

# Keysight D9020DDRC DDR2(+LP) Compliance Application

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## In This Book

This book is your guide to programming the Keysight Technologies D9020DDRC DDR2(+LP) 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 41, **Chapter 4**, “Instruments,” starting on page 51, and **Chapter 5**, “Message IDs,” starting on page 53 provide information specific to programming the D9020DDRC DDR2(+LP) 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, 4, and 5 for changes.



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# 1 Introduction to Programming

Remote Programming Toolkit / 8

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

- Launching and closing the application.
- Configuring the options.
- Running tests.
- Getting results.
- Controlling when and where 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/test 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](http://www.keysight.com/find/rpi). The D9020DDRC DDR2(+LP) Compliance Application uses Remote Interface Revision 6.21. 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 D9020DDRC DDR2(+LP) 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	Base Ratio	BurstTriggerBaseRatio_Chan1	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Base Ratio	BurstTriggerBaseRatio_Chan2	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Base Ratio	BurstTriggerBaseRatio_Chan3	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Base Ratio	BurstTrigge rBaseRatio_ Chan4	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Channel 1	MyCH1	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, LP_NA_, LP_Clock_DCK, LP_Clock_SCK, LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_Control_NCS, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3, LP_DM_DM0, LP_DM_DM1, LP_DM_DM2, LP_DM_DM3	Please select the signal connected to Channel 1 for timing tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Channel 2	MyCH2	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, LP_NA_, LP_Clock_DCK, LP_Clock_SCK, LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_Control_NCS, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3, LP_DM_DM0, LP_DM_DM1, LP_DM_DM2, LP_DM_DM3	Please select the signal connected to Channel 2 for timing tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Channel 3	MyCH3	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, LP_NA_, LP_Clock_DCK, LP_Clock_SCK, LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_Control_NCS, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3, LP_DM_DM0, LP_DM_DM1, LP_DM_DM2, LP_DM_DM3	Please select the signal connected to Channel 3 for timing tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Channel 4	MyCH4	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, LP_NA_, LP_Clock_DCK, LP_Clock_SCK, LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_Control_NCS, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3, LP_DM_DM0, LP_DM_DM1, LP_DM_DM2, LP_DM_DM3	Please select the signal connected to Channel 4 for Timing Tests

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Data Lane	AdvDbgInput_Eye	DQ0, DQ1, DQ2, DQ3, DQ4, DQ5, DQ6, DQ7, DQ8, DQ9, DQ10, DQ11, DQ12, DQ13, DQ14, DQ15, DQ16, DQ17, DQ18, DQ19, DQ20, DQ21, DQ22, DQ23, DQ24, DQ25, DQ26, DQ27, DQ28, DQ29, DQ30, DQ31, DQ32, DQ33, DQ34, DQ35, DQ36, DQ37, DQ38, DQ39, DQ40, DQ41, DQ42, DQ43, DQ44, DQ45, DQ46, DQ47, DQ48, DQ49, DQ50, DQ51, DQ52, DQ53, DQ54, DQ55, DQ56, DQ57, DQ58, DQ59, DQ60, DQ61, DQ62, DQ63	Identifies the data lane for the eye diagram tests.
Configure	Data Source	AdvDbg_Source1	1, 2, 3, 4	Identifies the source of the data to be analyzed for eye diagram tests.
Configure	Data Strobe Lane	AdvDbgSupport	DQS0, DQS1, DQS2, DQS3, DQS4, DQS5, DQS6, DQS7	Identifies the data strobe lane for the eye diagram tests.
Configure	Data Strobe Source	AdvDbg_Source2	-1, 1, 2, 3, 4	Identifies the source of the data strobe for eye diagram tests.
Configure	Derated Limit Method	DeratedLimitMethod	0, 1	This option is used to select the method to determine the derating values used in calculation of the dynamic test limit for tests that support derating [tDS-Diff(derate),tDH-Diff(derate),tIS(derate),tIH(derate)]. When the "Nominal Method" option is selected, the nominal slew rates of the relevant test signals(DQ or ADD/CMD) will be used to determine the derating value. Otherwise if "Tangent Method" option is selected, the slew rates of a tangent line to the actual test signals(DQ or ADD/CMD) will be used to determine the derating value instead.
Configure	Eye Diagram Display Style	EyeDiagramDisplayStyleOpt	EyeDispWithoutDQS, EyeDispWithDQS	Select the Display Style For Eye Diagram Test



