



PCIe4.0 (Base) Receiver Test Application Help

Register now!

Click the following link to protect your product.

www.tek.com/register



Copyright © 2026, Tektronix, Inc. All rights reserved. Licensed software products are owned by Tektronix or its subsidiaries or suppliers, and are protected by national copyright laws and international treaty provisions. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specifications and price change privileges reserved.

TEKTRONIX and TEK are registered trademarks of Tektronix, Inc.

These are the original instructions in English.

Go to tek.com/eula to read the Tektronix End User License Agreement.



Contacting Tektronix

Tektronix, Inc.
13725 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, service, and technical support:

In North America, call 1-800-833-9200.

Worldwide, visit www.tek.com to find contacts in your area.

Contents

Welcome	8
Getting help and support	9
Related documentation	9
Technical support	9
Getting started	10
Required equipment and accessories	10
Installing the software	11
Operating basics	12
Launch the application	12
Close the application	12
Launch Real-Time Oscilloscope	13
Launch TekRxService	13
Application panels	14
Application panels overview	14
Connections panel	15
Settings panel	16
Help panel	26
Calibrations panel	26
Tests panel	53
Programmatic interface commands	66
TEKRXTTEST:SELECT:HOME	66
TEKRXTTEST:SELECT:PCle4Base	66
PREF:BERT:IP	66
PREF:RTS:IP	67
CONN:BERT	67
CONN:RTS	67
SETTINGS:RTS:POSITIVECHANNEL	68
SETTINGS:RTS:NEGATIVECHANNEL	68
SETTINGS:RTS:SAMPLERATE	68
SETTINGS:TEKRXSERVICE:ANALYSISTIMEOUT	69
SETTINGS:SIGTEST:VERSION	69
SETTINGS:MULTITONESJCAL:ENABLE	69
SETTINGS:SOCKETSERVER:IP	70
SETTINGS:SOCKETSERVER:LISTENINGPORT	70
SETTINGS:SOCKETSERVER:TIMEOUT	70
SETTINGS:MULTITONESJCAL:FREQUENCYCOUNT	70
SETTINGS:MULTITONESJCAL:MAXFREQUENCY	71
SETTINGS:MULTITONESJCAL:MINFREQUENCY	71

SETTINGS:MULTITONESJCAL:POINTS.....	71
SETTINGS:EYE:ACQUISITIONS.....	72
SETTINGS:MULTITONESJCAL:DEFAULT.....	72
SETTINGS:MULTITONESJCAL:GENERATE.....	72
SETTINGS:TP1:CH1:EXTERNALATTEN.....	72
SETTINGS:TP1:CH2:EXTERNALATTEN.....	73
SETTINGS:TP2:CH1:EXTERNALATTEN.....	73
SETTINGS:TP2:CH2:EXTERNALATTEN.....	73
SETTINGS:TP2:ENBLEREPLICACHDEMBED.....	74
SETTINGS:TP2:REPLICACHDEEMBEDDIFF.....	74
SETTINGS:TP2:REPLICACHDEEMBEDCH1.....	74
SETTINGS:TP2:REPLICACHDEEMBEDCH2.....	75
SETTINGS:TP2:REPLICACHDEEMBEDFILETYPE.....	75
SETTINGS:EYE:ALGO.....	75
SETTINGS:CTLE:ANALYSISTOOL.....	76
SETTINGS:RESTORE.....	76
SETTINGS:RECALL.....	76
SETTINGS:SAVE.....	76
SETTINGS:RECALL:STATUS.....	77
SETTINGS:RESTORE:STATUS.....	77
SETTINGS:SAVE:STATUS.....	77
TP1CAL:OPEN.....	78
TP1CAL:WIZARD:OPEN.....	78
TP1CAL:WIZARD:CLOSE.....	78
TP1CAL:DELETE.....	78
TP1CAL:REPORT.....	79
TP1CAL:SAVE.....	79
TP1CAL:EQUIP:INIT.....	79
TP1CAL:EQUIP:SKIPSIGNALVALIDATION.....	79
TP1CAL:AUTOCAL.....	80
TP1CAL:AMPLITUDE:RUN.....	80
TP1CAL:PRESET:RUN.....	80
TP1CAL:RJ:RUN.....	81
TP1CAL:SJ:RUN.....	81
TP1CAL:MULTITONESJCAL:RUN.....	81
TP1CAL:EQUIP:STATUS.....	82
TP1CAL:AMPLITUDE:STATUS.....	82
TP1CAL:PRESET:STATUS.....	82
TP1CAL:RJ:STATUS.....	83
TP1CAL:SJ:STATUS.....	83
TP1CAL:MULTITONESJCAL:STATUS.....	83
TP1CAL:AMPLITUDE:SETTING.....	83
TP1CAL:RJ:SETTING.....	84
TP1CAL:SJ:SETTING.....	84
TP1CAL:SAVE:ID.....	84
TP1CAL:SAVE:GENERATEDBY.....	85

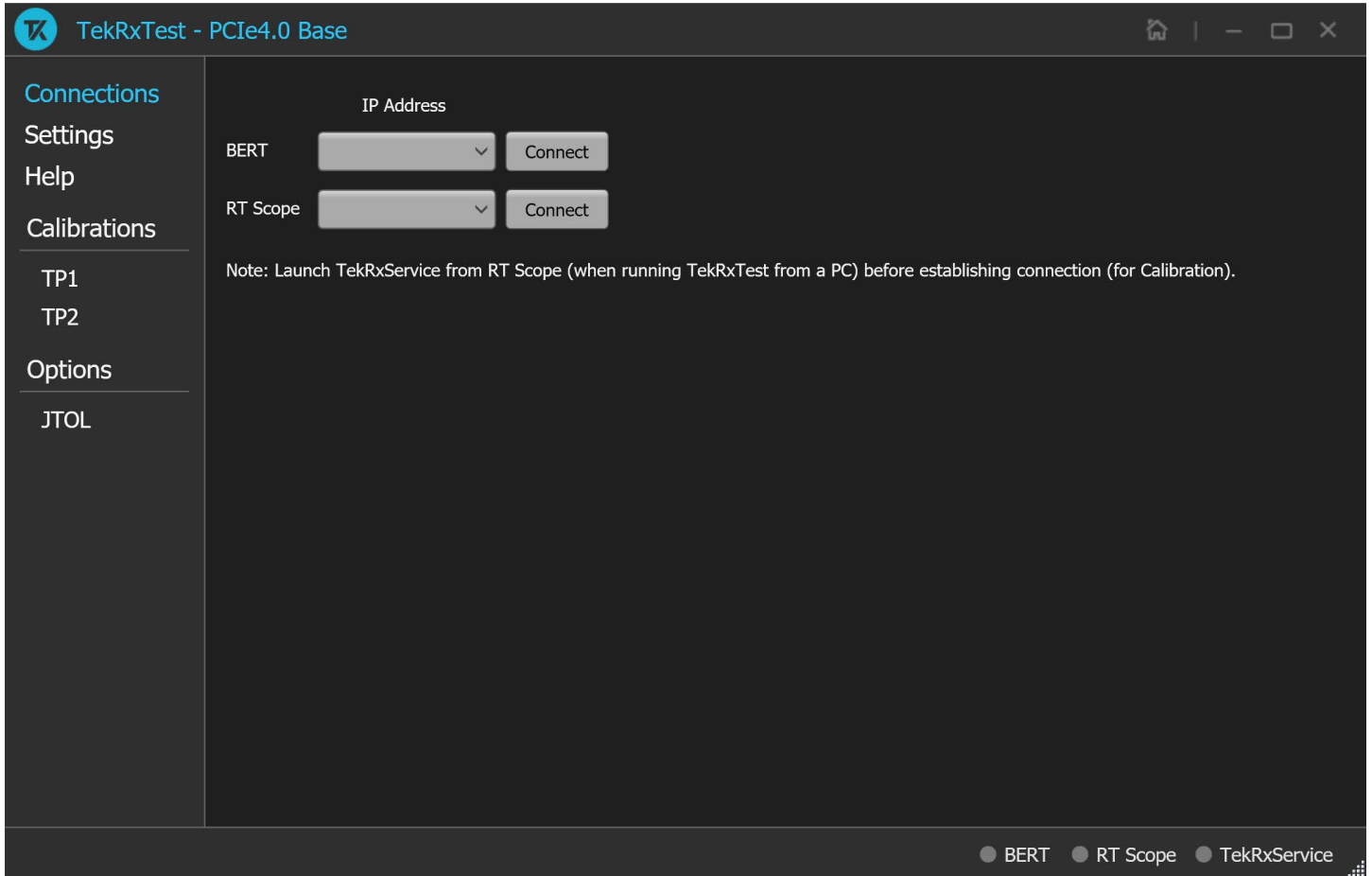
TP1CAL:SAVE:COMMENTS	85
TP1CAL:ACDC:RUN	85
TP1CAL:ACDC:STATUS	85
TP1CAL:ACDC:SETTING	86
TP1CAL:SJ@210MHz:RUN	86
TP1CAL:SJ@210MHz:STATUS	86
TP1CAL:INSERTIONLOSS:MODE	87
TP1CAL:MANUAL:INSERTIONLOSS	87
TP1CAL:MEASURELOSS:START	87
TP1CAL:MEASURELOSS:STATUS	88
TP2CAL:OPEN	88
TP2CAL:WIZARD:OPEN	88
TP2CAL:WIZARD:CLOSE	88
TP2CAL:DUT:TYPE	89
TP2CAL:SELECT:TP1	89
TP2CAL:DELETE	89
TP2CAL:REPORT	90
TP2CAL:SAVE	90
TP2CAL:SAVE:ISIPAIR	90
TP2CAL:EQUIP:INIT	90
TP2CAL:EQUIP:SKIPSIGNALVALIDATION	91
TP2CAL:CMI:RUN	91
TP2CAL:ILMEAS:RUN	91
TP2CAL:CTLEANDPRESET:RUN	92
TP2CAL:STRESSEDEYE:RUN	92
TP2CAL:EQUIP:STATUS	92
TP2CAL:CMI:STATUS	93
TP2CAL:ILMEAS:STATUS	93
TP2CAL:CTLEANDPRESET:STATUS	93
TP2CAL:STRESSEDEYE:STATUS	93
TP2CAL:DMI:SETTING	94
TP2CAL:CMI:SETTING	94
TP2CAL:SAVE:ID	94
TP2CAL:SAVE:GENERATEDBY	95
TP2CAL:SAVE:COMMENTS	95
TP2CAL:ILMEASFORDMI:RUN	95
TP2CAL:ILMEASFORDMI:STATUS	96
TP2CAL:STRESSEDEYE:ACQUISITIONS	96
TP2CAL:DMI:RUN	96
TP2CAL:DMI:STATUS	96
TP2CAL:CTLEANDPRESET:ACQUISITIONS	97
TP2CAL:STRESSEDEYE:SJ	97
TP2CAL:STRESSEDEYE:DMI	97
TP2CAL:STRESSEDEYE:AMPLITUDE	98
TP2CAL:STRESSEDEYE:MANUALCALRUN	98
TP2CAL:IL:MODE	98

TP2CAL:MANUAL:IL.	99
TP2CAL:IL:SCOPEACQS.	99
TP2CAL:IL:AVGS.	99
TP2CAL:CTLEANDPRESET:CHKCTLE.	100
TP2CAL:CTLEANDPRESET:CHKPRESET.	100
TP2CAL:STRESSEDEYE:EXHAUSTIVESWEEP.	100
TP2CAL:STRESSEDEYE:LINEARSWEEP.	101
TP2CAL:STRESSEDEYE:EXHAUSTIVE.	101
TP2CAL:STRESSEDEYE:STEPSIZE.	102
LOOPBACK:SELECT:PRESETSNAME.	102
LOOPBACK:SELECT:PRESETSPRESHOOT.	103
LOOPBACK:SELECT:PRESETSDEEMPHASIS.	103
LOOPBACK:SELECT:BERTCTLEMODE.	103
LOOPBACK:SELECT:LFEDFEMODE.	104
LOOPBACK:SELECT:AUTOSEARCHMODE.	104
LOOPBACK:SELECT:AUTOSEARCH.	104
LOOPBACK:AUTOSEARCH:TYPE.	105
LOOPBACK:SELECT:BERTCTLEVALUE.	105
LOOPBACK:SELECT:PATTERNATYPE.	105
LOOPBACK:AAS:DELAYSEARCHTYPE.	106
LOOPBACK:AAS:EYETHRESHOLDATYPE.	106
TEST:SELECT:TESTDURATION.	106
TEST:SELECT:STRESSCONFIGTYPE.	107
TEST:SELECT:AMP.	107
TEST:SELECT:DMI.	107
TEST:SELECT:CMI.	108
TEST:SELECT:RJ.	108
TEST:SELECT:SJ.	108
TEST:SELECT:BER.	109
TEST:SELECT:ERRORLIMIT.	109
JTOLTEST:OPEN.	109
JTOLTEST:WIZARD:OPEN.	109
JTOLTEST:WIZARD:CLOSE.	110
JTOLTEST:SELECT:TP2FILE.	110
JTOLTEST:SELECT:CUSTOM:MASK.	110
JTOLTEST:LOADSTRESS.	111
JTOLTEST:MIN:FREQ.	111
JTOLTEST:MAX:FREQ.	111
JTOLTEST:FREQ:POINTS.	111
JTOLTEST:FREQ:GENERATE.	112
JTOLTEST:FREQ:DEFAULT.	112
JTOLTEST:SELECT:RELAXATION.	112
JTOLTEST:SEARCH:ALGO.	113
JTOLTEST:RUN.	113
JTOLTEST:SAVE:ID.	113
JTOLTEST:SAVE:GENERATEDBY.	114

JTOLTEST:SAVE:COMMENTS.....	114
JTOLTEST:SAVE.....	114
JTOLTEST:RUNSTATUS.....	115
JTOLTEST:FREQ.....	115
JTOLTEST:PLOT:POINTS.....	115
JTOLTEST:SELECT:SJAMPUNITS.....	115
JTOLTEST:SELECT:CLOCKTYPE.....	116
JTOLTEST:PLOT.....	116
JTOLTEST:TABLE.....	116
JTOLTEST:SELECT:DUTTYPE.....	117
JTOLTEST:JITTERSTEP:HIGHFREQ.....	117
JTOLTEST:JITTERSTEP:LOWFREQ.....	117
JTOLTEST:JITTERSTEP:MIDDLEFREQ.....	118
JTOLTEST:JITTERSTEP:VERYLOWFREQ.....	118
LOOPBACK:SELECT:AUTOSEARCH.....	118
LOOPBACK:AUTOSEARCH:TYPE.....	119
LOOPBACK:AAS:DELAYSEARCHTYPE.....	119
LOOPBACK:AAS:EQSEARCH.....	119
LOOPBACK:AAS:EYETHRESHOLDTYPE.....	120

Welcome

Welcome to the PCIe4.0 (Base) TekRxTest application. This application performs the test as per the Gen 4 Base specification Revision 5.0 Version 1.0



TekRxTest - PCIe4.0 Base application

Receiver testing is accomplished by connecting the output of BERT PPG (which can produce specific PCIe test patterns) to the input of the DUT through a specialized set of fixtures and cables. The BERT can be programmed to add different amounts of random jitter, sinusoidal jitter, differential, common-mode interference along with variable signal amplitude, preshoot, and de-emphasis. Output of the DUT is connected to the BERT error detector to identify bit errors on the DUT Tx traffic, either during loopback or during sweep of one of the stress parameters. Any error detected can be assumed to be generated from the DUT Tx path as a result of either the DUT experiencing a bad bit-decision at its receiver or uncompensated back channel loss at the error detector of the BERT.

Key features and benefits

- PCIe Gen4 Receiver JTOL Testing as per Base specification for Non-Root complex / Root Complex devices.
- Automated calibration, forced loopback initiation, and testing.
- Jointly with Anritsu BERT MP1900A series, the receiver solution provides the tools and flexibility needed to visualize and control impairments, observe real-time eye performance, etc. for PCIe Gen4 devices.
- Reliable and accurate results reduce the test execution time and minimize the skill-set required to perform calibration and testing.

Getting help and support

Related documentation

The following documentation is available as part of the PCIe4.0 (Base) test application.

Product documentation

Item	Purpose	Location
Application Help	Application operation and User Interface details	Help panel of the application

See also

[Technical support](#) (on page 9)

Technical support

Tektronix values your feedback on our products. To help us serve you better, please send us your suggestions, ideas, or comments on your application or Real Time Oscilloscope. Contact Tektronix through mail, telephone, or the Web site. See Contacting Tektronix on page 0 at the front of this document for contact information.

When you contact Tektronix Technical Support, please include the following information (be as specific as possible):

General information

- All instrument model numbers
- Hardware options, if any
- Modules used
- Your name, company, mailing address, phone number, and FAX number
- Please indicate if you would like to be contacted by Tektronix about your suggestion or comments.

