

# Keysight D9030DDRC DDR3 Compliance Application



Programmer's  
Reference

# Notices

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### CAUTION

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## In This Book

This book is your guide to programming the Keysight Technologies D9030DDRC DDR3 Compliance Application.

- **Chapter 1**, “Introduction to Programming,” starting on page 7, describes compliance application programming basics.
- **Chapter 2**, “Configuration Variables and Values,” starting on page 9, **Chapter 3**, “Test Names and IDs,” starting on page 57, **Chapter 4**, “Instruments,” starting on page 65, and **Chapter 5**, “Message IDs,” starting on page 67 provide information specific to programming the D9030DDRC DDR3 Compliance Application.

### How to Use This Book

Programmers who are new to compliance application programming should read all of the chapters in order. Programmers who are already familiar with this may review chapters 2, 3, 4, and 5 for changes.



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# 1 Introduction to Programming

Remote Programming Toolkit / 8

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

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

You can accomplish other tasks by combining these functions.

## Remote Programming Toolkit

The majority of remote interface features are common across all the Keysight Technologies, Inc. family of compliance/test applications. Information on those features is provided in the N5452A Compliance Application Remote Programming Toolkit available for download from Keysight here: [www.keysight.com/find/rpi](http://www.keysight.com/find/rpi). The D9030DDRC DDR3 Compliance Application uses Remote Interface Revision 6.30. 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 D9030DDRC DDR3 Compliance Application options that you may query or set remotely using the appropriate remote interface method. The columns contain this information:

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

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

- Enable Advanced Features

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

**Table 1** Example Configuration Variables and Values

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

and you would set the variable remotely using:

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

```
C# syntax
```

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

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

**NOTE**

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

**NOTE**

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

**Table 2** Configuration Variables and Values

GUI Location	Label	Variable	Values	Description
Configure	A12-BC Channel	A12BCDigC hannel	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.
Configure	Base Ratio	BurstTriggerBaseRatio_Chan1	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Base Ratio	BurstTriggerBaseRatio_Chan2	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Base Ratio	BurstTriggerBaseRatio_Chan3	(Accepts user-defined text), 0.20	Specify the value of the base ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".

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

GUI Location	Label	Variable	Values	Description
Configure	Base Ratio	BurstTriggerBaseRatio_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".
Configure	Burst Clock Minimum Transition	MinClockCycles	(Accepts user-defined text), 202	This value is set when burst clock is selected. This value is used to set the number of clock transitions 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.
Configure	Burst Length Stimulus Mode	BurstLengthStimulusMode	FixedBurstLength, A12BCOnTheFly	This configuration for the selection of burst length stimulus mode. For "Fixed Burst Length" selection, application will assume all the burst occurrence 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.
Configure	CAS Channel	CASDigChannel	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.
Configure	CKE Channel	CKEDigChannel	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.
Configure	CS Channel	CSDigChannel	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
Configure	Clock - Continuous or Burst	ContOBurst	Continuous, Burst	This option is to select if the Clock signal is continuous or Bursted.
Configure	Clocking Method	ClockingMethod	1, 2, 3, 4	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 DDR3 tIS and tIS(derate) tests.
Configure	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.
Configure	Derated Limit Method	DeratedLimitMethod	0, 1	This option is used to select the method to determine the derating values used in calculation of the dynamic test limit for tests that support derating [tDS-Diff(derate),tDH-Diff(derate ),tIS(derate),tIH(derate)]. When the "Nominal Method" option is selected, the nominal slew rates of the relevant test signals(DQ or ADD/CMD) will be used to determine the derating value. Otherwise if "Tangent Method" option is selected, the slew rates of a tangent line to the actual test signals(DQ or ADD/CMD) will be used to determine the derating value instead.

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

GUI Location	Label	Variable	Values	Description
Configure	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.
Configure	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.
Configure	Eye Diagram Display Style	EyeDiagramDisplayStyleOpt	EyeDispWithoutDQS, EyeDispWithDQS	Select the Display Style For Eye Diagram Test
Configure	Fixed Burst Length	FixBurstLength	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.

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

GUI Location	Label	Variable	Values	Description
Configure	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.
Configure	Histogram of Measurement Mode	HistogramMeasurementMode	true, false	Enable/disable the histogram of measurement mode. When this option is enabled, App will present a diagram of histogram to show the graphical distribution of measurement result. This diagram will be merged into screenshot image.
Configure	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".
Configure	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".
Configure	Lower Threshold (V)	Chan3_Low_Thresh	(Accepts user-defined text), 0.55	Specify the lower measurement threshold used for Channel 3. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Lower Threshold (V)	Chan4_Low_Thresh	(Accepts user-defined text), 0.55	Specify the lower measurement threshold used for Channel 4. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Mark Worst Case Cycles	MarkWorstCaseCycles	true, false	Places markers around the worst case cycles (test-dependent). Slows runtime performance.