**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Eye Diagram Horizontal Position	EyeDiagHorizontalPos	(Accepts user-defined text), Auto, 0.0	Identifies the horizontal position of the Data(DQ) for the eye diagram tests.
Configure	Lower Threshold (V)	Chan1_Low_Thresh	(Accepts user-defined text), 0.00	Specify the lower measurement threshold used for Channel 1. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Lower Threshold (V)	Chan2_Low_Thresh	(Accepts user-defined text), 0.00	Specify the lower measurement threshold used for Channel 2. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Lower Threshold (V)	Chan3_Low_Thresh	(Accepts user-defined text), 0.00	Specify the lower measurement threshold used for Channel 3. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Lower Threshold (V)	Chan4_Low_Thresh	(Accepts user-defined text), 0.00	Specify the lower measurement threshold used for Channel 4. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Mark Worst Case Cycles	MarkWorstCaseCycles	true, false	Places markers around the worst case cycles (test-dependent). Slows runtime performance. When this configuration value is set to "No", a "N/A" label will be generated at the report page under the "tWorstCase" report column info.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Max Acquisition Count	MaxAcqCount	(Accepts user-defined text), 5, 10, 20, 50	Determine the maximum number of acquisition that the app will used to try and achieved the required READ/WRITE measurement burst count(as specified in the "Multi Burst Count" option) when performing the tests. *Note:This option is applicable to All Read Burst Tests and Write Burst Tests
Configure	Max Measurement Count	MaxNumOfEdgeCount	(Accepts user-defined text), 1, 10, 100, 1000	Determine the maximum number of measurement edge count (including both rising and falling edges of the selected Command and Address signal) that the app will used when performing the Command and Address Timing Tests(tIS, tIH, etc)
Configure	Middle Threshold (V)	Chan1_Mid_Thresh	(Accepts user-defined text), 0.00	Specify the middle measurement threshold used for Channel 1. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Middle Threshold (V)	Chan2_Mid_Thresh	(Accepts user-defined text), 0.00	Specify the middle measurement threshold used for Channel 2. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Middle Threshold (V)	Chan3_Mid_Thresh	(Accepts user-defined text), 0.00	Specify the middle measurement threshold used for Channel 3. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Middle Threshold (V)	Chan4_Mid_Thresh	(Accepts user-defined text), 0.00	Specify the middle measurement threshold used for Channel 4. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Multi Burst Count	MultiBurstCount	(Accepts user-defined text), 1, 10, 100, 1000	Determine the number of READ/WRITE measurement burst(s) that is required when performing the tests. *Note: This option is applicable to All Read Burst Tests and Write Burst Tests except Vih(ac) for strobe, Vih(dc) for strobe, Vil(ac) for strobe, Vil(dc) for strobe, Vid, VOH(AC), VOH(DC), VOL(AC), VOL(DC), VIHdiff(AC), VIHdiff(DC), VILDdiff(AC), VILDdiff(DC), VOHdiff(AC) and VOLDiff(AC) Tests
Configure	OfflineCAFile Path (Must be hidden)	OfflineCAFile Path	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineCSFile Path (Must be hidden)	OfflineCSFile Path	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineClock File Path (Must be hidden)	OfflineClock File Path	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineClock Minus File Path (Must be hidden)	OfflineClock Minus File Path	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineClock Plus File Path (Must be hidden)	OfflineClock Plus File Path	(Accepts user-defined text), C:\	For supporting offline.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	OfflineDQFilePath(Must be hidden)	OfflineDQFilePath	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineDQSFilePath(Must be hidden)	OfflineDQSFilePath	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineDQS MinusFilePath(Must be hidden)	OfflineDQS MinusFilePath	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineDQS PlusFilePath(Must be hidden)	OfflineDQS PlusFilePath	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineData Folder(Must be hidden)	OfflineData Folder	(Accepts user-defined text), C:\	For supporting offline.
Configure	OfflineData Mode(Must be hidden)	OfflineData Mode	(Accepts user-defined text), 0.0, 1.0	For supporting offline
Configure	Option	TypeOfSignalCH1_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the type of signal to use for Channel 1 testing.
Configure	Option	TypeOfSignalCH2_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the type of signal to use for Channel 2 testing.
Configure	Option	TypeOfSignalCH3_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the type of signal to use for Channel 3 testing.
Configure	Option	TypeOfSignalCH4_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the type of signal to use for Channel 4 testing.
Configure	PUT Source	ElecDiffOutputPut_Source	1, 2, 3, 4	Identifies the source of the PUT for Differential AC Output Tests.
Configure	PUT Source	ElecDiffVihVilPut_Source	1, 2, 3, 4	Identifies the source of the PUT for Differential VIHdiff/VILdiff tests.
Configure	PUT Source	ElecSEOutputPut_Source	1, 2, 3, 4	Identifies the source of the PUT for Single-Ended AC Output Tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	PUT Source	ElecSEVsehVselClockPut_Source	1, 2, 3, 4	Identifies the source of the PUT for VSEH/VSEL Tests for Clock.
Configure	PUT Source	ElecSEVsehVselStrobePut_Source	1, 2, 3, 4	Identifies the source of the PUT for VSEH/VSEL Tests for Strobe.
Configure	PUT Source	ElecSE_Source1	1, 2, 3, 4	Identifies the source of the PUT for Single-Ended AC Input Tests.
Configure	PUT Source	OvrShtSe_Source	1, 2, 3, 4	Identifies the source of the PUT for Single-Ended OverShoot/UnderShoot Tests.
Configure	PUT Source	OvrShtSe_Source2	1, 2, 3, 4	Identifies the source of the PUT for Single-Ended OverShoot/UnderShoot Tests.
Configure	PUT Source	OvrShtSe_Source_LPDDR2_CA	1, 2, 3, 4	Identifies the source of the PUT for Single-Ended OverShoot/UnderShoot Tests.
Configure	PUT Source	OvrShtSe_Source_LPDDR2_DQDM	1, 2, 3, 4	Identifies the source of the PUT for Single-Ended OverShoot/UnderShoot Tests.
Configure	PUT Source	VihVilCA_PUT_Source_LPDDR2	1, 2, 3, 4	Identifies the source of the PUT for VIHCA/ VILCA Tests.
Configure	PUT Source	VihVilCKE_PUT_Source_LPDDR2	1, 2, 3, 4	Identifies the source of the PUT for VIHCKE/ VILCKE Tests.
Configure	PUT Source	VihVilDQ_PUT_Source_LPDDR2	1, 2, 3, 4	Identifies the source of the PUT for VIH DQ/ VILDQ Tests.
Configure	PUT(+) Source	ElecDIFF_Source1	1, 2, 3, 4	Identifies the source of the PUT(+) for Differential AC Input Tests.
Configure	PUT(+) Source	ElecDIFF_Source4	1, 2, 3, 4	Identifies the source of the PUT(+) for Differential AC Output Tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	PUT(+) Source	ElecDiffVixC aPutSource Plus	1, 2, 3, 4	Identifies the source of the PUT(+) for VIXCA Test.
Configure	PUT(+) Source	ElecDiffVixD qPutSource Plus	1, 2, 3, 4	Identifies the source of the PUT(-) for VIXDQ Test.
Configure	PUT(-) Source	ElecDIFF_So urce2	1, 2, 3, 4	Identifies the source of the PUT(-) for Differential AC Input Tests.
Configure	PUT(-) Source	ElecDIFF_So urce5	1, 2, 3, 4	Identifies the source of the PUT(-) for Differential AC Output Tests.
Configure	PUT(-) Source	ElecDiffVixC aPutSource Minus	1, 2, 3, 4	Identifies the source of the PUT(-) for VIXCA Test.
Configure	PUT(-) Source	ElecDiffVixD qPutSource Minus	1, 2, 3, 4	Identifies the source of the PUT(-) for VIXDQ Test.
Configure	Pin Under Test, PUT	ElecDiffVihV ilPut	LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Clock_DCK	Identifies the Pin Under Test for Differential VIHdiff/ VILdiff tests.
Configure	Pin Under Test, PUT	ElecDiffVixD qPut	LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3	Identifies the Pin Under Test for VIXDQ Test.
Configure	Pin Under Test, PUT	ElecParamD ilInput	Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7	Identifies the Pin Under Test for Differential AC Input Tests.
Configure	Pin Under Test, PUT	ElecParamD iffOutput	LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3	Identifies the Pin Under Test for Differential AC output parameters.
Configure	Pin Under Test, PUT	ElecParamD olInput	Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7	Identifies the PUT for Differential AC Output Tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Pin Under Test, PUT	ElecParamS einput	Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_NDQS0, Strobe_NDQS1, Strobe_NDQS2, Strobe_NDQS3, Strobe_NDQS4, Strobe_NDQS5, Strobe_NDQS6, Strobe_NDQS7, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, Control_NCS0, Control_NCS1, Control_BA0, Control_BA1, Control_BA2, Control_NRAS, Control_NWE, Control_NCAS, Control_CKE0, Control_CKE1, Control_ODT0, Control_ODT1, Address_A0, Address_A1, Address_A2, Address_A3, Address_A4, Address_A5, Address_A6, Address_A7, Address_A8, Address_A9, Address_A10, Address_A11, Address_A12, Address_A13, Address_A14, Address_A15, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Clock_NCK0, Clock_NCK1, Clock_NCK2, Clock_NCK3	Identifies the Pin Under Test for Single-Ended AC input parameters.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Pin Under Test, PUT	ElecParamSeOutput	LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3	Identifies the Pin Under Test for Single-Ended AC output parameters.
Configure	Pin Under Test, PUT	ElecSEVsehVselClockPut	LP_Clock_SCK, LP_Clock_NCK	Identifies the Pin Under Test for VSEH/VSEL Tests for Clock.
Configure	Pin Under Test, PUT	ElecSEVsehVselStrobePut	LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3, LP_Strobe_NDQS0, LP_Strobe_NDQS1, LP_Strobe_NDQS2, LP_Strobe_NDQS3	Identifies the Pin Under Test for VSEH/VSEL Tests for Strobe.
Configure	Pin Under Test, PUT	OvrShtSelInput	/RAS, /WE, /CAS, /CS0, /CS1, CKE0, CKE1, ODT0, ODT1, A0, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, BA0, BA1, BA2	Identifies the Pin Under Test for Single-Ended Overshoot/Undershoot (Address, Control).
Configure	Pin Under Test, PUT	OvrShtSelInput2	DQ0, DQ1, DQ2, DQ3, DQ4, DQ5, DQ6, DQ7, DQ8, DQ9, DQ10, DQ11, DQ12, DQ13, DQ14, DQ15, DQ16, DQ17, DQ18, DQ19, DQ20, DQ21, DQ22, DQ23, DQ24, DQ25, DQ26, DQ27, DQ28, DQ29, DQ30, DQ31, DQ32, DQ33, DQ34, DQ35, DQ36, DQ37, DQ38, DQ39, DQ40, DQ41, DQ42, DQ43, DQ44, DQ45, DQ46, DQ47, DQ48, DQ49, DQ50, DQ51, DQ52, DQ53, DQ54, DQ55, DQ56, DQ57, DQ58, DQ59, DQ60, DQ61, DQ62, DQ63, DQS0, DQS1, DQS2, DQS3, DQS4, DQS5, DQS6, DQS7, /DQS0, /DQS1, /DQS2, /DQS3, /DQS4, /DQS5, /DQS6, /DQS7, CK0, CK1, CK2, CK3, /CK0, /CK1, /CK2, /CK3, DM0, DM1, DM2, DM3, DM4, DM5, DM6, DM7	Identifies the Pin Under Test for Single-Ended Overshoot/Undershoot (Clock, Data, Strobe, Mask).
Configure	Pin Under Test, PUT	OvrShtSelInput_LPDDR2_CA	CA0, CA1, CA2, CA3, CA4, CA5, CA6, CA7, CA8, CA9, CK_t, CK_c, CS_n, CKE	Identifies the Pin Under Test for Single-Ended Overshoot/Undershoot (Address, Command, Clock).