Application specific information

- Software version number
- Description of the problem such that technical support can duplicate the problem
- If possible, save the setup files for all the instruments used and the application

Getting started

Required equipment and accessories

Item	Vendor	R/O	Qty	Description	Notes
MP1900A	Anritsu	Required	1	≥16 Gb/s BERT	NRZ or PAM4 Configuration can be used for Gen3/4/5 NOTE: Configuration and Cables are required for connection between BERT modules are included by the 3rd party vendor.
DPO70KSX/DX or DPO714AX	Tektronix	Required	1	25 GHz, 4-channel oscilloscope	
DJA	Tektronix	Required	1	DPOJET Advanced option	DPOJET advanced Jitter, Eye and Timing Analysis SW option
SDLA64	Tektronix	Required	1	Serial Data Link Analysis SW option	Embedding/De-embedding/s-parameter filter generation/Receiver Virtualization and Analysis Software
174-6659-01	Tektronix	Required	1	Cable pair; SMA - SMP cable	Refclk connection between DUT and BERT
PMCABLE1M	Tektronix	Required	2	Cable pair; 2.92-to-2.92 mm, Straight, 1.5 ps matched, 1000 mm, 40 GHz	Equipment connections to replica channel and DUT
PCIe Gen4 BASE fixtures	PCI-SIG	Required	1	Or equivalent variable ISI channel fixture	

RXSW-NLP-PCIE4	Tektronix	Required	1	PCIe Gen4 Receiver software	PCI Gen 4 Rx BASE and CEM automation software - Node-Locked; Permanent
RXSW-NL1-PCIE4C					Gen 4 BASE and CEM Rx test software - Node Locked, Time Based, 1 year
RXSW-FLP-PCIE4					PCI Gen 4 Rx BASE and CEM automation software - Floating; Permanent
RXSW-FL1-PCIE4C					Gen4 BASE and CEM Rx test software - Floating, Time Based, 1 year

Installing the software

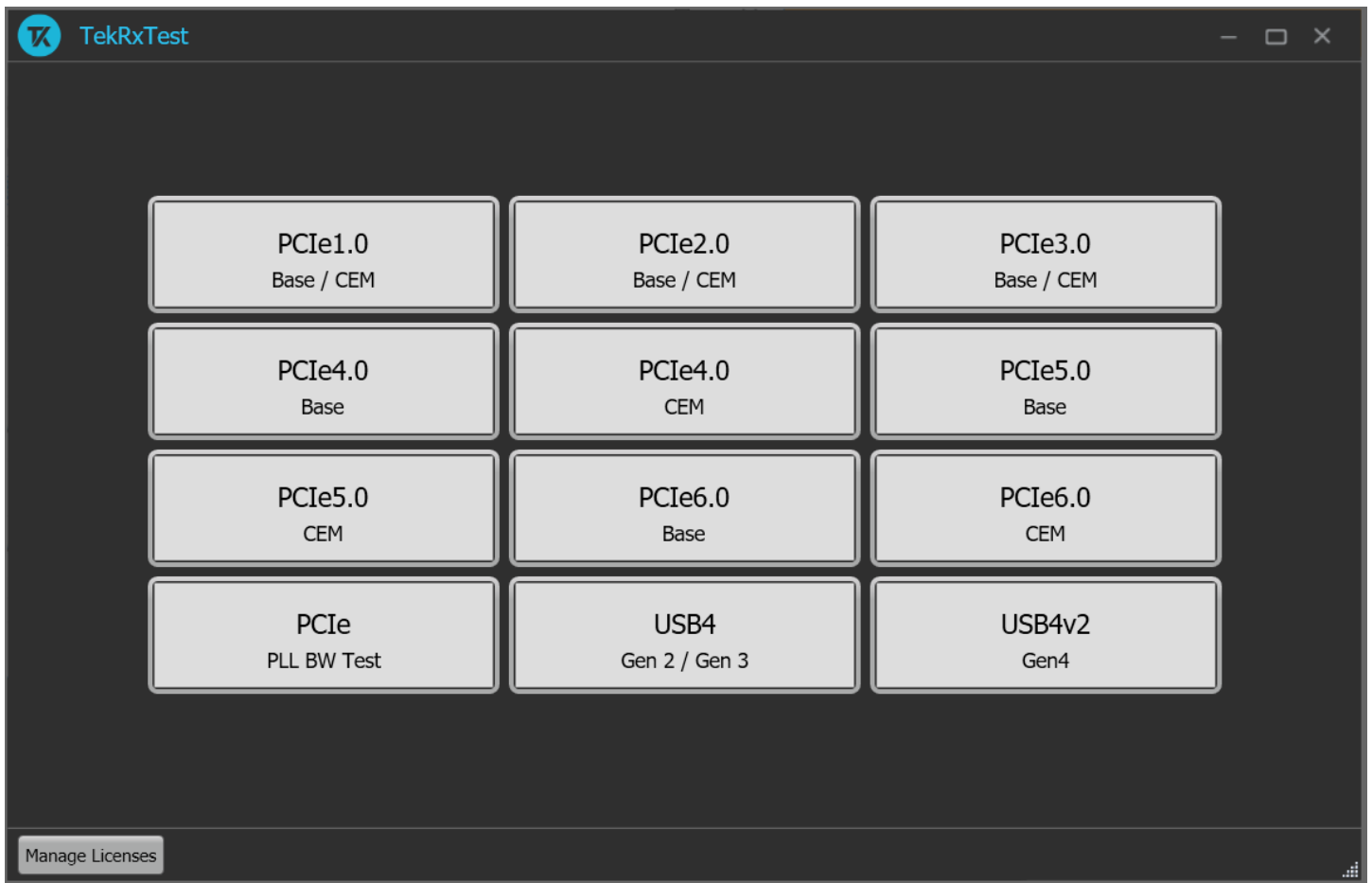
Complete the following steps to download and install the latest PCIe4.0 (Base) TekRx test application.

1. Go to www.tek.com.
2. Click **Downloads**. In the Download menu, select DOWNLOAD TYPE as Software and enter **PCIe4.0 (Base)** in the MODEL OR KEYWORD field and click **SEARCH**.
 1. Select the latest version of the software and follow the instructions to download.
 2. Copy the executable file into the instrument you wish to install the software (Real-time oscilloscope or PC).
 3. Follow the installation instruction that is available in the website. The software is installed at **C:\Program Files\Tektronix\BERTScope\RxTest60**
 4. Double click the shortcut icon on the desktop to launch the application.
 - The PCIe4.0 (Base) TekRx test application can be installed on a Tektronix real-time oscilloscope or a PC (optional).
 - You must install the TekRxService and SigTest application in the real-time oscilloscope to successfully connect the application with the real-time oscilloscope.

Operating basics


Launch the application

To launch the PCIe4.0 (Base) test application, double click the shortcut icon **TekRxTest** on the desktop and select **PCIe4.0 (Base)** in the application window.



TekRxTest application window

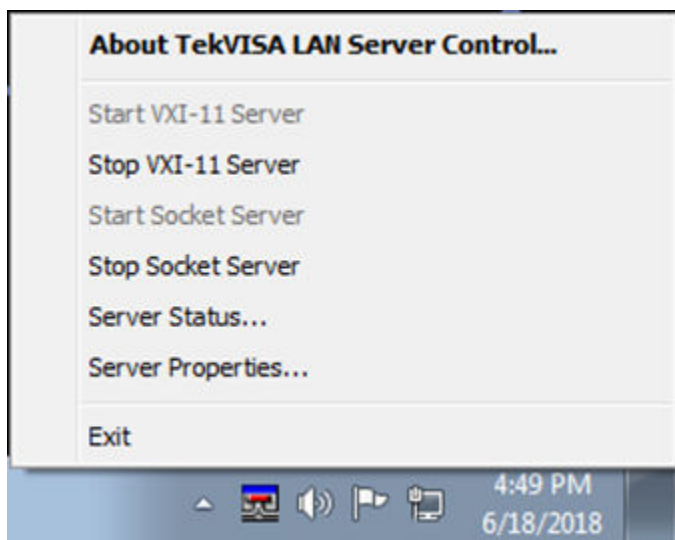
Close the application

To exit the application, click  on the application title bar. Follow on-screen instructions to save the unsaved session or test setup.

NOTE: Using other methods to exit the application may result in abnormal termination of the application.

Launch Real-Time Oscilloscope

The TekVISA Socket Server application on the oscilloscope provides the necessary connectivity between the TekRxTest application and scope. Although it is launched in the background when the scope boots up and the socket is initialized for communication, it is recommended to verify the status by clicking on the Desktop Tray > TekVISA LAN Server Control as shown in the image below. If it is ready to exchange data, then a wizard would appear as in the below image.

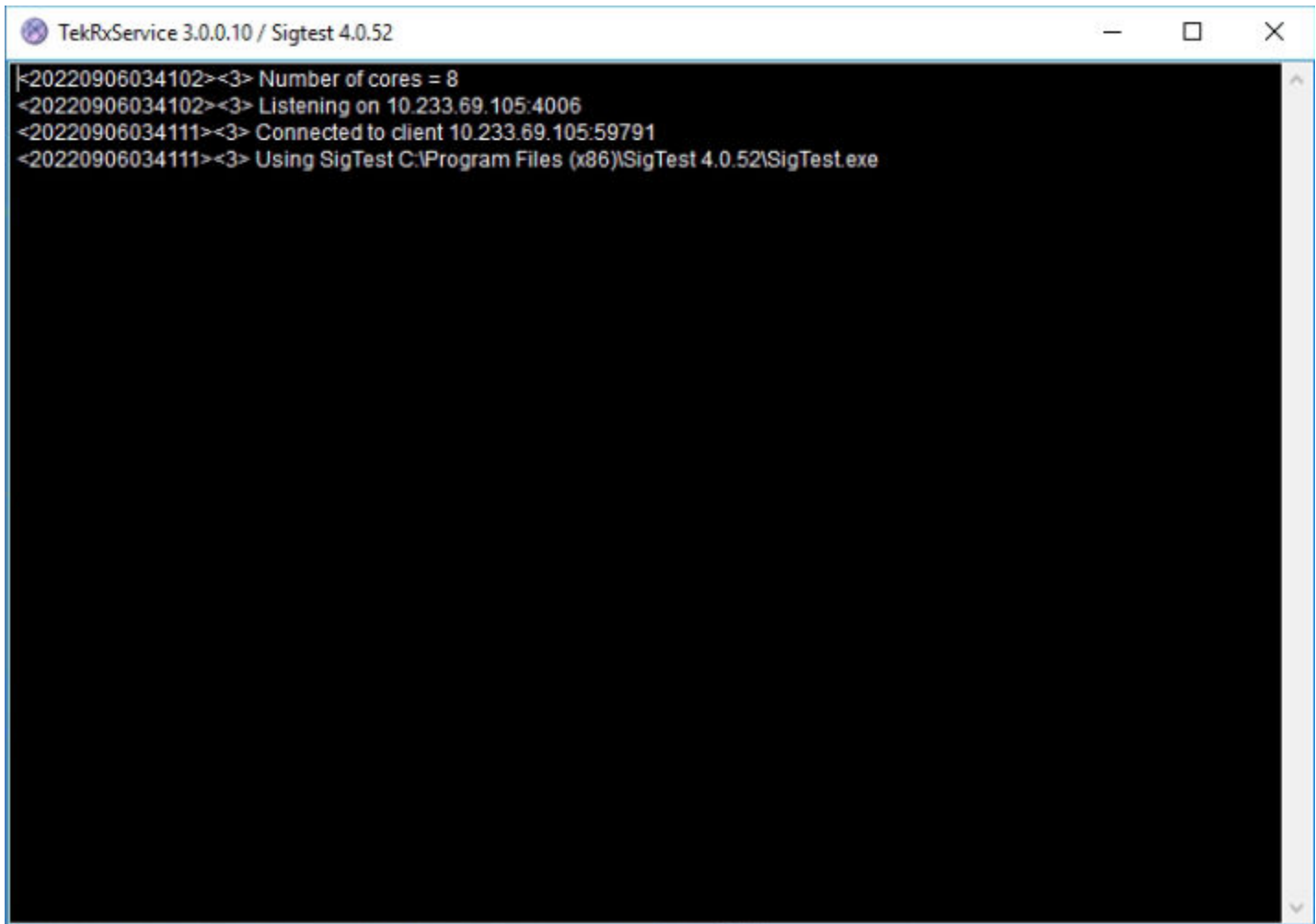


Launch Real-Time Oscilloscope

Note: In the unlikely event when the socket is not initialized, the process can be started by clicking on “Start Socket Server” which gets enabled during such a scenario.

Launch TekRxService

The PCIe4.0 (Base) TekRxTest application interfaces with the oscilloscope for data acquisition, analysis and data retrieval utilizing TekRxService application. This software module should be launched at the time of initiating the TekRxTest application.



```

TekRxService 3.0.0.10 / SigTest 4.0.52
<20220906034102><3> Number of cores = 8
<20220906034102><3> Listening on 10.233.69.105:4006
<20220906034111><3> Connected to client 10.233.69.105:59791
<20220906034111><3> Using SigTest C:\Program Files (x86)\SigTest 4.0.52\SigTest.exe

```

TekRxService application window

NOTE: TekRxService has to be launched if the application is being run on an external PC. To launch the application, double click the TekRxService batch file shortcut icon in the desktop of the real-time oscilloscope.

Application panels

Application panels overview

The PCIe4.0 (Base) TekRxTest application uses panels to group the configurations and settings. Click on any panel to configure the associated settings. A panel may have one or more tabs that lists the selections available in that panel. Controls in a tab may change depending on the settings made in the same tab or another tab.

Application panels overview

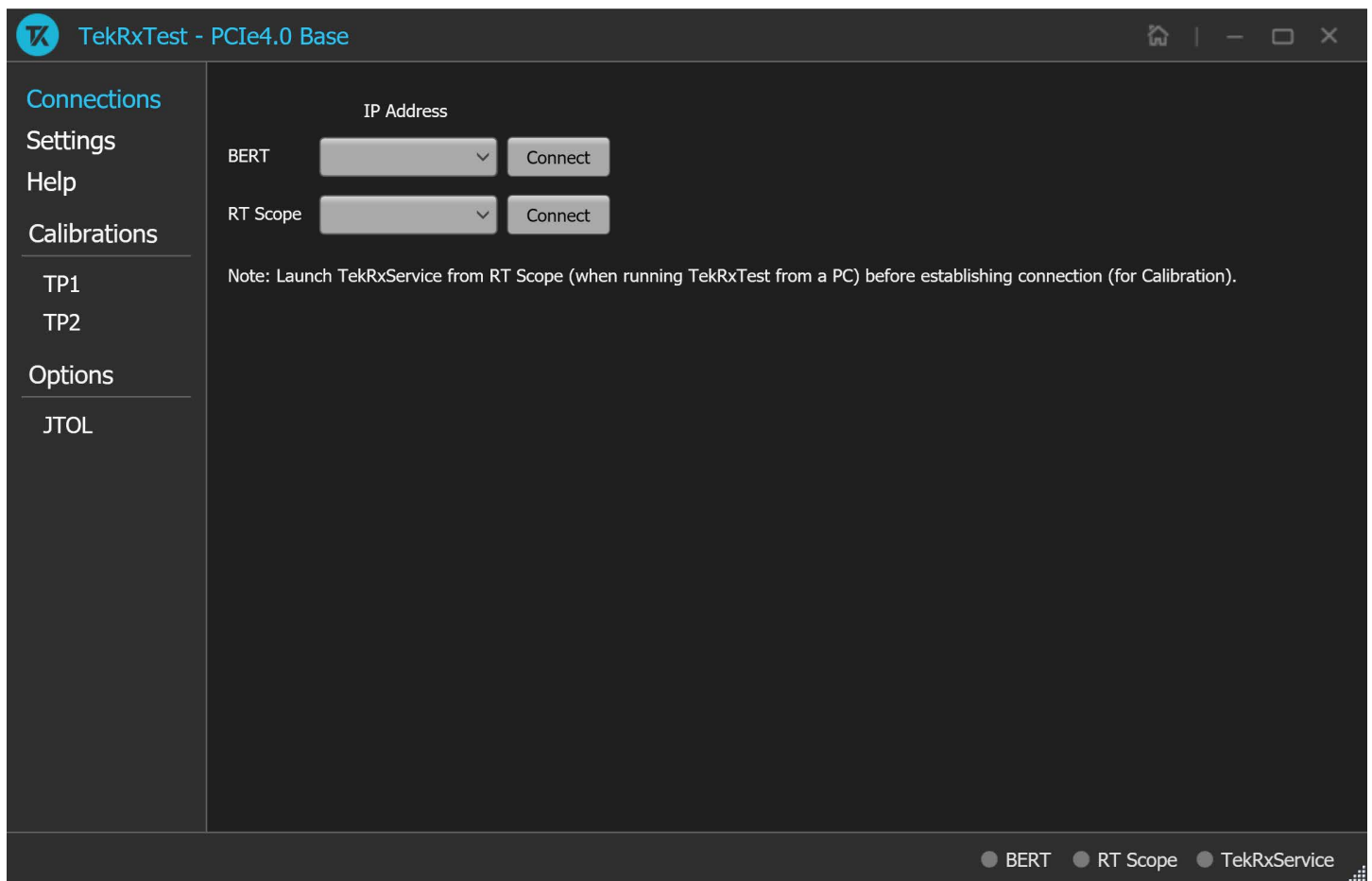
Parameter	Description
Connections	This panel displays the real-time oscilloscope and BERT connection settings. You can connect to a real-time oscilloscope and BERT by entering the IP address of the instruments.
Settings	This panel allows configuring various settings for the Components, TP1 and TP2 Calibration.

Help	This panel displays the application help.
Calibrations	This panel allows you to configure the calibration parameters for TP1/TP2 and save the results.
Tests	This panel allows you to configure the JTOL test settings and view the results.

Connections panel

The connections panel allows you to connect to a real-time oscilloscope and BERT with the PCIe4.0 (Base) TekRxTest application. Enter the IP address of the instruments and click **Connect** to establish the connection.