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

GUI Location	Label	Variable	Values	Description
Configure	Max Measurement Count	MaxNumOfEdgeCount	(Accepts user-defined text), 1, 10, 100, 1000	Determine the maximum number of measurement edge count (including both rising and falling edges of the selected Command and Address signal) that the app will use when performing the Command and Address Timing Tests(tIS, tIH, etc)
Configure	Middle Threshold (V)	Chan1_Mid_Thresh	(Accepts user-defined text), 0.00	Specify the middle measurement threshold used for Channel 1. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Middle Threshold (V)	Chan2_Mid_Thresh	(Accepts user-defined text), 0.00	Specify the middle measurement threshold used for Channel 2. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Middle Threshold (V)	Chan3_Mid_Thresh	(Accepts user-defined text), 0.75	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".
Configure	Middle Threshold (V)	Chan4_Mid_Thresh	(Accepts user-defined text), 0.75	Specify the middle measurement threshold used for Channel 4. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Multi Burst Count	MultiBurstCount	(Accepts user-defined text), 1, 10, 100, 1000	Determine the number of READ/WRITE measurement burst(s) that is required when performing the tests. *Note: This option is applicable to all READ /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.

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

GUI Location	Label	Variable	Values	Description
Configure	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 burst 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.
Configure	OfflineData Mode(Must be hidden)	OfflineData Mode	(Accepts user-defined text), 0.0, 1.0	For supporting offline
Configure	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.
Configure	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, 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 "Rank Separation" option is enabled. This allows the 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.
Configure	Sampling Points (Pts) Electrical and Timing Tests Only	SamplingPoints	(Accepts user-defined text), 20000000, 2000000, 1000000, 500000	Specifies the sampling points to be captured in all the tests except Clock Timing tests and Eye Diagram tests. Reduce the sampling points if the read/write bursts are occurring very frequently.

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

GUI Location	Label	Variable	Values	Description
Configure	Sampling Points (Pts) Eye Diagram Tests using MSOx Logic Triggering	SamplingPointsLynxEyeDiagram	(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 occurring very frequently.
Configure	Sampling Rate (GSa/s)	SamplingRate	MAX, 80, 40, 20, 10, 128, 64, 32, 16, 8	Specifies the sampling rate for the signal acquisition of all tests except Vref Signal Tests(VREF(DC) Measurement and VREF(AC) Measurement). If the selected sampling rate is higher than oscilloscope capability, application will set maximum sampling rate during runtime.
Configure	Threshold Mode	ThreshSetMode	1, 0	By selecting "TopBaseRatio", the system will automatically determine the threshold settings that are used for the READ/WRITE burst triggering and identification using the TopRatio and BaseRatio specified for a particular channel input. Setting "Custom Threshold" allows user to directly set the threshold settings used instead.
Configure	Top Ratio	BurstTriggerTopRatio_Channel1	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Top Ratio	BurstTriggerTopRatio_Channel2	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".

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

GUI Location	Label	Variable	Values	Description
Configure	Top Ratio	BurstTriggerTopRatio_Channel3	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	Top Ratio	BurstTriggerTopRatio_Channel4	(Accepts user-defined text), 0.80	Specify the value of the top ratio used when triggering for the READ/WRITE burst data. The value set here is applicable ONLY when the "Threshold Mode" option is set to "TopBaseRatio".
Configure	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.
Configure	Trigger timeout (ms)	TimeOut_Compliance	(Accepts user-defined text), 5000, 10000, 15000, 20000, 30000	Identifies the trigger time out value. This represent the time taken to terminate the test when the scope unable to trigger any signal.
Configure	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.

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

GUI Location	Label	Variable	Values	Description
Configure	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.
Configure	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".
Configure	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".
Configure	Upper Threshold (V)	Chan3_Up_Thresh	(Accepts user-defined text), 0.95	Specify the upper measurement threshold used for Channel 3. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	Upper Threshold (V)	Chan4_Up_Thresh	(Accepts user-defined text), 0.95	Specify the upper measurement threshold used for Channel 4. The value set here is applicable ONLY when the "Threshold Mode" option is set to "Custom Threshold".
Configure	VDD (V)	InputVDD	(Accepts user-defined text), 1.575, 1.500, 1.425	Identifies the input supply voltage.
Configure	VDDCA (V)	InputVDDC_A	(Accepts user-defined text), 1.575, 1.500, 1.425	Identifies the input supply voltage for command address signal.