**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Pin Under Test, PUT	OvrShtSelInput_LPDDR2_DQDM	DQ0, DQ1, DQ2, DQ3, DQ4, DQ5, DQ6, DQ7, DQ8, DQ9, DQ10, DQ11, DQ12, DQ13, DQ14, DQ15, DQ16, DQ17, DQ18, DQ19, DQ20, DQ21, DQ22, DQ23, DQ24, DQ25, DQ26, DQ27, DQ28, DQ29, DQ30, DQ31, DM0, DM1, DM2, DM3, DM0/DNV0, DM1/DNV1, DM2/DNV2, DM3/DNV3, DQS0_t, DQS1_t, DQS2_t, DQS3_t, DQS0_c, DQS1_c, DQS2_c, DQS3_c	Identifies the Pin Under Test for Single-Ended Overshoot/Undershoot (Data, Strobe, Mask).
Configure	Pin Under Test, PUT	TypeOfSignalCH1	NA, Clock, Strobe, Data, DM, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the parameters to use for channel 1 timing tests.
Configure	Pin Under Test, PUT	TypeOfSignalCH2	NA, Clock, Strobe, Data, DM, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the parameters to use for channel 2 timing tests.
Configure	Pin Under Test, PUT	TypeOfSignalCH3	NA, Clock, Strobe, Data, DM, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the parameters to use for channel 3 timing test.
Configure	Pin Under Test, PUT	TypeOfSignalCH4	NA, Clock, Strobe, Data, DM, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the parameters to use for channel 4 timing test.
Configure	Pin Under Test, PUT	VihVilCA_PUT_LPDDR2	LP_CommandAddress_CA0, LP_CommandAddress_CA1, LP_CommandAddress_CA2, LP_CommandAddress_CA3, LP_CommandAddress_CA4, LP_CommandAddress_CA5, LP_CommandAddress_CA6, LP_CommandAddress_CA7, LP_CommandAddress_CA8, LP_CommandAddress_CA9, LP_Control_NCS	Identifies the Pin Under Test for VIHCA/ VILCA Tests.
Configure	Pin Under Test, PUT	VihVilDQ_PUT_LPDDR2	LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_DM_DM0, LP_DM_DM1, LP_DM_DM2, LP_DM_DM3, LP_DMDNV_DMDNV0, LP_DMDNV_DMDNV1, LP_DMDNV_DMDNV2, LP_DMDNV_DMDNV3	Identifies the Pin Under Test for VIH DQ/ VIL DQ Tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	READ Latency	ReadLatency	1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 0.0	This option will only available IF 'CS' is selected. This allow user to verify the DUT with CS signal by selecting respective CL value.
Configure	READ Separation Max Setup/Hold Time (% of UI)	InfiniiScanMaxLimitR	(Accepts user-defined text), 0.2	Identifies the upper limit for Setup Time measurement used in the InfiniiScan Measurement Mode (READ cycle). For example, 0.2 represent 20% of 1 Unit Interval and etc.
Configure	READ Separation Min Setup/Hold Time (% of UI)	InfiniiScanMinLimitR	(Accepts user-defined text), 0.0	Identifies the lower limit for Setup Time measurement used in the InfiniiScan Measurement Mode (READ cycle).For example, 0.2 represent 20% of 1 Unit Interval and etc.
Configure	Re-scale Test Mask	ReScaleMask	true, false	Enable/disable horizontal re-scaling of selected test mask to be loaded in the eye diagram tests.
Configure	Sampling Points (Pts)	TestSamplingPoints	(Accepts user-defined text), 2000000, 1000000, 500000	Specifies the sampling points to be captured in all the tests except Clock tests and Eye Digram tests. Reduce the sampling points if the read/write bursts are occuring very frequently.
Configure	Sampling Rate (GSa/s)	SamplingRate	MAX, 80, 40, 20, 10, 128, 64, 32, 16, 8	Specifies the sampling rate for the signal acquisition of all tests except Vref Signal Tests(VREF(DC) Measurement and VREF(AC) Measurement). If the selected sampling rate is higher than oscilloscope capability, application will set maximum sampling rate during runtime.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Signal selected	MyCH1_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Control_NCS0, Control_NCS1, Control_BA0, Control_BA1, Control_BA2, Control_NRAS, Control_NWE, Control_NCAS, Control_CKE0, Control_CKE1, Control_ODT0, Control_ODT1, Address_A0, Address_A1, Address_A2, Address_A3, Address_A4, Address_A5, Address_A6, Address_A7, Address_A8, Address_A9, Address_A10, Address_A11, Address_A12, Address_A13, Address_A14, Address_A15, LP_Clock_DCK, LP_Clock_SCK, LP_Control_NCS, LP_Control_CKE, LP_CommandAddress_CA0, LP_CommandAddress_CA1, LP_CommandAddress_CA2, LP_CommandAddress_CA3, LP_CommandAddress_CA4, LP_CommandAddress_CA5, LP_CommandAddress_CA6, LP_CommandAddress_CA7, LP_CommandAddress_CA8, LP_CommandAddress_CA9	Please select the signal parameters connected to Channel 1 for control address timing tests.
Configure	Signal selected	MyCH2_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Control_NCS0, Control_NCS1, Control_BA0, Control_BA1, Control_BA2, Control_NRAS, Control_NWE, Control_NCAS, Control_CKE0, Control_CKE1, Control_ODT0, Control_ODT1, Address_A0, Address_A1, Address_A2, Address_A3, Address_A4, Address_A5, Address_A6, Address_A7, Address_A8, Address_A9, Address_A10, Address_A11, Address_A12, Address_A13, Address_A14, Address_A15, LP_Clock_DCK, LP_Clock_SCK, LP_Control_NCS, LP_Control_CKE, LP_CommandAddress_CA0, LP_CommandAddress_CA1, LP_CommandAddress_CA2, LP_CommandAddress_CA3, LP_CommandAddress_CA4, LP_CommandAddress_CA5, LP_CommandAddress_CA6, LP_CommandAddress_CA7, LP_CommandAddress_CA8, LP_CommandAddress_CA9	Please select the signal parameters connected to Channel 2 for control address timing tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Signal selected	MyCH3_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Control_NCS0, Control_NCS1, Control_BA0, Control_BA1, Control_BA2, Control_NRAS, Control_NWE, Control_NCAS, Control_CKE0, Control_CKE1, Control_ODT0, Control_ODT1, Address_A0, Address_A1, Address_A2, Address_A3, Address_A4, Address_A5, Address_A6, Address_A7, Address_A8, Address_A9, Address_A10, Address_A11, Address_A12, Address_A13, Address_A14, Address_A15, LP_Clock_DCK, LP_Clock_SCK, LP_Control_NCS, LP_Control_CKE, LP_CommandAddress_CA0, LP_CommandAddress_CA1, LP_CommandAddress_CA2, LP_CommandAddress_CA3, LP_CommandAddress_CA4, LP_CommandAddress_CA5, LP_CommandAddress_CA6, LP_CommandAddress_CA7, LP_CommandAddress_CA8, LP_CommandAddress_CA9	Please select the signal parameters connected to Channel 3 for control address timing tests.
Configure	Signal selected	MyCH4_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_DCK3, Clock_SCK0, Clock_SCK1, Clock_SCK2, Clock_SCK3, Control_NCS0, Control_NCS1, Control_BA0, Control_BA1, Control_BA2, Control_NRAS, Control_NWE, Control_NCAS, Control_CKE0, Control_CKE1, Control_ODT0, Control_ODT1, Address_A0, Address_A1, Address_A2, Address_A3, Address_A4, Address_A5, Address_A6, Address_A7, Address_A8, Address_A9, Address_A10, Address_A11, Address_A12, Address_A13, Address_A14, Address_A15, LP_Clock_DCK, LP_Clock_SCK, LP_Control_NCS, LP_Control_CKE, LP_CommandAddress_CA0, LP_CommandAddress_CA1, LP_CommandAddress_CA2, LP_CommandAddress_CA3, LP_CommandAddress_CA4, LP_CommandAddress_CA5, LP_CommandAddress_CA6, LP_CommandAddress_CA7, LP_CommandAddress_CA8, LP_CommandAddress_CA9	Please select the signal parameters connected to Channel 4 for control address timing tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Skip Connection Diagram Prompt	EnableConnectionPrompt	1, 0	By selecting "No", system will prompt for required connection diagram change when running selected tests. By selecting "Yes", system will NOT prompt for any connection diagram change when running the selected tests. This option is used to enable continuous running of tests from different test groups (that may require different scope connections) without having to respond to a pop-up connection diagram change. However, user are expected to be responsible of ensuring the correct scope connections that will be used for running all selected tests.
Configure	Skip Error Message	ErrorMsgOff	1, 0	By selecting "No", system will prompt error message. By selecting "Yes", system will bypass all error message that occur and continue to next test. The test result for those tests that encounter errors will be set to a default invalid value that would cause a failure. Hint: This is useful when the user wants to run multiple trials overnight.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Supporting Pin	ElecDiffVihVilSupport	NA_, LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31	Identifies the required supporting pin for Differential VIHdiff/ VILdiff tests.
Configure	Supporting Pin	ElecDiffVixDqSupportPin	LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31	Identifies the supporting pin for VIXDQ Test.
Configure	Supporting Pin	ElecParamDiSupport	NA_, Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63	Identifies the supporting pin for Differential AC Input Tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Supporting Pin	ElecParamDiffOutputSupport	LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31	Identifies the required supporting pin for Differential AC output parameters.
Configure	Supporting Pin	ElecParamDataSupport	Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63	Identifies the supporting pin for Differential AC Output Tests.
Configure	Supporting Pin	ElecParamSEOutputSupport	LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3	Identifies the required supporting pin for Single-Ended AC output parameters.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Supporting Pin	ElecParamSeSupport	NA, Data_DQ0, Data_DQ1, Data_DQ2, Data_DQ3, Data_DQ4, Data_DQ5, Data_DQ6, Data_DQ7, Data_DQ8, Data_DQ9, Data_DQ10, Data_DQ11, Data_DQ12, Data_DQ13, Data_DQ14, Data_DQ15, Data_DQ16, Data_DQ17, Data_DQ18, Data_DQ19, Data_DQ20, Data_DQ21, Data_DQ22, Data_DQ23, Data_DQ24, Data_DQ25, Data_DQ26, Data_DQ27, Data_DQ28, Data_DQ29, Data_DQ30, Data_DQ31, Data_DQ32, Data_DQ33, Data_DQ34, Data_DQ35, Data_DQ36, Data_DQ37, Data_DQ38, Data_DQ39, Data_DQ40, Data_DQ41, Data_DQ42, Data_DQ43, Data_DQ44, Data_DQ45, Data_DQ46, Data_DQ47, Data_DQ48, Data_DQ49, Data_DQ50, Data_DQ51, Data_DQ52, Data_DQ53, Data_DQ54, Data_DQ55, Data_DQ56, Data_DQ57, Data_DQ58, Data_DQ59, Data_DQ60, Data_DQ61, Data_DQ62, Data_DQ63, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7	Identifies the required supporting pin for Single-Ended AC input parameters.
Configure	Supporting Pin	ElecSEVsehVselStrobeSupport	LP_Data_DQ0, LP_Data_DQ1, LP_Data_DQ2, LP_Data_DQ3, LP_Data_DQ4, LP_Data_DQ5, LP_Data_DQ6, LP_Data_DQ7, LP_Data_DQ8, LP_Data_DQ9, LP_Data_DQ10, LP_Data_DQ11, LP_Data_DQ12, LP_Data_DQ13, LP_Data_DQ14, LP_Data_DQ15, LP_Data_DQ16, LP_Data_DQ17, LP_Data_DQ18, LP_Data_DQ19, LP_Data_DQ20, LP_Data_DQ21, LP_Data_DQ22, LP_Data_DQ23, LP_Data_DQ24, LP_Data_DQ25, LP_Data_DQ26, LP_Data_DQ27, LP_Data_DQ28, LP_Data_DQ29, LP_Data_DQ30, LP_Data_DQ31	Identifies the supporting pin for VSEH/VSEL Tests for Strobe.
Configure	Supporting Pin	VihVILDQ_SprtPin_LPD DR2	LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3, LP_Strobe_NDQS0, LP_Strobe_NDQS1, LP_Strobe_NDQS2, LP_Strobe_NDQS3	Identifies the required supporting pin for VIH/DQ/VILDQ Tests.
Configure	Supporting Pin Source	ElecDIFF_Source3	2, -1, 1, 3, 4	Identifies the source of the supporting pin for Differential AC Input Tests.