Connections panel



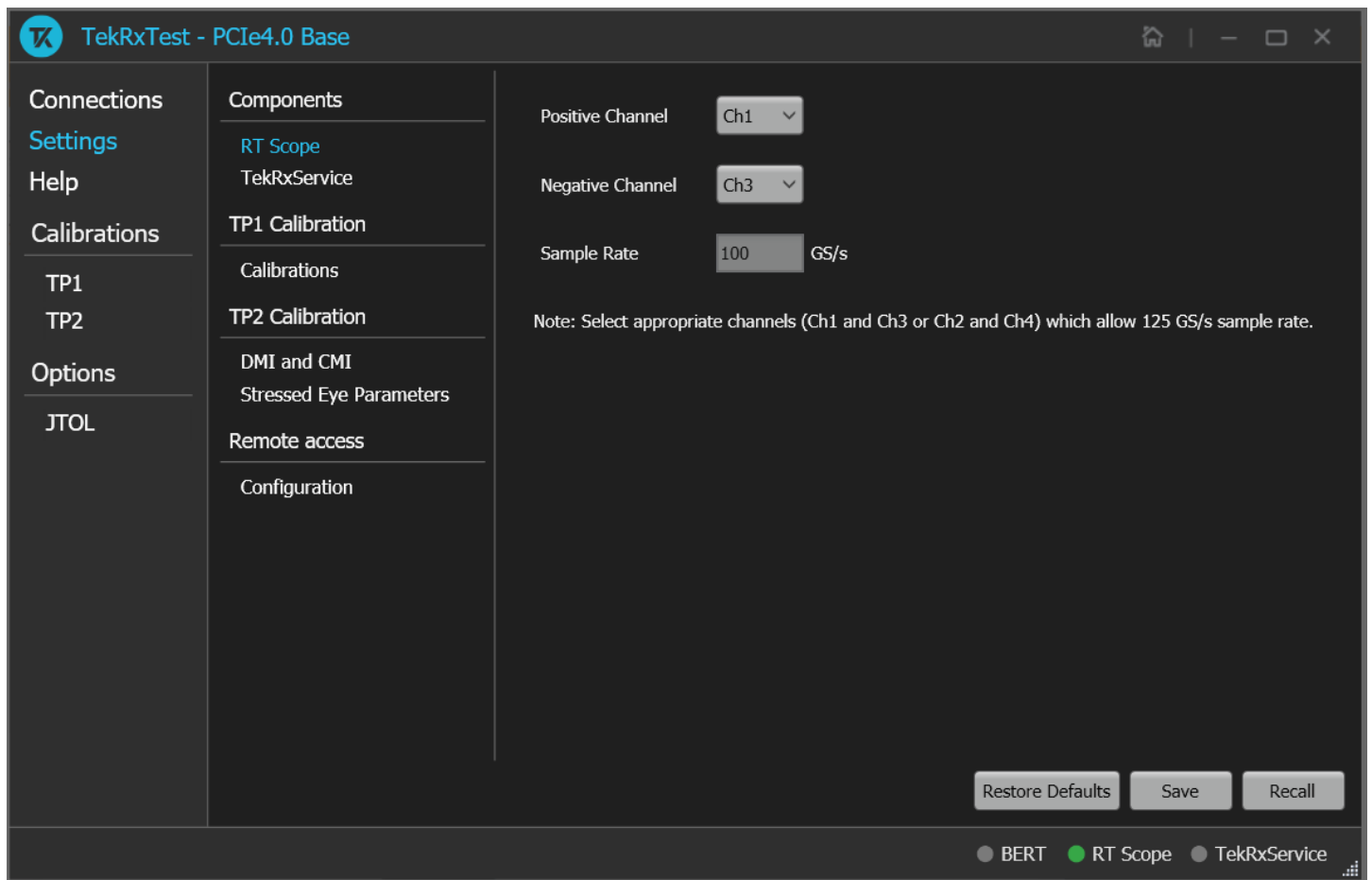
Connections panel

Connections	Description
BERT	Enter the BERT IP address in the address field and click Connect . When the BERT is connected successfully, the circle next to BERT in the right end corner turns green.

RT Scope	<p>Enter the RT Scope IP address in the address field and click Connect. When the RT Scope is connected successfully, the circle next to RT Scope and TekRxService in the right end corner turns green.</p> <p>Once the RT Scope connection is established, the application automatically identifies oscilloscope model. Consequently, the 'Connection Diagram' wizard will display setup figure with DPO70000SX/DX Oscilloscope or with DPO714AX Oscilloscope for TP1/TP2/LEQ Tx tests.</p> <hr/> <p>NOTE: Before you click Connect, if the TekRxTest application is running on an external PC, make sure to launch the TekRxService in the real-time oscilloscope.</p>
----------	---

Settings panel

This panel allows you to configure the settings for instruments, calibrations, and remote access. Click any tab to configure the associated settings.



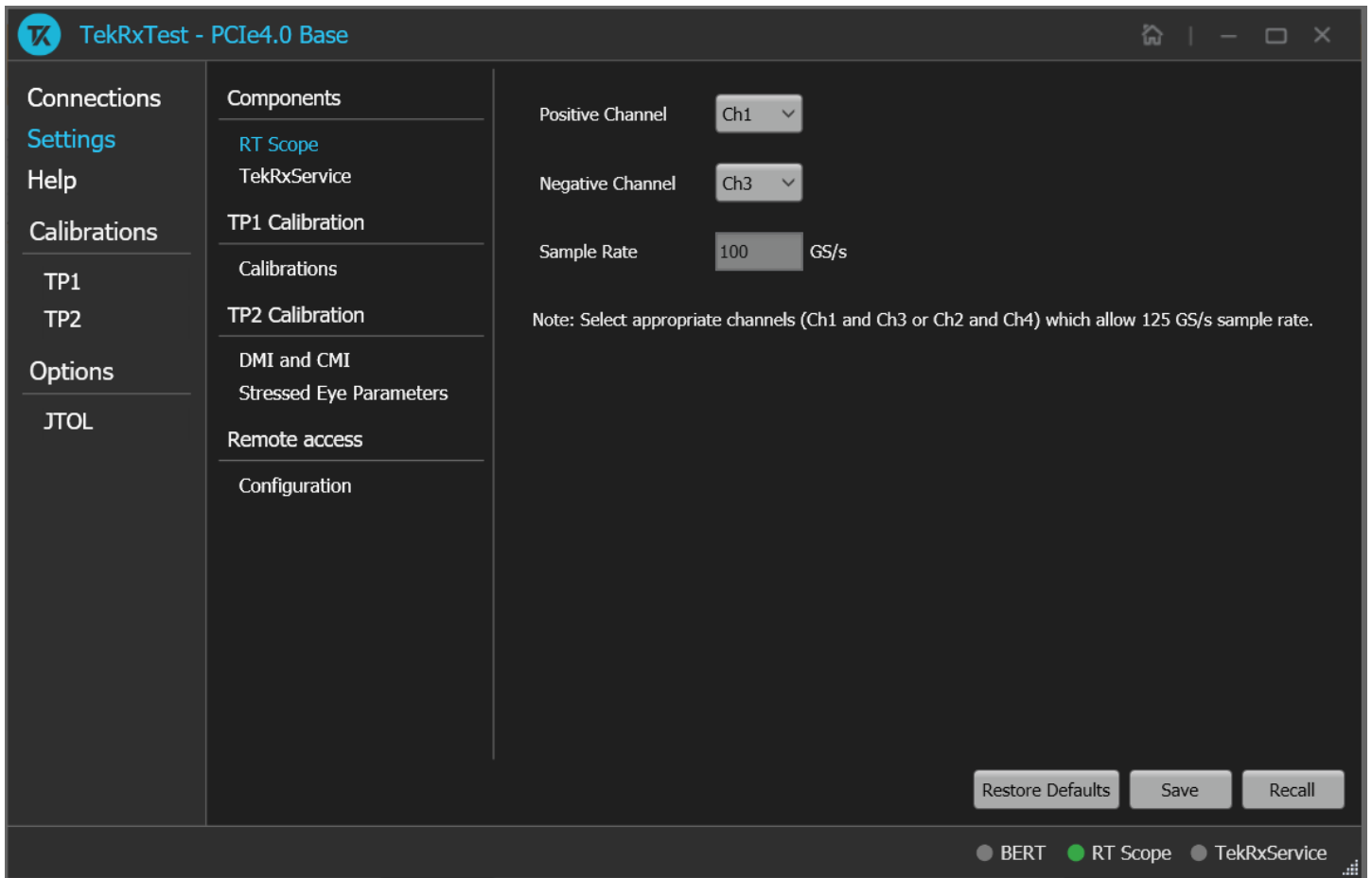
Settings panel

Settings panel configurations

Item	Description
Restore Defaults	Restores the application with default settings.
Save	Saves the current test setup.
Recall	Recalls the saved test setup.

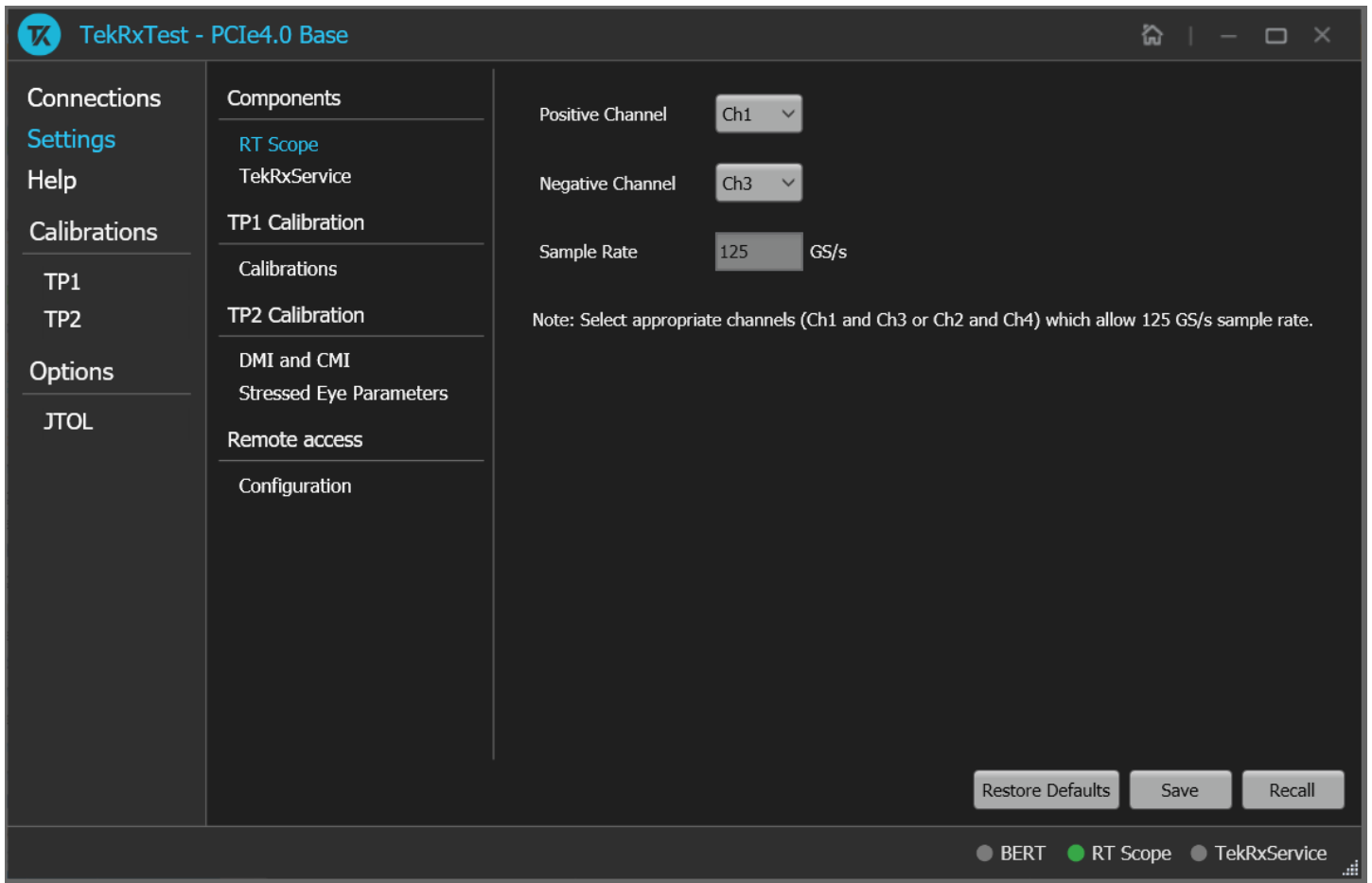
Components settings

The components settings display the parameters for RT Scope and TekRxService.



The screenshot shows the TekRxTest - PCIe4.0 Base application window. The left sidebar contains a navigation menu with the following items: Connections, Settings (highlighted in blue), Help, Calibrations (with sub-items TP1 and TP2), Options (with sub-item JTOL), and JTOL. The main content area is titled 'Components' and lists several settings categories: RT Scope (highlighted in blue), TekRxService, TP1 Calibration (with sub-item Calibrations), TP2 Calibration (with sub-items DMI and CMI and Stressed Eye Parameters), Remote access, and Configuration. The right side of the window displays configuration parameters: Positive Channel (Ch1), Negative Channel (Ch3), and Sample Rate (100 GS/s). A note below these parameters reads: 'Note: Select appropriate channels (Ch1 and Ch3 or Ch2 and Ch4) which allow 125 GS/s sample rate.' At the bottom right, there are three buttons: Restore Defaults, Save, and Recall. At the bottom center, there are three radio buttons: BERT (unselected), RT Scope (selected), and TekRxService (unselected).

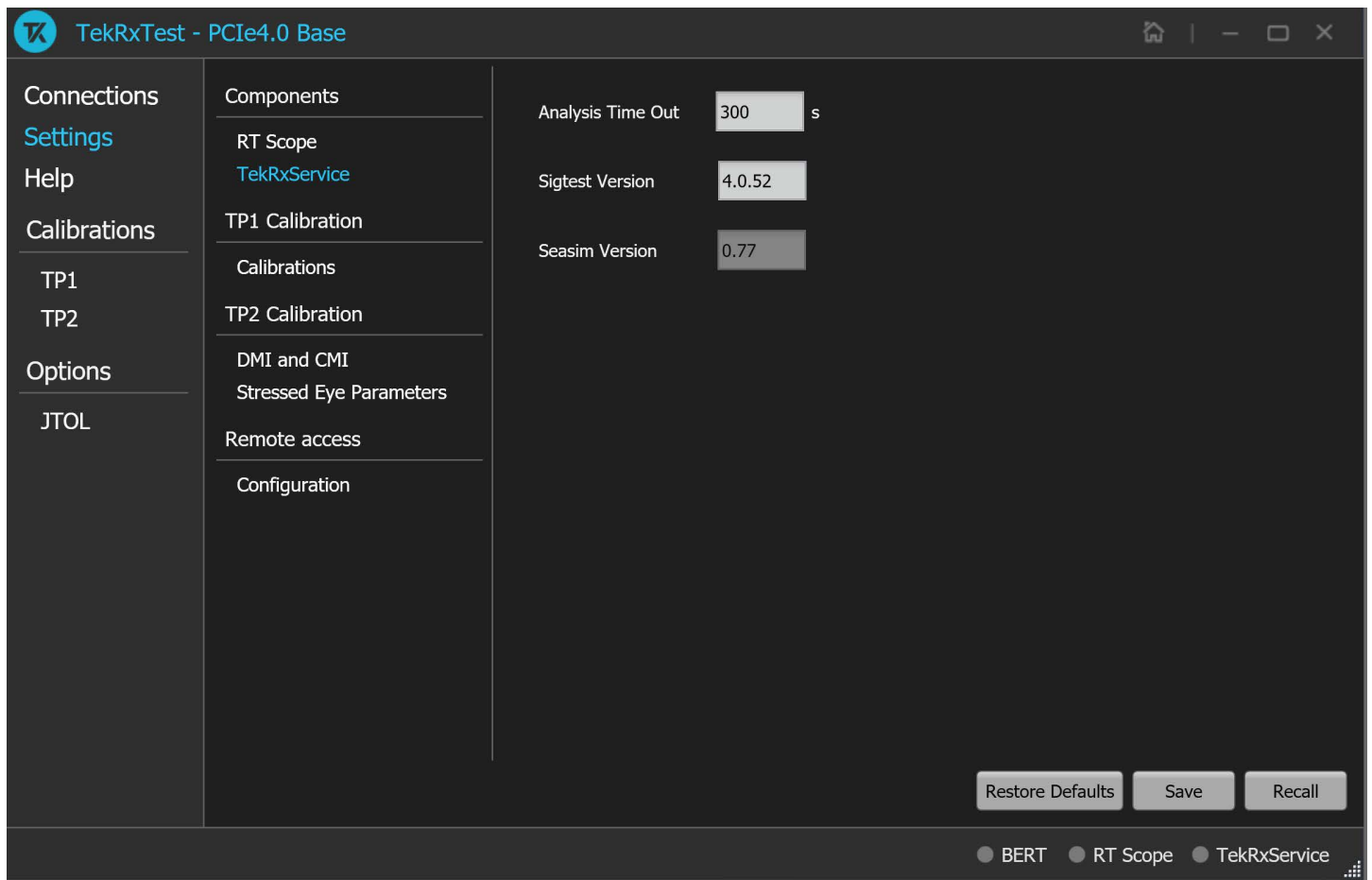
Components: RT Scope



Components: RT Scope with 7 series oscilloscope

Components: RT Scope

Parameter	Description
Positive Channel	Select the generator data positive channel from BERT.
Negative Channel	Select the generator data negative channel from BERT.
Sample Rate	Displays the RT Scope sample rate in GS/s. The Sample Rate automatically updates to 125 when the system is connected to a DPO714AX Oscilloscope..