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

GUI Location	Label	Variable	Values	Description
Configure	VDDQ (V)	InputVDDQ	(Accepts user-defined text), 1.575, 1.500, 1.425	Identifies the input supply voltage for data signal.
Configure	VIH.CA_AC (V)	InputThreshold_Vih_ac_CA	(Accepts user-defined text), 0.925	Identifies the ac input logic HIGH voltage for Address and Command inputs.
Configure	VIH.CA_DC (V)	InputThreshold_Vih_dc_CA	(Accepts user-defined text), 0.85	Identifies the dc input logic HIGH voltage for Address and Command inputs.
Configure	VIH.DQ_AC (V)	InputThreshold_Vih_ac_DQ	(Accepts user-defined text), 0.925	Identifies the ac input logic HIGH voltage for DQ and DM inputs.
Configure	VIH.DQ_DC (V)	InputThreshold_Vih_dc_DQ	(Accepts user-defined text), 0.85	Identifies the dc input logic HIGH voltage for DQ and DM inputs.
Configure	VIHdiff.CK_AC (V)	VIHdiff_ac_CK	(Accepts user-defined text), 0.5	Differential input high. Affects only differential CK only.
Configure	VIHdiff.DQS_AC (V)	VIHdiff_ac_DQS	(Accepts user-defined text), 0.5	Differential input high. Affects only differential DQS only.
Configure	VIHdiff_min /VIHdiff_DC (V)	VIHdiff_min	(Accepts user-defined text), 0.2	Minimum differential input high. This value is used solely to define a differential signal slew rate. Affects only differential DQS and CK.
Configure	VIL.CA_AC (V)	InputThreshold_Vil_ac_CA	(Accepts user-defined text), 0.575	Identifies the ac input logic LOW voltage for Address and Command inputs.
Configure	VIL.CA_DC (V)	InputThreshold_Vil_dc_CA	(Accepts user-defined text), 0.65	Identifies the dc input logic LOW voltage for Address and Command inputs.
Configure	VIL.DQ_AC (V)	InputThreshold_Vil_ac_DQ	(Accepts user-defined text), 0.575	Identifies the ac input logic LOW voltage for DQ and DM inputs.
Configure	VIL.DQ_DC (V)	InputThreshold_Vil_dc_DQ	(Accepts user-defined text), 0.65	Identifies the dc input logic LOW voltage for DQ and DM inputs.
Configure	VILDiff.CK_AC (V)	VILDiff_ac_CK	(Accepts user-defined text), -0.5	Differential input high. Affects only differential CK only.
Configure	VILDiff.DQS_AC (V)	VILDiff_ac_DQS	(Accepts user-defined text), -0.5	Differential input high. Affects only differential DQS only.

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

GUI Location	Label	Variable	Values	Description
Configure	VILdiff_max /VILdiff_DC (V)	VILdiff_max	(Accepts user-defined text), -0.2	Maximum differential input low. This value is used solely to define a differential signal slew rate. Affects only differential DQS and CK.
Configure	VOH_AC (V)	InputThresh old_Voh_ac	(Accepts user-defined text), 0.90	Identifies the ac output logic HIGH voltage.
Configure	VOH_DC (V)	InputThresh old_Voh_dc	(Accepts user-defined text), 1.20	Identifies the dc output logic HIGH voltage.
Configure	VOHdiff_AC (V)	VOHdiff_ac	(Accepts user-defined text), 0.30	Differential output high. Affects only differential DQS only.
Configure	VOL_AC (V)	InputThresh old_Vol_ac	(Accepts user-defined text), 0.60	Identifies the ac output logic LOW voltage.
Configure	VOL_DC (V)	InputThresh old_Vol_dc	(Accepts user-defined text), 0.30	Identifies the dc output logic LOW voltage.
Configure	VOLDiff_AC (V)	VOLDiff_ac	(Accepts user-defined text), -0.30	Differential output high. Affects only differential DQS only.
Configure	VRef DQS Diff(V)	InputRefV_V refDQSdiff MSO	(Accepts user-defined text), 0	This configuration only applicable for MSOx Logic Triggering.
Configure	VRef DQS Minus(V)	InputRefV_V refDQSminusMSO	(Accepts user-defined text), 0.75	This configuration only applicable for MSOx Logic Triggering.
Configure	VRef DQS Plus(V)	InputRefV_V refDQSplusMSO	(Accepts user-defined text), 0.75	This configuration only applicable for MSOx Logic Triggering.
Configure	VRef Digital Signal(V)	InputRefV_V refDigitalSignal	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies all Digital reference voltage for MSOx Logic Triggering.
Configure	VRefCA (V)	InputRefV_V refCA	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the input reference voltage for Address and Command inputs.
Configure	VRefDQ (V)	InputRefV_V refDQ	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the input reference voltage for DQ and DM inputs.
Configure	VTT (V)	InputRefV_V TT	(Accepts user-defined text), 0.735, 0.750, 0.765	Identifies the output reference voltage for data outputs.

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

GUI Location	Label	Variable	Values	Description
Configure	WE Channel	WEDigChannel	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.
Configure	WRITE Latency	WriteLatency	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 "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.
Configure	Waveform File Type	WfmFileType	.wfm, .h5	By selecting ".wfm", the application will save the waveform in wfm format for measurement. While selecting ".h5", the application will save the waveform in h5 format for measurement.
Configure	Window Width	WindowSize	(Accepts user-defined text), 200	Identifies the number of periods in the main sliding window.
Configure	Write Preamble Pattern	WritePreamblePattern	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.
Configure	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.
Configure	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.
Configure	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.