**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Supporting Pin Source	ElecDIFF_So urce6	1, 2, 3, 4	Identifies the source of the supporting pin for Differential AC Output Tests.
Configure	Supporting Pin Source	ElecDiffOut putSupprt_ Source	1, 2, 3, 4	Identifies the source of the supporting pin for Differential AC Output Tests.
Configure	Supporting Pin Source	ElecDiffVihV ilSupprt_ Source	NA_, 1, 2, 3, 4	Identifies the source of the supporting pin for Differential VIHdiff/ VILdiff tests.
Configure	Supporting Pin Source	ElecDiffVixD qSupportPi nSource	1, 2, 3, 4	Identifies the source of the supporting pin for VIXDQ Test.
Configure	Supporting Pin Source	ElecSEOutp utSupprt_ Source	1, 2, 3, 4	Identifies the source of the supporting pin for Single-Ended AC Output Tests.
Configure	Supporting Pin Source	ElecSEVseh VselStrobeS upport_ Source	1, 2, 3, 4	Identifies the source of the supporting pin for VSEH/VSEL Tests for Strobe.
Configure	Supporting Pin Source	ElecSE_ Source2	-1, 1, 2, 3, 4	Identifies the source of the supporting pin for Single-Ended AC Input Tests.
Configure	Supporting Pin Source	VihVilDQ_ prtPin_ Source_LPDDR2	1, 2, 3, 4	Identifies the source of the supporting pin for VIHdq/VILdq Tests.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Threshold Mode	ThreshSetMode	1, 0	By selecting "TopBaseRatio", the system will automatically determine the threshold settings that are used for the READ/WRITE burst triggering and identification using the TopRatio and BaseRatio specified for a particular channel input. Setting "Custom Threshold" allows user to directly set the threshold settings used instead.
Configure	Top Ratio	BurstTriggerTopRatio_Channel1	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Top Ratio	BurstTriggerTopRatio_Channel2	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Top Ratio	BurstTriggerTopRatio_Channel3	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Top Ratio	BurstTriggerTopRatio_Channel4	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Total Bit Display (cycle)	myDisBit	(Accepts user-defined text), 0, 2, 4, 10, 20, 50	This option allows the user to select how many data bits to be displayed by end of the test. More bits selected will enable user to have a clearer view of the whole burst of signals. Use 0 to display the whole burst.
Configure	Total Unit Interval	ADM_Mem Depth	(Accepts user-defined text), 4, 5, 10, 20, 50, 100	This Unit Interval means that the total UI(ns) to be used for Eye-Diagram eye folding. Unit Interval here is represented in Bit(ns). UI here can translate to Memory Depth with following equation : Memory Depth = 20G Sampling Rate x UI(user-select) X 1 Bit Cycle(2.5ns for a 400MT/s DUT)
Configure	Total Waveform	EyeDiagram NumOfWave	(Accepts user-defined text), 500, 1000, 1500, 3000, 5000	Select or type the total number of waveforms required for eye diagram tests.
Configure	Trigger timeout (ms)	TimeOut_Compliance	(Accepts user-defined text), 5000, 10000, 15000, 20000, 30000	Identifies the trigger time out value. This represent the time taken to terminate the test when the scope unable to trigger any signal.
Configure	Upper Threshold (V)	Chan1_Up_Thresh	(Accepts user-defined text), 0.00	Specify the upper measurement threshold used for Channel 1. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	Upper Threshold (V)	Chan2_Up_Thresh	(Accepts user-defined text), 0.00	Specify the upper measurement threshold used for Channel 2. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Upper Threshold (V)	Chan3_Up_Thresh	(Accepts user-defined text), 0.00	Specify the upper measurement threshold used for Channel 3. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Upper Threshold (V)	Chan4_Up_Thresh	(Accepts user-defined text), 0.00	Specify the upper measurement threshold used for Channel 4. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	VDD (V)	InputVDD	(Accepts user-defined text), 1.750, 1.800, 1.850	Identifies the input supply voltage.
Configure	VDDCA (V)	InputVDDC A	(Accepts user-defined text), 1.750, 1.800, 1.850	Identifies the input supply voltage for command/address output.
Configure	VDDQ (V)	InputVDDQ	(Accepts user-defined text), 1.750, 1.800, 1.850	Identifies the input supply voltage for data output.
Configure	VIHdiff_ac (V)	InputThreshold_VIHdiff_ac	(Accepts user-defined text), 0.5	Identifies the differential ac input logic HIGH voltage.
Configure	VIHdiff_dc (V)	InputThreshold_VIHdiff_dc	(Accepts user-defined text), 0.5	Identifies the differential dc input logic HIGH voltage.
Configure	VILdiff_ac (V)	InputThreshold_VILdiff_ac	(Accepts user-defined text), 0.5	Identifies the differential ac input logic LOW voltage.
Configure	VILdiff_dc (V)	InputThreshold_VILdiff_dc	(Accepts user-defined text), 0.5	Identifies the differential dc input logic LOW voltage.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	VOHdiff_ac (V)	InputThresh old_VOHdiff_ac	(Accepts user-defined text), 0.5	Identifies the differential ac output logic HIGH voltage.
Configure	VOLdiff_ac (V)	InputThresh old_VOLdiff_ac	(Accepts user-defined text), 0.5	Identifies the differential ac output logic LOW voltage.
Configure	Verify Selected Rank Only?	CSDQSCYC	0.0, 1.0	By choosing Yes, you will require an additional channel for Chip Select(CS). Measurement will only be done on selected Rank based on chip select signal connected to the oscilloscope.
Configure	Vih_ac (V)	InputThresh old_Vih_ac	(Accepts user-defined text), 1.150	Identifies the ac input logic HIGH voltage.
Configure	Vih_dc (V)	InputThresh old_Vih_dc	(Accepts user-defined text), 1.025	Identifies the dc input logic HIGH voltage.
Configure	Vil_ac (V)	InputThresh old_Vil_ac	(Accepts user-defined text), 0.650	Identifies the ac input logic LOW voltage.
Configure	Vil_dc (V)	InputThresh old_Vil_dc	(Accepts user-defined text), 0.775	Identifies the dc input logic LOW voltage.
Configure	Voh_ac (V)	InputThresh old_Voh_ac	(Accepts user-defined text), 1.150	Identifies the ac output logic HIGH voltage.
Configure	Voh_dc (V)	InputThresh old_Voh_dc	(Accepts user-defined text), 1.025	Identifies the dc output logic HIGH voltage.
Configure	Vol_ac (V)	InputThresh old_Vol_ac	(Accepts user-defined text), 0.650	Identifies the ac output logic LOW voltage.
Configure	Vol_dc (V)	InputThresh old_Vol_dc	(Accepts user-defined text), 0.775	Identifies the dc output logic LOW voltage.
Configure	Vref (V)	InputRefV_Vref	(Accepts user-defined text), 0.850, 0.900, 0.950	Identifies the input reference voltage.
Configure	WRITE Latency	WriteLatency	1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 0.0	This option will only available IF 'CS' is selected. This allow user to verify the DUT with CS signal by selecting respective CL value.

