Keysight N6462A/N6462B DDR4 Compliance Test Application

KEYSIGHT TECHNOLOGIES

Programmer's Reference

Notices

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In This Book

This book is your guide to programming the Keysight Technologies N6462A/N6462B DDR4 Compliance Test 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 61, and Chapter 4, “Instruments,” starting on page 71, provide information specific to programming the N6462A/N6462B DDR4 Compliance Test 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

Remote Programming Toolkit / 8

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 N6462A/N6462B DDR4 Compliance Test Application uses Remote Interface Revision 3.40. 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 N6462A/N6462B DDR4 Compliance Test 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
Confgure	A12-BC Channel	A12BCDigChannel	NA, DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the A12-BC digital signal to be analyzed for burst length detection.
Confgure	ACT Channel	ACTDigChannel	DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the ACT digital signal to be analyzed for MSOx Logic Triggering.
Confgure	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".
Confgure	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".
Confgure	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
Confgure	Base Ratio	BurstTrigerBaseRatio_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".
Confgure	Burst Clock Minimum Transistion	MinClock Cycles	(Accepts user-defined text), 202	This value is set when burst clock is selected. This value is used to set the number of clock transistions to test in a given burst - min is 202. This is to optimize both triggering capabilities (by setting a user expectation of consistant burst lengths) and maximize the number of measurements that can be made in a burst. This value can be typed to any value > 202.
Confgure	Burst Envelope Threshold	BurstEnv Thres	(Accepts user-defined text), 0.5	This setting is used to determine the Data Strobe burst sensitivity level when performing the READ/WRITE burst separation process. Setting this option to a smaller value will increase the sensitivity of the algoritm. This option can be used to detect and identify the smallest valid READ/WRITE Data Strobe burst within a data acquisition if there are significant difference in amplitude between the Data Strobe bursts. However, setting this option too small may cause noise to be interpreted as valid burst data.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Burst Length Limit	MaxBurst LenLimit	(Accepts user-defined text), 4, 8, 10000	This value is used to limit the maximum number of bits used in a valid data burst found when generating an eye diagram(Read or Write). For example, when this value is set to '8', the maximum number of bits used in a data burst to generate an eye diagram is limit to the first 8 data bit. User can specify custom value for this option.
Confgure	Burst Length Stimulus Mode	BurstLen gthStimul usMode	FixedBurstLength, A12BCOnTheFly	This configuration for the selection of burst length stimulus mode. For "Fixed Burst Length" selection, application will assume all the burst occurance have the same length of sub-burst. For "A12-BC Signal(Support On-The-Fly)" selection, the burst length of a sub-burst is depend on the logic state of BC signal at the moment Read/Write command queried.
Confgure	CAS Channel	CASDigC hannel	DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the CAS digital signal to be analyzed for MSOx Logic Triggering.
Confgure	CKE Channel	CKEDigC hannel	Ignore, DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the CKE digital signal to be analyzed for MSOx Logic Triggering.
Confgure	CS Channel	CSDigCh annel	DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the CS digital signal to be analyzed for MSOx Logic Triggering.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 1	MyCH1	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 1

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 1	MyCH1_ DQ	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 1

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 2	MyCH2	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 2

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 2	MyCH2_ DQ	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 2

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 3	MyCH3	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 3

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 3	MyCH3_ DQ	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 3

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 4	MyCH4	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 4

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Channel 4	MyCH4_ DQ	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Control_NCS0, Control_NCS1, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, CommandAddress_CA1, CommandAddress_CA2, CommandAddress_CS, 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 parameter connected to Channel 4