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

GUI Location	Label	Variable	Values	Description
Run Tests	Event	RunEvent	(None), Fail, Margin < N, Pass	Names of events that can be used with the StoreMode=Event or RunUntil RunEventAction options
Run Tests	RunEvent=Margin < N: Minimum required margin %	RunEvent_Margin < N_MinPercent	Any integer in range: 0 <= value <= 99	Specify N using the 'Minimum required margin %' control.
Set Up	AC Level (DQ)	AcLevels_CA	125, 135, 150, 160, 175	This option allow user to select AC level (CA).
Set Up	AC Level (DQ)	AcLevels_DQ	130, 135, 150, 160, 175	This option allow user to select AC level (DQ).
Set Up	Burst Triggering Method	BurstTrigMethod	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), 800, 1066, 1333, 1600, 1866, 2133	This option allow user to key in specific data rate.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 1 Chan1	COMCONConnection1_Chан1_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 1 Chan2	COMCONConnection1_Chан2_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 1 Chan3	COMCONConnection1_Chан3_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 1 Chan4	COMCONConnection1_Chан4_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 2 Chan1	COMCONConnection2_Chан1_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 2 Chan2	COMCONConnection2_Chан2_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 2 Chan3	COMCONConnection2_Chан3_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 2 Chan4	COMCONConnection2_Chан4_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 3 Chan1	COMCONConnection3_Chан1_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 3 Chan2	COMCONConnection3_Chан2_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 3 Chan3	COMCONConnection3_Chан3_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 3 Chan4	COMCONConnection3_Chан4_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 4 Chan1	COMCONConnection4_Chан1_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 4 Chan2	COMCONConnection4_Chан2_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 4 Chan3	COMCONConnection4_Chан3_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 4 Chan4	COMCONConnection4_Chан4_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 5 Chan1	COMCONConnection5_Chан1_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 5 Chan2	COMCONConnection5_Chан2_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 5 Chan3	COMCONConnection5_Chан3_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	DDR3 COMCON Connection 5 Chan4	COMCONConnection5_Chан4_DDR3	Not_In_Use, CK0, /CK0, CK1, /CK1, CK2, /CK2, CK0, Gnd, CK1, Gnd, CK2, Gnd, /CK0, Gnd, /CK1, Gnd, /CK2, Gnd, DQS0, /DQS0, DQS1, /DQS1, DQS2, /DQS2, DQS3, /DQS3, DQS4, /DQS4, DQS5, /DQS5, DQS6, /DQS6, DQS7, /DQS7, DQS8, /DQS8, DQS0, Gnd, DQS1, Gnd, DQS2, Gnd, DQS3, Gnd, DQS4, Gnd, DQS5, Gnd, DQS6, Gnd, DQS7, Gnd, DQS8, Gnd, /DQS0, Gnd, /DQS1, Gnd, /DQS2, Gnd, /DQS3, Gnd, /DQS4, Gnd, /DQS5, Gnd, /DQS6, Gnd, /DQS7, Gnd, /DQS8, Gnd, DQ0, Gnd, DQ1, Gnd, DQ2, Gnd, DQ3, Gnd, DQ4, Gnd, DQ5, Gnd, DQ6, Gnd, DQ7, Gnd, DQ8, Gnd, DQ9, Gnd, DQ10, Gnd, DQ11, Gnd, DQ12, Gnd, DQ13, Gnd, DQ14, Gnd, DQ15, Gnd, DQ16, Gnd, DQ17, Gnd, DQ18, Gnd, DQ19, Gnd, DQ20, Gnd, DQ21, Gnd, DQ22, Gnd, DQ23, Gnd, DQ24, Gnd, DQ25, Gnd, DQ26, Gnd, DQ27, Gnd, DQ28, Gnd, DQ29, Gnd, DQ30, Gnd, DQ31, Gnd, DQ32, Gnd, DQ33, Gnd, DQ34, Gnd, DQ35, Gnd, DQ36, Gnd, DQ37, Gnd, DQ38, Gnd, DQ39, Gnd, DQ40, Gnd, DQ41, Gnd, DQ42, Gnd, DQ43, Gnd, DQ44, Gnd, DQ45, Gnd, DQ46, Gnd, DQ47, Gnd, DQ48, Gnd, DQ49, Gnd, DQ50, Gnd, DQ51, Gnd, DQ52, Gnd, DQ53, Gnd, DQ54, Gnd, DQ55, Gnd, DQ56, Gnd, DQ57, Gnd, DQ58, Gnd, DQ59, Gnd, DQ60, Gnd, DQ61, Gnd, DQ62, Gnd, DQ63, Gnd, DQ64, Gnd, DQ65, Gnd, DQ66, Gnd, DQ67, Gnd, DQ68, Gnd, DQ69, Gnd, DQ70, Gnd, DQ71, Gnd, DM0, Gnd, DM1, Gnd, DM2, Gnd, DM3, Gnd, DM4, Gnd, DM5, Gnd, DM6, Gnd, DM7, Gnd, /CS0, Gnd, /CS1, Gnd, BA0, Gnd, BA1, Gnd, BA2, Gnd, /RAS, Gnd, /WE, Gnd, /CAS, Gnd, CKE0, Gnd, CKE1, Gnd, ODT0, Gnd, ODT1, Gnd, A0, Gnd, A1, Gnd, A2, Gnd, A3, Gnd, A4, Gnd, A5, Gnd, A6, Gnd, A7, Gnd, A8, Gnd, A9, Gnd, A10, Gnd, A11, Gnd, A12, Gnd, A13, Gnd, A14, Gnd, A15, Gnd	This option allow user to signal for common connection.
Set Up	Device ID	pcboOverallDeviceID	(Accepts user-defined text)	This option allow user to key in related test details.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 1 Chan1	COMCONConnection1_Chан1_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 1 Chan2	COMCONConnection1_Chан2_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 1 Chan3	COMCONConnection1_Chан3_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 1 Chan4	COMCONConnection1_Chан4_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 2 Chan1	COMCONConnection2_Chан1_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 2 Chan2	COMCONConnection2_Chан2_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 2 Chan3	COMCONConnection2_Chан3_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 2 Chan4	COMCONConnection2_Chан4_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 3 Chan1	COMCONConnection3_Chан1_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 3 Chan2	COMCONConnection3_Chан2_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 3 Chan3	COMCONConnection3_Chан3_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 3 Chan4	COMCONConnection3_Chан4_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 4 Chan1	COMCONConnection4_Chан1_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 4 Chan2	COMCONConnection4_Chан2_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 4 Chan3	COMCONConnection4_Chан3_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 4 Chan4	COMCONConnection4_Chан4_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 5 Chan1	COMCONConnection5_Chан1_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 5 Chan2	COMCONConnection5_Chан2_LPD DR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	LPDDR3 COMCON Connection 5 Chan3	COMCONConnection5_Chан3_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LPDDR3 COMCON Connection 5 Chan4	COMCONConnection5_Chан4_LPDDR3	NOT_IN_USE, CK_t, CK_c, CK_t, GND, CK_c, GND, DQS0_t, DQS0_c, DQS1_t, DQS1_c, DQS2_t, DQS2_c, DQS3_t, DQS3_c, DQS0_t, GND, DQS1_t, GND, DQS2_t, GND, DQS3_t, GND, DQS0_c, GND, DQS1_c, GND, DQS2_c, GND, DQS3_c, GND, DQ0, GND, DQ1, GND, DQ2, GND, DQ3, GND, DQ4, GND, DQ5, GND, DQ6, GND, DQ7, GND, DQ8, GND, DQ9, GND, DQ10, GND, DQ11, GND, DQ12, GND, DQ13, GND, DQ14, GND, DQ15, GND, DQ16, GND, DQ17, GND, DQ18, GND, DQ19, GND, DQ20, GND, DQ21, GND, DQ22, GND, DQ23, GND, DQ24, GND, DQ25, GND, DQ26, GND, DQ27, GND, DQ28, GND, DQ29, GND, DQ30, GND, DQ31, GND, DM0, GND, DM1, GND, DM2, GND, DM3, GND, CS_n, GND, CKE, GND, CA0, GND, CA1, GND, CA2, GND, CA3, GND, CA4, GND, CA5, GND, CA6, GND, CA7, GND, CA8, GND, CA9, GND	This option allow user to signal for common connection.
Set Up	LiveSignal or Offline	LiveSignalOrOfflineVar	Offline	This option allow user to select either LiveSignal or Offline.
Set Up	NumberOfConnectionRowInComCon	NumberOfConnectionRowInComCon	(Accepts user-defined text)	This to allow user to key in the NumberOfConnectionRow in common Connection.