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Configure	WRITE Separation Max Setup/Hold Time (% of UI)	InfiniiScanMaxLimitW	(Accepts user-defined text), 0.6	Identifies the upper limit for Setup Time measurement used in the InfiniiScan Measurement Mode (WRITE cycle). For example, 0.6 represent 60% of 1 Unit Interval and etc.
Configure	WRITE Separation Min Setup/Hold Time (% of UI)	InfiniiScanMinLimitW	(Accepts user-defined text), 0.4	Identifies the lower limit for Setup Time measurement used in the InfiniiScan Measurement Mode (WRITE cycle). For example, 0.4 represent 40% of 1 Unit Interval and etc.
Configure	Waveform File Type	WfmFileType	.wfm, .h5	By selecting ".wfm", the application will save the waveform in "*.wfm" format for measurement. While selecting ".h5", the application will save the waveform in "*.h5" format for measurement.
Configure	Waveform Source	Source	1, 2, 3, 4	Identifies the source of the data to be analyzed.
Configure	tDQSCK Delay (cycle)	tDQSCKDelay	(Accepts user-defined text), 1, 2, 3	The distance from first rising strobe to Read Latency(RL) clock edge.
Configure	terr(nper) Maximum N Width Value	nper_max	(Accepts user-defined text), 10	Sets the upper bound (inclusive) of the inner sliding window for the terr(nper) series.
Configure	terr(nper) Minimum N Width Value	nper_min	(Accepts user-defined text), 6	Sets the lower bound (inclusive) of the inner sliding window for the terr(nper) series.
Run Tests	Event	RunEvent	(None), Fail, Margin < N, Pass	Names of events that can be used with the StoreMode=Event or RunUntil RunEventAction options

**Table 2** Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
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	Custom Data Rate	pcboCustomSG	(Accepts user-defined text), 400, 500, 533, 600, 650, 667, 700, 800	This option allow user to key in specific data rate.
Set Up	Device ID	pcboOverallDeviceID	(Accepts user-defined text)	This option allow user to key in related test details.
Set Up	Low Power Speed Grade	DeviceType LP	LPDDR2-200, LPDDR2-266, LPDDR2-333, LPDDR2-400, LPDDR2-466, LPDDR2-533, LPDDR2-667, LPDDR2-800, LPDDR2-933, LPDDR2-1066	This option allow user to select specific Low Power DDR2 speed grade.
Set Up	LowPow	chkLowPowType	0.0, 1.0	This option allow user to select Low Power.
Set Up	Speed Grade	DeviceType	DDR2-400, DDR2-533, DDR2-667, DDR2-800, DDR2-1066	This option allow user to select specific speed grade.
Set Up	Test Mode	TestMode	Compliance, Custom	This option allow user to select test mode.
Set Up	User Comment	txtOverallUserComment	(Accepts user-defined text)	This option allow user to key in related test detail.
Set Up	User Description	pcboOverallDeviceDescription	(Accepts user-defined text)	This option allow user to key in test detail.

## 2 Configuration Variables and Values



## 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. Listed at the end, you may also find:

- Deprecated IDs and their replacements.
- Macro IDs which may be used to select multiple related tests at the same time.

**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
AC Input Logic High (Address,Control), VIHCA(AC)	10411	AC Input Logic High (Address,Control)
AC Input Logic High (Data, Mask), VIHDAQ(AC)	10421	AC Input Logic High (Data, Mask)
AC Input Logic Low (Address,Control), VILCA(AC)	10413	AC Input Logic Low (Address,Control)
AC Input Logic Low (Data, Mask), VILDAQ(AC)	10423	AC Input Logic Low (Data, Mask)
AC differential input cross point voltage, Vix	10380	AC differential cross point voltage
AC differential input voltage, Vid	10370	AC differential input voltage
AC differential output cross point voltage, Vox	10390	AC differential cross point voltage
CKE Input High Level, VIHCKE	10415	CKE Input High Level
CKE Input Low Level, VILCKE	10416	CKE Input Low Level
Clock Cross Point Voltage Test, VIXCA	10481	Clock Cross Point Voltage Test
DC Input Logic High (Address,Control), VIHCA(DC)	10412	DC Input Logic High (Address,Control)
DC Input Logic High (Data, Mask), VIHDAQ(DC)	10422	DC Input Logic High (Data, Mask)
DC Input Logic Low (Address,Control), VILCA(DC)	10414	DC Input Logic Low (Address,Control)
DC Input Logic Low (Data, Mask), VILDAQ(DC)	10424	DC Input Logic Low (Data, Mask)
Differential AC Input Logic High Voltage, VIHdiff(AC)	10483	Differential AC Input Logic High Voltage
Differential AC Input Logic Low Voltage, VILdiff(AC)	10485	Differential AC Input Logic Low Voltage