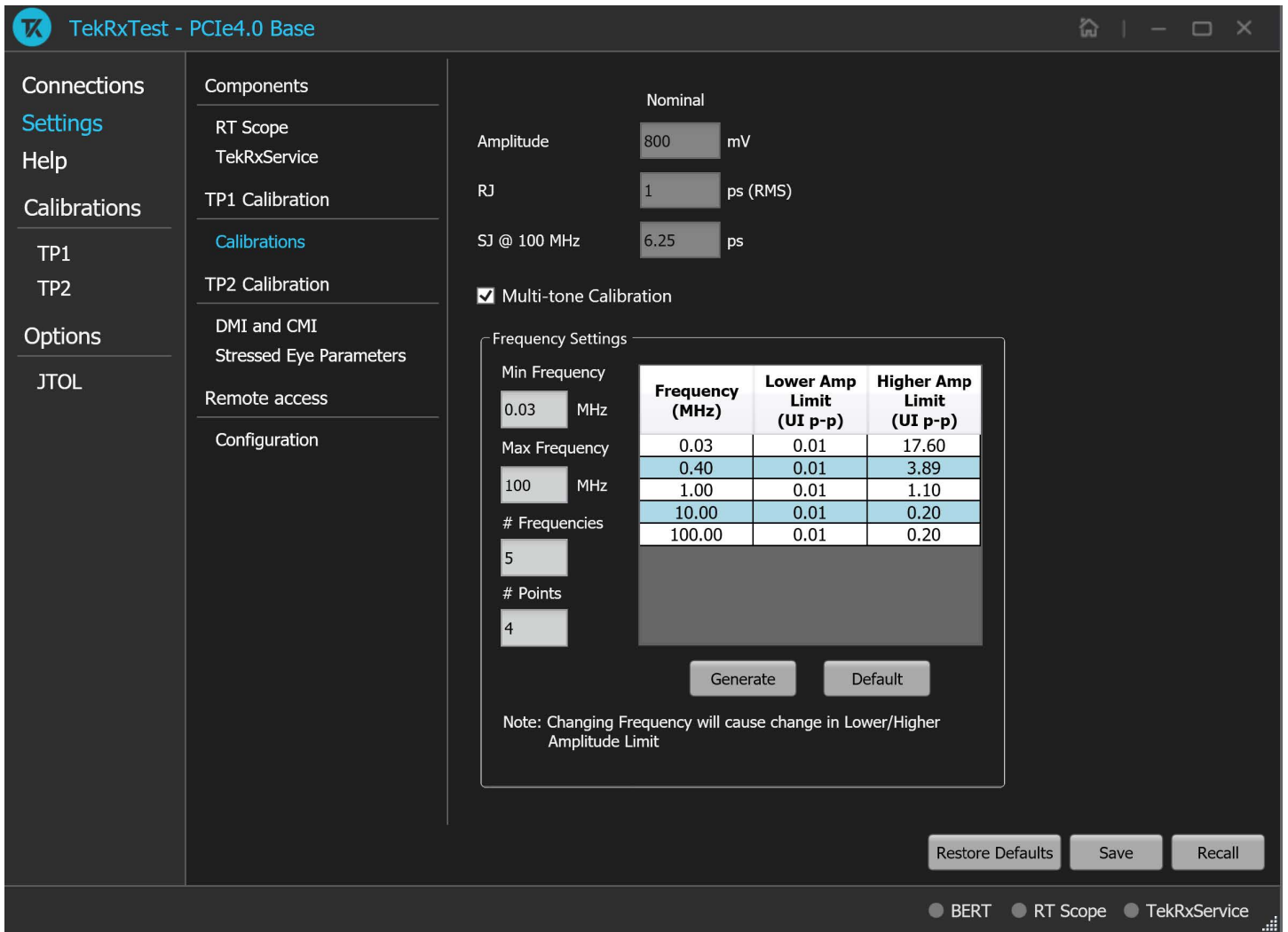


Components: TekRxService

Components: TekRxService

TP1 Calibration

The TP1 calibration tab allows you to configure the multi-tone calibration settings.



TP1 Calibration: Calibrations

TP1 Calibration: Calibrations

Parameter	Description
Amplitude	Displays the calibration target for generator amplitude source.
RJ	Displays the calibration target for random jitter source.
SJ @ 100 MHz	Displays the calibration target for sinusoidal jitter source @ 100 MHz.
Multi-tone Calibration	Select to enable the multi-tone calibration. It displays the calibration settings for multiple tones.
Frequency Settings:	Frequencies at which the SJ calibration needs to be performed for JTOL Test.
Frequency (MHz)	Displays the table of frequencies in MHz for which Multi-tone calibration is to be performed.

Lower Amplitude Limit (UI p-p)	Displays the table of lower amplitude limit values at which SJ calibration starts for that frequency.
Higher Amplitude Limit (UI p-p)	Displays the table of higher amplitude limit values at which SJ calibration ends for that frequency.
Min Frequency	Enter the minimum frequency value.
Max Frequency	Enter the maximum frequency value.
# Frequencies	Enter the desired number of frequencies within the specified range.
# Points	Enter the desired number of points used for calibration.
Generate	Click to view the table populated with the frequencies.
Default	Click to view the table populated with default list of frequencies.

TP2 Calibration

The TP2 calibration tab allows you to configure the DMI and CMI calibration, and Stressed Eye Parameters.

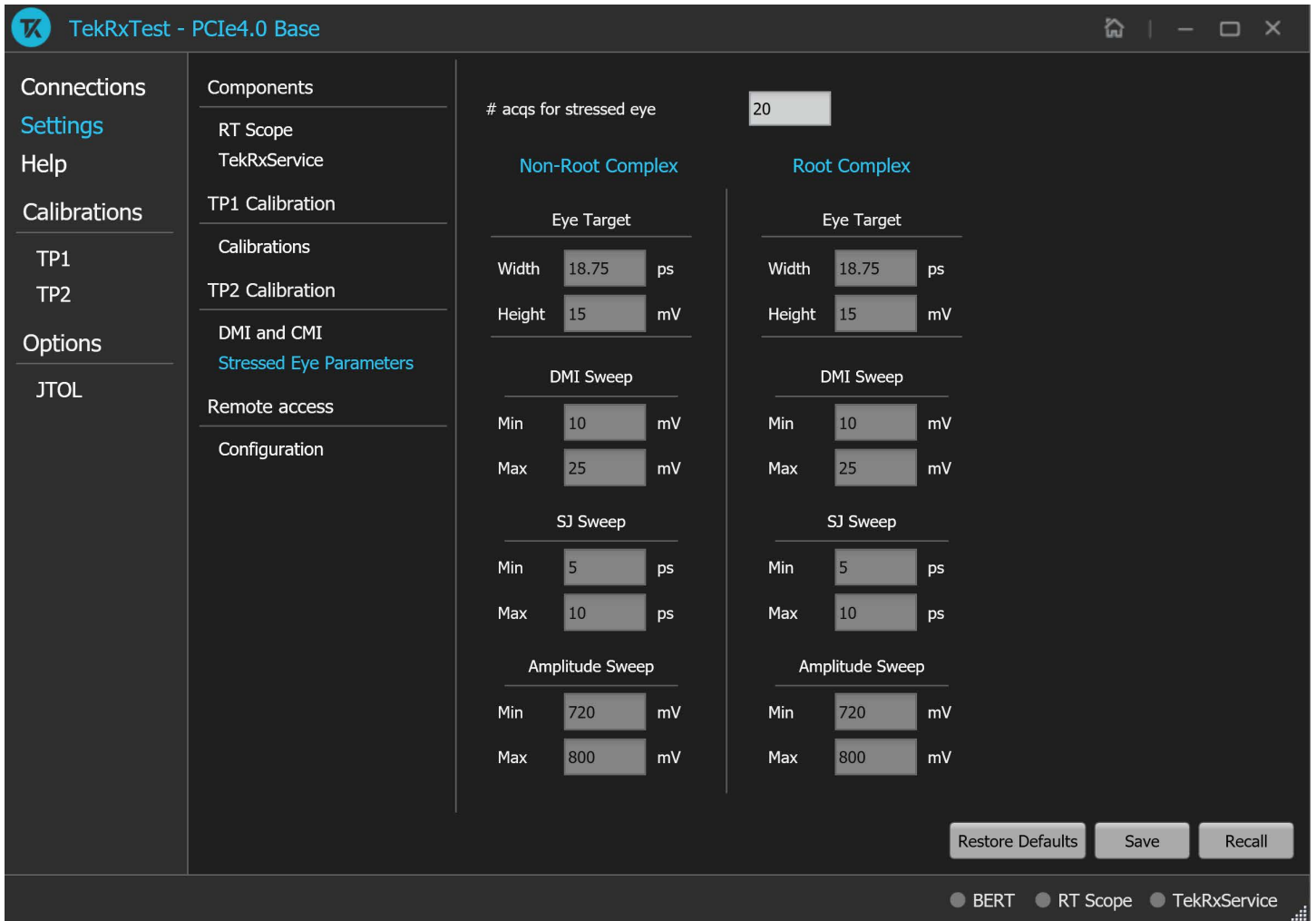
TP2 Calibration: DMI and CMI

The screenshot shows the TekRxTest - PCIe4.0 Base application interface. The left sidebar contains navigation options: Connections, Settings (highlighted), Help, Calibrations (with sub-items TP1 and TP2), Options (with sub-item JTOL), and Remote access. The main panel displays the TP2 Calibration settings for DMI and CMI. The DMI value is set to 14 mV and the CMI value is set to 150 mV. The interface includes buttons for Restore Defaults, Save, and Recall, and a status bar at the bottom showing BERT, RT Scope, and TekRxService.

TP2 Calibration: DMI and CMI

TP2 Calibration: DMI and CMI

Parameter	Description
DMI	Displays the nominal DMI value in mV.
CMI	Displays the nominal CMI value in mV.



TP2 Calibration: Stressed Eye Parameters

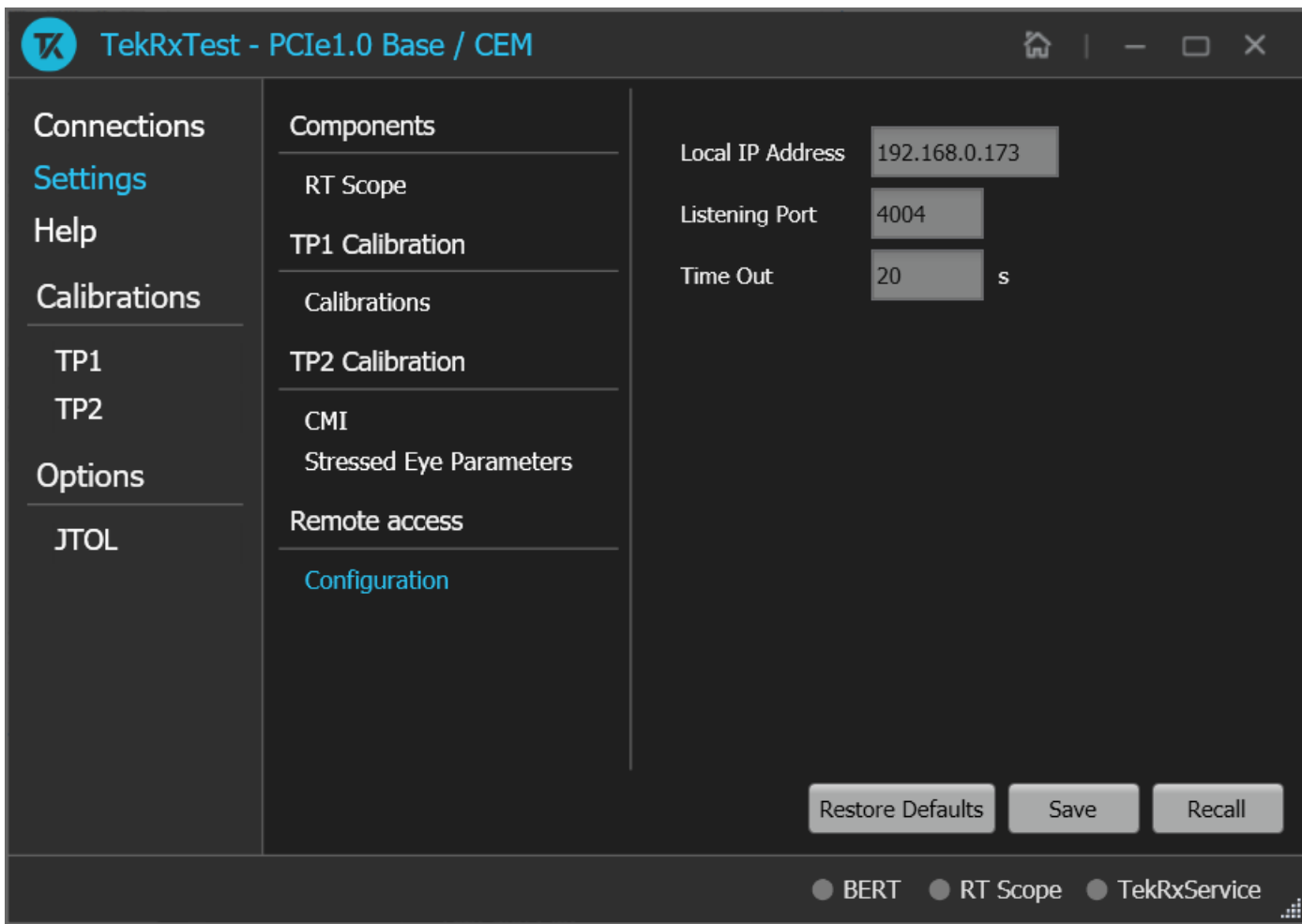
TP2 Calibration: Stressed Eye Parameters

Parameter	Description
# acqs for stressed eye	Displays the number of acquisitions value for stressed eye.
Eye Target	
Width	Displays the target eye width value as per PCIe specification.
Height	Displays the target eye height value as per PCIe specification.
DMI Sweep	

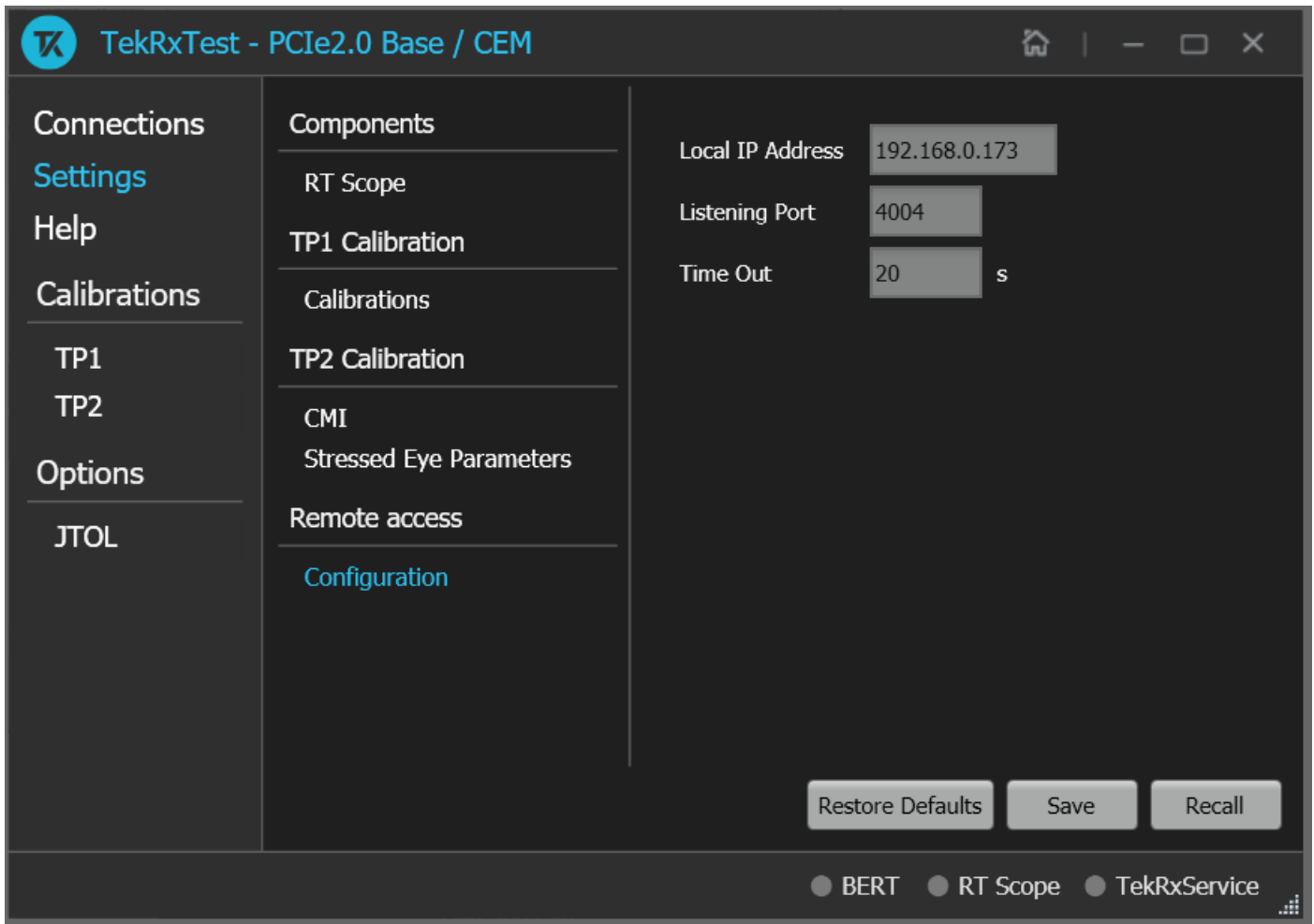
Min	Displays the minimum value of DMI sweep during stressed eye calibration.
Max	Displays the maximum value of DMI sweep during stressed eye calibration.
SJ Sweep	
Min	Displays the minimum value of SJ sweep during stressed eye calibration.
Max	Displays the maximum value of SJ sweep during stressed eye calibration.
Amplitude Sweep	
Min	Displays the minimum value of amplitude sweep during stressed eye calibration.
Max	Displays the maximum value of amplitude sweep during stressed eye calibration.