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

GUI Location	Label	Variable	Values	Description
Set Up	OfflineChipSelectFilePath	OfflineChipSelectFilePath	(Accepts user-defined text)	This to allow user to key in the offline ChipSelect file path.
Set Up	OfflineClockFilePath	OfflineClockFilePath	(Accepts user-defined text)	This to allow user to key in the offline Clock file path.
Set Up	OfflineClockMinusFilePath	OfflineClockMinusFilePath	(Accepts user-defined text)	This to allow user to key in the offline ClockMinus file path.
Set Up	OfflineClockPlusFilePath	OfflineClockPlusFilePath	(Accepts user-defined text)	This to allow user to key in the offline ClockPlus file path.
Set Up	OfflineCommandAddressFilePath	OfflineCommandAddressFilePath	(Accepts user-defined text)	This to allow user to key in the offline CommandAddress file path.
Set Up	OfflineDQSDiffFilePath	OfflineDQSDiffFilePath	(Accepts user-defined text)	This to allow user to key in the offline DQSDiff file path.
Set Up	OfflineDQSMinusFilePath	OfflineDQSMinusFilePath	(Accepts user-defined text)	This to allow user to key in the offline DQSMinus file path.
Set Up	OfflineDQSPlusFilePath	OfflineDQSPlusFilePath	(Accepts user-defined text)	This to allow user to key in the offline DQSPlus file path.
Set Up	OfflineDataFilePath	OfflineDataFilePath	(Accepts user-defined text)	This to allow user to key in the offline Data file path.
Set Up	OfflineDataMaskFilePath	OfflineDataMaskFilePath	(Accepts user-defined text)	This to allow user to key in the offline DataMask file path.
Set Up	OfflineDigitalFilePath	OfflineDigitalFilePath	(Accepts user-defined text)	This to allow user to key in the offline Digital file path.
Set Up	Speed Grade	DeviceType	DDR3-800, DDR3-1066, DDR3-1333, DDR3-1600, DDR3-1866, DDR3-2133	This option allow user to select specific speed grade.
Set Up	Speed Grade	DeviceType LPDDR3	LPDDR3-1333, LPDDR3-1600, LPDDR3-1866, LPDDR3-2133	This option allow user to select specific speed grade.
Set Up	Speed Grade	DeviceType LowPower	DDR3L-800, DDR3L-1066, DDR3L-1333, DDR3L-1600, DDR3L-1866	This option allow user to select specific speed grade.
Set Up	Test Mode	TestMode	Compliance, Custom	This option allow user to select test mode.

