresis Level	MeasThres_HysteresisLevel	(Accepts user-defined text), 0	Specify the value of the hysteresis level voltages used in setting the measurement thresholds. By default, this value is set to 0V. This option is only applicable for all the tests that does NOT have explicit specified measurement threshold method in the CTS specifications. This option is not applicable for TR_TF test, SR_DIF test and TIntra_Skew test.
Configure	Hysteresis Range	MeasThres_HysteresisRange	(Accepts user-defined text), 0.030, 0.050	Specify the value of the hysteresis range used in setting the measurement thresholds. By default, this value is set to 30mV. This option is only applicable for all the tests that does NOT have explicit specified measurement threshold method in the CTS specifications. This option is not applicable for TR_TF test, SR_DIF test and TIntra_Skew test.
Configure	Ignore DIF-N State After Change in Termination (UI)	DIFNStateB4TerminationChange	(Accepts user-defined text), 0, 9, 20	Enter the DIF-N state duration in UI before changing termination from 50ohms to 500ohms so that the region at 500ohms will be ignored when measuring VDIF. Enter "No termination change" if the DUT does not change termination during STALL state.
Configure	Interpolation	Interpolation	1, 0	This option is used to turn on interpolation for HS Burst Data mode. This config is only applicable for 1.1.8 TR_TF and 1.1.10 SR_DIF tests.
Configure	Interpolation Factor	PWM_TEYEInterpolationFactor	OFF, INT2, INT4, INT8, INT16	Specify the interpolation factor to be used when loading waveform file for eye diagram generation. This config is only applicable for 1.2.6 TEYE and 1.2.7 VDIF_AC tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Interpolation Factor(L2L_SKEW)	Interpolation_L2LSkew	OFF, INT1, INT2, INT4	Specify the interpolation factor to be used when loading waveform file for HS-TX Lane-to-Lane Skew tests. This config is only applicable for Test 1.1.9 T_L2L_SKEW tests.
Configure	IntraSkewEdgeHysteresis [V]	IntraSkewEdgeHysteresis	(Accepts user-defined text), 0.050, 0.030	This option is used to set the measurement thresholds when performing the Intra-Lane Output Skew test. The upper and lower measurement thresholds will be determined by adding or subtracting this value from the measured common-mode level of the test signal. By default this value is set to 30mV. In that case, if the common-mode level of a test signal is 110mV, then the measurement thresholds used will be as follow: Upper measurement threshold = 140mV Middle measurement threshold = 110mV Lower measurement threshold = 80mV
Configure	Logger	DJ_STDJLogger	1, 0	This option is used to enable/disable the logger feature for 1.1.17 DJ_TX and 1.1.18 STDJ_TX tests where the waveform captured for each acquisition and result will be saved in the following directory: Win7:C:\ProgramData\Keysight\Infiniium\Apps\MIPI_M-PHYTest\Project\app\DJ_STDJLogger\
Configure	Lower Percent	MeasThres_LowerPct	(Accepts user-defined text), 10, 20	Specify the value of the lower threshold used when the "MeasThreshold Mode" option is set to use "TopBaseRatio". By default, this value is set to 10%.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	MC_LS_PREPARE_LENGTH	MC_LS_PREPARE_LENGTH	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	Specify the value of the MC_LS_PREPARE_LENGTH. MC_LS_PREPARE_LENGTH is the PWM-BURST PREPARE length multiplier for OMC. MC_LS_PREPARE_LENGTH will be used to compute test limit for 1.2.3 TPWM_PREPARE test if Optical Media Converter(OMC) is present. The actual test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation: If OMC is present, TPWM_PREPARE_calc = MAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1). TPWM_PREPARE_TestLimit = MIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)). If OMC is not present, TPWM_PREPARE_calc = MAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1). TPWM_PREPARE_TestLimit = MIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)). The values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab. TLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX). The GEAR value is depends on the PWM Gear selected in Set Up Tab. Example 1, TX_LS_PREPARE_LENGTH = 10, MC_LS_PREPARE_LENGTH = 15, TLINE_RESET_DETECT = 1ms, GEAR = 1 and PWM bit rate = 9Mbps. if OMC is present, TPWM_PREPARE_TestLimit = 512SI. if OMC is not present, TPWM_PREPARE_TestLimit = 16SI. Example 2, TX_LS_PREPARE_LENGTH = 10, MC_LS_PREPARE_LENGTH = 15, TLINE_RESET_DETECT = 1ms, GEAR = 1 and PWM bit rate = 3Mbps. if OMC is present, TPWM_PREPARE_TestLimit = 300SI. if OMC is not present, TPWM_PREPARE_TestLimit = 16SI. This config is only applicable for 1.2.3 TPWM_PREPARE test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	MaxNumOfAcq	RJDJMaxNumOfAcq	(Accepts user-defined text), 10, 20, 30, 40, 50, 100	For TJ and DJ tests. This option is used to set the maximum number of single acquisition that the application will acquire when performing the jitter tests. The sample length of each single acquisition is specified in the "Acquisition Length [UI]" option.
Configure	MeasThreshold Mode	MeasThresMode	0, 1	This option sets the measurement threshold method that is used when performing all the test measurements that does NOT have explicit specified measurement threshold method in the CTS specifications. * When the "Hysteresis" method is selected, the "Hysteresis Range" and "Hysteresis Level" options will be used as the setting values. * When the "TopBaseRatio" method is selected, the "Upper Percent", "Middle Percent" and "Lower Percent" options will be used as the setting values. This option is not applicable for TR_TF test, SR_DIF test and TIntra_Skew test.
Configure	Middle Percent	MeasThres_MiddlePct	(Accepts user-defined text), 50	Specify the value of the middle threshold used when the "MeasThreshold Mode" option is set to use "TopBaseRatio". By default, this value is set to 50%.
Configure	Non-periodic pattern Filter Lag	RJDJFilterLag	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	For TJ and DJ tests.
Configure	Non-periodic pattern Filter Lead	RJDJFilterLead	-3, -2, -1, 0	For TJ and DJ tests.
Configure	Number of 0011 and 1100 Patterns	NumOfPatternTRTF	(Accepts user-defined text), 16, 32	This config is used to specify the number of 0011 and 1100 patterns to used for Rise and Fall times measurement. For example, if 32 is selected, rise and fall times will be measured for 32 copies of 1100 and 0011 patterns, respectively. This config is only applicable for 1.1.8 TR_TF and 1.1.10 SR_DIF tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Optical Media Converter(OMC)	OMC	1, 0	Specify the presence of OMC. This config variable will be used to determine the test limit for 1.2.3 TPWM_PREPARE test. The actual test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation: If OMC is present, TPWM_PREPARE_calc = MAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1). TPWM_PREPARE_TestLimit = MIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)). If OMC is not present, TPWM_PREPARE_calc = MAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1). TPWM_PREPARE_TestLimit = MIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)). The values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab. TLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX). The GEAR value is depends on the PWM Gear selected in Set Up Tab. Example 1, TX_LS_PREPARE_LENGTH = 10, MC_LS_PREPARE_LENGTH = 15, TLINE_RESET_DETECT = 1ms, GEAR = 1 and PWM bit rate = 9Mbps. if OMC is present, TPWM_PREPARE_TestLimit = 512SI. if OMC is not present, TPWM_PREPARE_TestLimit = 16SI. Example 2, TX_LS_PREPARE_LENGTH = 10, MC_LS_PREPARE_LENGTH = 15, TLINE_RESET_DETECT = 1ms, GEAR = 1 and PWM bit rate = 3Mbps. if OMC is present, TPWM_PREPARE_TestLimit = 300SI. if OMC is not present, TPWM_PREPARE_TestLimit = 16SI. This config is only applicable for 1.2.3 TPWM_PREPARE test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	PLL Settling Time (for 2nd Order PLL)	SettlingTime	0.010, 1, 2, 3, 4, 5	For 2nd Order PLL only. This option is in terms of "time constants", [T]. Setting this option to "1" means 1T or 1 time constant. A time constant is equal to [1/loop bandwidth]. For example, assume that if the loop bandwidth is 1.5MHz and the PLL Settling Time is set to 5. Then 5T = 5 / loop bandwidth = 5 / 1.5MHz = 3.3us. The scope will not use the first 3.3us of acquisition for measurement, just for clock recovery. This is to insure that the clock is locked to the data before the measurement is performed.
Configure	PSD termination	PSDTermination	1, 2, 3	Select termination to be used for PSD measurement.
Configure	PWM Data Eye Filter	PWMDataEyeFilter	1, 0	This option is used to enable/disable PWM Data Eye filtering where the SYNC regions from all the burst data will be removed before generating an eye diagram. For the filter to work, the PWM burst data stream must contain DIF-P, DIF-N, valid SYNC pattern and Marker0 pattern.
Configure	Pattern repetition	RJDJPatternLength	AUTO, ARBitrary	For TJ and DJ tests.
Configure	Phase Noise Sources Deskew	UFSPNCorrelationDeskew	true, false	This option is used to deskew the Phase Noise Source 1 and Phase Noise Source 2. When the selected option is "Disable, user will need to deskew the Phase Noise Source 1 and Phase Noise Source 2 manually. This config is only applicable for Correlation Phase Noise Measurement Method. This config is only applicable for Reference Clock Noise Floor Density (Ndensity) and Reference Clock Phase Noise (N) tests.
Configure	RJ Method	RJMethod	SPECtral, BothReportSpectral, BothReportTailFit	For TJ and DJ tests in Continuous Data mode. This option is used for RJ Method selection.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	RSE_TX [ohm]	RSE_TX	(Accepts user-defined text), 40, 50, 60	Specify the value of RSE_TX in unit ohm. This config is only applicable for 1.1.4 VCM(B) and 1.2.4 VCM tests if "Direct Connect" probing method is selected. For "Direct Connect" probing method: VCM is computed based on equation: VCM = (Vp + Vn)/2. VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor. The value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope]. RinScope: [50ohm]. The nominal value of RSE_TX: [50ohm]. Reference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
Configure	Ref Clk Frequency, MHz	Freq_RefClk	19.2E+6, 26.0E+6, 38.4E+6	Select proper Frequency of UFS Host Controller Reference Clock.
Configure	Ref Clk Memory Depth	AcqPoints_RefClk	100E+3, 200E+3, 500E+3, 1E+6, 2E+6, 4E+6, 5E+6, 6E+6, 8E+6, 10E+6	Acquisition Memory Depth for Universal Flash Storage Host Controller Reference Clock
Configure	Ref Clk Phase Noise Floor Start Frequency, Hz	UFSPNFloorStartFreq	(Accepts user-defined text), 5E+6	Reference Clock Phase Noise Floor Measurement Start Frequency.
Configure	Ref Clk Phase Noise Integration Start Frequency, Hz	UFSPNStartFreq	(Accepts user-defined text), 50E+3	Reference Clock Phase Noise Integrated SSD Measurement Start Frequency.
Configure	Ref Clk Phase Noise Integration Stop Frequency, Hz	UFSPNStopFreq	(Accepts user-defined text), 10E+6	Reference Clock Phase Noise Integrated SSD Measurement Stop Frequency.
Configure	Ref Clk Phase Noise Memory Depth	AcqPoints_RefClk_PhaseNoise	20E+6, 50E+6, 100E+6	Acquisition Memory Depth for Universal Flash Storage Host Controller Reference Clock Phase Noise.
Configure	Ref Clk Phase Noise Sampling Rate, GSa/s	SRate_RefClk_PhaseNoise	80.0E+9, 40.0E+9, 20.0E+9, 10.0E+9, 128.0E+9, 64.0E+9, 32.0E+9, 16.0E+9, 8.0E+9	Acquisition Sampling Rate for Universal Flash Storage Host Controller Reference Clock Phase Noise.
Configure	Ref Clk Sampling Rate, GSa/s	SRate_RefClk	80.0E+9, 40.0E+9, 20.0E+9, 10.0E+9, 128.0E+9, 64.0E+9, 32.0E+9, 16.0E+9, 8.0E+9	Acquisition Sampling Rate for Universal Flash Storage Host Controller Reference Clock