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Chip Select Source	AdvDbg_Source3	-1, 1, 2, 3, 4	Identifies the source of the Chip Select signal for eye diagram tests(Rank separation option ONLY).
Confgure	Clock - Continuous or Burst	ContOBurst	Continuous, Burst	This option is to select if the Clock signal is continuous or Bursted.
Confgure	Clock Lane	AdvDbgSupportClockMSOxLogicTrig	CK0, CK1, CK2	Identifies the Clock lane for the eye diagram tests using MSOX Logic input.
Confgure	Clock Source	AdvDbg_SourceClockMSOxLogicTrig	-1, 1, 2, 3, 4	Identifies the source of the Clock for eye diagram tests using MSOX Logic input.
Confgure	Clocking Method	Clocking Method	1, 2	This option is used to select the clocking method used in the selected PUT(under the Command and Address Timing tests section). The clocking method is typically determined by the memory controller where it could use "1T Timing" or "2T Timing" method on the address and command buses. This clocking method option will ONLY affect tIS and tIS(derate) tests.
Confgure	DQ to DQS phase shift for Read(%)	Read_Phase	(Accepts user-defined text), 20	This setting allow user to modify the expected phase shift of DQ-DQS for specific case. The number represent the % of phase shift expected for Read cycle.
Confgure	DQ to DQS phase shift for Write(%)	Write_Phase	(Accepts user-defined text), 40	This setting allow user to modify the expected phase shift of DQ-DQS for specific case. The number represent the % of phase shift expected for Write cycle.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	DQS Lower Threshold For Burst Trigger Method	DQSLowerThresForBurstTrig	(Accepts user-defined text), -0.2	Determine the lower threshold level of a Data Strobe burst (DQS) that can be identified as a valid READ/WRITE burst data by using Preamble method. If the actual amplitude of a burst data is not pass the value specified in this option, then that particular burst data will be ignored.
Confgure	DQS Middle Threshold For Burst Trigger Method	DQSMiddleThresForBurstTrig	(Accepts user-defined text), 0.0	Determine the middle threshold level of a Data Strobe burst (DQS) that can be identified as a valid READ/WRITE burst data by using Preamble method. If the actual amplitude of a burst data is not pass the value specified in this option, then that particular burst data will be ignored.
Confgure	DQS Upper Threshold For Burst Trigger Method	DQSUpperThresForBurstTrig	(Accepts user-defined text), 0.2	Determine the upper threshold level of a Data Strobe burst (DQS) that can be identified as a valid READ/WRITE burst data by using Preamble method. If the actual amplitude of a burst data is not pass the value specified in this option, then that particular burst data will be ignored.
Confgure	Data Lane	AdvDbgInputDataMSOxLogicTrig	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, DQ64, DQ65, DQ66, DQ67, DQ68, DQ69, DQ70, DQ71	Identifies the Data lane for the eye diagram tests using MSOX Logic input.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	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, DQ64, DQ65, DQ66, DQ67, DQ68, DQ69, DQ70, DQ71	Identifies the data lane for the eye diagram tests.
Confgure	Data Source	AdvDbg_Source1	1, 2, 3, 4	Identifies the source of the data to be analyzed for eye diagram tests.
Confgure	Data Source	AdvDbg_SourceDataMSOxLogicTrig	1, 2, 3, 4	Identifies the source of the Data for eye diagram tests using MSOX Logic input.
Confgure	Data Strobe Lane	AdvDbgSupport	DQS0, DQS1, DQS2, DQS3, DQS4, DQS5, DQS6, DQS7, DQS8	Identifies the data strobe lane for the eye diagram tests.
Confgure	Data Strobe Lane	AdvDbgSupportStrobeMSOxLogicTrig	DQS0, DQS1, DQS2, DQS3, DQS4, DQS5, DQS6, DQS7, DQS8	Identifies the Data Strobe lane for the eye diagram tests using MSOX Logic input.
Confgure	Data Strobe Source	AdvDbg_Source2	-1, 1, 2, 3, 4	Identifies the source of the data strobe for eye diagram tests.
Confgure	Data Strobe Source	AdvDbg_SourceStrobeMSOxLogicTrig	-1, 1, 2, 3, 4	Identifies the source of the Data Strobe for eye diagram tests using MSOX Logic input.
Confgure	Data Transfer Cycle	EyeDiagramOpt	R, W	Select Data Transfer Cycle For Eye Diagram Test
Confgure	Debug Info Logging	EnableDebugLogging	0, 1	This option enables/disables additional debug information logging during test run. This option is ONLY used for internal debugging purposes and should not be enable during normal test run.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	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.
Confgure	Edge Type for HoldTime measurements	CAEdgeOfInterest_HoldTime	0, 1, 2	This option is used to select the type of CA signal edge (Rising/Falling/Both) that will be processed when performing the hold time measurements for Command and Address Timing tests section. This option will ONLY affect tIH and tIH(derate) tests.
Confgure	Edge Type for SetupTime measurements	CAEdgeOfInterest_SetupTime	0, 1, 2	This option is used to select the type of CA signal edge (Rising/Falling/Both) that will be processed when performing the setup time measurements for Command and Address Timing tests section. This option will ONLY affect tIS and tIS(derate) tests.
Confgure	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
Confgure	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.
Confgure	Eye Diagram Vertical Base Level Scaling (V)	EyeDiagVerticalBaseLvlScal	(Accepts user-defined text), -0.10	Identifies the Vertical Base Level Scaling value of the Data(DQ) signal for the eye diagram tests.
Confgure	Eye Diagram Vertical Top Level Scaling (V)	EyeDiagVerticalTopLvlScal	(Accepts user-defined text), 1.3	Identifies the Vertical Top Level Scaling value of the Data(DQ) signal for the eye diagram tests.
Confgure	Fixed Burst Length	FixBurstLen_Timing	4, 8	This value is used ONLY when the "Rank Separation" option is enabled. The value is used in the process to identify and eliminate bubble states(if any) from a valid back-to-back data burst found when performing the Data Strobe Timing and Data Timing tests. For example, when this value is set to '8', all the data burst that has more than 8 data bit long will be scan for any bubble states within the data burst. It is assume that all the multiple data bursts will have the same fixed data length(in this example, 8 data bit). User can select from the available values for this option.
Confgure	Fixed Burst Length	FixedBurstLength_LogicMSOx	NA, 4, 8	This value is to define the Fix Burst Length of sub-burst. The value is used to determine the continuity of the sub-burst to the next sub-burst according to the Logic Pattern.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Lower Threshold (V)	Chan1_Low_Thresh	(Accepts user-defined text), -0.50	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".
Confgure	Lower Threshold (V)	Chan2_Low_Thresh	(Accepts user-defined text), -0.50	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".
Confgure	Lower Threshold (V)	Chan3_Low_Thresh	(Accepts user-defined text), 0.680	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".
Confgure	Lower Threshold (V)	Chan4_Low_Thresh	(Accepts user-defined text), 0.680	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".
Confgure	Mark Worst Case Cycles	MarkWorstCaseCycles	true, false	Places markers around the worst case cycles (test-dependent). Slows runtime performance.
Confgure	Max Acqusition 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 /WRITE burst related tests in the Electrical Tests group and Timing Tests group.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	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)
Confgure	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".
Confgure	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".
Confgure	Middle Threshold (V)	Chan3_Mid_Thresh	(Accepts user-defined text), 0.800	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".
Confgure	Middle Threshold (V)	Chan4_Mid_Thresh	(Accepts user-defined text), 0.800	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".
Confgure	Minimum Data Amplitude	DataVoltRange	(Accepts user-defined text), 0.5	Determine the minimum amplitude of a Data burst (DQ/DM) that can be identified as a valid READ/WRITE burst data. If the actual amplitude of a burst data is lower than the value specified in this option, then that particular burst data will be ignored.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	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 /WRITE burst related tests in the Electrical Tests group and Timing Tests group with the exception of VOH(AC), VOH(DC), VOL(AC), VOL(DC), VIHDiff(AC), VILDiff(AC), VOHDiff(AC) and VOLDiff(AC) tests.
Confgure	Number of Clock Measurements	NumClockMeas	(Accepts user-defined text), 200	This value is used to set the number of total clock transitions to be measured - min 200. If Continuous clock is selected, the memory depth will be set accordingly to capture enough clock edges. For bursted clock, it will first measure the number of clocks set in Burst clock transitions and then repeat as many acquisitions needed to meet the value set.
Confgure	OfflineCAFilePath(Must be hidden)	OfflineCAFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineCSFilePath(Must be hidden)	OfflineCSFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineClockFilePath(Must be hidden)	OfflineClockFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineClockMinusFilePath(Must be hidden)	OfflineClockMinusFilePath	(Accepts user-defined text), C:\	For supporting offline.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	OfflineClockPlusFilePath(Must be hidden)	OfflineClockPlusFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineDQFilePath(Must be hidden)	OfflineDQFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineDQSFilePath(Must be hidden)	OfflineDQSFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineDQSMinusFilePath(Must be hidden)	OfflineDQSMinusFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineDQSPlusFilePath(Must be hidden)	OfflineDQSPlusFilePath	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineDataFolder(Must be hidden)	OfflineDataFolder	(Accepts user-defined text), C:\	For supporting offline.