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

GUI Location	Label	Variable	Values	Description
Set Up	User Comment	txtOverallUserComment	(Accepts user-defined text)	This option allow user to key in related test detail.
Set Up	User Description	pcboOverallDeviceDescription	(Accepts user-defined text)	This option allow user to key in test detail.

## 2 Configuration Variables and Values

## 3 Test Names and IDs

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

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

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

- All Tests
  - Rise Time
  - Fall Time

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

**Table 3** Example Test Names and IDs

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

and you would run these tests remotely using:

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

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

Here are the actual Test names and IDs used by this application. Listed at the end, you may also find:

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

**NOTE**

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

**Table 4** Test IDs and Names

Name	TestId	Description
DummyTestToShowDQSDQPhaseConfig1	3	DummyTestToShowDQSDQPhaseConfig1
DummyTestToShowDQSDQPhaseConfig2	4	DummyTestToShowDQSDQPhaseConfig2
DummyTestToShowLogicTrigConfig	5	DummyTestToShowLogicTrigConfig
Eye Diagram for Command Address	30220	Eye Diagram for Command Address
EyeDiagram Test For Read Cycle	20405	User Defined Real-Time EyeDiagram Test For Read Cycle
EyeDiagram Test For Write Cycle	20406	User Defined Real-Time EyeDiagram Test For Write Cycle
Overshoot Amplitude (Clock Minus)	103505	Peak amplitude of AC overshoot
Overshoot Amplitude (Clock Plus)	103501	Peak amplitude of AC overshoot
Overshoot Amplitude (Command,Address)	103525	Peak amplitude of AC overshoot
Overshoot Amplitude (Strobe Minus)	103513	Peak amplitude of AC overshoot
Overshoot Amplitude (Strobe Plus)	103509	Peak amplitude of AC overshoot
Overshoot Area (Clock Minus)	103506	OverShoot area above VDDQ/VDDCA
Overshoot Area (Clock Plus)	103502	OverShoot area above VDDQ/VDDCA
Overshoot Area (Command,Address)	103526	OverShoot area above VDD/VDDCA
Overshoot Area (Strobe Minus)	103514	OverShoot area above VDDQ
Overshoot Area (Strobe Plus)	103510	OverShoot area above VDDQ
Overshoot amplitude (Chip Select)	103529	Peak amplitude of AC overshoot
Overshoot amplitude (Clock Enable)	103533	Peak amplitude of AC overshoot
Overshoot amplitude (Data Mask)	103521	Peak amplitude of AC overshoot
Overshoot amplitude (Data)	103517	Peak amplitude of AC overshoot
Overshoot area (Chip Select)	103530	OverShoot area above VDD/VDDCA

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

Name	TestId	Description
Overshoot area (Clock Enable)	103534	OverShoot area above VDD/VDDCA
Overshoot area (Data Mask)	103522	OverShoot area above VDDQ
Overshoot area (Data)	103518	OverShoot area above VDDQ
SRQdiffF	11414	Differential Output Falling Slew Rate
SRQdiffR	11413	Differential Output Rising Slew Rate
SRQseF	11342	Output signal minimum falling slew rate
SRQseR	11341	Output signal minimum rising slew rate
SlewF(Clock Minus) on Hold Region	103418	Input signal minimum falling slew rate
SlewF(Clock Minus) on Setup Region	103404	Input signal minimum falling slew rate
SlewF(Clock Plus) on Hold Region	103416	Input signal minimum falling slew rate
SlewF(Clock Plus) on Setup Region	103402	Input signal minimum falling slew rate
SlewF(Command,Address) on Hold Region	103428	Input signal minimum falling slew rate
SlewF(Command,Address) on Setup Region	103414	Input signal minimum falling slew rate
SlewF(Data Mask) on Hold Region	103426	Input signal minimum falling slew rate
SlewF(Data Mask) on Setup Region	103412	Input signal minimum falling slew rate
SlewF(Data) on Hold Region	103424	Input signal minimum falling slew rate
SlewF(Data) on Setup Region	103410	Input signal minimum falling slew rate
SlewF(Strobe Minus) on Hold Region	103422	Input signal minimum falling slew rate
SlewF(Strobe Minus) on Setup Region	103408	Input signal minimum falling slew rate
SlewF(Strobe Plus) on Hold Region	103420	Input signal minimum falling slew rate
SlewF(Strobe Plus) on Setup Region	103406	Input signal minimum falling slew rate
SlewR(Clock Minus) on Hold Region	103417	Input signal minimum rising slew rate
SlewR(Clock Minus) on Setup Region	103403	Input signal minimum rising slew rate
SlewR(Clock Plus) on Hold Region	103415	Input signal minimum rising slew rate
SlewR(Clock Plus) on Setup Region	103401	Input signal minimum rising slew rate
SlewR(Command,Address) on Hold Region	103427	Input signal minimum rising slew rate
SlewR(Command,Address) on Setup Region	103413	Input signal minimum rising slew rate
SlewR(Data Mask) on Hold Region	103425	Input signal minimum rising slew rate