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Ref Clk VCCQ Source	VCCQSource_RefClk	0, 1	Source of VCCQ on measurement, can choose between voltage input or measured from Reference clock.
Configure	Ref Clk VCCQ Voltage, Volt	VCCA_Volt	(Accepts user-defined text), 1.2	VCCQ reference voltage for VOH, VOL measurement. This option only applicable when Ref Clk VCCQ Source is opted for VCCQ Input.
Configure	Reference Channel Transfer Function File (G3)[HS-Burst Only]	BEREyeRefChanTFFile	(Accepts user-defined text), AUTO, OFF, CH1, CH2	This option is used to set the Reference Channel transfer function file that the application will be embeded when performing test. When the "OFF" is selected, no transfer function file will be embeded when performing test. When the "AUTO" is selected, the "short" channel (CH1) will be used for Small Amplitude and "long" options (CH2) will be used for Large Amplitude. User may specify custom Reference Channel file by providing the full path of the transfer function file (*.tf4). This config is applicable for 1.1.7 TEYE_G3_TX, VDIF_AC_G3_TX (B) tests only.
Configure	SYNC Pattern	SyncID	0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90	This option specifies the M-PHY SYNC pattern that will be searched when trying to identify the Marker0 pattern in the HS Burst data. When this option is set to "default", the SYNC patterns that will be searched for are "D10.5" and "D26.5" patterns. If this option is set to "D21.5", then the SYNC pattern that will be searched for is "D21.5" pattern only.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Sampling Rate, GSa/s	SRate	Default, 80.0E+9, 40.0E+9, 20.0E+9, 10.0E+9, 5.0E+9, 128.0E+9, 64.0E+9, 32.0E+9, 16.0E+9, 8.0E+9, 4.0E+9	Specify the Sampling Rate to use for all tests. Example 1, if the value of "Default" is selected, the Sampling Rate used is automatically set in the application based on the following criteria. For 90000 Series, 90000 X-Series, 90000 Q-Series, V-Series, Z-Series: [Burst Data] For data rate less than 10 Mbps, Sampling Rate = 2.5 GSa/s For data rate less than 50 Mbps, Sampling Rate = 5 GSa/s For data rate less than 1.5 Gbps, Sampling Rate = 10 GSa/s For data rate less than 2 Gbps, Sampling Rate = 20 GSa/s For data rate less than 6 Gbps, Sampling Rate = 40 GSa/s For data rate of 6 Gbps and above, Sampling Rate = 80 GSa/s [Continuous Data] The Sampling rate will be set up to maximum of 80GSa/s, depending on the scope capability. Example 2, if the value of "20GSa/s" is selected, the Sampling Rate used is automatically set in the application based on the following criteria. [Burst Data] The Sampling rate used is set to 20GSa/s for all tests. [Continuous Data] The Sampling rate will be set up to maximum of 80GSa/s, depending on the scope capability. If the configuration variable "Scope Bandwidth" is not set to "AUTO", the minimum Sampling Rate used will be 20GSa/s. For UXR-series: [Burst Data] For data rate less than 10 Mbps, Sampling Rate = 2 GSa/s For data rate less than 50 Mbps, Sampling Rate = 4 GSa/s For data rate less than 1.5 Gbps, Sampling Rate = 16 GSa/s For data rate less than 2 Gbps, Sampling Rate = 32 GSa/s For data rate less than 6 Gbps, Sampling Rate = 64 GSa/s For data rate of 6 Gbps and above, Sampling Rate = 128 GSa/s [Continuous Data] The Sampling rate will be set up to maximum of 128GSa/s, depending on the scope capability. Example 2, if the value of "16GSa/s" is selected, the Sampling Rate used is automatically set in the application based on the following criteria. [Burst Data] The Sampling rate used is set to 16GSa/s for all tests. [Continuous Data]

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Sampling Rate, GSa/s (continued)	SRate (continued)	Default, 80.0E+9, 40.0E+9, 20.0E+9, 10.0E+9, 5.0E+9, 128.0E+9, 64.0E+9, 32.0E+9, 16.0E+9, 8.0E+9, 4.0E+9	The Sampling rate will be set up to maximum of 128GSa/s, depending on the scope capability. If the configuration variable "Scope Bandwidth" is not set to "AUTO", the minimum Sampling Rate used will be 16GSa/s.
Configure	Save Waveforms	SlewRateSaveWaveform	1, 0	This option is used to enable/disable the save waveform feature for 1.1.10 SR_DIF_TX, 1.1.11 SR_DIF_TX Monotonicity and 1.1.12 ΔSR_DIF_TX Resolution tests where the waveforms captured for each acquisition will be saved in the following directory: Win7:C:\ ProgramData\Keysight\Infiniium\Apps\ MIPI_M-PHYTest\Project\app\ SlewRate_DIF\
Configure	Scope Bandwidth	ScopeBandwidth	AUTO, 1E+9, 2E+9, 3E+9, 4E+9, 5E+9, 6E+9, 7E+9, 8E+9, 9E+9, 10E+9, 11E+9, 12E+9, 13E+9, 14E+9, 15E+9, 16E+9, 17E+9, 18E+9, 19E+9, 20E+9, 21E+9, 22E+9, 23E+9, 24E+9, 25E+9, 26E+9, 27E+9, 28E+9, 29E+9, 30E+9, 31E+9, 32E+9	Enter the desired scope bandwidth here. By selecting the value of "Scope Bandwidth", the available options of "Sampling Rate, GSa/s" will be changed accordingly.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	SigTest Template Files	SigTestTemplateFiles	0, 1	Specify the SigTest Template files to be used when performing SigTest. When the "Original Template Files" is selected, the original template files will be used when performing SigTest. When the "New Template Files" is selected, the new set of template files which contains the new predefined CTLE values will be used when performing SigTest. This config is applicable for Test 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH1] [0dB] [SigTest] (C), 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] [SigTest] (C) and 1.1.7 TEYE_G4_SA_RT_TX, VDIF_AC_G4_SA_RT_TX [CH1] [3.5dB] [SigTest] (C) tests only.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Specification Version	SpecificationVersion	v4.0, v4.1	This option is used to specify the specification version that determine the targeted BER to be used for Test 1.1.6 TEYE_TX, VDIF_AC_TX, Test 1.1.7 TEYE_G3_TX, VDIF_AC_G3_TX, Test 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C), Test 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX [SigTest] (C), Test 1.1.15 TJ_TX(C), Test 1.1.16 STTJ_TX(C), Test 1.1.17 DJ_TX(C) and Test 1.1.18 STDJ_TX(C) when performing test. * For M-PHY specification v4.0, the BER is defined as 1E-10. * For M-PHY specification v4.1, the BER is defined as 1E-12. * When the "v4.0" is selected, the prorated mask from the M-PHY specification v4.0 which is targeted at BER 1E-10 will be used. The mask violation must not be greater than 1 hit to be considered as PASS. * When the "v4.1" is selected, the prorated mask from the M-PHY specification v4.1 which is targeted at BER 1E-12 will be used. The mask violation must not be greater than 1 hit to be considered as PASS. * This config is only applicable for CTS v4.0 and v4.1 option only. * This config is only applicable for Test 1.1.6 TEYE_TX, VDIF_AC_TX, Test 1.1.7 TEYE_G3_TX, VDIF_AC_G3_TX, Test 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C), Test 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX [SigTest] (C), Test 1.1.15 TJ_TX(C), Test 1.1.16 STTJ_TX(C), Test 1.1.17 DJ_TX(C) and Test 1.1.18 STDJ_TX tests only.
Configure	TLINE_RESET_DETECT(s)	TLINE_RESET_DETECT	(Accepts user-defined text), 0.001, 0.003	Specify the minimum value of the TLINE_RESET_DETECT. TLINE_RESET_DETECT will be used to compute the test limit for 1.2.3 TPWM_PREPARE test. TLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX). This config is only applicable for 1.2.3 TPWM_PREPARE test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	TX_HS_PREPARE_LENGTH	TX_HS_PREPARE_LENGTH	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	Specify the value of the TX_HS_PREPARE_LENGTH which used for 1.1.3 T_HS_PREPARE_LA_RT_TX test and 1.1.3 T_HS_PREPARE_SA_RT_TX test. The actual test limit(TX_HS_PREPARE_length) will be calculated based on equation [TX_HS_PREPARE_length = (TX_HS_PREPARE_LENGTH) * (2 ^(GEAR-1))]. The GEAR value is depends on the HS Data Rate value selected in Set Up Tab. Example 1: If Data Rate value of HS-G1A(1248) and TX_HS_PREPARE_LENGTH value of 15 are selected. Then, GEAR = 1 and test limit(TX_HS_PREPARE_length) = 15. Example 2: If Data Rate value of HS-G2A(2496) and TX_HS_PREPARE_LENGTH value of 15 are selected. Then, GEAR = 2 and test limit(TX_HS_PREPARE_length) = 30

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	TX_LS_PREPARE_LENGTH	TX_LS_PREPARE_LENGTH	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	Specify the value of the TX_LS_PREPARE_LENGTH. The actual test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation: If OMC is present, TPWM_PREPARE_calc = MAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1). TPWM_PREPARE_TestLimit = MIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)). If OMC is not present, TPWM_PREPARE_calc = MAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1). TPWM_PREPARE_TestLimit = MIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)). The values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab. TLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX). The GEAR value is depends on the PWM Gear selected in Set Up Tab. Example 1, TX_LS_PREPARE_LENGTH = 10, MC_LS_PREPARE_LENGTH = 15, TLINE_RESET_DETECT = 1ms, GEAR = 1 and PWM bit rate = 9Mbps. if OMC is present, TPWM_PREPARE_TestLimit = 512SI. if OMC is not present, TPWM_PREPARE_TestLimit = 16SI. Example 2, TX_LS_PREPARE_LENGTH = 10, MC_LS_PREPARE_LENGTH = 15, TLINE_RESET_DETECT = 1ms, GEAR = 1 and PWM bit rate = 3Mbps. if OMC is present, TPWM_PREPARE_TestLimit = 300SI. if OMC is not present, TPWM_PREPARE_TestLimit = 16SI. This config is only applicable for 1.2.3 TPWM_PREPARE test.
Configure	Termination Emulation	TermEmu_RefClk	0, 1	In Direct Connect (Cable) case, scope does not provide proper termination so with this option, can emulate proper termination for reference clock test. This option only affect when probing method is Direct Connect (Cable).