Confgure	OfflineDataMode(Must be hidden)	OfflineDataMode	(Accepts user-defined text), 0.0, 1.0	For supporting offline
Confgure	Option	TypeOfSignalCH1_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the signal to use for Chanel 1 Command and Address Timing Test.
Confgure	Option	TypeOfSignalCH2_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the signal to use for Channel 2 Command and Address Timing Test.
Confgure	Option	TypeOfSignalCH3_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the signal to use for Channel 3 Command and Address Timing Test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Option	TypeOfSignalCH4_CAT	NA, PUT, SP, LP_NA, LP_PUT, LP_SP	Identifies the signal to use for Channel 4 Command and Address Timing Test.
Confgure	PUT Source	ElecDiffCKVihVilPut_Source	1, 2, 3, 4	Identifies the source of the PUT for Differential VIHdiff.CK/ VILdiff.CK tests.
Confgure	PUT Source	ElecDiffDQSVihVilPut_Source	1, 2, 3, 4	Identifies the source of the PUT for Differential VIHdiff.DQS/ VILdiff.DQS tests.
Confgure	PUT Source	ElecDiffOutputPut_Source	1, 2, 3, 4	Identifies the source of the PUT for Differential AC Output Tests.
Confgure	PUT Source	ElecSEVsehVselClockMinusPut_Source	1, 2, 3, 4	Identifies the source of the PUT for VSEH/VSEL Tests for Clock.
Confgure	PUT Source	ElecSEVsehVselClockPlusPut_Sourc e	1, 2, 3, 4	Identifies the source of the PUT for VSEH/VSEL Tests for Clock.
Confgure	PUT Source	ElecSEVsehVselStrobeMinusPut_Source	1, 2, 3, 4	Identifies the source of the PUT for VSEH/VSEL Tests for Strobe.
Confgure	PUT Source	ElecSEVsehVselStrobePlusPut_Sourc e	1, 2, 3, 4	Identifies the source of the PUT for VSEH/VSEL Tests for Strobe.
Confgure	PUT Source	ElecSE_Source1	1, 2, 3, 4	Identifies the source of the PUT for "VOH/VOL and Output Slew Rate tests" test group.
Confgure	PUT Source	ElecSE_Source1_CA	1, 2, 3, 4	Identifies the source channel of the PUT for "VIH/VIL for Command and Address" test group.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	PUT Source	ElecSE_Source1_DQ	1, 2, 3, 4	Identifies the source channel of the PUT for "VIH/VIL for DQ and DM" test group.
Confgure	PUT Source	OvrShtSeCA_LP_Source	1, 2, 3, 4	Identifies the source channel of the PUT for Overshoot/Undershoot (Address, Control, Clock, Chip Select, Clock Enable) tests.
Confgure	PUT Source	OvrShtSeDQ_LP_Source	1, 2, 3, 4	Identifies the source channel of the PUT for Overshoot/Undershoot (Data, Strobe, Mask) tests.
Confgure	PUT Source	OvrShtSe_Source	1, 2, 3, 4	Identifies the source channel of the PUT for Overshoot/Undershoot (Address, Control) tests.
Confgure	PUT Source	OvrShtSe_Source2	1, 2, 3, 4	Identifies the source channel of the PUT for Overshoot/Undershoot (Data, Strobe, Mask) tests.
Confgure	PUT Source	OvrShtSe_Source3	1, 2, 3, 4	Identifies the source channel of the PUT for Overshoot/Undershoot (Clock) tests.
Confgure	PUT(+) Source	ElecDIFF_Source1	1, 2, 3, 4	Identifies the source channel of the PUT(+) for Differential AC Input Tests.
Confgure	PUT(+) Source	ElecDiffVixCaPutSourcePlus	1, 2, 3, 4	Identifies the source of the PUT(+) for VIXCA Test.
Confgure	PUT(+) Source	ElecDiffVixDqPutSourcePlus	1, 2, 3, 4	Identifies the source of the PUT(-) for VIXDQ Test.
Confgure	PUT(-) Source	ElecDIFF_Source2	1, 2, 3, 4	Identifies the source channel of the PUT(-) for Differential AC Input Tests.
Confgure	PUT(-) Source	ElecDiffVixCaPutSourceMinus	1, 2, 3, 4	Identifies the source of the PUT(-) for VIXCA Test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	PUT(-) Source	ElecDiffVixDqPutSourceMinus	1, 2, 3, 4	Identifies the source of the PUT(-) for VIXDQ Test.
Confgure	Pin Under Test, PUT	ElecDiffCKVihVilPut	Clock_DCK0, Clock_DCK1, Clock_DCK2, LP_Clock_DCK	Identifies the Pin Under Test for Differential VIHdiff.CK/ VILdiff.CK tests.
Confgure	Pin Under Test, PUT	ElecDiffDQSVihVilPut	Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3	Identifies the Pin Under Test for Differential VIHdiff.DQS/ VILdiff.DQS tests.
Confgure	Pin Under Test, PUT	ElecDiffVixDqPut	Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3	Identifies the Pin Under Test for VIXDQ Test.
Confgure	Pin Under Test, PUT	ElecParamDiInput	Clock_DCK0, Clock_DCK1, Clock_DCK2, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8	Identifies the Pin Under Test for Differential AC Input Tests parameters.
Confgure	Pin Under Test, PUT	ElecParamDiffOutput	Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, LP_Strobe_DDQS0, LP_Strobe_DDQS1, LP_Strobe_DDQS2, LP_Strobe_DDQS3	Identifies the Pin Under Test for Differential AC output parameters.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Pin Under Test, PUT	ElecPara mSeInput	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, 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 "VOH/VOL and Output Slew Rate tests" test group.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Pin Under Test, PUT	ElecParamSeInput_CA	Control_NRAS, Control_NWE, Control_NCAS, Control_NCS0, Control_NCS1, 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, Control_BA0, Control_BA1, Control_BA2, 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 "VIH/VIL for Command and Address" test group.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Pin Under Test, PUT	ElecParamSeInput_DQ	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, DM_DM0, DM_DM1, DM_DM2, DM_DM3, DM_DM4, DM_DM5, DM_DM6, DM_DM7, 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	Identifies the Pin Under Test for "VIH/VIL for DQ and DM" test group.
Confgure	Pin Under Test, PUT	ElecSEVsehVselClockMinusPut	Clock_NCK0, Clock_NCK1, Clock_NCK2, LP_Clock_NCK	Identifies the Pin Under Test for VSEH/VSEL Tests for Clock.
Confgure	Pin Under Test, PUT	ElecSEVsehVselClockPlusPut	Clock_SCK0, Clock_SCK1, Clock_SCK2, LP_Clock_SCK	Identifies the Pin Under Test for VSEH/VSEL Tests for Clock.
Confgure	Pin Under Test, PUT	ElecSEVsehVselStrobeMinusPut	Strobe_NDQS0, Strobe_NDQS1, Strobe_NDQS2, Strobe_NDQS3, Strobe_NDQS4, Strobe_NDQS5, Strobe_NDQS6, Strobe_NDQS7, Strobe_NDQS8, LP_Strobe_NDQS0, LP_Strobe_NDQS1, LP_Strobe_NDQS2, LP_Strobe_NDQS3	Identifies the Pin Under Test for VSEH/VSEL Tests for Strobe.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Pin Under Test, PUT	ElecSEVsehVselStrobePlusPut	Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, LP_Strobe_SDQS0, LP_Strobe_SDQS1, LP_Strobe_SDQS2, LP_Strobe_SDQS3	Identifies the Pin Under Test for VSEH/VSEL Tests for Strobe.
Confgure	Pin Under Test, PUT	OvrShtSeCA_LP_Input	CKE, CS_n, ODT, CA0, CA1, CA2, CA3, CA4, CA5, CA6, CA7, CA8, CA9, CK_t, CK_c	Identifies the Pin Under Test for Overshoot/Undershoot (Address, Control, Clock, Chip Select, Clock Enable) parameters.
Confgure	Pin Under Test, PUT	OvrShtSeDQ_LP_Input	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, DQS0_t, DQS1_t, DQS2_t, DQS3_t, DQS0_c, DQS1_c, DQS2_c, DQS3_c, DM0, DM1, DM2, DM3	Identifies the Pin Under Test for Overshoot/Undershoot (Data, Strobe, Mask) parameters.
Confgure	Pin Under Test, PUT	OvrShtSeInput	/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 Overshoot/Undershoot (Address, Control) parameters.
Confgure	Pin Under Test, PUT	OvrShtSeInput2	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, DQ64, DQ65, DQ66, DQ67, DQ68, DQ69, DQ70, DQ71, DQS0, DQS1, DQS2, DQS3, DQS4, DQS5, DQS6, DQS7, DQS8, DQS0/, DQS1/, DQS2/, DQS3/, DQS4/, DQS5/, DQS6/, DQS7/, DQS8/, DM0, DM1, DM2, DM3, DM4, DM5, DM6, DM7	Identifies the Pin Under Test for Overshoot/Undershoot (Data, Strobe, Mask) parameters.
Confgure	Pin Under Test, PUT	OvrShtSeInput3	CK0, CK1, CK2, /CK0, /CK1, /CK2	Identifies the Pin Under Test for Overshoot/Undershoot (Clock) parameters.
Confgure	Pin Under Test, PUT	TypeOfSignalCH2	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel2 timing test.
Confgure	Pin Under Test, PUT	TypeOfSignalCH2_DQ	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel2 timing test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Pin Under Test, PUT	TypeOfSignalCH3	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel3 timing test.
Confgure	Pin Under Test, PUT	TypeOfSignalCH3_DQ	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel3 timing test.
Confgure	Pin Under Test, PUT	TypeOfSignalCH4	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel4 timing test.
Confgure	Pin Under Test, PUT	TypeOfSignalCH4_DQ	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel4 timing test.
Confgure	Pin Under Test, PUT Parameters for Channel 1	TypeOfSignalCH1	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel 1 timing tests.
Confgure	Pin Under Test, PUT Parameters for Channel 1	TypeOfSignalCH1_DQ	NA, Clock, Strobe, Data, DM, CommandAddress, Control, LP_NA, LP_Clock, LP_Strobe, LP_Data, LP_DM, LP_Control	Identifies the signal to use for Channel 1 timing tests.
Confgure	RAS Channel	RASDigChannel	DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the RAS digital signal to be analyzed for MSOx Logic Triggering.
Confgure	READ Latency	ReadLatency	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0	This value is used ONLY when the "Rank Separation" option is enabled. This allow user to specify the overall Read latency(RL) value to be used in performing the Data Strobe Timing and Data Timing tests when the "Rank Separation" option is enabled. By definition, the Read Latency (RL) = Additive Latency (AL) + CAS Latency (CL); RL = AL + CL.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	READ Latency Value	RLValue	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0	This value is used ONLY when the "Rank Separation" option is enabled. This allow user to specify the overall Read latency(RL) value to be used in generating the READ eye diagram when the "Rank Separation" option is enabled. By definition, the Read Latency (RL) = Additive Latency (AL) + CAS Latency (CL); RL = AL + CL.