**Table 4** Test IDs and Names (continued)

Name	TestID	Description
Differential AC Output Logic High Voltage, VOHdiff(AC)	10495	Differential AC Output Logic High Voltage
Differential AC Output Logic Low Voltage, VOLdiff(AC)	10496	Differential AC Output Logic Low Voltage
Differential DC Input Logic High Voltage, VIHdiff(DC)	10484	Differential DC Input Logic High Voltage
Differential DC Input Logic Low Voltage, VILdiff(DC)	10486	Differential DC Input Logic Low Voltage
Differential Output Falling Slew Rate (40ohm), SRQdiffF(40ohm)	10492	Differential Output Falling Slew Rate (40ohm)
Differential Output Falling Slew Rate (60ohm), SRQdiffF(60ohm)	10494	Differential Output Falling Slew Rate (60ohm)
Differential Output Rising Slew Rate (40ohm), SRQdiffR(40ohm)	10491	Differential Output Rising Slew Rate (40ohm)
Differential Output Rising Slew Rate (60ohm), SRQdiffR(60ohm)	10493	Differential Output Rising Slew Rate (60ohm)
Input signal minimum falling slew rate, SLEWf	10342	Input signal minimum falling slew rate
Input signal minimum rising slew rate, SLEWr	10341	Input signal minimum rising slew rate
Maximum AC Input Logic High, Vih(ac)	10311	Maximum AC Input Logic High
Maximum DC Input Logic Low, Vil(dc)	10322	Maximum DC Input Logic Low
Minimum AC Input Logic Low, Vil(ac)	10321	Minimum AC Input Logic Low
Minimum DC Input Logic High, Vih(dc)	10312	Minimum DC Input Logic High
Overshoot amplitude (Address, Control)	10351	Peak amplitude of AC overshoot
Overshoot amplitude (Address, Control, Clock, Chip Select, Clock Enable)	10451	Peak amplitude of AC overshoot
Overshoot amplitude (Clock, Data, Strobe, Mask)	10353	Peak amplitude of AC overshoot
Overshoot amplitude (Data, Strobe, Mask)	10453	Peak amplitude of AC overshoot
Overshoot area (Address, Control)	10352	OverShoot area above VDD
Overshoot area (Address, Control, Clock, Chip Select, Clock Enable)	10452	OverShoot area above VDDCA
Overshoot area (Clock, Data, Strobe, Mask)	10354	OverShoot area above VDDQ

**Table 4** Test IDs and Names (continued)

Name	TestID	Description
Overshoot area (Data, Strobe, Mask)	10454	OverShoot area above VDDQ
Single-ended AC Output Logic High Voltage, VOH(AC)	10431	Single-ended AC Output Logic High Voltage
Single-ended AC Output Logic Low Voltage, VOL(AC)	10433	Single-ended AC Output Logic Low Voltage
Single-ended DC Output Logic High Voltage, VOH(DC)	10432	Single-ended DC Output Logic High Voltage
Single-ended DC Output Logic Low Voltage, VOL(DC)	10434	Single-ended DC Output Logic Low Voltage
Single-ended High Level Voltage, VSEH(AC)	10471	Single-ended High Level Voltage
Single-ended High Level Voltage, VSEH(AC)	10473	Single-ended High Level Voltage
Single-ended Low Level Voltage, VSEL(AC)	10472	Single-ended Low Level Voltage
Single-ended Low Level Voltage, VSEL(AC)	10474	Single-ended Low Level Voltage
Single-ended Output Falling Slew Rate (40ohm), SRQseF(40ohm)	10442	Single-ended Output Falling Slew Rate (40ohm)
Single-ended Output Falling Slew Rate (60ohm), SRQseF(60ohm)	10444	Single-ended Output Falling Slew Rate (60ohm)
Single-ended Output Rising Slew Rate (40ohm), SRQseR(40ohm)	10441	Single-ended Output Rising Slew Rate (40ohm)
Single-ended Output Rising Slew Rate (60ohm), SRQseR(60ohm)	10443	Single-ended Output Rising Slew Rate (60ohm)
Strobe Cross Point Voltage Test, VIXDQ	10482	Strobe Cross Point Voltage Test
TestToHideConfig	3	TestToHideConfig
Undershoot amplitude (Address, Control)	10361	Peak amplitude of AC undershoot
Undershoot amplitude (Address, Control, Clock, Chip Select, Clock Enable)	10461	Peak amplitude of AC undershoot
Undershoot amplitude (Clock, Data, Strobe, Mask)	10363	Peak amplitude of AC undershoot
Undershoot amplitude (Data, Strobe, Mask)	10463	Peak amplitude of AC undershoot
Undershoot area (Address, Control)	10362	UnderShoot area below VSS

**Table 4** Test IDs and Names (continued)

Name	TestID	Description
Undershoot area (Address, Control, Clock, Chip Select, Clock Enable)	10462	UnderShoot area below VSSCA
Undershoot area (Clock, Data, Strobe, Mask)	10364	UnderShoot area below VSSQ
Undershoot area (Data, Strobe, Mask)	10464	UnderShoot area below VSSQ
User Defined Real-Time Eye Diagram Test For Read Cycle	20401	User Defined Real-Time Eye Diagram Test For Read Cycle
User Defined Real-Time Eye Diagram Test For Write Cycle	20402	User Defined Real-Time Eye Diagram Test For Write Cycle
tAC	30011	DQ output access time from CK,/CK.
tCH(abs) Absolute clock HIGH pulse width	2100	tCH(abs) Absolute clock HIGH pulse width
tCH(avg) Average clock HIGH pulse width	1000	tCH(avg) Average clock HIGH pulse width
tCK(abs) Absolute clock period(Falling Edge)	52	tCK(abs) Absolute clock period of Falling Edge Measurements
tCK(abs) Absolute clock period(Rising Edge)	2	tCK(abs) Absolute clock period of Rising Edge Measurements
tCK(avg) Average clock period(Falling Edge)	250	tCK(avg) Average clock period of Falling Edge Measurements
tCK(avg) Average clock period(Rising Edge)	200	tCK(avg) Average clock period of Rising Edge Measurements
tCL(abs) Absolute clock LOW pulse width	2150	tCL(abs) Absolute clock LOW pulse width
tCL(avg) Average clock LOW pulse width	1050	tCL(avg) Average clock LOW pulse width
tDH(Vref based)- Differential. For Data Mask.	30323	DQ and DM input hold time - Differential(Vref based). For Data Mask.
tDH(Vref based)- Differential. For Data.	30321	DQ and DM input hold time - Differential(Vref based). For Data.
tDH(base)- Differential. For Data Mask.	30309	DQ and DM input hold time - Differential. For Data Mask.
tDH(base)- Differential. For Data.	30302	DQ and DM input hold time - Differential. For Data.
tDH(derate)- Differential. For Data Mask.	30313	DQ and DM input hold time - Differential. For Data Mask.
tDH(derate)- Differential. For Data.	30311	DQ and DM input hold time - Differential. For Data.
tDH1(base) - Single Ended. For Data Mask.	30315	DQ and DM input hold time - Single Ended

**Table 4** Test IDs and Names (continued)

Name	TestID	Description
tDH1(base) - Single Ended. For Data.	30304	DQ and DM input hold time - Single Ended
tDH1(derate)- Single Ended. For Data Mask.	30319	DQ and DM input hold time - Differential. For Data Mask.
tDH1(derate)- Single Ended. For Data.	30317	DQ and DM input hold time - Differential. For Data.
tDIPW	30306	DQ and DM input pulse width
tDQSK	30021	DQS output access time from CK,/CK
tDQSKDM	30025	DQSK Delta Medium
tDQSKDS	30024	DQSK Delta Short
tDQSH	30107	DQS input high pulse width
tDQSL	30108	DQS input low pulse width
tDQSQ	30104	DQS-DQ skew for DQS and associated DQ signals
tDQSS	30106	DQS latching transition to associated clock edge
tDS(Vref based)- Differential. For Data Mask.	30322	DQ and DM input setup time - Differential(Vref based). For Data Mask.
tDS(Vref based)- Differential. For Data.	30320	DQ and DM input setup time - Differential(Vref based). For Data.
tDS(base)- Differential. For Data Mask.	30308	DQ and DM input setup time - Differential. For Data Mask.
tDS(base)- Differential. For Data.	30301	DQ and DM input setup time - Differential. For Data.
tDS(derate)- Differential. For Data Mask.	30312	DQ and DM input setup time - Differential. For Data Mask.
tDS(derate)- Differential. For Data.	30310	DQ and DM input setup time - Differential. For Data.
tDS1(base)- Single Ended. For Data Mask.	30314	DQ and DM input setup time - Single Ended
tDS1(base)- Single Ended. For Data.	30303	DQ and DM input setup time - Single Ended
tDS1(derate)- Single Ended. For Data Mask.	30318	DQ and DM input setup time - Differential. For Data Mask.
tDS1(derate)- Single Ended. For Data.	30316	DQ and DM input setup time - Differential. For Data.
tDSH	30110	DQS falling edge hold time from CK
tDSS	30109	DQS falling edge to CK setup time
tDVAC(Clock)	30022	tDVAC(Clock)
tDVAC(Strobe)	30118	tDVAC(Strobe)
tHZDQ	30101	DQ out high-impedance time from CK,/CK
tHZDQS	30117	DQS high-impedance time from CK,/CK