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Test Limit for DigRFv4 Protocol Specification(UI)	DigRFv4TestLimitL2L	(Accepts user-defined text), 10	Specify the test limit value for 1.1.9 T_L2L_SKEW_HS_LA_RT_TX test. This config is only applicable if "DigRFv4" value is selected for Protocol Specification configuration variable.
Configure	Total Acquisition Length [UI]	TotalBEREyeAcqLen	(Accepts user-defined text), 3.0E+6, 4.0E+6, 5.0E+6	This option is used to set the total acquisition length in terms of UI. The actual sample points equivalent to then number of UI specified will be calculated based on the measured data rate. The default value is 3E6 UIs. This config is applicable for 1.1.6 TEYE_TX, VDIF_AC_TX (C), 1.1.7 TEYE_G3_TX, VDIF_AC_G3_TX (C) and 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) tests only.
Configure	Transfer Function File (G3)[HS-Continuous Only]	G3ContinuousBEREyeTFFile	AUTO, OFF	This option is used to set the transfer function file that the application will be embeded when performing HS-TX Gear 3 Differential AC Eye tests. When the "AUTO" is selected, the "short" channel (CH1) will be used for Test 1.1.7 TEYE_G3_LA_TX, VDIF_AC_G3_LA_TX [CH1] [0dB] (C) and Test 1.1.7 TEYE_G3_SA_TX, VDIF_AC_G3_SA_TX [CH1] [3.5dB] (C) tests. The "long" channel (CH2) will be used for 1.1.7 TEYE_G3_LA_TX, VDIF_AC_G3_LA_TX [CH2] [6dB] (C). When the "OFF" is selected, no transfer function file will be embeded. This config is applicable for Test 1.1.7 TEYE_G3_TX, VDIF_AC_G3_TX (C) tests only.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Transfer Function File (G4)	G4BEREyeTFFile	Reference Channel + Package Model, Package Model ONLY, OFF	This option is used to set the transfer function file that the application will be embeded when performing HS-TX Gear 4 Differential AC Eye tests. By default, the transfer function file for Reference Channel and Package Model will be embeded. When the "Package Model ONLY" is selected, the transfer function file for Package Model will be embeded only. When the "OFF" is selected, no transfer function file will be embeded. This config is applicable for Test 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX (C) and Test 1.1.7 TEYE_G4_TX, VDIF_AC_G4_TX [SigTest] (C) tests only.
Configure	Transition Density Dependent	TransDensityDependent	1, 0	This option is used to enable/disable the Transition Density Dependent for TEYE tests where the JTF and OJTF responses are dependent on transition density.
Configure	TrigThreshold Mode	TrigThresMode	0, 1	This option is used to set the trigger threshold mode. When this option is set to "Auto", the application will automatically determine the threshold value. When this option is set to "Manual", then the value of the "Trigger Level" option will be used as the trigger threshold.
Configure	Trigger Level	TrigThresLevel	(Accepts user-defined text), 0	Specify the value of the trigger level used for triggering the test signal when running the M-PHY tests. The value of this option will be used ONLY when the "TrigThreshold Mode" option is set to "Manual". By default, this value is set to 0V.
Configure	Trigger Location	StartOfTrig	0, 1	This option is used to set the starting location of the trigger for all tests excluding the slew rate, jitter tests. When this option is set to "DIF-N", the application will trigger at the location where a DIF-N region begins. When this option is set to "DIF-P", the application will trigger at the location where a DIF-P region begins.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	UFS Butterworth Filter Cutoff Frequency(Hz)	UFSButterFiltCutoff Freq	(Accepts user-defined text), 1E+6, 2E+6, 3E+6, 4E+6, 5E+6	Specify the Butterworth filter cutoff frequency when applying Butterworth Low Pass Filter on UFS Reference Clock Signal. The default value is 2MHz. This config is only applicable for UFS Reference Clock Frequency Error (Ferror) test.
Configure	UFS Butterworth Filter Order	UFSButterFiltOrder	(Accepts user-defined text), 1, 2, 3, 4	Specify the Butterworth filter order when applying Butterworth Low Pass Filter on UFS Reference Clock Signal. The default value is 2nd Order. This config is only applicable for UFS Reference Clock Frequency Error (Ferror) test.
Configure	Upper Percent	MeasThres_UpperP ct	(Accepts user-defined text), 90, 80	Specify the value of the upper threshold used when the "MeasThreshold Mode" option is set to use "TopBaseRatio". By default, this value is set to 90%.
Configure	VDIF_AC Histogram Window	HistogramWindow Ratio	(Accepts user-defined text), 0.2, 0.8, 0.9	This config is used to specify the location of histogram window for VDIF_AC measurement. For example, if 0.8 is selected, VDIF_AC is measured at location (+/-0.4)*(TPWM/3) from center of fraction bit of PWM_Major_TX. This config is only applicable for 1.2.7 VDIF_AC test.
Run Tests	Event	RunEvent	(None), Fail, Margin < N, Pass	Names of events that can be used with the StoreMode=Event or RunUntil RunEventAction options
Run Tests	RunEvent=Margin < N: Minimum required margin %	RunEvent_Margin < N_MinPercent	Any integer in range: 0 <= value <= 99	Specify N using the 'Minimum required margin %' control.
Set Up	CTSVersion	CTSVersion	v3.0, v4.0 and v4.1	Select the CTS Version. Select the CTS Version.
Set Up	ChanDiffInputLane A	ChanDiffInputLane A	Channel 1, Channel 2, Channel 3, Channel 4	Identifies the channel for the Differential data signal (TXDP-TXDN) for all tests. For the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests, the Differential (TXDP-TXDN) is referred to as the channel connection for LANE0. Identifies the channel for the Differential data signal (TXDP-TXDN) for all tests. For the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests, the Differential (TXDP-TXDN) is referred to as the channel connection for LANE0.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	ChanDiffInputLaneB	ChanDiffInputLaneB	Channel 1, Channel 2, Channel 3, Channel 4	Identifies the channel for Differential data signal (TXDP-TXDN). This configuration applies only to the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests. If you select 2 for the Number of Supported Lane, the Differential (TXDP-TXDN) is referred to as the channel connection for LANE1. If you select 3 for the Number of Supported Lane, the Differential (TXDP-TXDN) is referred to as the channel connection for LANE1 and LANE2. You will be prompted to change the connection through the test. Identifies the channel for Differential data signal (TXDP-TXDN). This configuration applies only to the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests. If you select 2 for the Number of Supported Lane, the Differential (TXDP-TXDN) is referred to as the channel connection for LANE1. If you select 3 for the Number of Supported Lane, the Differential (TXDP-TXDN) is referred to as the channel connection for LANE1 and LANE2. You will be prompted to change the connection through the test.
Set Up	ChanSEInputLaneA	ChanSEInputLaneA	Channel 1 and Channel 3, Channel 2 and Channel 4	Identifies the channels for Single-Ended TXDP and Single-Ended TXDN for all tests. For the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests, the Single-Ended (TXDP and TXDN) is referred to as the channel connection for LANE0. Identifies the channels for Single-Ended TXDP and Single-Ended TXDN for all tests. For the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests, the Single-Ended (TXDP and TXDN) is referred to as the channel connection for LANE0.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	ChanSEInputLaneB	ChanSEInputLaneB	Channel 1 and Channel 3, Channel 2 and Channel 4	Identifies the channels for Single-Ended TXDP and Single-Ended TXDN. This configuration applies only to the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests. If you select 2 for the Number of Supported Lane, the Single-Ended (TXDP and TXDN) is referred to as the channel connection for LANE1. If you select 3 for the Number of Supported Lane, the Single-Ended (TXDP and TXDN) is referred to as the channel connection for LANE1 and LANE2. You will be prompted to change the connection through the test. Identifies the channels for Single-Ended TXDP and Single-Ended TXDN. This configuration applies only to the 1.1.9 T_L2L_SKEW_HS and 1.2.9 T_L2L_SKEW_PWM tests. If you select 2 for the Number of Supported Lane, the Single-Ended (TXDP and TXDN) is referred to as the channel connection for LANE1. If you select 3 for the Number of Supported Lane, the Single-Ended (TXDP and TXDN) is referred to as the channel connection for LANE1 and LANE2. You will be prompted to change the connection through the test.
Set Up	DUTDataRate	DUTDataRate	HS-G1A (1248), HS-G1B (1456.0), HS-G1B (1457.6), HS-G1B (1459.2), HS-G2A (2496), HS-G2B (2912.0), HS-G2B (2915.2), HS-G2B (2918.4), HS-G3A (4992), HS-G3B (5824.0), HS-G3B (5830.4), HS-G3B (5836.8), HS-G4A (9984), HS-G4B (11648.0), HS-G4B (11660.8), HS-G4B (11673.6)	This option allow user to select the HS data rate. This option allow user to select the HS data rate.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	DUTPWMGear	DUTPWMGear	PWM-G0 (0.01 - 3), PWM-G1 (3 - 9), PWM-G2 (6 - 18), PWM-G3 (12 - 36), PWM-G4 (24 - 72), PWM-G5 (48 - 144), PWM-G6 (96 - 288), PWM-G7 (192 - 576), AUTO	This option allow user to select the PWM Gear. This option allow user to select the PWM Gear.
Set Up	DataConnectionType	DataConnectionType	Single-Ended, Differential	Select the channel connection type for all tests. Select the channel connection type for all tests.
Set Up	EnableEmbeddingConTEYE_G3	EnableEmbeddingConTEYE_G3	On, Off	Apply InfiniiSim Embedding on Data Signals. By setting this option as (On), user have to manually configure the 'Transfer Function File (G3)[HS-Continuous Only]' configurable option in the Configure Tab, under the 'BER Differential AC Eye Test Settings' section. This setting is applicable only for the following tests: 1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [CH1] [0dB] (C), 1.1.7 TEYE_G3_SA_RT_TX, VDIF_AC_G3_SA_RT_TX [CH1] [3.5dB] (C) and 1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [CH2] [6dB] (C) tests. This option is applicable only for Offline Mode. Apply InfiniiSim Embedding on Data Signals. By setting this option as (On), user have to manually configure the 'Transfer Function File (G3)[HS-Continuous Only]' configurable option in the Configure Tab, under the 'BER Differential AC Eye Test Settings' section. This setting is applicable only for the following tests: 1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [CH1] [0dB] (C), 1.1.7 TEYE_G3_SA_RT_TX, VDIF_AC_G3_SA_RT_TX [CH1] [3.5dB] (C) and 1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [CH2] [6dB] (C) tests. This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	EnableEmbeddingConTEYE_G4_SigTest	EnableEmbeddingConTEYE_G4_SigTest	On, Off	Apply InfiniiSim Embedding on data waveform. By setting this option as (On), user have to manually configure the 'Transfer Function File (G4)' configurable option in the Configure Tab, under the 'BER Differential AC Eye Test Settings' section. This setting is applicable only for the Test 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] [SigTest] (C). This option is applicable only for Offline Mode. Apply InfiniiSim Embedding on data waveform. By setting this option as (On), user have to manually configure the 'Transfer Function File (G4)' configurable option in the Configure Tab, under the 'BER Differential AC Eye Test Settings' section. This setting is applicable only for the Test 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] [SigTest] (C). This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	FolderHSBurst_VCM	FolderHSBurst_VCM	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.1.4 VCM(B) test. This option is applicable only for Offline Mode. If the probing method selected is 'Active Probe (Differential Probe)' or 'Direct Connect', the folder must contain VCM_DataPSignal.wfm and VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)', the folder must contain ActiveTermAcq1_VCM_DataPSignal.wfm, ActiveTermAcq1_VCM_DataNSignal.wfm, ActiveTermAcq2_VCM_DataPSignal.wfm and ActiveTermAcq2_VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)[Manual]', the folder must contain ActiveTermManual_VCM_DataPSignal.wfm , ActiveTermManual_VCM_DataNSignal.wfm. Saved folder path that contain Waveform Files for 1.1.4 VCM(B) test. This option is applicable only for Offline Mode. If the probing method selected is 'Active Probe (Differential Probe)' or 'Direct Connect', the folder must contain VCM_DataPSignal.wfm and VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)', the folder must contain ActiveTermAcq1_VCM_DataPSignal.wfm, ActiveTermAcq1_VCM_DataNSignal.wfm, ActiveTermAcq2_VCM_DataPSignal.wfm and ActiveTermAcq2_VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)[Manual]', the folder must contain ActiveTermManual_VCM_DataPSignal.wfm , ActiveTermManual_VCM_DataNSignal.wfm.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	FolderHS_L2L_L1L0	FolderHS_L2L_L1L0	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.1.9 T_L2L_SKEW(B) test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 1. Saved folder path that contain Waveform Files for 1.1.9 T_L2L_SKEW(B) test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 1.
Set Up	FolderHS_L2L_L2L0	FolderHS_L2L_L2L0	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.1.9 T_L2L_SKEW(B) test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 2. Saved folder path that contain Waveform Files for 1.1.9 T_L2L_SKEW(B) test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 2.
Set Up	FolderHS_L2L_L3L0	FolderHS_L2L_L3L0	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.1.9 T_L2L_SKEW(B) test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 3. Saved folder path that contain Waveform Files for 1.1.9 T_L2L_SKEW(B) test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 3.
Set Up	FolderPWM_L2L_L1L0	FolderPWM_L2L_L1L0	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.2.9 T_L2L_SKEW test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 1. Saved folder path that contain Waveform Files for 1.2.9 T_L2L_SKEW test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 1.
Set Up	FolderPWM_L2L_L2L0	FolderPWM_L2L_L2L0	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.2.9 T_L2L_SKEW test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 2. Saved folder path that contain Waveform Files for 1.2.9 T_L2L_SKEW test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 2.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	FolderPWM_L2L_L3L0	FolderPWM_L2L_L3L0	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.2.9 T_L2L_SKEW test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 3. Saved folder path that contain Waveform Files for 1.2.9 T_L2L_SKEW test. This option is applicable only for Offline Mode and for Number of Supported Lane greater than 3.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	FolderPWM_VCM	FolderPWM_VCM	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.2.4 VCM test. This option is applicable only for Offline Mode. If the probing method selected is 'Active Probe (Differential Probe)' or 'Direct Connect', the folder must contain VCM_DataPSignal.wfm and VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)', the folder must contain ActiveTermAcq1_VCM_DataPSignal.wfm, ActiveTermAcq1_VCM_DataNSignal.wfm, ActiveTermAcq2_VCM_DataPSignal.wfm and ActiveTermAcq2_VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)[Manual]', the folder must contain ActiveTermManual_VCM_DataPSignal.wfm , ActiveTermManual_VCM_DataNSignal.wfm. Saved folder path that contain Waveform Files for 1.2.4 VCM test. This option is applicable only for Offline Mode. If the probing method selected is 'Active Probe (Differential Probe)' or 'Direct Connect', the folder must contain VCM_DataPSignal.wfm and VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)', the folder must contain ActiveTermAcq1_VCM_DataPSignal.wfm, ActiveTermAcq1_VCM_DataNSignal.wfm, ActiveTermAcq2_VCM_DataPSignal.wfm and ActiveTermAcq2_VCM_DataNSignal.wfm. If the probing method selected is 'Active Probe (Active Termination Adapter)[Manual]', the folder must contain ActiveTermManual_VCM_DataPSignal.wfm , ActiveTermManual_VCM_DataNSignal.wfm.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	Folder_SR_DIF	Folder_SR_DIF	(Accepts user-defined text)	Saved folder path that contain Waveform Files for 1.1.10 SR_DIF[MAX](B), 1.1.10 SR_DIF[MIN](B), 1.1.11 SR_DIF Monotonicity(B) and 1.1.12 SR_DIF Resolution(B) tests. This option is applicable only for Offline Mode. If Number of Slew Rate State = 1: Single-ended signal type:The folder must contain SR1_DataPSignal.wfm, SR1_DataNSignal.wfm. Differential signal type:The folder must contains SR1_DiffDataSignal.wfm. If Number of Slew Rate State = 2: Single-ended signal type:The folder must contain SR1_DataPSignal.wfm, SR1_DataNSignal.wfm, SR2_DataPSignal.wfm, SR2_DataNSignal.wfm Differential signal type:The folder must contains SR1_DiffDataSignal.wfm, SR2_DiffDataSignal.wfm Saved folder path that contain Waveform Files for 1.1.10 SR_DIF[MAX](B), 1.1.10 SR_DIF[MIN](B), 1.1.11 SR_DIF Monotonicity(B) and 1.1.12 SR_DIF Resolution(B) tests. This option is applicable only for Offline Mode. If Number of Slew Rate State = 1: Single-ended signal type:The folder must contain SR1_DataPSignal.wfm, SR1_DataNSignal.wfm. Differential signal type:The folder must contains SR1_DiffDataSignal.wfm. If Number of Slew Rate State = 2: Single-ended signal type:The folder must contain SR1_DataPSignal.wfm, SR1_DataNSignal.wfm, SR2_DataPSignal.wfm, SR2_DataNSignal.wfm Differential signal type:The folder must contains SR1_DiffDataSignal.wfm, SR2_DiffDataSignal.wfm