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

Name	TestID	Description
Slewr(Data Mask) on Setup Region	103411	Input signal minimum rising slew rate
Slewr(Data) on Hold Region	103423	Input signal minimum rising slew rate
Slewr(Data) on Setup Region	103409	Input signal minimum rising slew rate
Slewr(Strobe Minus) on Hold Region	103421	Input signal minimum rising slew rate
Slewr(Strobe Minus) on Setup Region	103407	Input signal minimum rising slew rate
Slewr(Strobe Plus) on Hold Region	103419	Input signal minimum rising slew rate
Slewr(Strobe Plus) on Setup Region	103405	Input signal minimum rising slew rate
Undershoot Amplitude (Clock Minus)	103507	Peak amplitude of AC undershoot
Undershoot Amplitude (Clock Plus)	103503	Peak amplitude of AC undershoot
Undershoot Amplitude (Command,Address)	103527	Peak amplitude of AC undershoot
Undershoot Amplitude (Strobe Minus)	103515	Peak amplitude of AC undershoot
Undershoot Amplitude (Strobe Plus)	103511	Peak amplitude of AC undershoot
Undershoot Area (Clock Minus)	103508	UnderShoot area below VSS/VSSCA
Undershoot Area (Clock Plus)	103504	UnderShoot area below VSS/VSSCA
Undershoot Area (Command,Address)	103528	UnderShoot area below VSS/VSSCA
Undershoot Area (Strobe Minus)	103516	UnderShoot area below VSSQ
Undershoot Area (Strobe Plus)	103512	UnderShoot area below VSSQ
Undershoot amplitude (Chip Select)	103531	Peak amplitude of AC undershoot
Undershoot amplitude (Clock Enable)	103535	Peak amplitude of AC undershoot
Undershoot amplitude (Data Mask)	103523	Peak amplitude of AC undershoot
Undershoot amplitude (Data)	103519	Peak amplitude of AC undershoot
Undershoot area (Chip Select)	103532	UnderShoot area below VSS/VSSCA
Undershoot area (Clock Enable)	103536	UnderShoot area below VSS/VSSCA
Undershoot area (Data Mask)	103524	UnderShoot area below VSSQ
Undershoot area (Data)	103520	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(AC)	10315	AC Input Logic High
VIH.DQ(DC)	10314	DC Input Logic High

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

Name	TestId	Description
VIH.DQ(DC)	10316	DC Input Logic High
VIHdiff.CK	10419	Differential Input Logic High Voltage
VIHdiff.CK(AC)	10411	Differential AC Input Logic High Voltage
VIHdiff.CK(DC)	10415	Differential DC Input Logic High Voltage
VIHdiff.DQS	10421	Differential Input Logic High Voltage
VIHdiff.DQS(AC)	10413	Differential AC Input Logic High Voltage
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(AC)	10325	AC Input Logic Low
VIL.DQ(DC)	10324	DC Input Logic Low
VIL.DQ(DC)	10326	DC Input Logic Low
VILdiff.CK	10420	Differential Input Logic Low Voltage
VILdiff.CK(AC)	10412	Differential AC Input Logic Low Voltage
VILdiff.CK(DC)	10416	Differential DC Input Logic Low Voltage
VILdiff.DQS	10422	Differential 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 for Clock	10383	AC differential input cross point voltage(Clock)
VIX for Strobe	10380	AC differential input cross point voltage(Strobe)
VIXCA	10381	Clock Cross Point Voltage Test
VIXDQ	10382	Strobe Cross Point Voltage Test
VOH(AC)	11311	AC Output Logic High
VOH(DC)	11312	DC Output Logic High
VOHdiff(AC)	11411	Differential AC Output Logic High Voltage
VOL(AC)	11321	AC Output Logic Low
VOL(DC)	11322	DC Output Logic Low
VOLDiff(AC)	11412	Differential AC Output Logic Low Voltage
VSEH(Clock Minus)	10377	Single-ended High Level Voltage for Clock Minus
VSEH(Clock Plus)	10375	Single-ended High Level Voltage for Clock Plus