Confgure	Rank Separation	CSDQSCYC	0.0, 1.0	Enable/disable the rank separation option when running the Data Strobe Timing and Data Timing tests. When this option is enabled, an additional channel for Chip Select(CS) signal will be required. Measurements will only be done on selected Rank based on the Chip Select signal connected to the oscilloscope. This Rank Separation mode is also used to handle a valid back-to-back data burst found when running the selected Data Strobe Timing and Data Timing tests. The bubble states(if any) that exist during a valid back-to-back data burst will be identified and ignored based on the Chip Select signal with reference to the "READ/WRITE Latency" and "Fix Burst Length" settings.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Rank Separation	RankEye Diagram Opt	0, 1	Enable/disable the rank separation option for generating the READ/WRITE eye diagram. When this option is enabled, the eye diagram generated will be qualified based on an additional Chip Select input signal besides the DQS and DQ signals. When this option is disabled, the eye diagram will be generated based on DQS and DQ signal ONLY (Chip Select input will be ignored).
Confgure	Re-scale Test Mask	ReScale Mask	true, false	Enable/disable horizontal re-scaling of selected test mask to be loaded in the eye diagram tests.
Confgure	Read Preamble Pattern	ReadPreambePattern	Static, Toggle	This option is used to indicate the expected Read Preamble pattern so that the correct first edge of a burst can be identified.
Confgure	Sampling Points (Pts) Electrical and Timing Tests Only	Sampling Points	(Accepts user-defined text), 2000000, 1000000, 500000	Specifies the sampling points to be captured in all the tests except Clock Timing tests and Eye Digram tests. Reduce the sampling points if the read/write bursts are occuring very frequently.
Confgure	Sampling Points (Pts) Eye Diagram Tests using MSOx Logic Triggering	Sampling PointsLynxEyeDiagram	(Accepts user-defined text), 8000000, 2000000, 1000000	Specifies the sampling points to be captured in Eye Diagram Test which using MSOx Logic Triggering. Reduce the sampling points if the read/write bursts are occuring very frequently.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Sampling Points (Pts) For Eye Diagram Tests Only	SamplingPointsNormalEyeDiagram	(Accepts user-defined text), 2000000, 1000000, 500000, 250000, 100000	Specifies the sampling points to be captured in Eye Digram tests. Reduce the sampling points if the read/write bursts are occuring very frequently. The 100000 sample points is recomended for the oscilloscope having Sampling rate between 20G/Sa to 40G/Sa because the slowness peformance will happen in setting higher sample points. For the oscilloscope have higher sampling rate like 80G/Sa or above, user require to set the sample points to a higher value.
Confgure	Signal selected	MyCH1_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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 parameter connected to Channel 1 for Command and Address Timing tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Signal selected	MyCH2_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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 parameter connected to Channel 2 for Command and Address Timing tests.
Confgure	Signal selected	MyCH3_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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 parameter connected to Channel 3 for Command and Address Timing tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Signal selected	MyCH4_CAT	NA_, Clock_DCK0, Clock_DCK1, Clock_DCK2, Clock_SCK0, Clock_SCK1, Clock_SCK2, 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 parameter connected to Channel 4 for Command and Address Timing tests.
Confgure	Skip Connection Diagram Prompt	EnableConnection Prompt	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.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Skip Error Message	ErrorMsg Off	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.
Confgure	Supporti ng Pin	ElecDiffD QSVihVil Support	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, 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.DQS/ VILdiff.DQS tests.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin	ElecDiffVixDqSupportPin	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, 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, 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	Identifies the supporting pin for VIXDQ Test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin	ElecParamDiSupport	N/A, 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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71	Identifies the supporting pin for Differential AC Input Tests parameters.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin	ElecParamDiffOutputSupport	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, 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.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin	ElecParamSeSupport	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, 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 "VOH/VOL and Output Slew Rate tests" test group.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin	ElecParamSeSupport_DQ	Strobe_DDQS0, Strobe_DDQS1, Strobe_DDQS2, Strobe_DDQS3, Strobe_DDQS4, Strobe_DDQS5, Strobe_DDQS6, Strobe_DDQS7, Strobe_DDQS8, Strobe_SDQS0, Strobe_SDQS1, Strobe_SDQS2, Strobe_SDQS3, Strobe_SDQS4, Strobe_SDQS5, Strobe_SDQS6, Strobe_SDQS7, Strobe_SDQS8, 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 "VIH/VIL for DQ and DM" test group.
Confgure	Supporting Pin	ElecSEVsehVselStrobeMinusSupport	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, 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.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin	ElecSEVsehVselStrobePlusSupport	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, Data_DQ64, Data_DQ65, Data_DQ66, Data_DQ67, Data_DQ68, Data_DQ69, Data_DQ70, Data_DQ71, 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.
Confgure	Supporting Pin Source	ElecDIFF_Source3	-1, 1, 2, 3, 4	Identifies the source channel of the supporting pin for Differential AC Input Tests.
Confgure	Supporting Pin Source	ElecDiffDQSVihVilSupprt_Source	1, 2, 3, 4	Identifies the source of the supporting pin for Differential VIHdiff.DQS/ VILdiff.DQS tests.
Confgure	Supporting Pin Source	ElecDiffOutputSupprt_Source	1, 2, 3, 4	Identifies the source of the supporting pin for Differential AC Output Tests.
Confgure	Supporting Pin Source	ElecDiffVixDqSupportPinSource	1, 2, 3, 4	Identifies the source of the supporting pin for VIXDQ Test.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Supporting Pin Source	ElecSEVsehVselStrobeMinusSupport_Source	1, 2, 3, 4	Identifies the source of the supporting pin for VSEH/VSEL Tests for Strobe.
Confgure	Supporting Pin Source	ElecSEVsehVselStrobePlusSupport_Source	1, 2, 3, 4	Identifies the source of the supporting pin for VSEH/VSEL Tests for Strobe.
Confgure	Supporting Pin Source	ElecSE_Source2	1, 2, 3, 4	Identifies the source of the supporting pin for "VOH/VOL and Output Slew Rate tests" test group.
Confgure	Supporting Pin Source	ElecSE_Source2_DQ	-1, 1, 2, 3, 4	Identifies the source channel of the supporting pin for "VIH/VIL for DQ and DM" test group.
Confgure	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.
Confgure	Top Ratio	BurstTrigerTopRatio_Chan1	(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
Confgure	Top Ratio	BurstTriggerTopRatio_Chan2	(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".
Confgure	Top Ratio	BurstTriggerTopRatio_Chan3	(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".
Confgure	Top Ratio	BurstTriggerTopRatio_Chan4	(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".
Confgure	TopBase Level Vertical Scaling Evaluation Mode	TopBaseLevelScalingEvalMode	0, 1	Select the method of TopBase Level Scaling evaluation mode for the eye diagram tests. If the "Auto Thresholds Scaling" option was chosen, the top level and the base level of the oscilloscope display value will be set Automatic. While, the option "User defined Vertical Level Scaling" was selected the top level and base level of the oscilloscope display will be set by the values input by user.
Confgure	Total Bit Display(cycle)	myDisBit	(Accepts user-defined text), 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.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	Total CA Waveform	EyeDiagramCANumOfWave	(Accepts user-defined text), 500, 1000, 1500, 3000, 5000	Select or type the total number of waveforms required for CA eye diagram tests.
Confgure	Total Waveform	EyeDiagramNumOfWave	(Accepts user-defined text), 500, 1000, 1500, 3000, 5000	Select or type the total number of waveforms required for eye diagram tests.
Confgure	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.
Confgure	Triggering READ Latency	TriggeringReadLatency	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 41.0, 42.0, 43.0, 44.0, 45.0, 46.0, 47.0, 48.0, 49.0, 50.0, 51.0, 52.0, 53.0, 54.0, 55.0, 56.0, 57.0, 58.0, 59.0, 60.0, 61.0, 62.0, 63.0, 64.0, 65.0, 66.0, 67.0, 68.0, 69.0, 70.0, 71.0, 72.0, 73.0, 74.0, 75.0, 76.0, 77.0, 78.0, 79.0, 80.0, 81.0, 82.0, 83.0, 84.0, 85.0, 86.0, 87.0, 88.0, 89.0, 90.0, 91.0, 92.0, 93.0, 94.0, 95.0, 96.0, 97.0, 98.0, 99.0, 100.0	This value is used ONLY when the "Logic Triggering" option is enabled. This allow user to specify the overall Read latency(RL) value to be used to determine the burst location from event of Read Burst logic pattern.
Confgure	Triggering WRITE Latency	TriggeringWriteLatency	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 41.0, 42.0, 43.0, 44.0, 45.0, 46.0, 47.0, 48.0, 49.0, 50.0, 51.0, 52.0, 53.0, 54.0, 55.0, 56.0, 57.0, 58.0, 59.0, 60.0, 61.0, 62.0, 63.0, 64.0, 65.0, 66.0, 67.0, 68.0, 69.0, 70.0, 71.0, 72.0, 73.0, 74.0, 75.0, 76.0, 77.0, 78.0, 79.0, 80.0, 81.0, 82.0, 83.0, 84.0, 85.0, 86.0, 87.0, 88.0, 89.0, 90.0, 91.0, 92.0, 93.0, 94.0, 95.0, 96.0, 97.0, 98.0, 99.0, 100.0	This value is used ONLY when the "Logic Triggering" option is enabled. This allow user to specify the overall Write latency(WL) value to be used to determine the burst location from event of Write Burst logic pattern.
Confgure	Upper Threshold (V)	Chan1_Up_Thresh	(Accepts user-defined text), 0.50	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
Confgure	Upper Threshold (V)	Chan2_Up_Thresh	(Accepts user-defined text), 0.50	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".