Remote access: Configuration

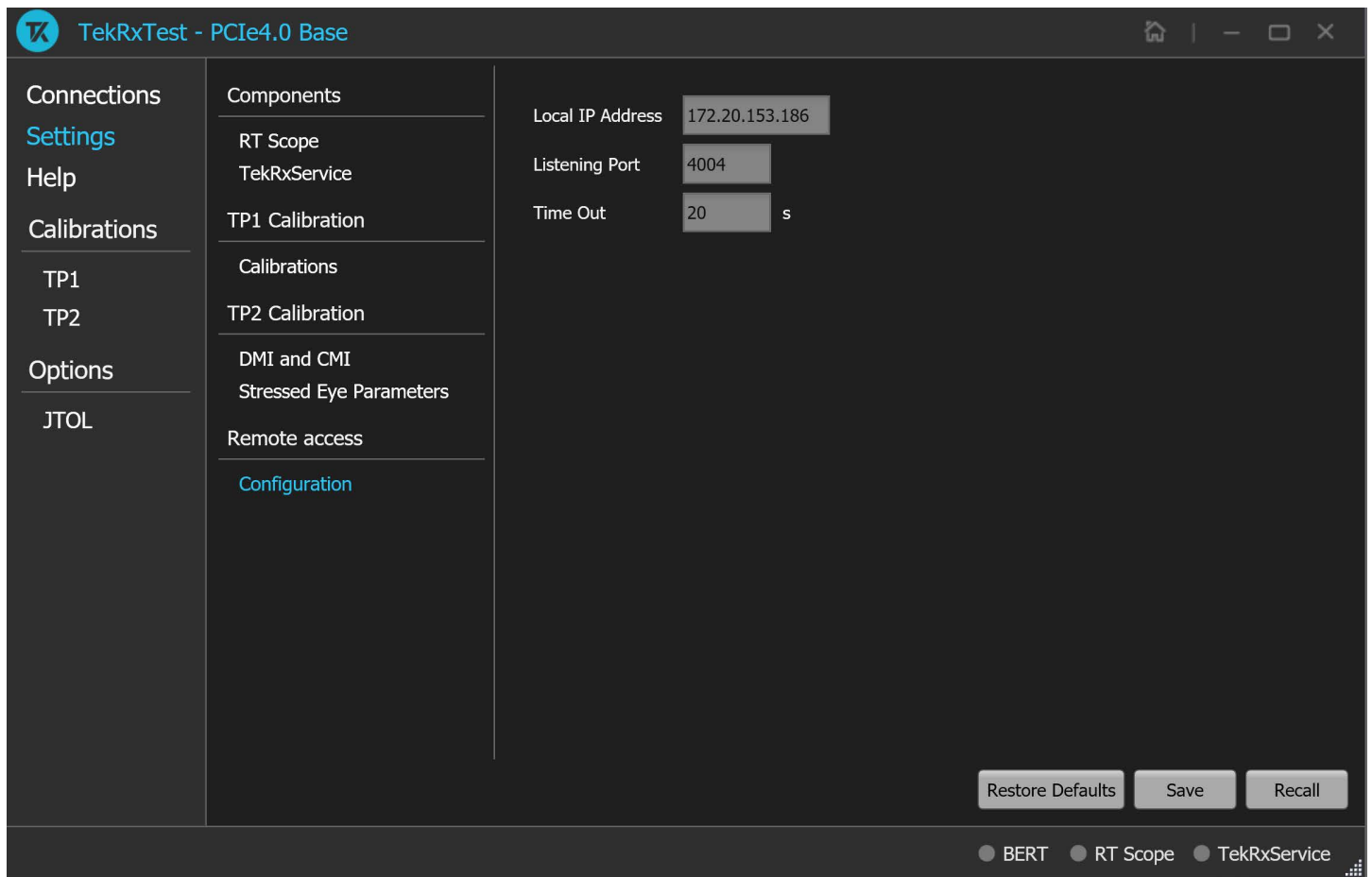
The remote access tab allows you to configure the remote setting parameters to access the equipment remotely.



Remote access: Configuration



Remote access: Configuration



Remote access: Configuration

Remote access: Configuration

Parameter	Description
Local IP Address	Displays the IP address for connecting to the application over socket server.
Listening Port	Displays the TCP/IP port number of the port that the socket server is listening. Default Value: 4004
Time Out	Displays the timeout value used when communicating with the socket server. Default Value: 20 Seconds

Help panel

The help panel launches the PCIe4.0 (Base) TekRxTest application help document.

Calibrations panel

Complete TP1 and TP2 calibrations before you start the DUT testing using the PCIe2.0 (Base/CEM) test application. Follow the instructions in the calibration wizards to automate the calibration for the test points. After calibrating the test points, you can save the results.

TP1 Calibration

The TP1 calibration panel allows you to perform calibration for TP1 and save the results. You can perform calibration for Signal Amplitude, Preset, Random Jitter (RJ), Sinusoidal Jitter (SJ), SJ@210 MHz, and, Multi-tone. Additionally, there is a provision to perform AC-DC Balancing.


The PCIe4.0 (Base) TekRxTest application calibrates the following at TP1:

1. Amplitude - The differential voltage swing is required to be within 720 - 800 mV. This is done only after the transition and non-transition bit levels are made equal using de-emphasis.
2. Tx Equalization Presets - The various levels of de-emphasis and preshoot are required to be calibrated within the tolerance as specified.
3. RJ - It is calibrated to be 1 ps (RMS value).
4. SJ - The SJ is calibrated over the desired range of 5-10 ps (pk-pk) including the nominal SJ specification of 0.1 UI (6.25 ps) at 100 MHz frequency).
5. SJ @ 210 MHz - If the stressed eye calibration requires sinusoidal jitter levels greater than 0.1 UI, then SJ@210 MHz is used during JTOL test.
6. Multi-tone - It is calibrated over a specific range for multiple user-defined frequencies.

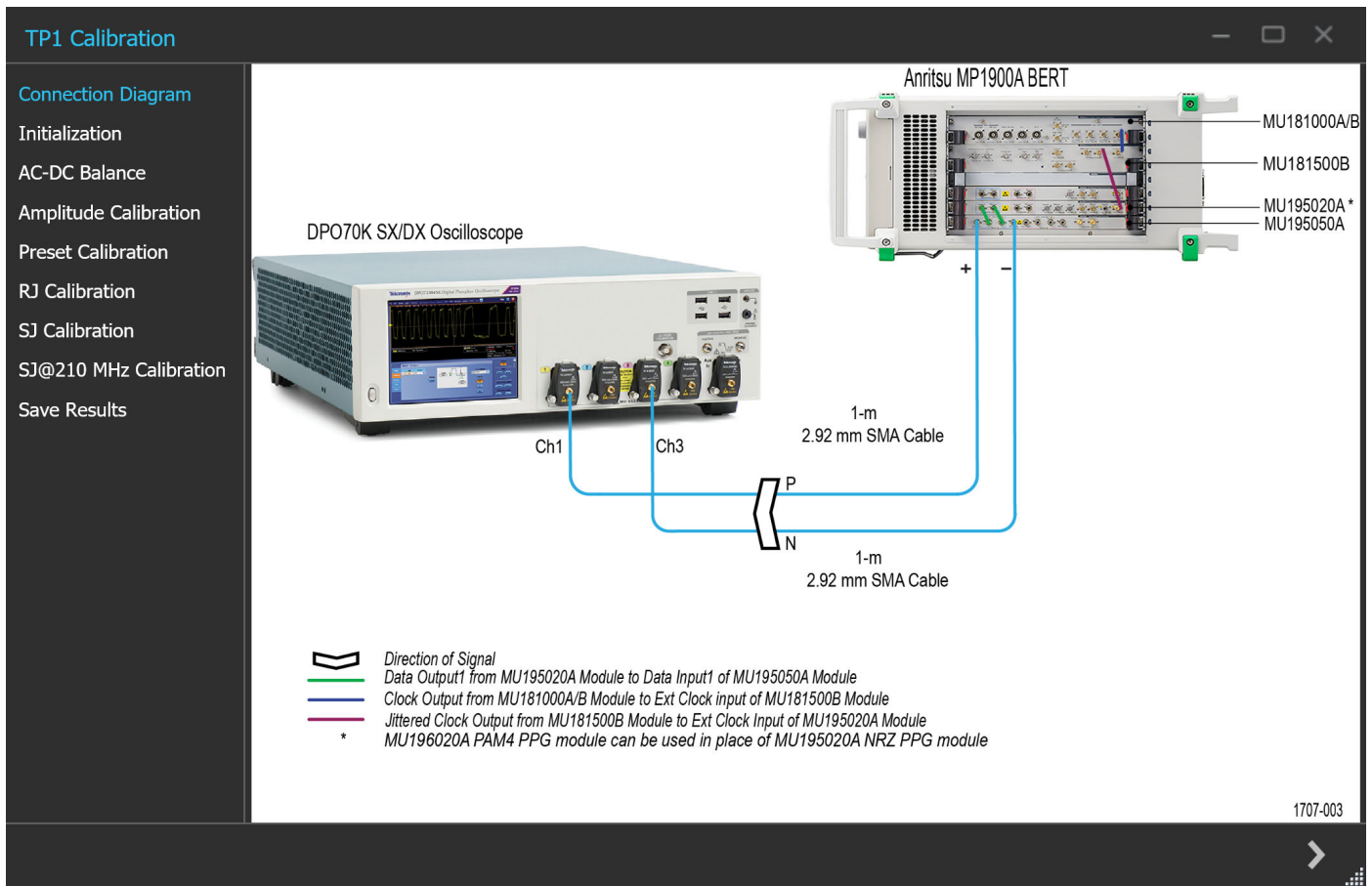
TP1 Calibration procedure

Unique ID	Completion Status	Generated By	Date/Time	Comment
[Example_TP1_Calibration]	Complete	TEK	09 Sep 2021, 23:47 PM	

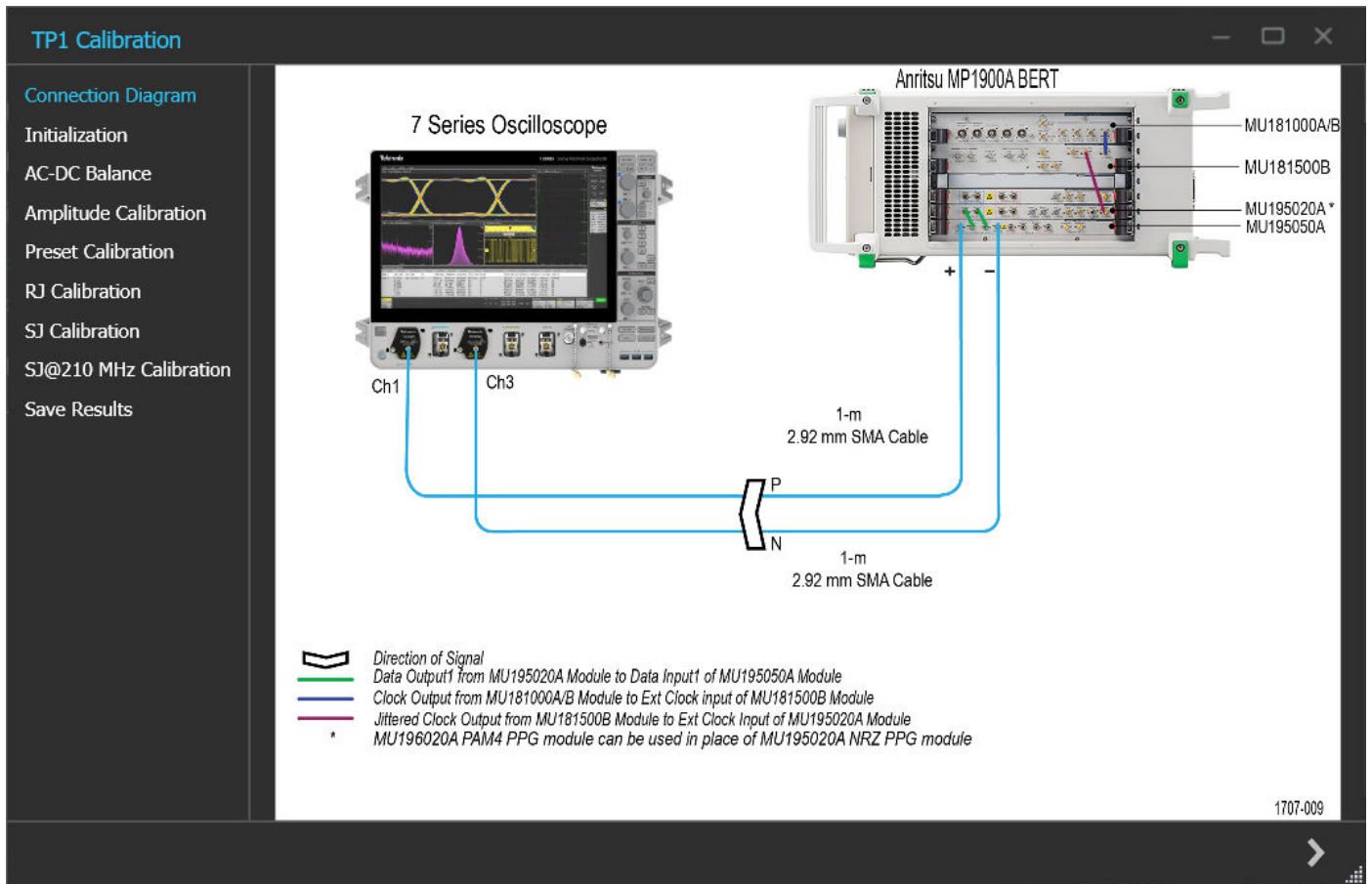
TP1 Calibration

Click TP1 under the calibration tab to view the calibration results. Click  at the right end corner of the application to launch the TP1 calibration wizard. This wizard will guide you through the sequential procedure to perform the calibration.

1. **Connection Diagram:** This tab displays the connection diagram for TP1 calibration. The connection diagram is same for AIC / System.



TP1 Calibration: Connection Diagram



TP1 Calibration:Connection Diagram with 7 series oscilloscope

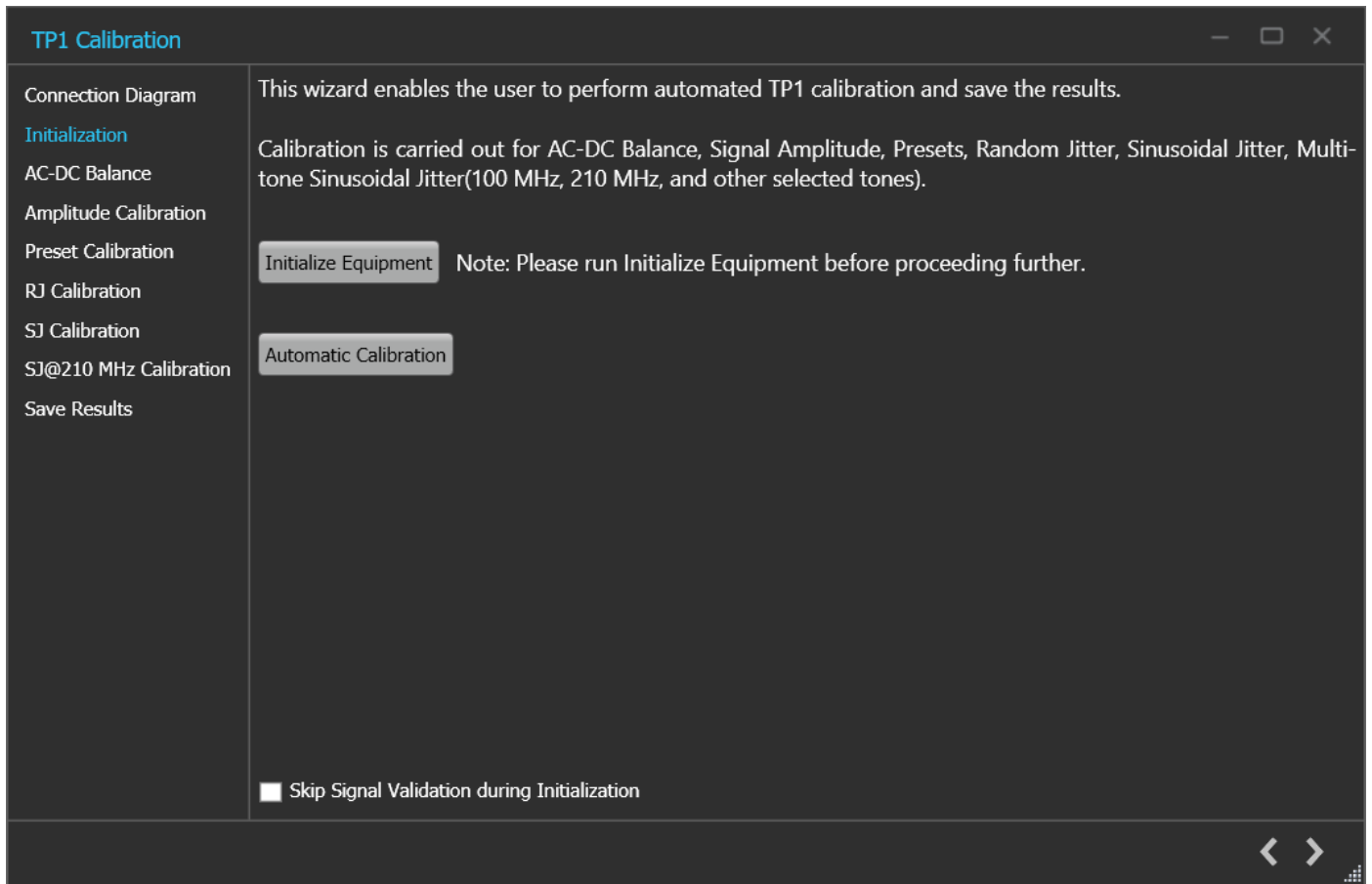


Click  to move to the next screen.

- Initialization:** This tab displays the description and allows you to initialize the equipment. Click **Initialize Equipment** and complete the initialization process.

You can click **Automatic Calibration** to perform the automatic calibration with the default settings for amplitude, Tx Equalization Presets, RJ, and SJ parameters without user intervention.

To skip the signal validation during initialization, enable the **Skip Signal Validation** check box.