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

Name	TestID	Description
VSEH(Strobes Minus)	10373	Single-ended High Level Voltage for Strobes Minus
VSEH(Strobes Plus)	10371	Single-ended High Level Voltage for Strobes Plus
VSEL(Clock Minus)	10378	Single-ended Low Level Voltage for Clock Minus
VSEL(Clock Plus)	10376	Single-ended Low Level Voltage for Clock Plus
VSEL(Strobes Minus)	10374	Single-ended Low Level Voltage for Strobes Minus
VSEL(Strobes Plus)	10372	Single-ended Low Level Voltage for Strobes Plus
tCH Average High Measurements	2000	tCH Average High Measurements
tCH(abs) Absolute clock HIGH pulse width	2200	tCH(abs) Absolute clock HIGH pulse width
tCK(abs) Period Rising Edge Measurements	1	tCK Period Rising Edge Measurements
tCK(abs) Rising Edge Measurements	2	tCK(abs) Rising Edge Measurements
tCK(avg) Rising Edge Measurements	200	tCK(avg) Rising Edge Measurements
tCKE	30206	CKE Minimum Pulse Width
tCL Average Low Measurements	2050	tCL Average LowMeasurements
tCL(abs) Absolute clock LOW pulse width	2250	tCL(abs) Absolute clock LOW pulse width
tDH(base)	30302	DQ and DM input hold time - Differential
tDH(base)	30308	DQ and DM input hold time - Differential
tDH-Diff(derate)	30304	DQ and DM input hold time - Differential
tDH-Diff(derate)	30310	DQ and DM input hold time - Differential
tDIPW	30305	DQ and DM input pulse width
tDIPW	30311	DQ and DM input pulse width
tDQSCK	30021	DQS output access time from CK,/CK
tDQSH	30107	DQS input high pulse width
tDQSL	30108	DQS input low pulse width
tDQSQ	30104	DQS-DQ skew for DQS and associated DQ signals
tDQSS	30106	DQS latching transition to associated clock edge
tDS(base)	30301	DQ and DM input setup time - Differential
tDS(base)	30307	DQ and DM input setup time - Differential
tDS-Diff(derate)	30303	DQ and DM input setup time - Differential
tDS-Diff(derate)	30309	DQ and DM input setup time - Differential

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

Name	TestID	Description
tDSH	30110	DQS falling edge hold time from CK
tDSS	30109	DQS falling edge to CK setup time
tDVAC(Clock)	30022	tDVAC(Clock)
tDVAC(Strobe)	30117	tDVAC(Strobe)
tHZDQ	30101	DQ out high-impedance time from CK,/CK
tHZDQS	30118	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
tIHCA(base)	30212	Address and control input hold time
tIHCA(derate)	30216	Address and control input hold time
tIHCKE	30219	CKE input hold time
tIHCS(base)	30213	CS_n input hold time
tIHCS(derate)	30217	CS_n input hold time
tIPW	30207	tIPW
tIPWCA	30208	tIPWCA
tIPWCS	30209	tIPWCS
tIS(base)	30201	Address and control input setup time
tIS(derate)	30203	Address and control input setup time
tISCA(base)	30210	Address and control input setup time
tISCA(derate)	30214	Address and control input setup time
tISCKE	30218	CKE input setup time
tISCS(base)	30211	CS_n input setup time
tISCS(derate)	30215	CS_n input setup time
tLZDQ	30102	DQ low-impedance time from CK,/CK
tLZDQS	30103	DQS low-impedance time from CK,/CK
tQH	30105	DQ/DQS output hold time from DQS
tQSH	30115	DQS output high time
tQLS	30116	DQS output low time
tRPRE	30113	Read preamble
tRPST	30114	Read postamble
tVAC(Command,Address)	30205	tVAC(Command,Address)

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

Name	TestID	Description
tVAC(Data Mask)	30312	tVAC(Data Mask)
tVAC(Data)	30306	tVAC(Data)
tWPRE	30111	Write preamble
tWPST	30112	Write postamble
terr(10per) Rising Edge Measurements	1200	terr(10per) Rising Edge Measurements
terr(11per) Rising Edge Measurements	1300	terr(11per) Rising Edge Measurements
terr(12per) Rising Edge Measurements	1400	terr(12per) Rising Edge Measurements
terr(2per) Rising Edge Measurements	400	terr(2per) Rising Edge Measurements
terr(3per) Rising Edge Measurements	500	terr(3per) Rising Edge Measurements
terr(4per) Rising Edge Measurements	600	terr(4per) Rising Edge Measurements
terr(5per) Rising Edge Measurements	700	terr(5per) Rising Edge Measurements
terr(6per) Rising Edge Measurements	800	terr(6per) Rising Edge Measurements
terr(7per) Rising Edge Measurements	900	terr(7per) Rising Edge Measurements
terr(8per) Rising Edge Measurements	1000	terr(8per) Rising Edge Measurements
terr(9per) Rising Edge Measurements	1100	terr(9per) Rising Edge Measurements
terr(nper) Rising Edge Measurements	3000	terr(nper) Rising Edge Measurements
tjit(CC) Rising Edge Measurements	100	tjit(CC) Rising Edge Measurements
tjit(duty-high) Jitter Average High Measurements	2100	tjit(duty-high) Jitter Average High Measurements
tjit(duty-low) Jitter Average Low Measurements	2150	tjitduty-low Jitter Average LowMeasurements
tjit(per) Rising Edge Measurements	300	tjit(per) Rising Edge Measurements

## 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.

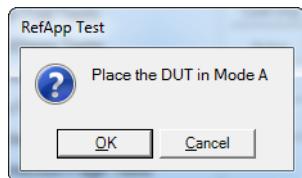
**Table 6** Instrument Names

Instrument Name	Description
Infinium	The primary oscilloscope

## 5 Message IDs

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

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



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

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

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

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

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

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

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

Here are actual message IDs used by this application:

**NOTE**

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

**Table 7** Message IDs

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

**Table 7** Message IDs (continued)

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

**Table 7** Message IDs (continued)

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

**Table 7** Message IDs (continued)

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

## 5 Message IDs

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