Confgure	Upper Threshold (V)	Chan3_Up_Thresh	(Accepts user-defined text), 0.920	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".
Confgure	Upper Threshold (V)	Chan4_Up_Thresh	(Accepts user-defined text), 0.920	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".
Confgure	User Defined Vcent	UserDefinedVcent	(Accepts user-defined text), 0.800	Identifies the user defined Vcent level for shifting of the tDIVW/vDIVW mask. The value set here is applicable ONLY when the "Vcent Evaluation Mode" option is set to "User defined Vcent".
Confgure	VDD (V)	InputVDD	(Accepts user-defined text), 1.275, 1.200, 1.125	Identifies the input supply voltage.
Confgure	VDD1 (V)	InputVDD1	(Accepts user-defined text), 1.950, 1.800, 1.700	Identifies the input supply voltage.
Confgure	VDD2 (V)	InputVDD2	(Accepts user-defined text), 1.275, 1.200, 1.125	Identifies the input supply voltage.
Confgure	VDDQ (V)	InputVDDQ	(Accepts user-defined text), 1.275, 1.200, 1.125	Identifies the input supply voltage for data signal.
Confgure	VIH.CA_AC (V)	InputThreshold_Vih_ac_CA	(Accepts user-defined text), 0.720	Identifies the ac input logic HIGH voltage for Address and Command inputs.
Confgure	VIH.CA_DC (V)	InputThreshold_Vih_dc_CA	(Accepts user-defined text), 0.700	Identifies the dc input logic HIGH voltage for Address and Command inputs.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	VIH.DQ_AC (V)	InputThreshold_Vih_ac_DQ	(Accepts user-defined text), 0.920	Identifies the ac input logic HIGH voltage for DQ and DM inputs.
Confgure	VIH.DQ_DC (V)	InputThreshold_Vih_dc_DQ	(Accepts user-defined text), 0.900	Identifies the dc input logic HIGH voltage for DQ and DM inputs.
Confgure	VIHdiff.CK_AC (V)	VIHdiff_ac_CK	(Accepts user-defined text), 0.240	Differential input high. Affects only differential CK only.
Confgure	VIHdiff.DQS_AC (V)	VIHdiff_ac_DQS	(Accepts user-defined text), 0.240	Differential input high. Affects only differential DQS only.
Confgure	VIHdiff_min/VIHdiff_DC (V)	VIHdiff_min	(Accepts user-defined text), 0.200	Minimum differential input high. This value is used solely to define a differential signal slew rate. Affects only differential DQS and CK.
Confgure	VIL.CA_AC (V)	InputThreshold_Vil_ac_CA	(Accepts user-defined text), 0.480	Identifies the ac input logic LOW voltage for Address and Command inputs.
Confgure	VIL.CA_DC (V)	InputThreshold_Vil_dc_CA	(Accepts user-defined text), 0.500	Identifies the dc input logic LOW voltage for Address and Command inputs.
Confgure	VIL.DQ_AC (V)	InputThreshold_Vil_ac_DQ	(Accepts user-defined text), 0.680	Identifies the ac input logic LOW voltage for DQ and DM inputs.
Confgure	VIL.DQ_DC (V	InputThreshold_Vil_dc_DQ	(Accepts user-defined text), 0.700	Identifies the dc input logic LOW voltage for DQ and DM inputs.
Confgure	VILdiff.CK_AC (V)	VILdiff_ac_CK	(Accepts user-defined text), -0.240	Differential input high. Affects only differential CK only.
Confgure	VILdiff.DQS_AC (V)	VILdiff_ac_DQS	(Accepts user-defined text), -0.240	Differential input high. Affects only differential DQS only.
Confgure	VILdiff_max/VILdiff_DC (V)	VILdiff_max	(Accepts user-defined text), -0.200	Maximum differential input low. This value is used solely to define a differential signal slew rate. Affects only differential DQS and CK.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	VOH_AC (V)	InputThreshold_Voh_ac	(Accepts user-defined text), 1.020	Identifies the ac output logic HIGH voltage.
Confgure	VOH_DC (V)	InputThreshold_Voh_dc	(Accepts user-defined text), 1.32	Identifies the dc output logic HIGH voltage.
Confgure	VOHdiff_AC (V)	VOHdiff_ac	(Accepts user-defined text), 0.360	Differential output high. Affects only differential DQS only.
Confgure	VOL_AC (V)	InputThreshold_Vol_ac	(Accepts user-defined text), 0.660	Identifies the ac output logic LOW voltage.
Confgure	VOL_DC (V)	InputThreshold_Vol_dc	(Accepts user-defined text), 0.600	Identifies the dc output logic LOW voltage.
Confgure	VOLdiff_AC (V)	VOLdiff_ac	(Accepts user-defined text), -0.360	Differential output high. Affects only differential DQS only.
Confgure	VQW (V)	InputThreshold_VQW	(Accepts user-defined text), 0.0, 0.140	Identifies the voltage data input valid window for DQ Read.
Confgure	VRef A12-BC Signal(V)	InputRefV_VrefA12BCLogic	(Accepts user-defined text), NA, 0.735, 0.750, 0.765	Identifies the A12-BC reference voltage for MSOx Logic Triggering.
Confgure	VRef ACT Signal(V)	InputRefV_VrefACTLogic	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the ACT reference voltage for MSOx Logic Triggering.
Confgure	VRef CAS Signal(V)	InputRefV_VrefCASLogic	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the CAS reference voltage for MSOx Logic Triggering.
Confgure	VRef CKE Signal(V)	InputRefV_VrefCKELogic	(Accepts user-defined text), NA, 0.735, 0.750, 0.765	Identifies the CKE reference voltage for MSOx Logic Triggering.
Confgure	VRef CS Signal(V)	InputRefV_VrefCSLogic	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the CS reference voltage for MSOx Logic Triggering.
Confgure	VRef RAS Signal(V)	InputRefV_VrefRASLogic	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the RAS reference voltage for MSOx Logic Triggering.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	VRef WE Signal(V)	InputRef V_VrefWE Logic	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the WE reference voltage for MSOx Logic Triggering.
Confgure	VRefCA (V)	InputRef V_VrefCA	(Accepts user-defined text), 0.750, 0.600, 0.450	Identifies the input reference voltage for Address and Command inputs.
Confgure	VRefDQ (V)	InputRef V_VrefDQ	(Accepts user-defined text), 0.950, 0.800, 0.650	Identifies the input reference voltage for DQ and DM inputs.
Confgure	VTT (V)	InputRef V_VTT	(Accepts user-defined text), 0.950, 0.800, 0.650	Identifies the output reference voltage for data outputs.
Confgure	Vcent Evaluatio n Mode	VcentEval Mode	0, 1	Select the method of Vcent level evaluation for shifting of the tDIVW/vDIVW mask.
Confgure	VciVW (V)	InputThre shold_Vci VW	(Accepts user-defined text), 0.155	Identifies the voltage CA input valid window.
Confgure	VdiVW (V)	InputThre shold_Vd iVW	(Accepts user-defined text), 0.120, 0.140	Identifies the voltage data input valid window for DQ.
Confgure	Vref Source	Vref_Mea s_Source	1, 2, 3, 4	Identifies the source channel of the Vref Signal for Vref Measurement..
Confgure	WE Channel	WEDigCh annel	DIGital0, DIGital1, DIGital2, DIGital3, DIGital4, DIGital5, DIGital6, DIGital7, DIGital8, DIGital9, DIGital10, DIGital11, DIGital12, DIGital13, DIGital14, DIGital15	Identifies the channel source selection of the WE digital signal to be analyzed for MSOx Logic Triggering.
Confgure	WRITE Latency	WriteLate ncy	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0	This value is used ONLY when the "Rank Separation" option is enabled. This allow user to specify the overall Write latency(WL) value to be used in performing the Data Strobe Timing and Data Timing tests when the "Rank Separation" option is enabled. By definition, the Write Latency (WL) = Additive Latency (AL) + CAS Write Latency (CWL); WL = AL + CWL.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	WRITE Latency Value	WLValue	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0	This value is used ONLY when the "Rank Separation" option is enabled. This allow user to specify the overall Write latency(WL) value to be used in generating the WRITE eye diagram when the "Rank Separation" option is enabled. By definition, the Write Latency (WL) = Additive Latency (AL) + CAS Write Latency (CWL); WL = AL + CWL.
Confgure	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.
Confgure	Waveform Source	Source	1, 2, 3, 4	Identifies the source Channel of the data to be analyzed.
Confgure	Window Width	WindowSize	(Accepts user-defined text), 200	Identifies the number of periods in the main sliding window.
Confgure	Write Preamble Pattern	WritePreamblePattern	LPDDR4, DDR3, DDR2	This option is used to indicate the expected Write Preamble pattern so that the correct first edge of a burst can be identified.
Confgure	tCIVW	Window Width_tCIVW	(Accepts user-defined text), 0.300	This value multiplied with the Clock Rate is the width of the mask to measure tCIVW.
Confgure	tDIVW	Window Width_tDIVW	(Accepts user-defined text), 0.220, 0.250	This value multiplied with the UI is the width of the mask to measure tDIVW.
Confgure	tDQSCK Delay (cycle)	tDQSCKDelay	(Accepts user-defined text), 1, 2, 3, 4, 5, 6	The distance from first rising strobe to Read Latency(RL) clock edge.
Confgure	tQW	Window Width_tQW	(Accepts user-defined text), 0.700, 0.700, 0.730, 0.750	This value multiplied with the UI is the width of the mask to measure tQW.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Confgure	terr(nper) Maximum N Width Value	nper_max	(Accepts user-defined text), 50	Sets the upper bound (inclusive) of the inner sliding window for the terr(nper) series.
Confgure	terr(nper) Minimum N Width Value	nper_min	(Accepts user-defined text), 13	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
Run Tests	RunEvent =Margin < N: Minimum required margin %	RunEvent _Margin < N_MinPercent	Any integer in range: 0 <= value <= 100	Specify N using the 'Minimum required margin %' control.
Set Up	Burst Triggering Method	BurstTrig Method	DQS-DQ Phase Difference, MSOx Logic Triggering	This option allow user to select burst triggering method.
Set Up	Custom Data Rate	pcboCustomSG	(Accepts user-defined text), 1600, 1866, 2133, 2400, 2666, 3200, 4266	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	LPDDR4	chkLPDDR4	0.0, 1.0	This option allow user to select LPDDR4 SDRAM Type.
Set Up	ReadWriteOpt	ReadWriteOpt	Rd or Wrt ONLY, DQS/DQ Setup, CA1, CA2	This option allows the user to select which method is used for read/write separation
Set Up	Speed Grade	DeviceType	DDR4-1600, DDR4-1866, DDR4-2133, DDR4-2400, DDR4-2666, DDR4-3200	This option allow user to select specific speed grade.
Set Up	Speed Grade	DeviceTypeLPDDR4	LPDDR4-1600, LPDDR4-1866, LPDDR4-2133, LPDDR4-2400, LPDDR4-2666, LPDDR4-3200, LPDDR4-4266	This option allow user to select specific speed grade.
Set Up	Test Mode	AcLevels_CA	100, 110, 120	This option allow user to select test mode.
Set Up	Test Mode	AcLevels_DQ	100, 110, 120	This option allow user to select test mode.