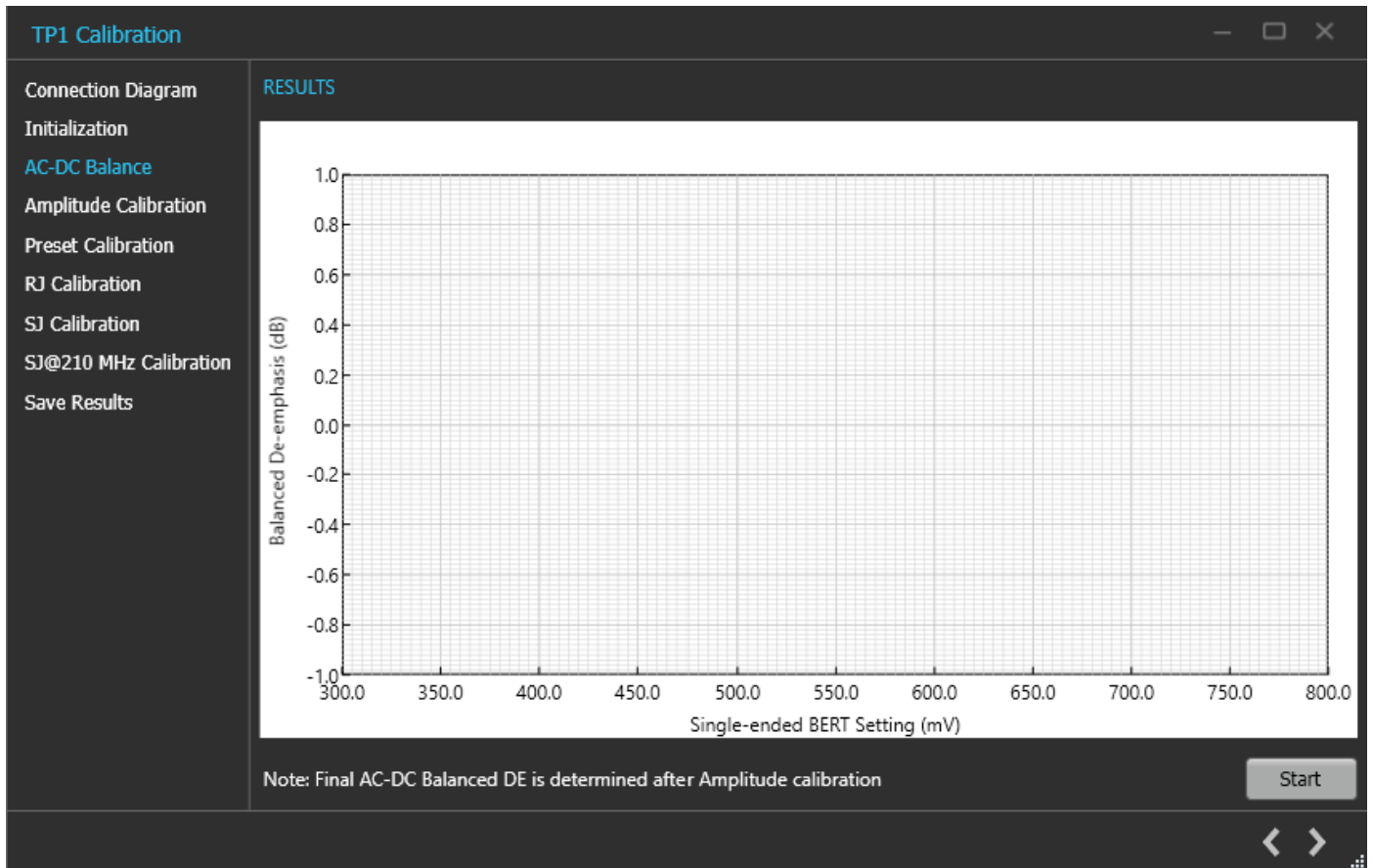


TP1 Calibration: Initialization



Click  to move to the next screen.

3. **AC-DC Balance:** This tab displays the graph plots of AC-DC balance.



TP1 Calibration: AC-DC Balance

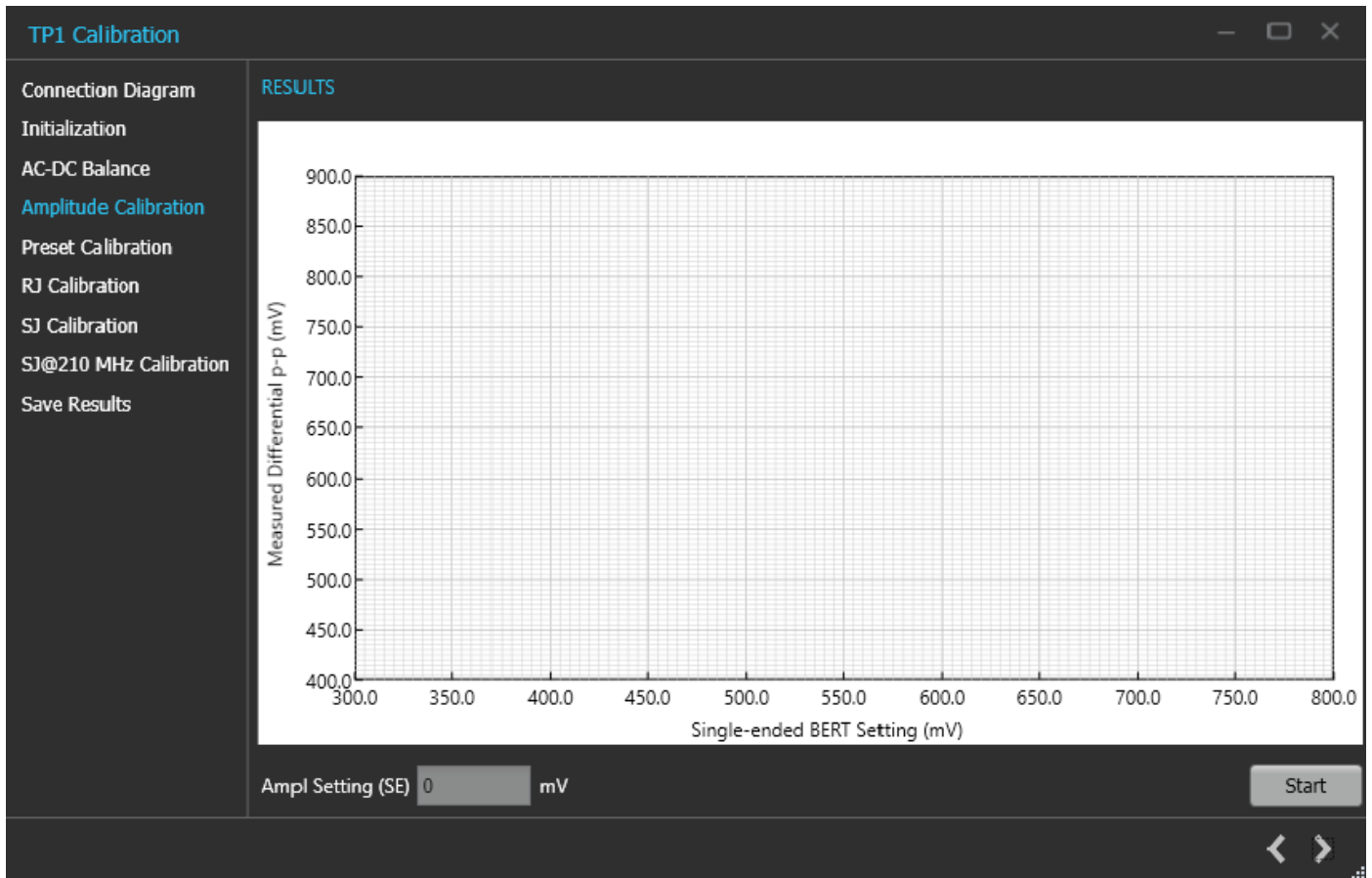
TP1 Calibration: AC-DC Balance

Parameter	Description
Start	Click Start to run the measurements.



Click  to move to the next screen.

4. **Amplitude Calibration:** This tab displays the graph plots of amplitude calibration.



TP1 Calibration: Amplitude Calibration

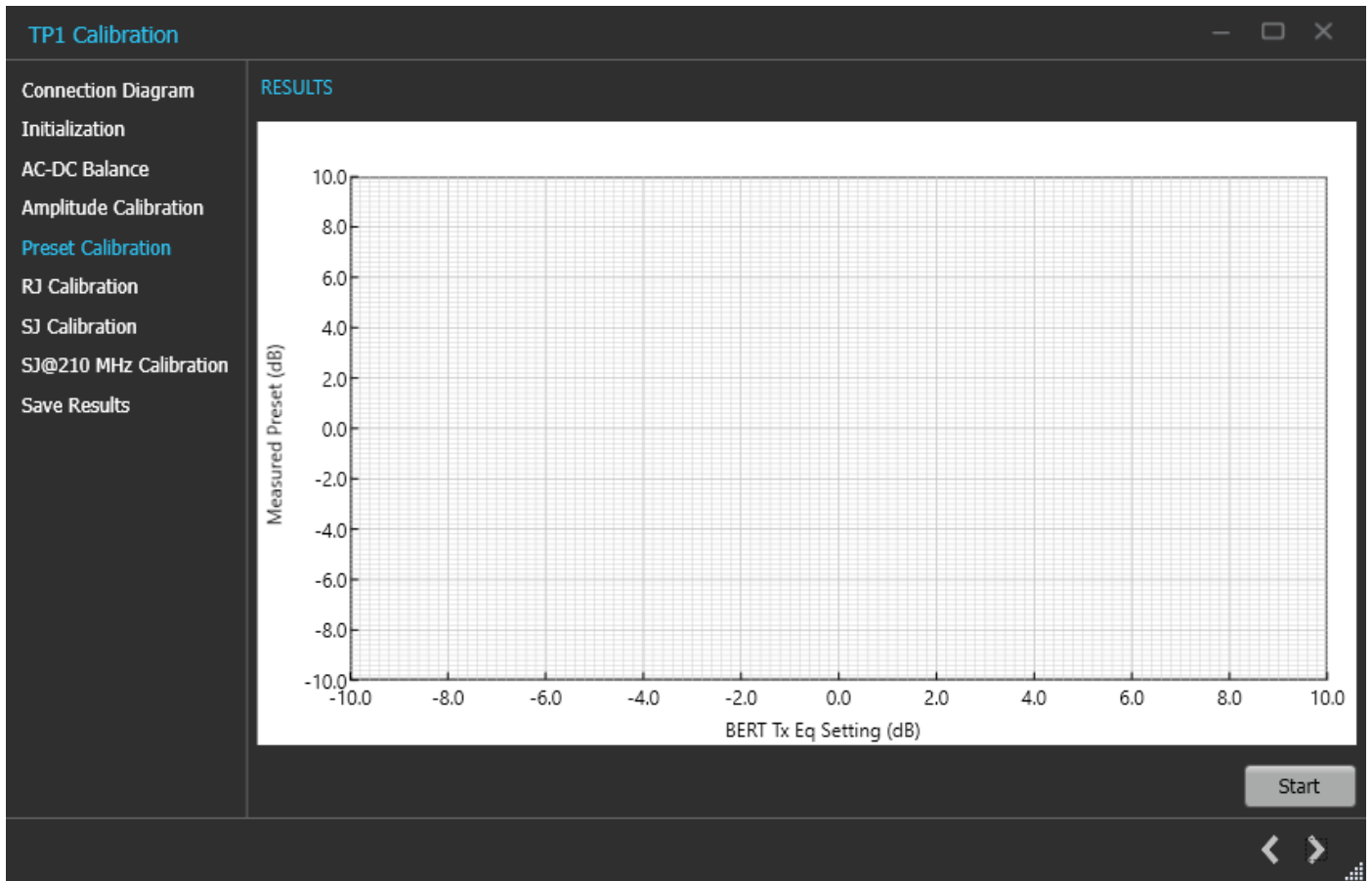
TP1 Calibration: Amplitude Calibration

Parameter	Description
Ampl Setting (SE)	Displays the single-ended calibrated amplitude value corresponding to 800 mV differential.
Start	Click Start to run the measurements.



Click  to move to the next screen.

5. **Preset Calibration:** This tab displays the graph plots of preset calibration.



TP1 Calibration: Preset Calibration

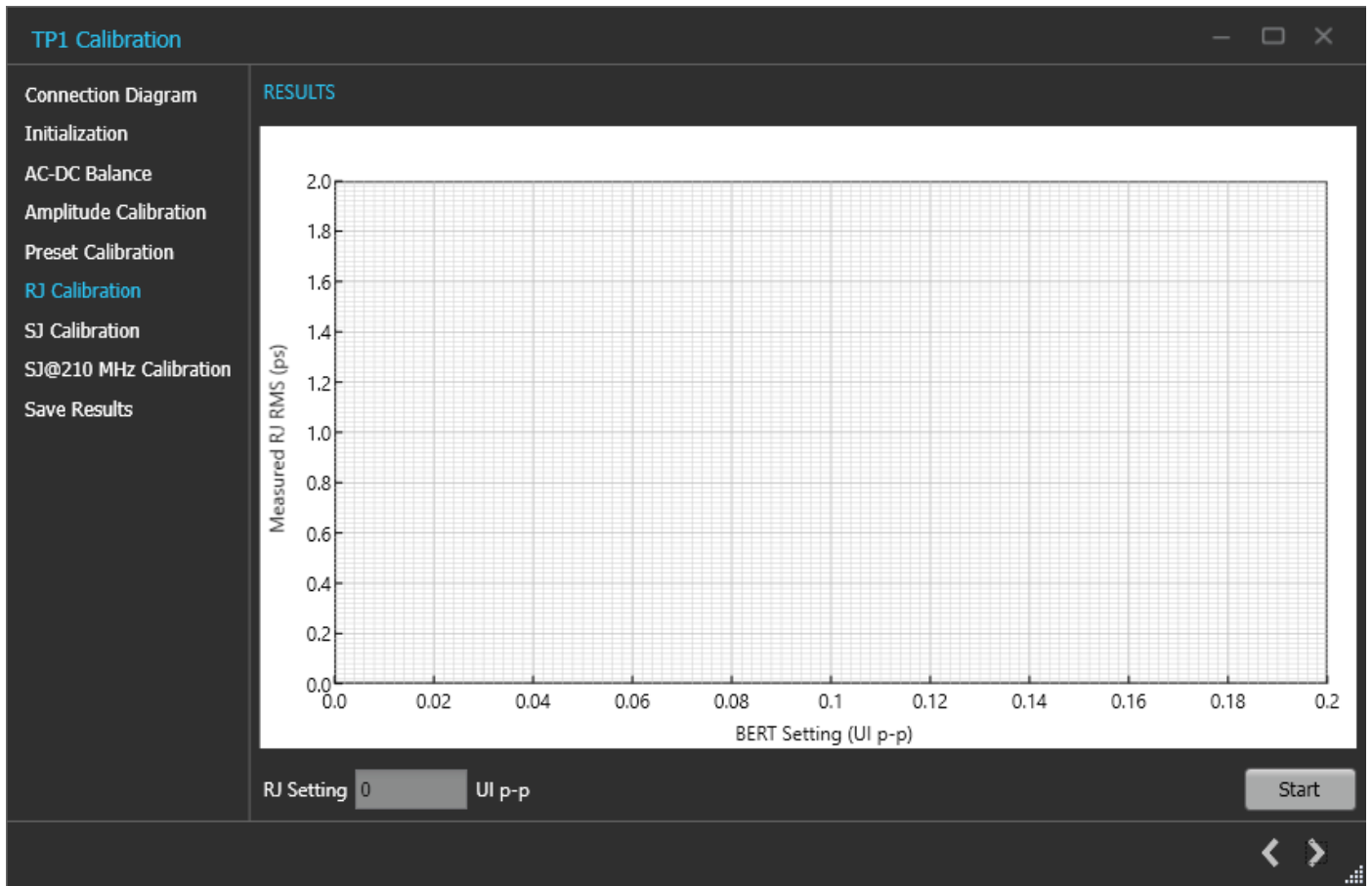
TP1 Calibration: Preset Calibration

Parameter	Description
Start	Click Start to run the measurements.



Click  to move to the next screen.

6. **RJ Calibration:** This tab displays the graph plots of RJ calibration.



TP1 Calibration: RJ Calibration

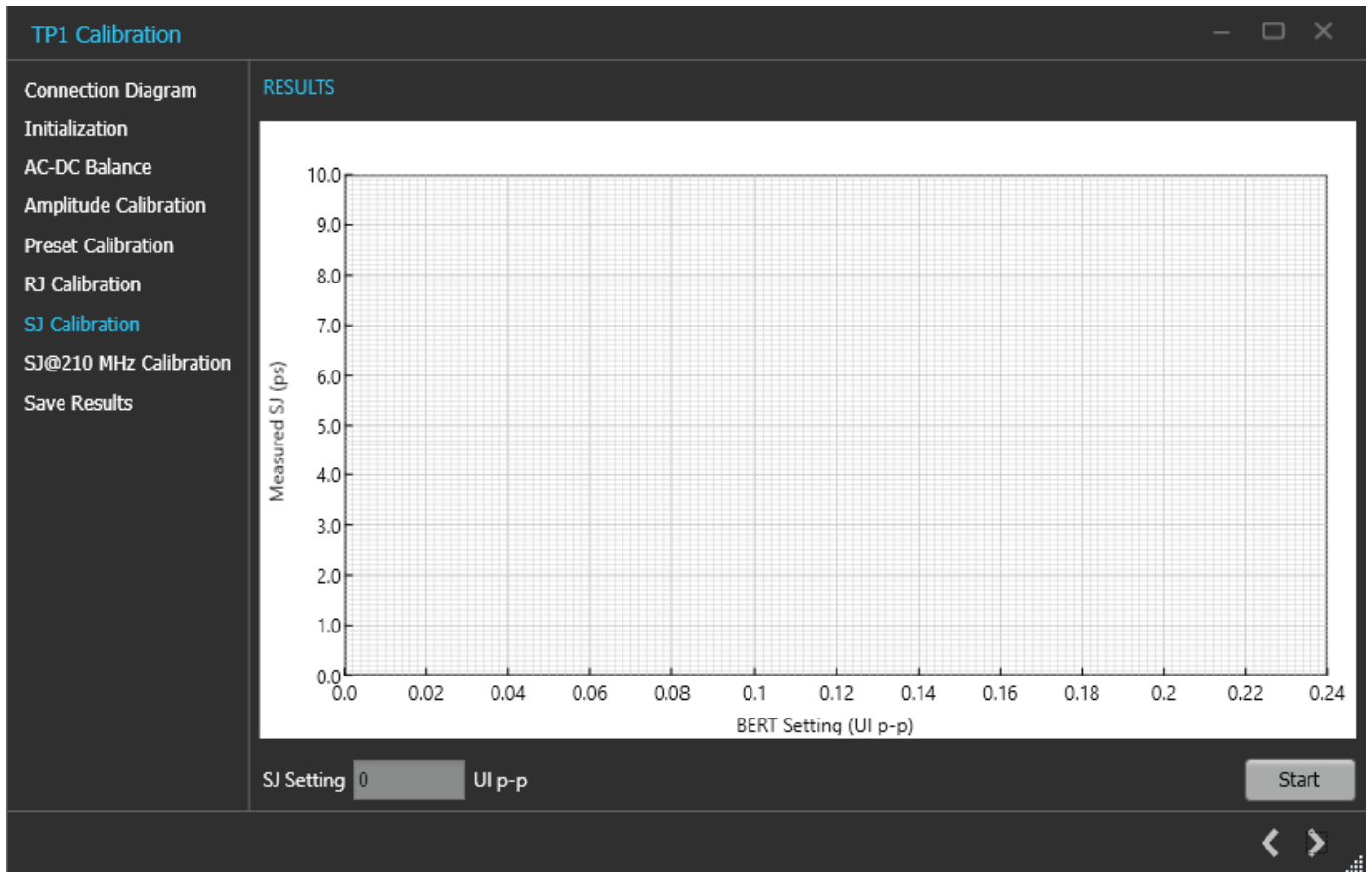
TP1 Calibration: RJ Calibration

Parameter	Description
RJ Setting	Displays the calibrated RJ setting corresponding to the nominal value.
Start	Click Start to run the measurements.