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	InfoTestEnable	InfoTestEnable	0.0, 1.0	Enable or disable informative tests. For CTS v3.0, the informative tests include 1.1.2 test, 1.1.7 test for HS-G3A option, 1.1.6 and 1.1.7 tests at far-end HS-RX test point, 1.1.8 test for HS-Continuous mode, 1.1.9 for A series data rate option, 1.1.10, 1.1.11, 1.1.12 for G2,G3, 1.1.15, 1.1.16, 1.1.17, 1.1.18 tests and 1.2.6 test. For CTS v4.0 and v4.1, the informative tests include 1.1.2 test, 1.1.6 and 1.1.7 tests for HS-Burst mode, 1.1.7 test for HS-G3A and HS-G4A options for HS-Continuous mode, 1.1.6 and 1.1.7 tests at far-end HS-RX test point, 1.1.8 test for HS-Continuous mode, 1.1.9 for A series data rate option, 1.1.10, 1.1.11, 1.1.12 for G2,G3, 1.1.14 test, 1.1.15, 1.1.16, 1.1.17, 1.1.18 tests and 1.2.6 test. Enable or disable informative tests. For CTS v3.0, the informative tests include 1.1.2 test, 1.1.7 test for HS-G3A option, 1.1.6 and 1.1.7 tests at far-end HS-RX test point, 1.1.8 test for HS-Continuous mode, 1.1.9 for A series data rate option, 1.1.10, 1.1.11, 1.1.12 for G2,G3, 1.1.15, 1.1.16, 1.1.17, 1.1.18 tests and 1.2.6 test. For CTS v4.0 and v4.1, the informative tests include 1.1.2 test, 1.1.6 and 1.1.7 tests for HS-Burst mode, 1.1.7 test for HS-G3A and HS-G4A options for HS-Continuous mode, 1.1.6 and 1.1.7 tests at far-end HS-RX test point, 1.1.8 test for HS-Continuous mode, 1.1.9 for A series data rate option, 1.1.10, 1.1.11, 1.1.12 for G2,G3, 1.1.14 test, 1.1.15, 1.1.16, 1.1.17, 1.1.18 tests and 1.2.6 test.
Set Up	Lane0	Lane0	0.0, 1.0	Data Lane - Lane0 Data Lane - Lane0
Set Up	Lane1	Lane1	0.0, 1.0	Data Lane - Lane1 Data Lane - Lane1
Set Up	Lane2	Lane2	0.0, 1.0	Data Lane - Lane2 Data Lane - Lane2
Set Up	Lane3	Lane3	0.0, 1.0	Data Lane - Lane3 Data Lane - Lane3