Table 2 Configuration Variables and Values (continued)

GUI Location	Label	Variable	Values	Description
Set Up	Test Mode	TestMode	Compliance, Custom	This option allow user to select test mode.
Set Up	User Comment	txtOverall UserCom ment	(Accepts user-defined text)	This option allow user to key in related test detail.
Set Up	User Descripti on	pcboOver allDevice Descripti on	(Accepts user-defined text)	This option allow user to key in test detail.

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
CA VIHL(ac)	30403	CA VIHL(ac) voltage must meet or exceed VIHL at any time in the UI (with not time requirement above VIHL)
DQ VIHL(ac)	20408	DQ VIHL(ac) voltage must meet or exceed VIHL at any time in the UI (with not time requirement above VIHL)
DummyTestToShowDDR4Config	6	DummyTestToShowDDR4Config
DummyTestToShowDQSDQPhaseConfig1	3	DummyTestToShowDQSDQPhaseConfig1
DummyTestToShowLPDDR4Config	7	DummyTestToShowLPDDR4Config
DummyTestToShowLogicTrigConfigDDR4	5	DummyTestToShowLogicTrigConfigDDR4
Eye Diagram Test For Read Cycle	20401	User Defined Real-Time Eye Diagram Test For Read Cycle
Eye Diagram Test For Read Cycle	20405	User Defined Real-Time Eye Diagram Test For Read Cycle (MSOX version)
Eye Diagram Test For Write Cycle	20402	User Defined Real-Time Eye Diagram Test For Write Cycle
Eye Diagram Test For Write Cycle	20406	User Defined Real-Time Eye Diagram Test For Write Cycle (MSOX version)
Overshoot amplitude (Address, Control)	10351	Peak amplitude of AC overshoot
Overshoot amplitude (Address, Control)	50351	Peak amplitude of AC overshoot
Overshoot amplitude (Address, Control, Clock, Chip Select, Clock Enable)	10355	Peak amplitude of AC overshoot
Overshoot amplitude (Clock)	10359	Peak amplitude of AC overshoot
Overshoot amplitude (Clock)	50359	Peak amplitude of AC overshoot
Overshoot amplitude (Data, Strobe, Mask)	10353	Peak amplitude of AC overshoot
Overshoot amplitude (Data, Strobe, Mask)	10357	Peak amplitude of AC overshoot