Click  to move to the next screen.

7. **SJ Calibration:** This tab displays the graph plots of SJ calibration.



TP1 Calibration: SJ Calibration

d}}

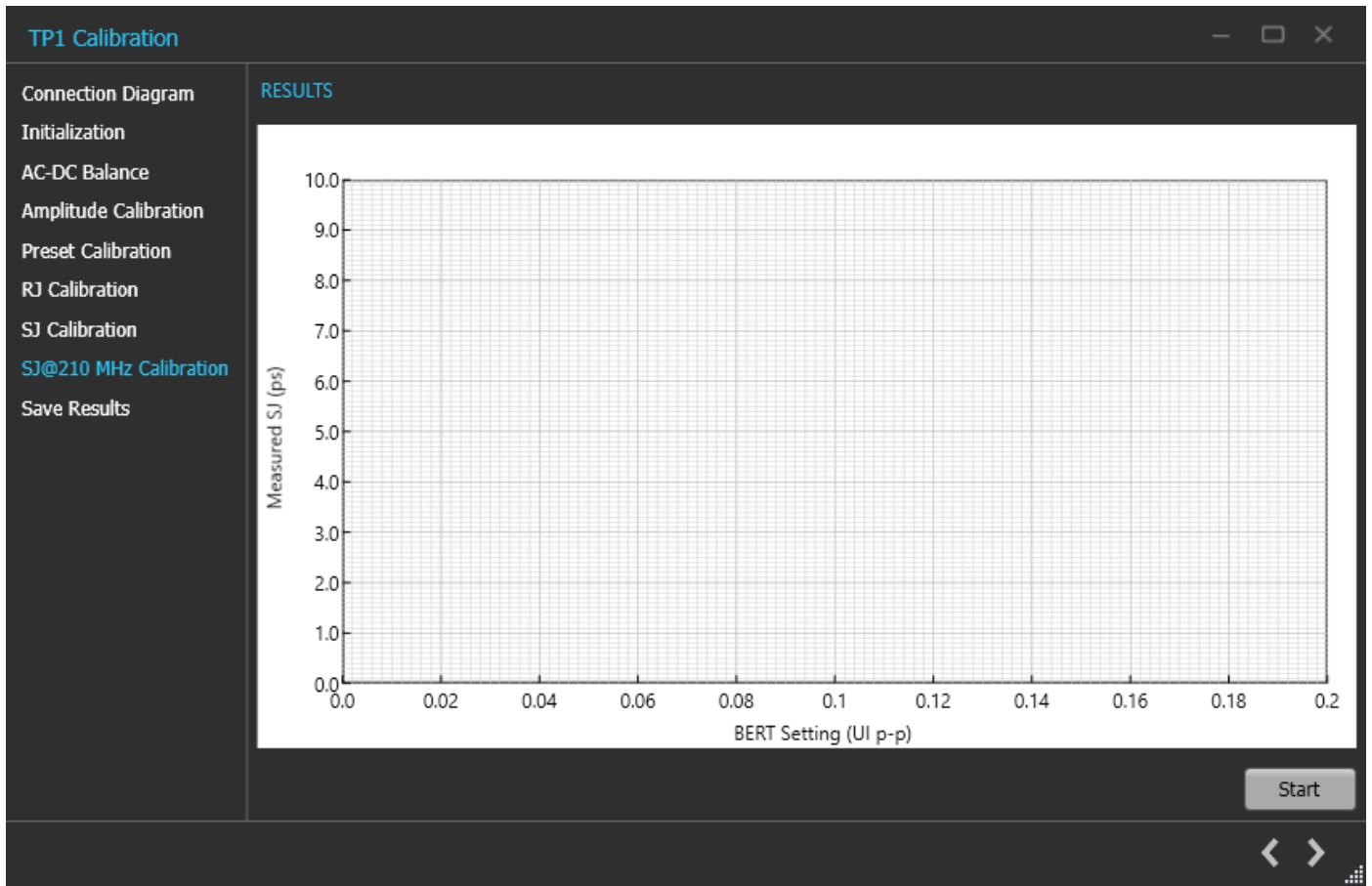
TP1 Calibration: SJ Calibration

Parameter	Description
SJ Setting	Displays the calibrated SJ setting corresponding to the nominal target value.
Start	Click Start to run the measurements.



Click  to move to the next screen.

- 8. **SJ@210 MHz Calibration:** This tab displays the graph plots of SJ@210 MHz calibration.

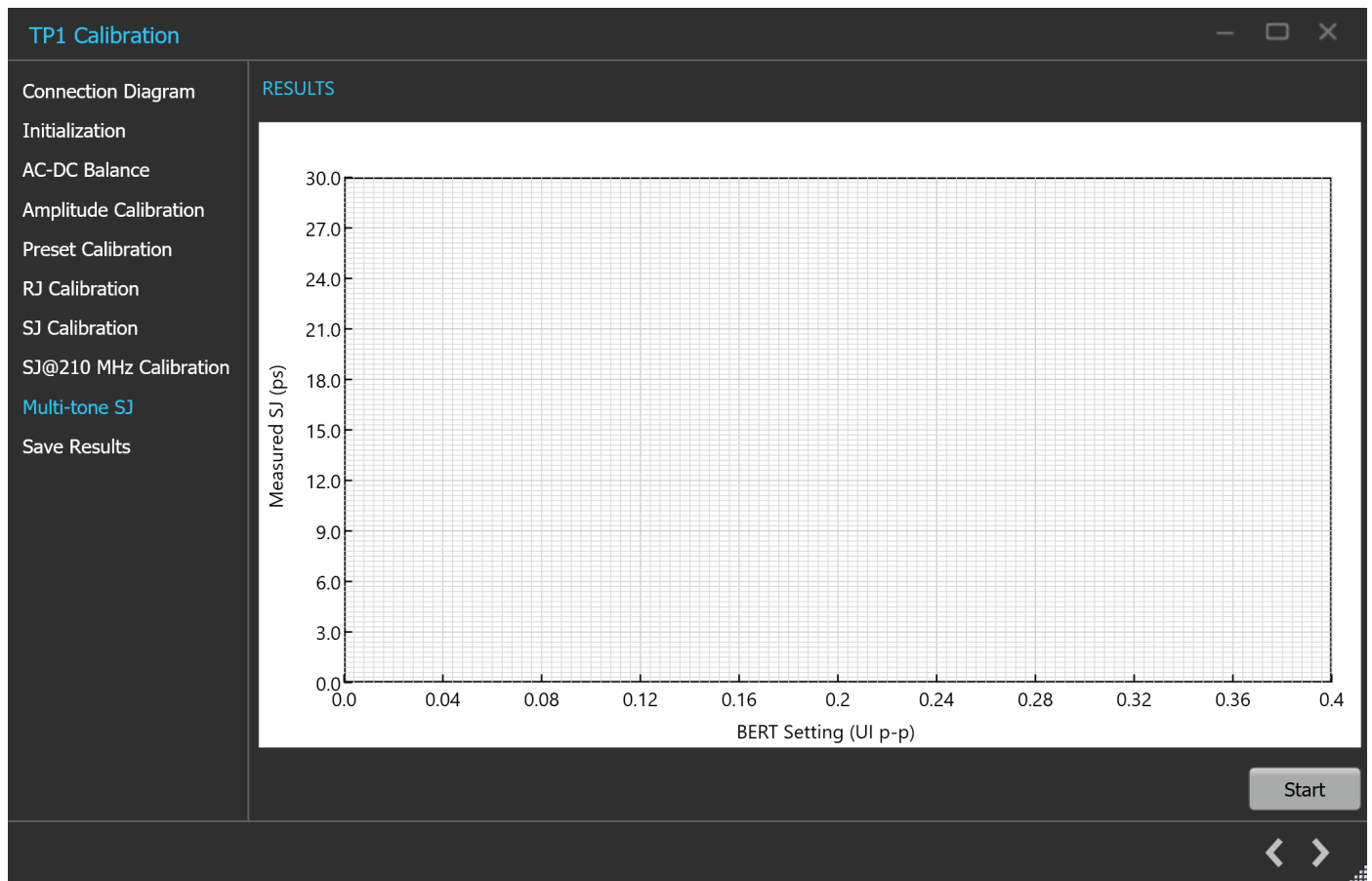


TP1 Calibration: SJ@210 MHz Calibration

TP1 Calibration: SJ@210 MHz Calibration

Parameter	Description
Start	Click Start to run the measurements.

- Multi-tone SJ:** This tab displays the graph plots of multi-tone SJ calibration. Enable the multi-tone option in the settings panel to display the Multi-tone SJ calibration panel in the TP1 calibration wizard window.

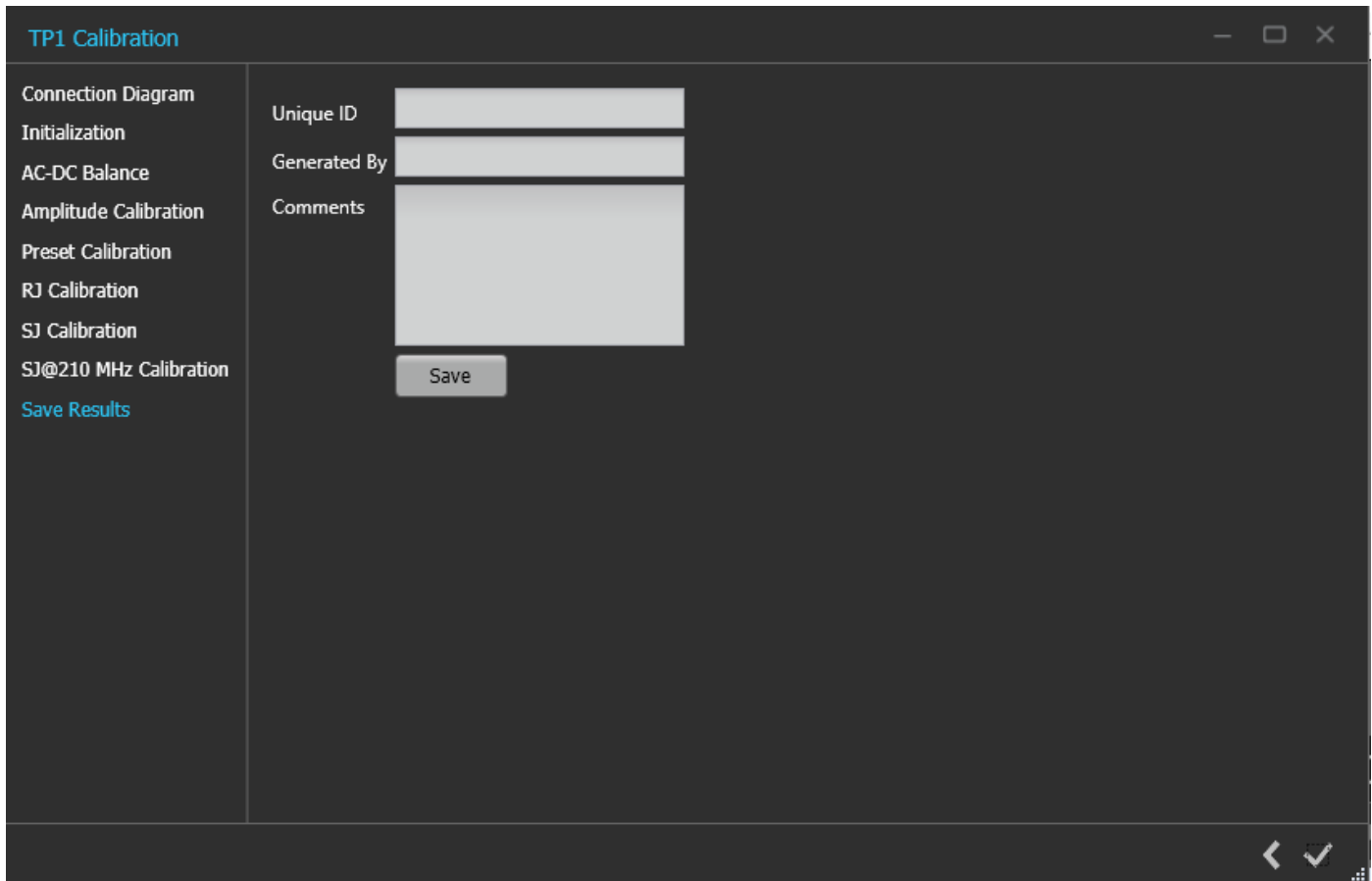


TP1 Calibration: Multi-tone SJ

TP1 Calibration: Multi-tone SJ

Parameter	Description
Start	Click Start to run the measurements.


10. **Save Results:** This tab allows you to save all the TP1 calibration results.



TP1 Calibration: Save Results

TP1 Calibration: Save Results

Parameter	Description
Unique ID	Enter the Unique ID of the calibrated equipment in the text box.
Generated By	Enter the user name in the text box.
Comments (Optional)	Enter the required comments in the comment box.
Save	Click to save the results.

Click  to complete the TP1 calibration and close the wizard.

NOTE: Completion of the TP1 calibration process or in the event of cancellation of the process, the BERT data generator is turned off automatically by the PCIe4.0 (Base) TekRxTest application.

TP2 Calibration

You must perform TP1 calibration before you start performing the calibration for TP2.

The PCIe4.0 (Base) TekRx test application calibrates the following at TP2:


1. DMI - The differential mode sinusoidal interference is required to be calibrated within 10 - 25 mV (pk-pk) by capturing the 2.1 GHz sinusoidal output for a duration of at least 125 us.
2. CMI - The common-mode sinusoidal interference is required to be calibrated for a nominal voltage of 150 mV (pk-pk) by capturing the 120 MHz sinusoidal output for a duration of at least 125 us.
3. CTLE and Preset- Tx equalization presets P5 and P6 are used to find the optimal eye area with the optimal CTLE.
4. Stressed Eye calibration - As per the specification, various signal parameters and stress levels are computed to generate a signal that meets the stressed eye targets.

TP2 Calibration procedure



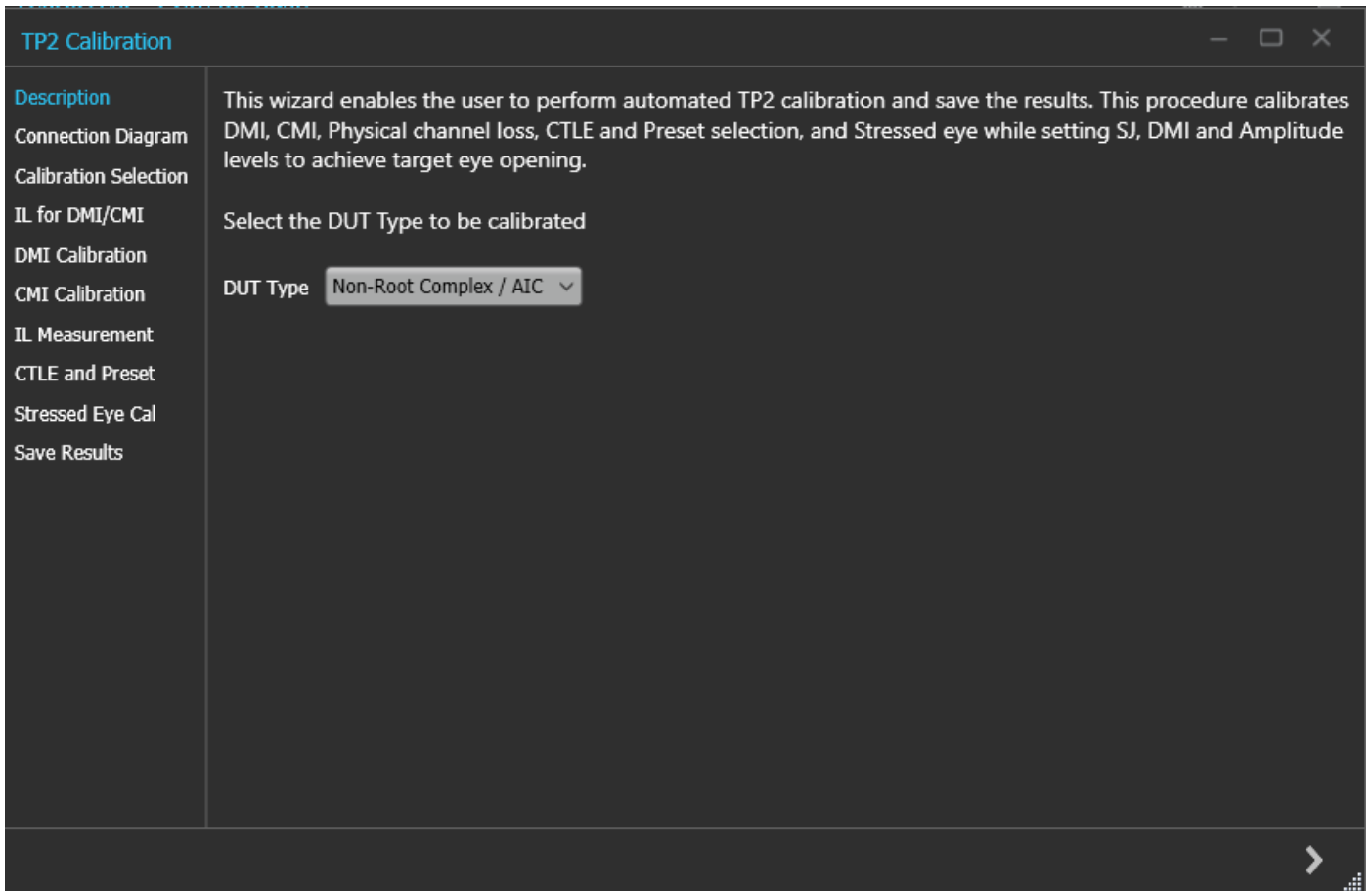
Unique ID	Device	Completion Status	Stressed Eye Convergence	Generated By	Date/Time	Comment
[Example_TP2_NR]	Non-Root Comple>	Complete	True	TEK	14 Sep 2021, 02:0	
[Example_TP2_RC]	Root Complex / Sy	Complete	True	TEK	11 Sep 2021, 00:3	

TP2 Calibration

Click TP2 under the calibration tab to view the calibration results. Click  at the right end corner of the application, to launch the TP2 calibration wizard. This wizard will guide you through the sequential procedure to perform the calibration.