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	NoOfSlewRateState	NoOfSlewRateState	(Accepts user-defined text), 1, 2, 3	Select the Number of Slew Rate States for the 1.1.10 HS-TX Slew Rate Control Range test. Selecting the Number of Slew Rate States as 1 disables the 1.1.10 HS-TX Slew Rate Control Range test. Select the Number of Slew Rate States for the 1.1.10 HS-TX Slew Rate Control Range test. Selecting the Number of Slew Rate States as 1 disables the 1.1.10 HS-TX Slew Rate Control Range test.
Set Up	NumSupportedLaneL2L	NumSupportedLaneL2L	1, 2, 3, 4	Select the Number of Supported Lane for the 1.1.9 HS-TX Lane-to-Lane Skew test and 1.2.9 PWM-TX Lane-to-Lane Skew test. Selecting the Number of Supported Lane as 1 disables these tests. Select the Number of Supported Lane for the 1.1.9 HS-TX Lane-to-Lane Skew test and 1.2.9 PWM-TX Lane-to-Lane Skew test. Selecting the Number of Supported Lane as 1 disables these tests.
Set Up	OfflineEnable	OfflineEnable	0.0, 1.0	Use offline waveform Use offline waveform
Set Up	OfflineInterpolationContEye	OfflineInterpolationContEye	Off, INT2, INT4, INT8, INT16	This option allow user to select the HS data rate.Specify the interpolation factor to be used when loading waveform file for eye diagram generation. This option is applicable only for Test 1.1.6 TEYE,VDIF_AC and Test 1.1.7 TEYE_G3,VDIF_AC_G3 tests only. This option is applicable only for Offline Mode. Specify the interpolation factor to be used when loading waveform file for eye diagram generation. This option is applicable only for Test 1.1.6 TEYE,VDIF_AC and Test 1.1.7 TEYE_G3,VDIF_AC_G3 tests only. This option is applicable only for Offline Mode
Set Up	PerformN7010ACalibration	PerformN7010ACalibration	0.0, 1.0	Enable or disable to perform N7010A Calibration. Enable or disable to perform N7010A Calibration.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	ProbingMethod	ProbingMethod	Active Probe (Differential Probe), Active Probe (Active Termination Adapter), Active Probe (Active Termination Adapter)[Manual], Direct Connect	Select the probing method for all tests. Select the probing method for all tests.
Set Up	ProtocolSpecificationL2L	ProtocolSpecificationL2L	DigRFv4, LLI, UniPro, SSIC, M-PCIe	Select the Protocol Specification which will be used to define the test limit for Test 1.1.9 T_L2L_SKEW_HS_LA_RT_TX and 1.2.9 T_L2L_SKEW_PWM_LA_NT_TX tests. Select the Protocol Specification which will be used to define the test limit for Test 1.1.9 T_L2L_SKEW_HS_LA_RT_TX and 1.2.9 T_L2L_SKEW_PWM_LA_NT_TX tests.
Set Up	RSEValueMethod	RSEValueMethod	Manual RSE, Calculated RSE	Select the method to determine the RSE value for N7010A Calibration. Select the method to determine the RSE value for N7010A Calibration.
Set Up	RSE_ActiveTerminationCal	RSE_ActiveTerminationCal	(Accepts user-defined text)	Enter the RSE value for N7010A Calibration Enter the RSE value for N7010A Calibration
Set Up	SavedSignalType	SavedSignalType	Single-ended, Differential	Select the Signal Type of the saved signal Select the Signal Type of the saved signal
Set Up	SwitchMatrixProbeMethod	SwitchMatrixProbeMethod	Active Probe (Differential Probe), Active Probe (Active Termination Adapter), Active Probe (Active Termination Adapter)[Manual], Direct Connect	Select method used to connect the data lane testpoint to the scope. This option is used when the Switch Matrix option is enabled. Select method used to connect the data lane testpoint to the scope. This option is used when the Switch Matrix option is enabled.
Set Up	TEYESigTestEnable	TEYESigTestEnable	0.0, 1.0	Enable or disable Test 1.1.7 TEYE_G4, VDIF_AC_G4 [SigTest] tests. Enable or disable Test 1.1.7 TEYE_G4, VDIF_AC_G4 [SigTest] tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	TXDNInfiniiSimCal	TXDNInfiniiSimCal	Off, 2 Port, 4 Port (TXDP and TXDN)	Select to embed/de-embed transfer function file TXDN prior to N7010A Calibration. Select to embed/de-embed transfer function file TXDN prior to N7010A Calibration.
Set Up	TXDNTransferFunctionFileCal	TXDNTransferFunctionFileCal	(Accepts user-defined text)	Select the transfer function file for embedding/de-embedding for TXDN prior to N7010A Calibration. Select the transfer function file for embedding/de-embedding for TXDN prior to N7010A Calibration.
Set Up	TXDPInfiniiSimCal	TXDPInfiniiSimCal	Off, 2 Port, 4 Port (TXDP and TXDN)	Select to embed/de-embed transfer function file for TXDP prior to N7010A Calibration. Select to embed/de-embed transfer function file for TXDP prior to N7010A Calibration.
Set Up	TXDPTransferFunctionFileCal	TXDPTransferFunctionFileCal	(Accepts user-defined text)	Select the transfer function file for embedding/de-embedding for TXDP prior to N7010A Calibration. Select the transfer function file for embedding/de-embedding for TXDP prior to N7010A Calibration.
Set Up	TestGroup_HS	TestGroup_HS	0.0, 1.0	HS tests - Burst Data HS tests - Burst Data
Set Up	TestGroup_HS_ContData	TestGroup_HS_ContData	0.0, 1.0	HS tests - Continuous Data HS tests - Continuous Data
Set Up	TestGroup_LA_NT	TestGroup_LA_NT	0.0, 1.0	LA_NT tests LA_NT tests
Set Up	TestGroup_LA_RT	TestGroup_LA_RT	0.0, 1.0	LA_RT tests LA_RT tests
Set Up	TestGroup_LS	TestGroup_LS	0.0, 1.0	LS tests LS tests
Set Up	TestGroup_SA_NT	TestGroup_SA_NT	0.0, 1.0	SA_NT tests SA_NT tests
Set Up	TestGroup_SA_RT	TestGroup_SA_RT	0.0, 1.0	SA_RT tests SA_RT tests
Set Up	UFSClockInformativeTestEnable	UFSClockInformativeTestEnable	0.0, 1.0	Enable or disable UFS Clock informative tests. Enable or disable UFS Clock informative tests.
Set Up	UFSPhaseNoiseMeasurementMethod	UFSPhaseNoiseMeasurementMethod	One Source, Correlation	Select the Phase Noise Measurement Method for UFS Phase Noise tests. Correlation method is recommended to get propoer result. Select the Measurement Method for UFS Phase Noise tests. Correlation method is recommended to get proper result.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	UFSRefClockChanSE	UFSRefClockChanSE	Channel 1, Channel 2, Channel 3, Channel 4	Identifies the channel for Single-Ended Ref Clock for UFS Clock tests. Identifies the channel for Single-Ended Ref Clock for UFS Clock tests.
Set Up	UFSRefClockPhaseNoiseSource1	UFSRefClockPhaseNoiseSource1	Channel 1, Channel 2, Channel 3, Channel 4	Identifies the channel for Ref Clock Phase Noise Source 1 for UFS Clock tests. Identifies the channel for Ref Clock Phase Noise Source 1 for UFS Clock tests.
Set Up	UFSRefClockPhaseNoiseSource2	UFSRefClockPhaseNoiseSource2	Channel 1, Channel 2, Channel 3, Channel 4	Identifies the channel for Ref Clock Phase Noise Source 2 for UFS Clock tests. Identifies the channel for Ref Clock Phase Noise Source 2 for UFS Clock tests.
Set Up	UFSRefClockProbingMethod	UFSRefClockProbingMethod	Active Probe (Differential Probe), Direct Connect	Select the probing method for UFS Clock tests. Select the probing method for UFS Clock tests.
Set Up	WfmFileDiffDataBurst	WfmFileDiffDataBurst	(Accepts user-defined text)	Saved Data Differential signal for HS-Burst mode tests. This option is applicable only for Offline Mode. Saved Data Differential signal for HS-Burst mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataBurstTEYEG3	WfmFileDiffDataBurstTEYEG3	(Accepts user-defined text)	Saved Data differential signal for 1.1.7 TEYE_G3,VDIF_AC_G3(B) and 1.1.7 TEYE_G3,VDIF_AC_G3[Far End HS-RX Test Point](B) tests. This option is applicable only for Offline Mode. Saved Data differential signal for 1.1.7 TEYE_G3,VDIF_AC_G3(B) and 1.1.7 TEYE_G3,VDIF_AC_G3[Far End HS-RX Test Point](B) tests. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataBurstTRTF	WfmFileDiffDataBurstTRTF	(Accepts user-defined text)	Saved Data differential signal for 1.1.8 TR_TF(B) test. This option is applicable only for Offline Mode. Saved Data differential signal for 1.1.8 TR_TF(B) test. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataCon	WfmFileDiffDataCon	(Accepts user-defined text)	Saved Data Differential signal for HS-Continuous mode tests. This option is applicable only for Offline Mode. Saved Data Differential signal for HS-Continuous mode tests. This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	WfmFileDiffDataContTEYEG1G2	WfmFileDiffDataContTEYEG1G2	(Accepts user-defined text)	Saved Data Differential signal for 1.1.6 TEYE,VDIF_AC(C) tests. This option is applicable only for Offline Mode. Saved Data Differential signal for 1.1.6 TEYE,VDIF_AC(C) tests. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataContTEYEG3_CH1	WfmFileDiffDataContTEYEG3_CH1	(Accepts user-defined text)	Saved Data Differential signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH1](C) tests. This option is applicable only for Offline Mode. Saved Data Differential signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH1](C) tests. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataContTEYEG3_CH2	WfmFileDiffDataContTEYEG3_CH2	(Accepts user-defined text)	Saved Data Differential signal for 1.1.6 TEYE,VDIF_AC(C) tests. This option is applicable only for Offline Mode.Saved Data Differential signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH2](C) tests. This option is applicable only for Offline Mode. Saved Data Differential signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH2](C) tests. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataContTEYEG4_CH1_SigTest	WfmFileDiffDataContTEYEG4_CH1_SigTest	(Accepts user-defined text)	Saved Data differential signal for 1.1.7 TEYE_G4,VDIF_AC_G4(C) tests. This setting is applicable only for the following tests: 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH1] [0dB] [SigTest] (C), 1.1.7 TEYE_G4_SA_RT_TX, VDIF_AC_G4_SA_RT_TX [CH1] [3.5dB] [SigTest] (C) tests. This option is applicable only for Offline Mode. Saved Data differential signal for 1.1.7 TEYE_G4,VDIF_AC_G4(C) tests. This setting is applicable only for the following tests: 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH1] [0dB] [SigTest] (C), 1.1.7 TEYE_G4_SA_RT_TX, VDIF_AC_G4_SA_RT_TX [CH1] [3.5dB] [SigTest] (C) tests. This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	WfmFileDiffDataContTEYEG4_CH2_SigTest	WfmFileDiffDataContTEYEG4_CH2_SigTest	(Accepts user-defined text)	Saved Data differential signal for 1.1.7 TEYE_G4,VDIF_AC_G4(C) tests. This setting is applicable only for the following tests: 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] [SigTest] (C) test. This option is applicable only for Offline Mode. Saved Data differential signal for 1.1.7 TEYE_G4,VDIF_AC_G4(C) tests. This setting is applicable only for the following tests: 1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] [SigTest] (C) test. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataPWM	WfmFileDiffDataPWM	(Accepts user-defined text)	Saved Data Differential signal for LS-PWM mode tests. This option is applicable only for Offline Mode. Saved Data Differential signal for LS-PWM mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileDiffDataTOLPWMG1	WfmFileDiffDataTOLPWMG1	(Accepts user-defined text)	Saved Data differential signal for 1.2.10 TOLPWM-G1 test. This option is applicable only for Offline Mode. Saved Data differential signal for 1.2.10 TOLPWM-G1 test. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDNBurst	WfmFileSETXDNBurst	(Accepts user-defined text)	Saved TXDN single-ended signal for HS-Burst mode tests. This option is applicable only for Offline Mode. Saved TXDN single-ended signal for HS-Burst mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDNBurstTRTF	WfmFileSETXDNBurstTRTF	(Accepts user-defined text)	Saved TXDN single ended signal for 1.1.8 TR_TF(B) test. This option is applicable only for Offline Mode. Saved TXDN single ended signal for 1.1.8 TR_TF(B) test. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDNCon	WfmFileSETXDNCon	(Accepts user-defined text)	Saved TXDN single-ended signal for HS-Continuous mode tests. This option is applicable only for Offline Mode. Saved TXDN single-ended signal for HS-Continuous mode tests. This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	WfmFileSETXDNPWM	WfmFileSETXDNPWM	(Accepts user-defined text)	Saved TXDN single-ended signal for LS-PWM mode tests. This option is applicable only for Offline Mode. Saved TXDN single-ended signal for LS-PWM mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDNTOLPWMG1	WfmFileSETXDNTOLPWMG1	(Accepts user-defined text)	Saved TXDN single-ended signal for 1.2.10 TOLPWM-G1 test. This option is applicable only for Offline Mode. Saved TXDN single-ended signal for 1.2.10 TOLPWM-G1 test. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDPBurst	WfmFileSETXDPBurst	(Accepts user-defined text)	Saved TXDP single-ended signal for HS-Burst mode tests. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for HS-Burst mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDPBurstTRTF	WfmFileSETXDPBurstTRTF	(Accepts user-defined text)	Saved TXDP single ended signal for 1.1.8 TR_TF(B) test. This option is applicable only for Offline Mode. Saved TXDP single ended signal for 1.1.8 TR_TF(B) test. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDPCon	WfmFileSETXDPCon	(Accepts user-defined text)	Saved TXDP single-ended signal for HS-Continuous mode tests. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for HS-Continuous mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDPPWM	WfmFileSETXDPPWM	(Accepts user-defined text)	Saved TXDP single-ended signal for LS-PWM mode tests. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for LS-PWM mode tests. This option is applicable only for Offline Mode.
Set Up	WfmFileSETXDPTOLPWMG1	WfmFileSETXDPTOLPWMG1	(Accepts user-defined text)	Saved TXDP single-ended signal for 1.2.10 TOLPWM-G1 test. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for 1.2.10 TOLPWM-G1 test. This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	WfmFileTXDNContTEYEG1G2	WfmFileTXDNContTEYEG1G2	(Accepts user-defined text)	Saved TXDN single-ended signal for 1.1.6 TEYE,VDIF_AC(C) tests.This option is applicable only for Offline Mode. Saved TXDN single-ended signal for 1.1.6 TEYE,VDIF_AC(C) tests.This option is applicable only for Offline Mode.
Set Up	WfmFileTXDNContTEYEG3_CH1	WfmFileTXDNContTEYEG3_CH1	(Accepts user-defined text)	Saved TXDN single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH1](C) tests.This option is applicable only for Offline Mode. Saved TXDN single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH1](C) tests.This option is applicable only for Offline Mode.
Set Up	WfmFileTXDNContTEYEG3_CH2	WfmFileTXDNContTEYEG3_CH2	(Accepts user-defined text)	Saved TXDN single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH2](C) tests.This option is applicable only for Offline Mode. Saved TXDN single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH2](C) tests.This option is applicable only for Offline Mode.
Set Up	WfmFileTXDPContTEYEG1G2	WfmFileTXDPContTEYEG1G2	(Accepts user-defined text)	Saved TXDP single-ended signal for 1.1.6 TEYE,VDIF_AC(C) tests. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for 1.1.6 TEYE,VDIF_AC(C) tests. This option is applicable only for Offline Mode.
Set Up	WfmFileTXDPContTEYEG3_CH1	WfmFileTXDPContTEYEG3_CH1	(Accepts user-defined text)	Saved TXDP single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3(C)[CH1] tests. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3(C)[CH1] tests. This option is applicable only for Offline Mode.
Set Up	WfmFileTXDPContTEYEG3_CH2	WfmFileTXDPContTEYEG3_CH2	(Accepts user-defined text)	Saved TXDP single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH2](C) tests. This option is applicable only for Offline Mode. Saved TXDP single-ended signal for 1.1.7 TEYE_G3,VDIF_AC_G3[CH2](C) tests. This option is applicable only for Offline Mode.
Set Up	WfmFileUFSPhaseNoiseSource1	WfmFileUFSPhaseNoiseSource1	(Accepts user-defined text)	Saved UFS Phase Noise Source 1 signal for UFS Phase Noise tests. This option is applicable only for Offline Mode. Saved UFS Phase Noise Source 1 signal for UFS Phase Noise tests. This option is applicable only for Offline Mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	WfmFileUFSPhase NoiseSource2	WfmFileUFSPhase NoiseSource2	(Accepts user-defined text)	Saved UFS Phase Noise Source 2 signal for UFS Phase Noise tests. This option is applicable only for Offline Mode. Saved UFS Phase Noise Source 2 signal for UFS Phase Noise tests. This option is applicable only for Offline Mode.
Set Up	WfmFileUFSRefClo ck	WfmFileUFSRefClo ck	(Accepts user-defined text)	Saved UFS Reference Clock single-ended signal for UFS Reference Clock tests. This option is applicable only for Offline Mode. Saved UFS Reference Clock single-ended signal for UFS Reference Clock tests. This option is applicable only for Offline Mode.
Set Up	txtDeviceID	txtDeviceID	(Accepts user-defined text)	Optional user defined device ID displayed in the test report. Optional user defined device ID displayed in the test report.
Set Up	txtUserComment	txtUserComment	(Accepts user-defined text)	Optional user comments displayed in the test report. Optional user comments displayed in the test report.

3 Test Names and IDs

The following table shows the mapping between each test's numeric ID and name. The numeric ID is required by various remote interface methods.

- Name — The name of the test as it appears on the user interface **Select Tests** tab.
- Test ID — The number to use with the RunTests method.
- Description — The description of the test as it appears on the user interface **Select Tests** tab.