Table 4 Test IDs and Names (continued)

Name	TestID	Description
Overshoot amplitude (Data, Strobe, Mask)	50353	Peak amplitude of AC overshoot
Overshoot area (Address, Control)	10352	OverShoot area above VDD
Overshoot area (Address, Control)	50352	OverShoot area above VDD
Overshoot area (Address, Control, Clock, Chip Select, Clock Enable)	10356	OverShoot area above VDDCA
Overshoot area (Clock)	10360	OverShoot area above VDDQ
Overshoot area (Clock)	50360	OverShoot area above VDDQ
Overshoot area (Data, Strobe, Mask)	10354	OverShoot area above VDDQ
Overshoot area (Data, Strobe, Mask)	10358	OverShoot area above VDDQ
Overshoot area (Data, Strobe, Mask)	50354	OverShoot area above VDDQ
Read Define	50001	This test is a setup test to define zone criteria for read/write separation - when config option set to DQS/DQ only.
SLEWf	10342	Input signal minimum falling slew rate
SLEWr	10341	Input signal minimum rising slew rate
SRIN_diVW	20409	Measures rising and falling slew rates over vDIVW
SRQdiffF	11414	Differential Output Falling Slew Rate
SRQdiffF	51414	Differential Output Falling Slew Rate
SRQdiffR	11413	Differential Output Rising Slew Rate
SRQdiffR	51413	Differential Output Rising Slew Rate
SRQseF	11342	Output signal minimum falling slew rate
SRQseF	51342	Output signal minimum falling slew rate
SRQseR	11341	Output signal minimum rising slew rate
SRQseR	51341	Output signal minimum rising slew rate
Undershoot amplitude (Address, Control)	10361	Peak amplitude of AC undershoot
Undershoot amplitude (Address, Control)	50361	Peak amplitude of AC undershoot

Table 4 Test IDs and Names (continued)

Name	TestID	Description
Undershoot amplitude (Address, Control, Clock, Chip Select, Clock Enable)	10365	Peak amplitude of AC undershoot
Undershoot amplitude (Clock)	10369	Peak amplitude of AC undershoot
Undershoot amplitude (Clock)	50369	Peak amplitude of AC undershoot
Undershoot amplitude (Data, Strobe, Mask)	10363	Peak amplitude of AC undershoot
Undershoot amplitude (Data, Strobe, Mask)	10367	Peak amplitude of AC undershoot
Undershoot amplitude (Data, Strobe, Mask)	50363	Peak amplitude of AC undershoot
Undershoot area (Address, Control)	10362	UnderShoot area below VSS
Undershoot area (Address, Control)	50362	UnderShoot area below VSS
Undershoot area (Address, Control, Clock, Chip Select, Clock Enable)	10366	UnderShoot area below VSS
Undershoot area (Clock)	10370	UnderShoot area below VSSQ
Undershoot area (Clock)	50370	UnderShoot area below VSSQ
Undershoot area (Data, Strobe, Mask)	10368	UnderShoot area below VSS
Undershoot area (Data, Strobe, Mask)	10364	UnderShoot area below VSSQ
Undershoot area (Data, Strobe, Mask)	50364	UnderShoot area below VSSQ
VIH.CA(AC)	10311	AC Input Logic High
VIH.CA(DC)	10312	DC Input Logic High
VIH.DQ(AC)	10313	AC Input Logic High
VIH.DQ(DC)	10314	DC Input Logic High
VIHdiff.CK(AC)	10411	Differential AC Input Logic High Voltage
VIHdiff.CK(AC)	50411	Differential AC Input Logic High Voltage
VIHdiff.CK(DC)	10415	Differential DC Input Logic High Voltage
VIHdiff.CK(DC)	50415	Differential DC Input Logic High Voltage
VIHdiff.DQS(AC)	10413	Differential AC Input Logic High Voltage

Table 4 Test IDs and Names (continued)

Name	TestID	Description
VIHdiff.DQS(DC)	10417	Differential DC Input Logic High Voltage
VIL.CA(AC)	10321	AC Input Logic Low
VIL.CA(DC)	10322	DC Input Logic Low
VIL.DQ(AC)	10323	AC Input Logic Low
VIL.DQ(DC)	10324	DC Input Logic Low
VILdiff.CK(AC)	10412	Differential AC Input Logic Low Voltage
VILdiff.CK(AC)	50412	Differential AC Input Logic Low Voltage
VILdiff.CK(DC)	10416	Differential DC Input Logic Low Voltage
VILdiff.CK(DC)	50416	Differential DC Input Logic Low Voltage
VILdiff.DQS(AC)	10414	Differential AC Input Logic Low Voltage
VILdiff.DQS(DC)	10418	Differential DC Input Logic Low Voltage
VIX	10380	AC differential input cross point voltage
VIX(CK)	10381	Clock Cross Point Voltage Test
VIX(DQS)	10382	Strobe Cross Point Voltage Test
VOH(AC)	11311	AC Output Logic High
VOH(AC)	51311	AC Output Logic High
VOH(DC)	11312	DC Output Logic High
VOH(DC)	51312	DC Output Logic High
VOHdiff(AC)	11411	Differential AC Output Logic High Voltage
VOHdiff(AC)	51411	Differential AC Output Logic High Voltage
VOL(AC)	11321	AC Output Logic Low
VOL(AC)	51321	AC Output Logic Low
VOL(DC)	11322	DC Output Logic Low
VOL(DC)	51322	DC Output Logic Low
VOLdiff(AC)	11412	Differential AC Output Logic Low Voltage
VOLdiff(AC)	51412	Differential AC Output Logic Low Voltage
VSEH(Clock Minus)	10337	Single-ended High Level Voltage
VSEH(Clock Minus)	50337	Single-ended High Level Voltage
VSEH(Clock Plus)	10333	Single-ended High Level Voltage
VSEH(Clock Plus)	50333	Single-ended High Level Voltage
VSEH(Strobe Minus)	10335	Single-ended High Level Voltage for Strobes Minus

Table 4 Test IDs and Names (continued)

Name	TestID	Description
VSEH(Strobe Minus)	50335	Single-ended High Level Voltage for Strobes Minus
VSEH(Strobe Plus)	10331	Single-ended High Level Voltage for Strobes Plus
VSEH(Strobe Plus)	50331	Single-ended High Level Voltage for Strobes Plus
VSEL(Clock Minus)	10338	Single-ended Low Level Voltage
VSEL(Clock Minus)	50338	Single-ended Low Level Voltage
VSEL(Clock Plus)	10334	Single-ended Low Level Voltage
VSEL(Clock Plus)	50334	Single-ended Low Level Voltage
VSEL(Strobe Minus)	10336	Single-ended Low Level Voltage for Strobes Minus
VSEL(Strobe Minus)	50336	Single-ended Low Level Voltage for Strobes Minus
VSEL(Strobe Plus)	10332	Single-ended Low Level Voltage for Strobes Plus
VSEL(Strobe Plus)	50332	Single-ended Low Level Voltage for Strobes Plus
Vix_CK_ratio	50381	Clock Cross Point Voltage Ratio Test
Vix_DQS_ratio	50382	Strobe Cross Point Voltage Ratio Test
Vref Measurement	10371	Vref Measurement
Write Define	50000	This test is a setup test to define zone criteria for read/write separation - when config option set to DQS/DQ only.
tCH Average High Measurements	2000	tCH Average High Measurements
tCH Average High Measurements	52000	tCH Average High Measurements
tCH(abs)	2001	tCH Abs High Measurements
tCIPW	30401	Command Address Input Pulse Width (Note: UI = tck(avg)min)
tCIVW	30400	Command Address Valid Window
tCK(abs) Period Rising Edge Measurements	1	tCK Period Rising Edge Measurements
tCK(abs) Rising Edge Measurements	2	tCK(abs) Rising Edge Measurements
tCK(abs) Rising Edge Measurements	50002	tCK(abs) Rising Edge Measurements
tCK(avg) Rising Edge Measurements	200	tCK(avg) Rising Edge Measurements