**Table 4** Test IDs and Names (continued)

Name	TestID	Description
tIH(base)	30202	Address and control input hold time
tIH(derate)	30205	Address and control input hold time
tIHCKE	30208	CKE input hold time
tIHCKEb	30210	CKE input hold time
tIPW	30206	tIPW
tIS(base)	30201	Address and control input setup time
tIS(derate)	30204	Address and control input setup time
tISCKE	30207	CKE input setup time
tISCKEb	30209	CKE input setup time
tLZDQ	30102	DQ low-impedance time from CK,/CK
tLZDQS	30103	DQS low-impedance time from CK,/CK
tQH	30105	DQ/DQS output hold time from DQS
tQHP	30307	Data Half Period
tQHS	30023	Data hold skew factor
tQSH	30115	DQS output high pulse width
tQSL	30116	DQS output low pulse width
tRPRE	30113	Read preamble
tRPST	30114	Read postamble
tVAC(CS,CA)	30203	tVAC(CS,CA)
tVAC(Data)	30305	tVAC(Data)
tWPRE	30111	Write preamble
tWPST	30112	Write postamble
terr(10per) Cumulative error across 10 cycles(Falling Edge)	1750	terr(10per) Cumulative error across 10 cycles of Falling Edge Measurements
terr(10per) Cumulative error across 10 cycles(Rising Edge)	1700	terr(10per) Cumulative error across 10 cycles of Rising Edge Measurements
terr(11-50per) Cumulative error across 11-50 cycles(Falling Edge)	950	terr(11-50per) Cumulative error across 11-50 cycles of Falling Edge Measurements
terr(11-50per) Cumulative error across 11-50 cycles(Rising Edge)	900	terr(11-50per) Cumulative error across 11-50 cycles of Rising Edge Measurements
terr(11per) Cumulative error across 11 cycles(Falling Edge)	1850	terr(11per) Cumulative error across 11 cycles of Falling Edge Measurements

**Table 4** Test IDs and Names (continued)

Name	TestID	Description
terr(11per) Cumulative error across 11 cycles(Rising Edge)	1800	terr(11per) Cumulative error across 11 cycles of Rising Edge Measurements
terr(12per) Cumulative error across 12 cycles(Falling Edge)	1950	terr(12per) Cumulative error across 12 cycles of Falling Edge Measurements
terr(12per) Cumulative error across 12 cycles(Rising Edge)	1900	terr(12per) Cumulative error across 12 cycles of Rising Edge Measurements
terr(13-50per) Cumulative error across 13-50 cycles(Falling Edge)	2050	terr(13-50per) Cumulative error across 13-50 cycles of Falling Edge Measurements
terr(13-50per) Cumulative error across 13-50 cycles(Rising Edge)	2000	terr(13-50per) Cumulative error across 13-50 cycles of Rising Edge Measurements
terr(2per) Cumulative error across 2 cycles(Falling Edge)	450	terr(2per) Cumulative error across 2 cycles of Falling Edge Measurements
terr(2per) Cumulative error across 2 cycles(Rising Edge)	400	terr(2per) Cumulative error across 2 cycles of Rising Edge Measurements
terr(3per) Cumulative error across 3 cycles(Falling Edge)	550	terr(3per) Cumulative error across 3 cycles of Falling Edge Measurements
terr(3per) Cumulative error across 3 cycles(Rising Edge)	500	terr(3per) Cumulative error across 3 cycles of Rising Edge Measurements
terr(4per) Cumulative error across 4 cycles(Falling Edge)	650	terr(4per) Cumulative error across 4 cycles of Falling Edge Measurements
terr(4per) Cumulative error across 4 cycles(Rising Edge)	600	terr(4per) Cumulative error across 4 cycles of Rising Edge Measurements
terr(5per) Cumulative error across 5 cycles(Falling Edge)	750	terr(5per) Cumulative error across 5 cycles of Falling Edge Measurements
terr(5per) Cumulative error across 5 cycles(Rising Edge)	700	terr(5per) Cumulative error across 5 cycles of Rising Edge Measurements
terr(6-10per) Cumulative error across 6-10 cycles(Falling Edge)	850	terr(6-10per) Cumulative error across 6-10 cycles of Falling Edge Measurements
terr(6-10per) Cumulative error across 6-10 cycles(Rising Edge)	800	terr(6-10per) Cumulative error across 6-10 cycles of Rising Edge Measurements
terr(6per) Cumulative error across 6 cycles(Falling Edge)	1350	terr(6per) Cumulative error across 6 cycles of Falling Edge Measurements
terr(6per) Cumulative error across 6 cycles(Rising Edge)	1300	terr(6per) Cumulative error across 6 cycles of Rising Edge Measurements
terr(7per) Cumulative error across 7 cycles(Falling Edge)	1450	terr(7per) Cumulative error across 7 cycles of Falling Edge Measurements
terr(7per) Cumulative error across 7 cycles(Rising Edge)	1400	terr(7per) Cumulative error across 7 cycles of Rising Edge Measurements



**Table 4** Test IDs and Names (continued)

Name	TestID	Description
terr(8per) Cumulative error across 8 cycles(Falling Edge)	1550	terr(8per) Cumulative error across 8 cycles of Falling Edge Measurements
terr(8per) Cumulative error across 8 cycles(Rising Edge)	1500	terr(8per) Cumulative error across 8 cycles of Rising Edge Measurements
terr(9per) Cumulative error across 9 cycles(Falling Edge)	1650	terr(9per) Cumulative error across 9 cycles of Falling Edge Measurements
terr(9per) Cumulative error across 9 cycles(Rising Edge)	1600	terr(9per) Cumulative error across 9 cycles of Rising Edge Measurements
terr(nper) Cumulative error across n cycles(Falling Edge)	1250	terr(nper) Cumulative error across n cycles of Falling Edge
terr(nper) Cumulative error across n cycles(Rising Edge)	1200	terr(nper) Cumulative error across n cycles of Rising Edge
tjit(CC) Cycle to cycle clock period jitter(Falling Edge)	150	tjit(CC) Cycle to cycle clock period jitter of Falling Edge Measurements
tjit(CC) Cycle to cycle clock period jitter(Rising Edge)	100	tjit(CC) Cycle to cycle clock period jitter of Rising Edge Measurements
tjit(duty-high) Duty cycle jitter(Rising Edge)	1100	tjit(duty-high) Duty cycle jitter of Rising Edge
tjit(duty-low) Duty cycle jitter(Falling Edge)	1150	tjit(duty-low) Duty cycle jitter of Falling Edge
tjit(per) Clock period jitter(Falling Edge)	350	tjit(per) Clock period jitter of Falling Edge Measurements
tjit(per) Clock period jitter(Rising Edge)	300	tjit(per) Clock period jitter of Rising Edge Measurements

### 3 Test Names and IDs

## 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.

---

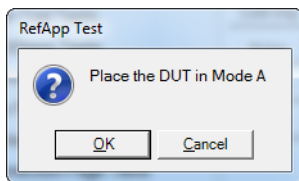
**Table 6** Instrument Names

Instrument Name	Description
Infiniium	The primary oscilloscope
pulsegen	81134A PulseGen

## 5 Message IDs

During the normal course of operation, an application displays multiple message prompts. The application's remote interface exposes a callback capability which enables remote clients to receive the text found in the prompt and to programmatically select the desired response (OK, Cancel, etc.). In order to determine which message is being received, the remote program could parse the message and look for key words. However, because message text is subject to change, a more reliable approach is to use the "message ID" that is attached to the more frequently-seen messages. The following table shows the IDs of the messages that this application may prompt during nominal operation.