For example, if the graphical user interface displays this tree in the **Select Tests** tab:

- All Tests
  - Rise Time
  - Fall Time

then you would expect to see something like this in the table below:

Table 3 Example Test Names and IDs

Name	Test ID	Description
Fall Time	110	Measures clock fall time.
Rise Time	100	Measures clock rise time.

and you would run these tests remotely using:

```
ARSL syntax
-----------
arsl -a ipaddress -c "SelectedTests '100,110'"
arsl -a ipaddress -c "Run"

C# syntax
---------
remoteAte.SelectedTests = new int[]{100,110};
remoteAte.Run();
```

Here are the actual Test names and IDs used by this application:

NOTE The file, "TestInfo.txt", which may be found in the same directory as this help file, contains all of the information found in the table below in a format suitable for parsing.

Table 4 Test IDs and Names

Name	TestID	Description
1.1.1 f_OFFSET_LA_NT_TX[MAX] (B)	627	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_LA_NT_TX[MAX] (C)	1627	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_LA_NT_TX[MEAN] (B)	617	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_LA_NT_TX[MEAN] (C)	1617	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_LA_NT_TX[MIN] (B)	628	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_LA_NT_TX[MIN] (C)	1628	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_LA_RT_TX[MAX] (B)	827	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_LA_RT_TX[MAX] (C)	1827	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_LA_RT_TX[MEAN] (B)	817	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_LA_RT_TX[MEAN] (C)	1817	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_LA_RT_TX[MIN] (B)	828	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_LA_RT_TX[MIN] (C)	1828	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_SA_NT_TX[MAX] (B)	527	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_SA_NT_TX[MAX] (C)	1527	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_SA_NT_TX[MEAN] (B)	517	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_SA_NT_TX[MEAN] (C)	1517	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_SA_NT_TX[MIN] (B)	528	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_SA_NT_TX[MIN] (C)	1528	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_SA_RT_TX[MAX] (B)	727	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_SA_RT_TX[MAX] (C)	1727	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MAX]
1.1.1 f_OFFSET_SA_RT_TX[MEAN] (B)	717	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_SA_RT_TX[MEAN] (C)	1717	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MEAN]
1.1.1 f_OFFSET_SA_RT_TX[MIN] (B)	728	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.1 f_OFFSET_SA_RT_TX[MIN] (C)	1728	Test 1.1.1 - HS-TX Transmitter Frequency Offset[MIN]
1.1.10 SR_DIF_LA_RT_TX[MAX] (B)	806	Test 1.1.10 - HS-TX Slew Rate[MAX].\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.10 SR_DIF_LA_RT_TX[MIN] (B)	807	Test 1.1.10 - HS-TX Slew Rate[MIN].\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.10 SR_DIF_SA_RT_TX[MAX] (B)	706	Test 1.1.10 - HS-TX Slew Rate[MAX].\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.10 SR_DIF_SA_RT_TX[MIN] (B)	707	Test 1.1.10 - HS-TX Slew Rate[MIN].\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.11 SR_DIF_LA_RT_TX Monotonicity (B)	808	Test 1.1.11 - HS-TX Slew Rate State Monotonicity.\nResults should be monotonically decreasing.\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.11 SR_DIF_SA_RT_TX Monotonicity (B)	708	Test 1.1.11 - HS-TX Slew Rate State Monotonicity.\nResults should be monotonically decreasing.\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.12 ΔSR_DIF_LA_RT_TX Resolution (B)	809	Test 1.1.12 - HS-TX Slew Rate State Resolution. 1% < ΔSR_DIF_LA_RT_TX < 30%.\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.12 ΔSR_DIF_SA_RT_TX Resolution (B)	709	Test 1.1.12 - HS-TX Slew Rate State Resolution. 1% < ΔSR_DIF_SA_RT_TX < 30%.\nFor CTS v3.0, this is an informative test for HS-G2 and HS-G3 options.\nFor CTS v4.0 and v4.1 option, this is an informative test for HS-G2, HS-G3 and HS-G4 options.
1.1.13 TINTRA_SKEW_LA_NT_TX (B)	610	Test 1.1.13 - HS-TX Intra-Lane Output Skew
1.1.13 TINTRA_SKEW_LA_RT_TX (B)	810	Test 1.1.13 - HS-TX Intra-Lane Output Skew
1.1.13 TINTRA_SKEW_SA_NT_TX (B)	510	Test 1.1.13 - HS-TX Intra-Lane Output Skew
1.1.13 TINTRA_SKEW_SA_RT_TX (B)	710	Test 1.1.13 - HS-TX Intra-Lane Output Skew
1.1.14 TPULSE_LA_NT_TX (B)	611	Test 1.1.14 - HS-TX Transmitter Pulse Width.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.14 TPULSE_LA_RT_TX (B)	811	Test 1.1.14 - HS-TX Transmitter Pulse Width.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.14 TPULSE_SA_NT_TX (B)	511	Test 1.1.14 - HS-TX Transmitter Pulse Width.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.14 TPULSE_SA_RT_TX (B)	711	Test 1.1.14 - HS-TX Transmitter Pulse Width.\nFor CTS v4.0 and v4.1 option, this test is an informative test.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.15 TJ_LA_NT_TX (B)	612	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_LA_NT_TX (C)	1612	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_LA_RT_TX (B)	812	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_LA_RT_TX (C)	1812	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_SA_NT_TX (B)	512	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_SA_NT_TX (C)	1512	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_SA_RT_TX (B)	712	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.15 TJ_SA_RT_TX (C)	1712	Test 1.1.15 - HS-TX Total Jitter.\nThis is an informative test.
1.1.16 STTJ_LA_NT_TX (B)	614	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.16 STTJ_LA_NT_TX (C)	1614	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.16 STTJ_LA_RT_TX (B)	814	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.16 STTJ_LA_RT_TX (C)	1814	Test 1.1.16 - HS-TX Short-Term Total Jitter\nThis is an informative test.
1.1.16 STTJ_SA_NT_TX (B)	514	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.16 STTJ_SA_NT_TX (C)	1514	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.16 STTJ_SA_RT_TX (B)	714	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.16 STTJ_SA_RT_TX (C)	1714	Test 1.1.16 - HS-TX Short-Term Total Jitter.\nThis is an informative test.
1.1.17 DJ_LA_NT_TX (B)	613	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.17 DJ_LA_NT_TX (C)	1613	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.17 DJ_LA_RT_TX (B)	813	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.17 DJ_LA_RT_TX (C)	1813	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.17 DJ_SA_NT_TX (B)	513	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.17 DJ_SA_NT_TX (C)	1513	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.17 DJ_SA_RT_TX (B)	713	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.17 DJ_SA_RT_TX (C)	1713	Test 1.1.17 - HS-TX Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_LA_NT_TX (B)	615	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_LA_NT_TX (C)	1615	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_LA_RT_TX (B)	815	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_LA_RT_TX (C)	1815	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_SA_NT_TX (B)	515	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter\nThis is an informative test.
1.1.18 STDJ_SA_NT_TX (C)	1515	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_SA_RT_TX (B)	715	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.18 STDJ_SA_RT_TX (C)	1715	Test 1.1.18 - HS-TX Short-Term Deterministic Jitter.\nThis is an informative test.
1.1.2 PSDCM_LA_RT_TX (B)	816	Test 1.1.2 - HS-TX Common-Mode AC Power Spectral Magnitude Limit.\nThis is an informative test.
1.1.2 PSDCM_SA_RT_TX (B)	716	Test 1.1.2 - HS-TX Common-Mode AC Power Spectral Magnitude Limit.\nThis is an informative test.
1.1.3 T_HS_PREPARE_LA_RT_TX (B)	818	Test 1.1.3 - HS-TX PREPARE Length
1.1.3 T_HS_PREPARE_SA_RT_TX (B)	718	Test 1.1.3 - HS-TX PREPARE Length
1.1.4 VCM_LA_NT_TX[Active Probe (Active Termination Adapter)] (B)	634	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.1.4 VCM_LA_NT_TX[Active Probe (Differential Probe)] (B)	603	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.4 VCM_LA_NT_TX[Direct Connect] (B)	633	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
1.1.4 VCM_LA_RT_TX[Active Probe (Active Termination Adapter) - Manual] (B)	835	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)[Manual]" probing method.\nUser will need to set Vterm value using Infiniium's Probe Configuration dialog box before running tests.
1.1.4 VCM_LA_RT_TX[Active Probe (Active Termination Adapter)] (B)	834	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.1.4 VCM_LA_RT_TX[Active Probe (Differential Probe)] (B)	803	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.
1.1.4 VCM_LA_RT_TX[Direct Connect] (B)	833	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
1.1.4 VCM_SA_NT_TX[Active Probe (Active Termination Adapter)] (B)	534	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.1.4 VCM_SA_NT_TX[Active Probe (Differential Probe)] (B)	503	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.4 VCM_SA_NT_TX[Direct Connect] (B)	533	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
1.1.4 VCM_SA_RT_TX[Active Probe (Active Termination Adapter) - Manual] (B)	735	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)[Manual]" probing method.\nUser will need to set Vterm value using Infiniium's Probe Configuration dialog box before running tests.
1.1.4 VCM_SA_RT_TX[Active Probe (Active Termination Adapter)] (B)	734	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.1.4 VCM_SA_RT_TX[Active Probe (Differential Probe)] (B)	703	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.
1.1.4 VCM_SA_RT_TX[Direct Connect] (B)	733	Test 1.1.4 - HS-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
1.1.5 VDIF_DC_LA_NT_TX (B)	600	Test 1.1.5 - HS-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.1.5 VDIF_DC_LA_RT_TX (B)	800	Test 1.1.5 - HS-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.1.5 VDIF_DC_SA_NT_TX (B)	500	Test 1.1.5 - HS-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.1.5 VDIF_DC_SA_RT_TX (B)	700	Test 1.1.5 - HS-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.1.6 TEYE_LA_NT_TX (B)	601	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.6 TEYE_LA_RT_TX, VDIF_AC_LA_RT_TX (B)	801	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\ nFor CTS v4.0 and v4.1 option, this test is an informative test and the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.6 TEYE_LA_RT_TX, VDIF_AC_LA_RT_TX (C)	1821	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\ nFor CTS v4.0 and v4.1 option, the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.6 TEYE_LA_RT_TX, VDIF_AC_LA_RT_TX [Far End HS-RX Test Point](B)	841	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.6 G1 and G2 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\ nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.6 TEYE_LA_RT_TX, VDIF_AC_LA_RT_TX [Far End HS-RX Test Point](C)	1841	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.6 G1 and G2 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\ nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.6 TEYE_SA_NT_TX (B)	501	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye
1.1.6 TEYE_SA_RT_TX, VDIF_AC_SA_RT_TX (B)	701	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\ nFor CTS v4.0 and v4.1 option, this test is an informative test and the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.6 TEYE_SA_RT_TX, VDIF_AC_SA_RT_TX (C)	1721	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\ nFor CTS v4.0 and v4.1 option, the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.6 TEYE_SA_RT_TX, VDIF_AC_SA_RT_TX [Far End HS-RX Test Point](B)	741	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.6 G1 and G2 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\ nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.6 TEYE_SA_RT_TX, VDIF_AC_SA_RT_TX [Far End HS-RX Test Point](C)	1741	Test 1.1.6 - HS-TX G1 and G2 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.6 G1 and G2 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\ nThe intention of this test is to support additional information (FYI) testing purposes.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX (B)	802	Test 1.1.7 - HS-TX G3 Differential AC Eye. The "long" channel (CH2) will be embeded when performing this test.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\nFor CTS v4.0 and v4.1 option, this test is an informative test and the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [CH1] [0dB] (C)	1822	Test 1.1.7 - HS-TX G3 Differential AC Eye. The "short" channel (CH1) will be embeded when performing this test.\nThis is an informative test for HS-G3A option.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [CH2] [6dB] (C)	1823	Test 1.1.7 - HS-TX G3 Differential AC Eye. The "long" channel (CH2) will be embeded when performing this test.\nThis is an informative test for HS-G3A option.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [Far End HS-RX Test Point](B)	842	Test 1.1.7 - HS-TX G3 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.7 G3 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\ nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.7 TEYE_G3_LA_RT_TX, VDIF_AC_G3_LA_RT_TX [Far End HS-RX Test Point](C)	1842	Test 1.1.7 - HS-TX G3 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.7 G3 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\ nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.7 TEYE_G3_SA_RT_TX, VDIF_AC_G3_SA_RT_TX (B)	702	Test 1.1.7 - HS-TX G3 Differential AC Eye. The "short" channel (CH1) will be embeded when performing this test.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\nFor CTS v4.0 and v4.1 option, this test is an informative test and the mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G3_SA_RT_TX, VDIF_AC_G3_SA_RT_TX [CH1] [3.5dB] (C)	1722	Test 1.1.7 - HS-TX G3 Differential AC Eye.\nThe "short" channel (CH1) will be embeded when performing this test.\nThis is an informative test for HS-G3A option.\nFor CTS v3.0 option, the mask violation must be 0 hit to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the mask violation must not be greater than 1 hit to be considered as PASS.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.7 TEYE_G3_SA_RT_TX, VDIF_AC_G3_SA_RT_TX [Far End HS-RX Test Point](B)	742	Test 1.1.7 - HS-TX G3 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.7 G3 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.7 TEYE_G3_SA_RT_TX, VDIF_AC_G3_SA_RT_TX [Far End HS-RX Test Point](C)	1742	Test 1.1.7 - HS-TX G3 Differential AC Eye [Far End HS-RX Test Point].\nThis test is customized test that is leveraged from the test algorithm of Test 1.1.7 G3 Differential AC Eye test where the Receiver eye mask is used instead of the Transmitter eye mask.\nThe intention of this test is to support additional information (FYI) testing purposes.
1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH1] [0dB] (C)	1845	Test 1.1.7 - HS-TX G4 Differential AC Eye.\nThe "long" channel (CH1) and package model will be embeded when performing this test.\nThis test is only applicable for CTS v4.0 and v4.1 option.\nThis is an informative test.\nThe mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH1] [0dB] [SigTest] (C)	1843	Test 1.1.7 - HS-TX G4 Differential AC Eye.\nThe "long" channel (CH1) and package model will be embeded when performing this test.\nThis test is only applicable for CTS v4.0 and v4.1 option.\nThis is an informative test for HS-G4A options.
1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] (C)	1846	Test 1.1.7 - HS-TX G4 Differential AC Eye.\nThe "long" channel (CH2) and package model will be embeded when performing this test.\nThis test is only applicable for CTS v4.0 and v4.1 option.\nThis is an informative test.\nThe mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G4_LA_RT_TX, VDIF_AC_G4_LA_RT_TX [CH2] [6dB] [SigTest] (C)	1844	Test 1.1.7 - HS-TX G4 Differential AC Eye.\nThe "long" channel (CH2) and package model will be embeded when performing this test.\nThis test is only applicable for CTS v4.0 and v4.1 option.\nThis is an informative test for HS-G4A options.
1.1.7 TEYE_G4_SA_RT_TX, VDIF_AC_G4_SA_RT_TX [CH1] [3.5dB] (C)	1745	Test 1.1.7 - HS-TX G4 Differential AC Eye.\nThe "short" channel (CH1) and package model will be embeded when performing this test.\nThis test is only applicable for CTS v4.0 and v4.1 option.\nThis is an informative test.\nThe mask violation must not be greater than 1 hit to be considered as PASS.
1.1.7 TEYE_G4_SA_RT_TX, VDIF_AC_G4_SA_RT_TX [CH1] [3.5dB] [SigTest] (C)	1743	Test 1.1.7 - HS-TX G4 Differential AC Eye.\nThe "short" channel (CH1) and package model will be embeded when performing this test.\nThis test is only applicable for CTS v4.0 and v4.1 option.\nThis is an informative test for HS-G4A options.
1.1.7 VDIF_AC_LA_NT_TX (B)	602	Test 1.1.7 - HS-TX Maximum Differential AC Output Voltage Amplitude
1.1.7 VDIF_AC_SA_NT_TX (B)	502	Test 1.1.7 - HS-TX Maximum Differential AC Output Voltage Amplitude