Table 4 Test IDs and Names (continued)

Name	TestID	Description
tCK(avg) Rising Edge Measurements	50200	tCK(avg) Rising Edge Measurements
tCKE	30206	CKE Minimum Pulse Width
tCL Average Low Measurements	2050	tCL Average LowMeasurements
tCL Average Low Measurements	52050	tCL Average LowMeasurements
tCL(abs)	2051	tCL Abs LowMeasurements
tDH(base)	30302	DQ and DM input hold time - Differential
tDH-Diff(derate)	30304	DQ and DM input hold time - Differential
tDIPW	30305	DQ and DM input pulse width
tDIPW	20410	Data Input Pulse Width
tDIVW	50403	tDIVW
tDIVW Margin	20403	tDIVW Margin
tDQS2DQ	20407	tDQS2DQ
tDQSCK	30021	DQS output access time from CK,/CK
tDQSCK	50021	DQS output access time from CK,/CK
tDQSH	30107	DQS input high pulse width
tDQSH	50107	DQS input high pulse width
tDQSL	30108	DQS input low pulse width
tDQSL	50108	DQS input low pulse width
tDQSQ	30104	DQS-DQ skew for DQS and associated DQ signals
tDQSQ	50104	DQS-DQ skew for DQS and associated DQ signals
tDQSQ_DBI	30501	DQS-DQ skew for DQS and associated DQ signals with DBI enabled
tDQSS	30106	DQS latching transition to associated clock edge
tDQSS	50106	DQS latching transition to associated clock edge
tDS(base)	30301	DQ and DM input setup time - Differential
tDS-Diff(derate)	30303	DQ and DM input setup time - Differential
tDSH	30110	DQS falling edge hold time from CK
tDSH	50110	DQS falling edge hold time from CK
tDSS	30109	DQS falling edge to CK setup time

Table 4 Test IDs and Names (continued)

Name	TestID	Description
tDSS	50109	DQS falling edge to CK setup time
tDVAC(Clock)	30022	tDVAC(Clock)
tDVAC(Strobe)	30117	tDVAC(Strobe)
tHZDQ	30101	DQ out high-impedance time from CK,/CK
tHZDQ	50101	DQ out high-impedance time from CK,/CK
tHZDQS	30118	DQS high-impedance time from CK,/CK
tHZDQS	50118	DQS high-impedance time from CK,/CK
tIH(base)	30202	Address and control input hold time
tIH(derate)	30204	Address and control input hold time
tIS(base)	30201	Address and control input setup time
tIS(derate)	30203	Address and control input setup time
tLZDQ	30102	DQ low-impedance time from CK,/CK
tLZDQ	50102	DQ low-impedance time from CK,/CK
tLZDQS	30103	DQS low-impedance time from CK,/CK
tLZDQS	50103	DQS low-impedance time from CK,/CK
tQH	30105	DQ/DQS output hold time from DQS
tQH	50105	DQ/DQS output hold time from DQS
tQH_DBI	30502	DQ/DQS output hold time from DQS with DBI enabled
tQSH	30115	DQS output high time
tQSH	50115	DQS output high time
tQSH_DBI	30503	DQS output high time with DBI enabled
tQSL	30116	DQS output low time
tQSL	50116	DQS output low time
tQSL_DBI	30504	DQS output low time with DBI enabled
tQW_total	30505	tQW_total
tQW_total_DBI	30506	tQW_total with DBI
tRPRE	30113	Read preamble
tRPRE	50113	Read preamble
tRPST	30114	Read postamble
tRPST	50114	Read postamble
tVAC(CS,CA)	30205	tVAC(CS,CA)

Table 4 Test IDs and Names (continued)

Name	TestID	Description
tVAC(Data)	30306	tVAC(Data)
tWPRE	30111	Write preamble
tWPRE	50111	Write preamble
tWPST	30112	Write postamble
tWPST	50112	Write postamble
terr(10per) Rising Edge Measurements	1200	terr(10per) Rising Edge Measurements
terr(10per) Rising Edge Measurements	51200	terr(10per) Rising Edge Measurements
terr(11per) Rising Edge Measurements	1300	terr(11per) Rising Edge Measurements
terr(11per) Rising Edge Measurements	51300	terr(11per) Rising Edge Measurements
terr(12per) Rising Edge Measurements	1400	terr(12per) Rising Edge Measurements
terr(12per) Rising Edge Measurements	51400	terr(12per) Rising Edge Measurements
terr(2per) Rising Edge Measurements	400	terr(2per) Rising Edge Measurements
terr(2per) Rising Edge Measurements	50400	terr(2per) Rising Edge Measurements
terr(3per) Rising Edge Measurements	500	terr(3per) Rising Edge Measurements
terr(3per) Rising Edge Measurements	50500	terr(3per) Rising Edge Measurements
terr(4per) Rising Edge Measurements	600	terr(4per) Rising Edge Measurements
terr(4per) Rising Edge Measurements	50600	terr(4per) Rising Edge Measurements
terr(5per) Rising Edge Measurements	700	terr(5per) Rising Edge Measurements
terr(5per) Rising Edge Measurements	50700	terr(5per) Rising Edge Measurements
terr(6per) Rising Edge Measurements	800	terr(6per) Rising Edge Measurements

Table 4 Test IDs and Names (continued)

Name	TestID	Description
terr(6per) Rising Edge Measurements	50800	terr(6per) Rising Edge Measurements
terr(7per) Rising Edge Measurements	900	terr(7per) Rising Edge Measurements
terr(7per) Rising Edge Measurements	50900	terr(7per) Rising Edge Measurements
terr(8per) Rising Edge Measurements	1000	terr(8per) Rising Edge Measurements
terr(8per) Rising Edge Measurements	51000	terr(8per) Rising Edge Measurements
terr(9per) Rising Edge Measurements	1100	terr(9per) Rising Edge Measurements
terr(9per) Rising Edge Measurements	51100	terr(9per) Rising Edge Measurements
terr(nper) Rising Edge Measurements	3000	terr(nper) Rising Edge Measurements
terr(nper) Rising Edge Measurements	53000	terr(nper) Rising Edge Measurements
tjit(CC) Rising Edge Measurements	100	tjit(CC) Rising Edge Measurements for 800MT/s
tjit(CC) Rising Edge Measurements	50100	tjit(CC) Rising Edge Measurements for 800MT/s
tjit(duty-high) Jitter Average High Measurements	2100	tjit(duty-high) Jitter Average High Measurements
tjit(duty-high) Jitter Average High Measurements	52100	tjit(duty-high) Jitter Average High Measurements
tjit(duty-low) Jitter Average Low Measurements	2150	tjitduty-low Jitter Average LowMeasurements
tjit(duty-low) Jitter Average Low Measurements	52150	tjitduty-low Jitter Average LowMeasurements
tjit(per) Rising Edge Measurements	300	tjit(per) Rising Edge Measurements
tjit(per) Rising Edge Measurements	50300	tjit(per) Rising Edge Measurements
vCIVW	30402	vCIVW
vDIVW	50404	vDIVW
vDIVW Margin	20404	vDIVW Margin

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
scope	The primary oscilloscope

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