For example, if the application may display the following prompt:



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

Message	ID	Responses	Usage
DUT mode message	313AEE2F-9EF0-476f-A2EB-29A5C7DE686F	OK=action completed and proceed, Cancel = abort test	App

- Message – A summary of the message in the prompt.
- ID – A unique code that will never change for this prompt, even if the message text changes (assuming the underlying purpose is maintained).
- Responses – The buttons on the prompt and their actions.
- Usage – The scope of the message:
  - "Common" – This message/ID may be used by other apps.

- "App" – This message/ID is unique to this app.
- "<testID>" – This message/ID is unique to this test ID.

A remote client would then structure the code in its message callback handler as shown below to manage message identification:

```
private static void OnSimpleMessage(object sender, MessageEventArgs e)
{
    if (e.ID == "313AEE2F-9EF0-476f-A2EB-29A5C7DE686F")
    {
        // Add code here to set the DUT in Mode A

        e.Response = DialogResult.OK;
    }
}
```

Here are actual message IDs used by this application:

**NOTE**

The file, "MessageInfo.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 7** Message IDs

Message	ID	Responses	Usage
Acq Limit: Can't determine minimum bandwidth	25A86458-151E-413D-B890-FC30CFD5ECAA	OK	Instrument
Activating limit will conflict with existing results	31A39751-6019-41de-89DF-59DB239DF978	OK=delete conflicting results, Cancel=cancel activation	Instrument
Already running tests	022467B0-6E08-40eb-B4D4-BBB018FBFBC7	OK	Instrument
App startup aborted	C2B67F67-E5D5-4845-8B63-443781223010	OK	Instrument
Can't set memory depth	FFFF1129-BD83-4318-993E-64C94033CEC4	OK=skip step and continue, Cancel=abort test	Instrument
Channel Setup: Unknown scope channel	CDE944EB-F440-4CB1-AFDC-7596461BCD86	OK	Instrument
Compliance/Debug mode change	9C72A970-8D7D-4b37-9787-48AEEA5DC3F1	OK=change mode, Cancel=abort action	Instrument
Confirmation Required	37437505-160C-4cc8-BA06-093C12994C1E	OK=continue, Cancel=abort test	Instrument
Connection change	879629E6-78FA-4a87-B247-A9DB4F0D7330	Abort=abort run, Retry=connection changed - continue run, Ignore=connection not changed - continue run	Instrument

**Table 7** Message IDs (continued)

Message	ID	Responses	Usage
Debug pause (messages vary)	50B66A97-A6A9-413f-8329-76DFAC492FD6	OK=resume, Cancel=abort run	Instrument
End of run summary	602F9866-F975-42b7-842C-D8447E5E3FCB	OK	Instrument
End of run summary (test aborted)	124580E4-4486-42d4-B908-C6D0FB2AEE93	OK	Instrument
Error during CSV file generation	C88B1C64-8334-4b15-8727-81F5E2BA2ED4	OK	Instrument
Error during app exit	81112706-F720-4787-81D3-B22A9B692B41	OK	Instrument
Expected signal not found	86C74779-322E-4585-A07A-26A2C8FAAC84	Abort=abort test, Retry=retry failed action, Ignore=skip failed step	Instrument
Expected signal not found	7957D5B8-E62D-4224-A7DD-70361E816A43	Retry=retry failed action, Cancel=abort test	Instrument
InfiniiSim: Not available because scope default prevented	B8461A2C-9F5F-4AF3-94C1-DF77080D517A	OK	Instrument
InfiniiSim: Scope doesn't support settings found in project	C9BC2205-8041-448b-AF31-CF602183E989	OK	Instrument
InfiniiSim: Unknown scope channel	4E5ECAF6-867C-47B3-982D-5F07E2090703	OK	Instrument
No test selected	B5D233AD-9EB4-4ac2-A443-A30A13643978	OK	Instrument
PrecisionProbe and InfiniiSim controllers turned off after config change	B4477006-D6D1-4375-9FF7-D8177FFC1BF9	OK	Instrument
PrecisionProbe/PrecisionCable: Not available because scope default prevented	6E60C9F8-8FBF-419C-B70A-B666FBDE3677	OK	Instrument
PrecisionProbe/PrecisionCable: Scope doesn't support settings found in project	2FC3B6FA-E28C-4700-9F46-4ABBA86A0D90	OK	Instrument
PrecisionProbe/PrecisionCable: Switch Controller is enabled	22F46DA8-89AE-4370-A57C-571DCF5BB87E	OK	Instrument
PrecisionProbe/PrecisionCable: Unknown scope channel	6788685B-9E88-47E6-BAE6-862F5BF3C9BA	OK	Instrument
Project loaded as read-only (reason)	98C785F8-D24F-4758-A18D-1CCE61F25371	OK	Instrument

**Table 7** Message IDs (continued)

Message	ID	Responses	Usage
Project loaded with errors	58AD7A02-1E63-4d77-BC6C-6EF3E37AAD5B	OK	Instrument
Project not loaded	B2615E9C-5ED7-4db7-AEAF-2BC25C62B656	OK	Instrument
Project save failed (unauthorized access)	89DCC194-6254-4902-AE63-B7CCD12C8B2A	OK	Instrument
Run paused	FE2CF871-6D4A-4080-8FF9-770075590D9F	OK=resume, Cancel=abort run	Instrument
Setting change requires result deletion	8732A3AB-142C-47e5-86EA-DB737F415DDE	OK=delete results; Cancel=abort change	Instrument
Store mode change requires result deletion	884CDFDE-605E-4d04-B8FD-9B181E7FA468	OK=delete results, Cancel=abort change	Instrument
Switch Matrix controller turned off after config change	FC95EBAA-F33F-4eae-90BB-6A6A8F16E2DF	OK	Instrument
Switch Matrix: Auto mode unavailable after config change	6E5589DC-E073-4818-9E8A-782A75898475	OK	Instrument
Switch Matrix: Auto mode unavailable for model, all settings will be reset	F78BD2E2-BF29-42e0-98F8-23B6CE565B08	OK=go auto do reset, Cancel=abort action	Instrument
Switch Matrix: Confirm Auto mode	D5E1A12E-6218-4416-8451-5F9415D924BF	OK=go auto, Cancel=stay manual	Instrument
Switch Matrix: Obsolete items in settings discarded	0C45BD20-E0C2-481e-A3B6-9C1A26C2103A	OK	Instrument
Switch Matrix: Reconnect drivers	047FE44F-B251-49fa-B3C7-5590317230CD	Yes=use saved addresses, No=prompt for new addresses, Cancel=reset all settings	Instrument
Switch Matrix: Remove all InfiniiSim settings	C5560182-73BE-4901-941E-3DAEC9F07B33	OK=remove, Cancel=abort action	Instrument
Switch Matrix: User cancelled settings load	50F3FB70-AA6B-488e-8CFA-62CDA756F746	OK	Instrument
SwitchMatrix: Correction reset due to application route change	95FEA629-3BE1-4288-BA34-426516018B07	OK=Accept new routing, Cancel=Reset switch matrix settings	Instrument
SwitchMatrix: Instrument already connected to another driver	08556148-4D63-4edd-B894-22916F39849A	OK	Instrument
SwitchMatrix: Max num drivers exceeded	7D8994AB-FCC2-4294-87B3-19B972BB6510	OK	Instrument



**Table 7** Message IDs (continued)

Message	ID	Responses	Usage
SwitchMatrix: Reset after drive reconnect fail	CF3E93B6-77FA-4FD7-B656-D286BE1C7C75	OK	Instrument
SwitchMatrix: Reset after drive reconnect fail	D298A4B8-F077-49BE-9CB2-AE6C14FB4705	OK	Instrument
SwitchMatrix: Unexpected multi-SPDT module	2723591D-55A9-44F3-9318-B732995D9427	OK	Instrument
SwitchMatrix: Unknown current switch state	ECE6535B-5C1A-4688-9E45-FB255435CC92	OK	Instrument
Unknown EEyeLocation parameter	FCA1C61B-D2EA-4671-AD48-9C080A6C6039	OK	Instrument
Upgrade app to open project	794C6148-ADF4-4b24-895D-74D94B76F8AE	OK	Instrument



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