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.1.8 TR_TF_HS_LA_NT_TX (B)	604	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.8 TR_TF_HS_LA_NT_TX (C)	1604	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nThis test is an informative test.
1.1.8 TR_TF_HS_LA_RT_TX (B)	804	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.8 TR_TF_HS_LA_RT_TX (C)	1804	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nThis test is an informative test.
1.1.8 TR_TF_HS_SA_NT_TX (B)	504	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.8 TR_TF_HS_SA_NT_TX (C)	1504	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nThis test is an informative test.
1.1.8 TR_TF_HS_SA_RT_TX (B)	704	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nFor CTS v4.0 and v4.1 option, this test is an informative test.
1.1.8 TR_TF_HS_SA_RT_TX (C)	1704	Test 1.1.8 - HS-TX 20/80% Rise and Fall Times.\nThis test is an informative test.
1.1.9 T_L2L_L1_L0_LA_RT_TX	822	Test 1.1.9 - HS-TX Lane-to-Lane Skew.\nThis is an informative test for for A series data rate option.
1.1.9 T_L2L_L2_L0_LA_RT_TX	823	Test 1.1.9 - HS-TX Lane-to-Lane Skew.\nThis is an informative test for for A series data rate option.
1.1.9 T_L2L_L3_L0_LA_RT_TX	824	Test 1.1.9 - HS-TX Lane-to-Lane Skew.\nThis is an informative test for for A series data rate option.
1.1.9 T_L2L_SKEW_HS_2LANE_LA_RT_TX	819	Test 1.1.9 - HS-TX Lane-to-Lane Skew (This test will not be supported under Switch Matrix mode).\nThis is an informative test for for A series data rate option.
1.1.9 T_L2L_SKEW_HS_3LANE_LA_RT_TX	820	Test 1.1.9 - HS-TX Lane-to-Lane Skew (This test will not be supported under Switch Matrix mode).\nThis is an informative test for for A series data rate option.
1.1.9 T_L2L_SKEW_HS_4LANE_LA_RT_TX	821	Test 1.1.9 - HS-TX Lane-to-Lane Skew (This test will not be supported under Switch Matrix mode).\nThis is an informative test for for A series data rate option.
1.2.1 TPWM-TX_LA_NT_TX[MAX]	216	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MAX]
1.2.1 TPWM-TX_LA_NT_TX[MEAN]	206	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MEAN]
1.2.1 TPWM-TX_LA_NT_TX[MIN]	226	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MIN]
1.2.1 TPWM-TX_LA_RT_TX[MAX]	416	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MAX]
1.2.1 TPWM-TX_LA_RT_TX[MEAN]	406	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MEAN]
1.2.1 TPWM-TX_LA_RT_TX[MIN]	426	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MIN]

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.1 TPWM-TX_SA_NT_TX[MAX]	116	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MAX]
1.2.1 TPWM-TX_SA_NT_TX[MEAN]	106	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MEAN]
1.2.1 TPWM-TX_SA_NT_TX[MIN]	126	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MIN]
1.2.1 TPWM-TX_SA_RT_TX[MAX]	316	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MAX]
1.2.1 TPWM-TX_SA_RT_TX[MEAN]	306	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MEAN]
1.2.1 TPWM-TX_SA_RT_TX[MIN]	326	Test 1.2.1 - PWM-TX Transmit Bit Duration (TPWM-TX)[MIN]
1.2.10 TOLPWM-G1-TX_LA_NT_TX[MAX]	207	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MAX]
1.2.10 TOLPWM-G1-TX_LA_NT_TX[MIN]	227	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MIN]
1.2.10 TOLPWM-G1-TX_LA_RT_TX[MAX]	407	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MAX]
1.2.10 TOLPWM-G1-TX_LA_RT_TX[MIN]	427	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MIN]
1.2.10 TOLPWM-G1-TX_SA_NT_TX[MAX]	107	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MAX]
1.2.10 TOLPWM-G1-TX_SA_NT_TX[MIN]	127	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MIN]
1.2.10 TOLPWM-G1-TX_SA_RT_TX[MAX]	307	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MAX]
1.2.10 TOLPWM-G1-TX_SA_RT_TX[MIN]	327	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-G1-TX)[MIN]
1.2.10 TOLPWM-TX_LA_NT_TX[MAX]	217	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MAX]
1.2.10 TOLPWM-TX_LA_NT_TX[MIN]	237	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MIN]
1.2.10 TOLPWM-TX_LA_RT_TX[MAX]	417	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MAX]
1.2.10 TOLPWM-TX_LA_RT_TX[MIN]	437	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MIN]
1.2.10 TOLPWM-TX_SA_NT_TX[MAX]	117	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MAX]
1.2.10 TOLPWM-TX_SA_NT_TX[MIN]	137	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MIN]
1.2.10 TOLPWM-TX_SA_RT_TX[MAX]	317	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MAX]

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.10 TOLPWM-TX_SA_RT_TX[MIN]	337	Test 1.2.10 - PWM-TX Transmit Bit Duration Tolerance (TOLPWM-TX)[MIN]
1.2.11 TPWM-MINOR-G0-TX_LA_NT_TX	209	Test 1.2.11 - PWM-TX PWM-G0 Minor Duration (TPWM-MINOR-G0-TX)
1.2.11 TPWM-MINOR-G0-TX_LA_RT_TX	409	Test 1.2.11 - PWM-TX PWM-G0 Minor Duration (TPWM-MINOR-G0-TX)
1.2.11 TPWM-MINOR-G0-TX_SA_NT_TX	109	Test 1.2.11 - PWM-TX PWM-G0 Minor Duration (TPWM-MINOR-G0-TX)
1.2.11 TPWM-MINOR-G0-TX_SA_RT_TX	309	Test 1.2.11 - PWM-TX PWM-G0 Minor Duration (TPWM-MINOR-G0-TX)
1.2.2 kPWM-TX_LA_NT_TX[MAX]	218	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MAX]
1.2.2 kPWM-TX_LA_NT_TX[MEAN]	208	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MEAN]
1.2.2 kPWM-TX_LA_NT_TX[MIN]	228	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MIN]
1.2.2 kPWM-TX_LA_RT_TX[MAX]	418	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MAX]
1.2.2 kPWM-TX_LA_RT_TX[MEAN]	408	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MEAN]
1.2.2 kPWM-TX_LA_RT_TX[MIN]	428	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MIN]
1.2.2 kPWM-TX_SA_NT_TX[MAX]	118	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MAX]
1.2.2 kPWM-TX_SA_NT_TX[MEAN]	108	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MEAN]
1.2.2 kPWM-TX_SA_NT_TX[MIN]	128	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MIN]
1.2.2 kPWM-TX_SA_RT_TX[MAX]	318	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MAX]
1.2.2 kPWM-TX_SA_RT_TX[MEAN]	308	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MEAN]
1.2.2 kPWM-TX_SA_RT_TX[MIN]	328	Test 1.2.2 - PWM-TX Transmit Ratio (kPWM-TX)[MIN]

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.3 TPWM_PREPARE_LA_NT_TX	210	Test 1.2.3 - PWM-TX PREPARE Length (TPWM-PREPARE).\n\nThe test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation:\n\nIf OMC is present,\ nTPWM_PREPARE_calc = \ nMAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1)\ nTPWM_PREPARE_TestLimit = \nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nIf OMC is not present,\ nTPWM_PREPARE_calc = \nMAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1).\nTPWM_PREPARE_TestLimit = \ nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nThe values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab.\n\nTLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX).\n\nThe GEAR value is depends on the PWM Gear selected in Set Up Tab.\n\ nTPWM_PREPARE(SI) = TPWM_PREPARE(s)/(10 * TPWM_TX)\nFor CTS v3.0 option, the TPWM-PREPARE result must equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the TPWM-PREPARE must greater than or equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.
1.2.3 TPWM_PREPARE_LA_RT_TX	410	Test 1.2.3 - PWM-TX PREPARE Length (TPWM-PREPARE).\n\nThe test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation:\n\nIf OMC is present,\ nTPWM_PREPARE_calc = \ nMAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1).\ nTPWM_PREPARE_TestLimit = \nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nIf OMC is not present,\ nTPWM_PREPARE_calc = \nMAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1).\nTPWM_PREPARE_TestLimit = \ nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nThe values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab.\n\nTLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX).\n\nThe GEAR value is depends on the PWM Gear selected in Set Up Tab.\n\ nTPWM_PREPARE(SI) = TPWM_PREPARE(s)/(10 * TPWM_TX)\nFor CTS v3.0 option, the TPWM-PREPARE result must equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the TPWM-PREPARE must greater than or equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.3 TPWM_PREPARE_SA_NT_TX	110	Test 1.2.3 - PWM-TX PREPARE Length (TPWM-PREPARE).\n\nThe test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation:\n\nIf OMC is present,\ nTPWM_PREPARE_calc = \ nMAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1)\ nTPWM_PREPARE_TestLimit = \nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nIf OMC is not present,\ nTPWM_PREPARE_calc = \nMAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1).\nTPWM_PREPARE_TestLimit = \ nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nThe values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab.\n\nTLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX).\n\nThe GEAR value is depends on the PWM Gear selected in Set Up Tab.\n\ nTPWM_PREPARE(SI) = TPWM_PREPARE(s)/(10 * TPWM_TX)\nFor CTS v3.0 option, the TPWM-PREPARE result must equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the TPWM-PREPARE must greater than or equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.
1.2.3 TPWM_PREPARE_SA_RT_TX	310	Test 1.2.3 - PWM-TX PREPARE Length (TPWM-PREPARE).\n\nThe test limit(TPWM_PREPARE_TestLimit) for 1.2.3 TPWM_PREPARE test will be calculated based on equation:\n\nIf OMC is present,\ nTPWM_PREPARE_calc = \ nMAX(2^(MAX(TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH) + GEAR - 7), 1)\ nTPWM_PREPARE_TestLimit = \nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nIf OMC is not present,\ nTPWM_PREPARE_calc = \nMAX(2^(TX_LS_PREPARE_LENGTH + GEAR - 7), 1).\nTPWM_PREPARE_TestLimit = \ nMIN(TPWM_PREPARE_calc, MIN(TLINE_RESET_DETECT)).\n\nThe values of OMC, TX_LS_PREPARE_LENGTH, MC_LS_PREPARE_LENGTH and TLINE_RESET_DETECT(s) are configurable in Configure Tab.\n\nTLINE_RESET_DETECT(SI) = TLINE_RESET_DETECT(s)/(10 * TPWM_TX).\n\nThe GEAR value is depends on the PWM Gear selected in Set Up Tab.\n\ nTPWM_PREPARE(SI) = TPWM_PREPARE(s)/(10 * TPWM_TX)\nFor CTS v3.0 option, the TPWM-PREPARE result must equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.\nFor CTS v4.0 and v4.1 option, the TPWM-PREPARE must greater than or equal to the test limit(TPWM_PREPARE_TestLimit) to be considered as PASS.

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.4 VCM_LA_NT_TX[Active Probe (Active Termination Adapter) - Manual]	235	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)[Manual]" probing method.\nUser will need to set Vterm value using Infiniium's Probe Configuration dialog box before running tests.
1.2.4 VCM_LA_NT_TX[Active Probe (Active Termination Adapter)]	234	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.2.4 VCM_LA_NT_TX[Active Probe (Differential Probe)]	203	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.
1.2.4 VCM_LA_NT_TX[Direct Connect]	233	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
1.2.4 VCM_LA_RT_TX[Active Probe (Active Termination Adapter) - Manual]	435	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)[Manual]" probing method.\nUser will need to set Vterm value using Infiniium's Probe Configuration dialog box before running tests.
1.2.4 VCM_LA_RT_TX[Active Probe (Active Termination Adapter)]	434	Test 1.3.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.2.4 VCM_LA_RT_TX[Active Probe (Differential Probe)]	403	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.
1.2.4 VCM_LA_RT_TX[Direct Connect]	433	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.4 VCM_SA_NT_TX[Active Probe (Active Termination Adapter) - Manual]	135	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)[Manual]" probing method.\nUser will need to set Vterm value using Infiniium's Probe Configuration dialog box before running tests.
1.2.4 VCM_SA_NT_TX[Active Probe (Active Termination Adapter)]	134	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.2.4 VCM_SA_NT_TX[Active Probe (Differential Probe)]	103	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.
1.2.4 VCM_SA_NT_TX[Direct Connect]	133	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].
1.2.4 VCM_SA_RT_TX[Active Probe (Active Termination Adapter) - Manual]	335	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)[Manual]" probing method.\nUser will need to set Vterm value using Infiniium's Probe Configuration dialog box before running tests.
1.2.4 VCM_SA_RT_TX[Active Probe (Active Termination Adapter)]	334	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Active Termination Adapter)" probing method.\nThe Vterm value calculated when performing N7010A Calibration in Connection Setup form will be used.
1.2.4 VCM_SA_RT_TX[Active Probe (Differential Probe)]	303	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Active Probe (Differential Probe)" probing method.\nReference: VCM = (Vp + Vn) / 2.
1.2.4 VCM_SA_RT_TX[Direct Connect]	333	Test 1.2.4 - PWM-TX Common Mode Output Voltage Amplitude.\nThis test is only applicable for "Direct Connect" probing method.\nVCM is computed based on equation: VCM = (Vp + Vn)/2.\nThe VCM_RSE_TX is computed based on equation: VCM_RSE_TX = [(Vp + Vn)/2] * Factor.\nThe value of Factor: [(RSE_TX + Rin_Scope)/Rin_Scope].\nThe value of RinScope: [50ohm].\nThe nominal value of RSE_TX: [50ohm].\nReference: VCM_RSE_TX = [(Vp + Vn)/ 2]*[(RSE_TX + 50)/50].

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.5 VDIF_DC_LA_NT_TX	200	Test 1.2.5 - PWM-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.2.5 VDIF_DC_LA_RT_TX	400	Test 1.2.5 - PWM-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.2.5 VDIF_DC_SA_NT_TX	100	Test 1.2.5 - PWM-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.2.5 VDIF_DC_SA_RT_TX	300	Test 1.2.5 - PWM-TX Differential DC Output Voltage Amplitude (VDIF_DC_xA_xT_TX)
1.2.6 TEYE_LA_NT_TX	201	Test 1.2.6 - PWM-TX Transmitter Eye Opening.\nThis is an informative test.
1.2.6 TEYE_LA_RT_TX	401	Test 1.2.6 - PWM-TX Transmitter Eye Opening.\nThis is an informative test.
1.2.6 TEYE_SA_NT_TX	101	Test 1.2.6 - PWM-TX Transmitter Eye Opening.\nThis is an informative test.
1.2.6 TEYE_SA_RT_TX	301	Test 1.2.6 - PWM-TX Transmitter Eye Opening.\nThis is an informative test.
1.2.7 VDIF_AC_LA_NT_TX	202	Test 1.2.7 - PWM-TX Maximum Differential AC Output Voltage Amplitude
1.2.7 VDIF_AC_LA_RT_TX	402	Test 1.2.7 - PWM-TX Maximum Differential AC Output Voltage Amplitude
1.2.7 VDIF_AC_SA_NT_TX	102	Test 1.2.7 - PWM-TX Maximum Differential AC Output Voltage Amplitude
1.2.7 VDIF_AC_SA_RT_TX	302	Test 1.2.7 - PWM-TX Maximum Differential AC Output Voltage Amplitude
1.2.8 TR_TF_PWM_LA_NT_TX	204	Test 1.2.8 - PWM-TX 20/80% Rise and Fall Times.\ nRiseFallTimeMaxLimit is determined by 0.07 * TPWM_TX.
1.2.8 TR_TF_PWM_LA_RT_TX	404	Test 1.2.8 - PWM-TX 20/80% Rise and Fall Times.\ nRiseFallTimeMaxLimit is determined by 0.07 * TPWM_TX.
1.2.8 TR_TF_PWM_SA_NT_TX	104	Test 1.2.8 - PWM-TX 20/80% Rise and Fall Times.\ nRiseFallTimeMaxLimit is determined by 0.07 * TPWM_TX.
1.2.8 TR_TF_PWM_SA_RT_TX	304	Test 1.2.8 - PWM-TX 20/80% Rise and Fall Times.\ nRiseFallTimeMaxLimit is determined by 0.07 * TPWM_TX.
1.2.9 T_L2L_L1_L0_PWM_LA_NT_TX	222	Test 1.2.9 - PWM-TX Lane-to-Lane Skew
1.2.9 T_L2L_L2_L0_PWM_LA_NT_TX	223	Test 1.2.9 - PWM-TX Lane-to-Lane Skew
1.2.9 T_L2L_L3_L0_PWM_LA_NT_TX	224	Test 1.2.9 - PWM-TX Lane-to-Lane Skew
1.2.9 T_L2L_SKEW_PWM_2LANE_LA_NT_TX	219	Test 1.2.9 - PWM-TX Lane-to-Lane Skew (This test will not be supported under Switch Matrix mode)

Table 4 Test IDs and Names (continued)

Name	TestID	Description
1.2.9 T_L2L_SKEW_PWM_3LANE_LA_NT_TX	220	Test 1.2.9 - PWM-TX Lane-to-Lane Skew (This test will not be supported under Switch Matrix mode)
1.2.9 T_L2L_SKEW_PWM_4LANE_LA_NT_TX	221	Test 1.2.9 - PWM-TX Lane-to-Lane Skew (This test will not be supported under Switch Matrix mode)
No tests available	9999	
Reference Clock Duty Cycle (Tdc)	3005	Duty Cycle Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Frequency Error (Ferror)	3004	Frequency Error Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Noise Floor Density (Ndensity)	3007	Noise Floor Density Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Output Clock Fall Time (ToFall)	3003	Output Clock Fall Time Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Output Clock Rise Time (ToRise)	3002	Output Clock Rise Time Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Output High Voltage (VOH)	3000	DC Output High Voltage Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Output Low Voltage (VOL)	3001	DC Output Low Voltage Test of Universal Flash Storage (UFS) Host Controller Reference Clock
Reference Clock Phase Noise (N)	3006	Phase Nosie Test of Universal Flash Storage (UFS) Host Controller Reference Clock

4 Instruments

The following table shows the instruments used by this application. The name is required by various remote interface methods.

- Instrument Name — The name to use as a parameter in remote interface commands.
- Description — The description of the instrument.

For example, if an application uses an oscilloscope and a pulse generator, then you would expect to see something like this in the table below:

Table 5 Example Instrument Information

Name	Description
scope	The primary oscilloscope.
Pulse	The pulse generator used for Gen 2 tests.

and you would be able to remotely control an instrument using:

```
ARSL syntax (replace [description] with actual parameter)
------------------------------------------------------------------------
arsl -a ipaddress -c "SendScpiCommandCustom 'Command=[scpi
command];Timeout=100;Instrument=pulsegen'"

arsl -a ipaddress -c "SendScpiQueryCustom 'Command=[scpi
query];Timeout=100;Instrument=pulsegen'"


C# syntax (replace [description] with actual parameter)
------------------------------------------------------------------------
SendScpiCommandOptions commandOptions = new SendScpiCommandOptions();
commandOptions.Command = "[scpi command]";
commandOptions.Instrument = "[instrument name]";
commandOptions.Timeout = [timeout];
remoteAte.SendScpiCommand(commandOptions);

SendScpiQueryOptions queryOptions = new SendScpiQueryOptions();
queryOptions.Query = "[scpi query]";
queryOptions.Instrument = "[instrument name]";
```

```
queryOptions.Timeout = [timeout];
remoteAte.SendScpiQuery(queryOptions);
```

Here are the actual instrument names used by this application:

NOTE The file, "InstrumentInfo.txt", which may be found in the same directory as this help file, contains all of the information found in the table below in a format suitable for parsing.

Table 6 Instrument Names

Instrument Name	Description
Infiniium	Infiniium
JBert	JBert
Ruby	Ruby

Index