You must perform TP1 calibration before you start performing the calibration for TP2.

1. **Description:** This tab displays the description and allows you to select the DUT Type as Non-Root Complex or Root Complex.



TP2 Calibration: Description

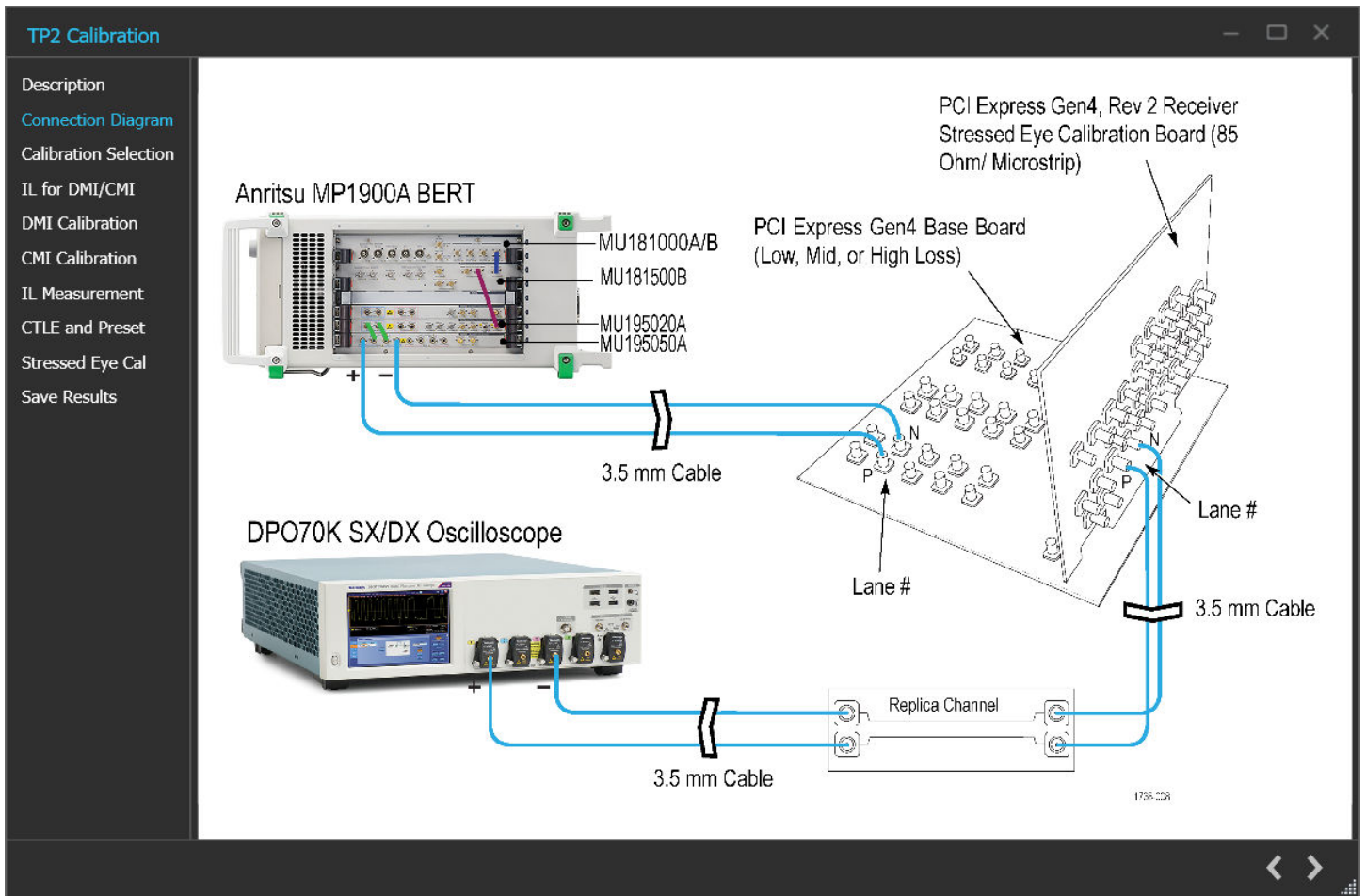
TP2 Calibration: Description

Parameter	Description
DUT Type	<ul style="list-style-type: none"> • Non-Root Complex / AIC Card • Root Complex / System

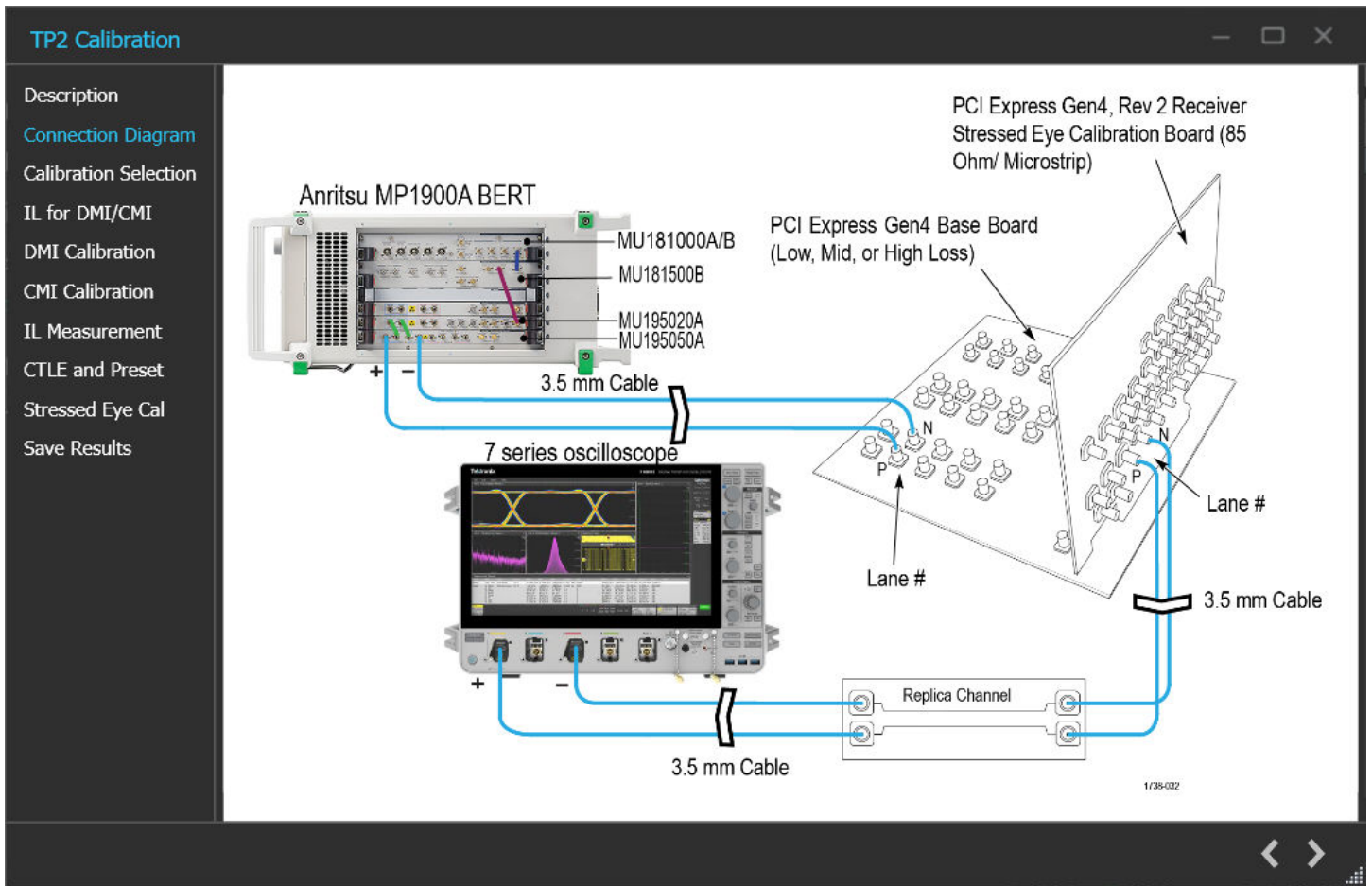


Click  to move to the next screen.

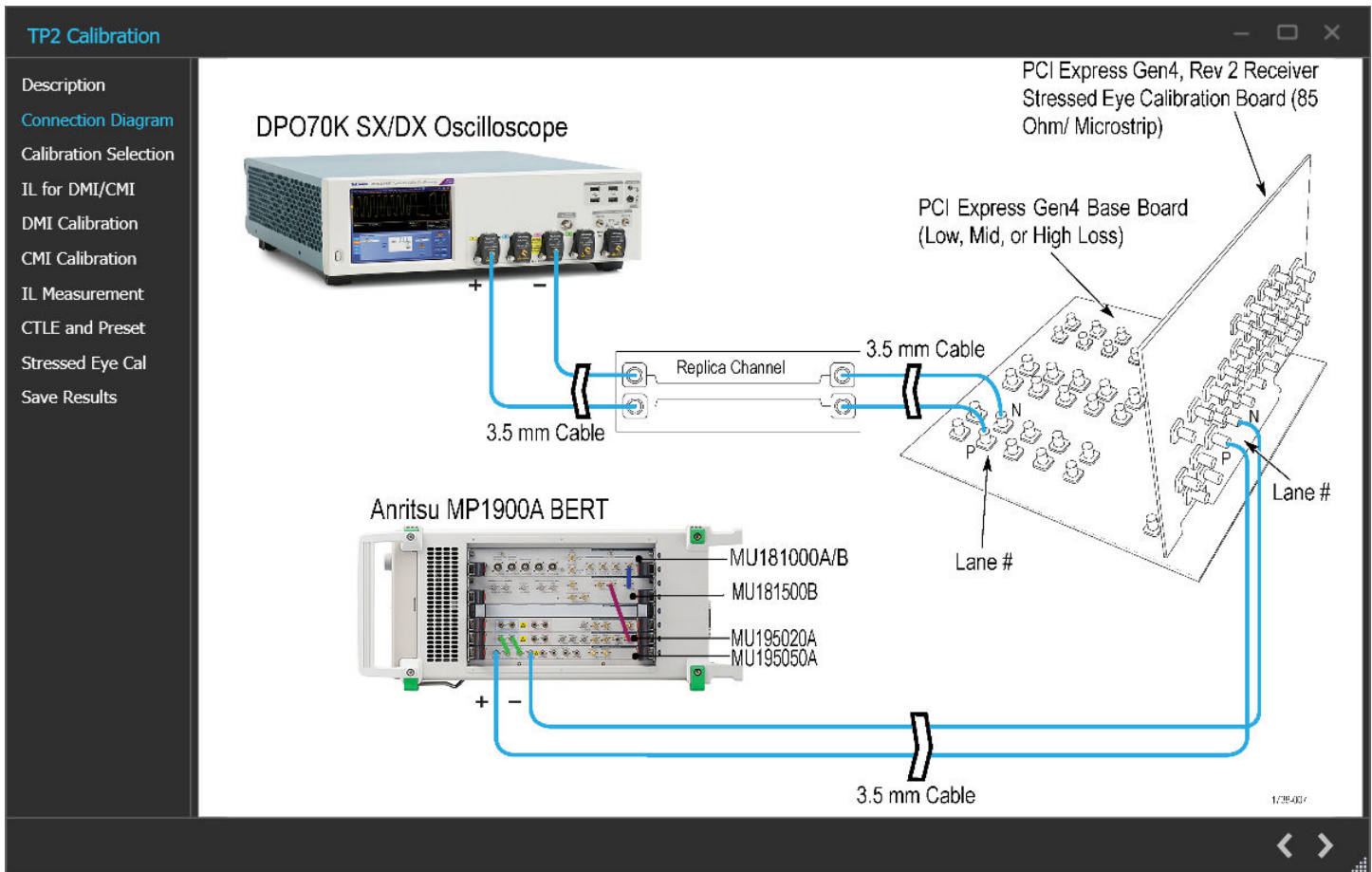
2. **Connection Diagram:** This tab displays the connection diagram for the DUT Type selected in description screen.



TP2 Calibration: Connection Diagram - AIC



TP2 Calibration:Connection Diagram - AIC with 7 series oscilloscope



TP2 Calibration: Connection Diagram-System

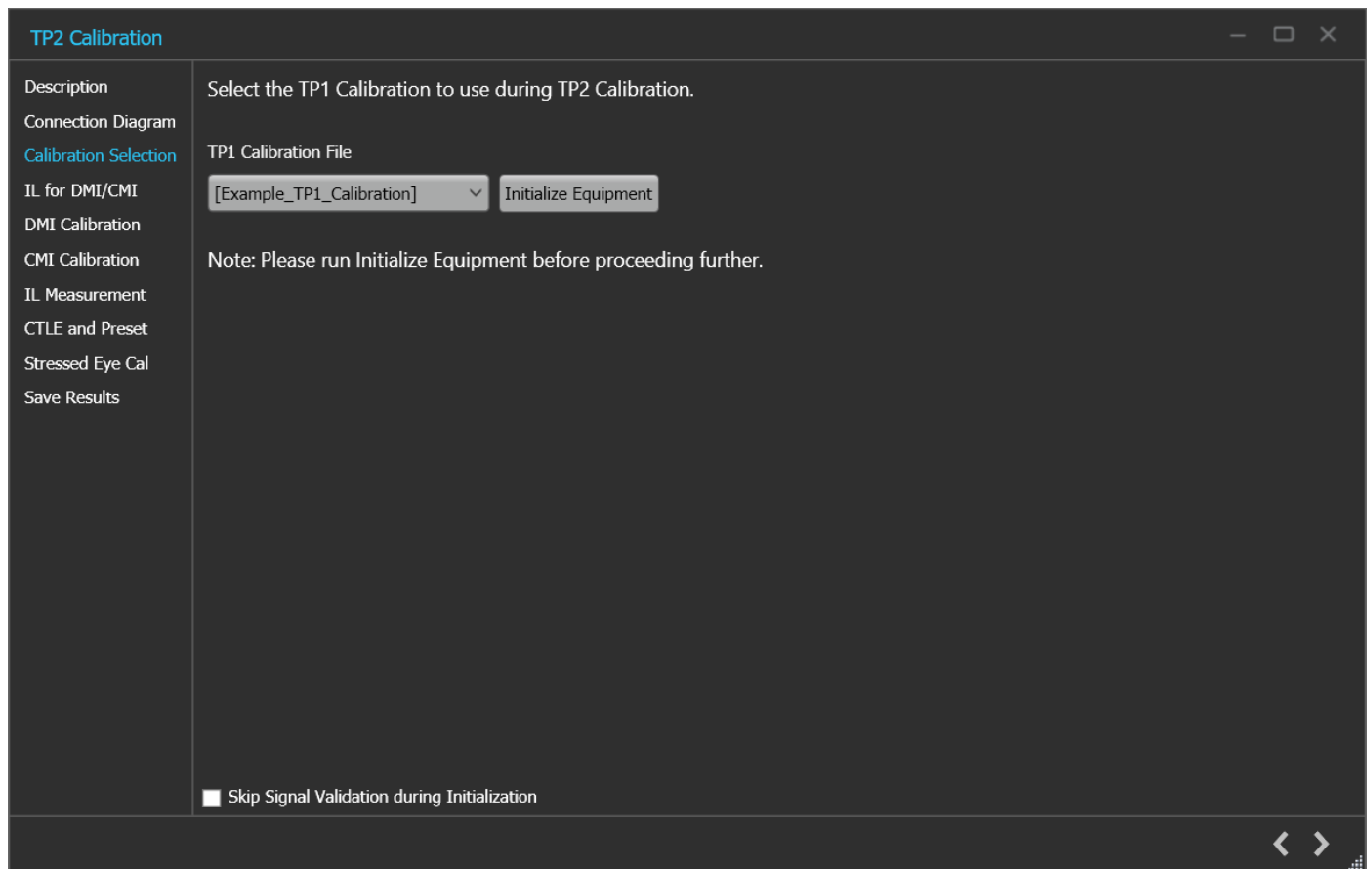
NOTE:

The System Connection Diagram for TP2 Calibration is same as the connection diagram shown above for the DPO71AX Oscilloscope



Click to move to the next screen.

1. **Calibration Selection:** This tab allows you to select the TP1 Calibration file from the drop-down list and click **Initialize Equipment**.



TP2 Calibration: Calibration Selection

TP2 Calibration: Calibration Selection

Parameter	Description
TP1 Calibration File	Select the desired TP1 calibration file and initialize the equipment.
Skip Signal Validation during Initialization	Check the checkbox to skip signal validation.



Click  to move to the next screen.

2. **IL for DMI/CMI:** This module returns physical channel loss without package embedding for DMI and CMI calibration.

TP2 Calibration

Description

Connection Diagram

Calibration Selection

IL for DMI/CMI

DMI Calibration

CMI Calibration

IL Measurement

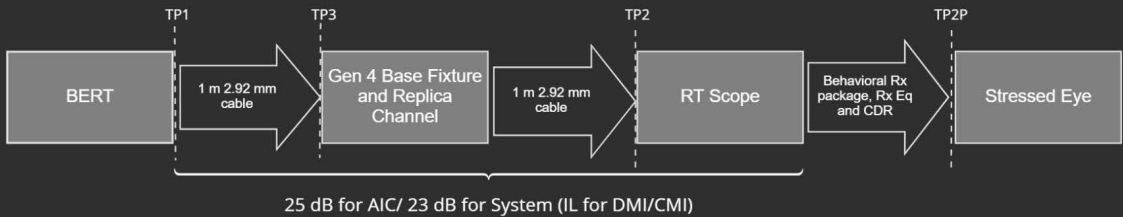
CTLE and Preset

Stressed Eye Cal

Save Results

1. This module returns the total physical channel loss in the present set-up.

2. The user can skip the procedure if the total physical channel loss is already known.



25 dB for AIC/ 23 dB for System (IL for DMI/CMI)

Settings

Scope acqs # avgs

Start

TP2 Calibration: IL for DMI/CMI

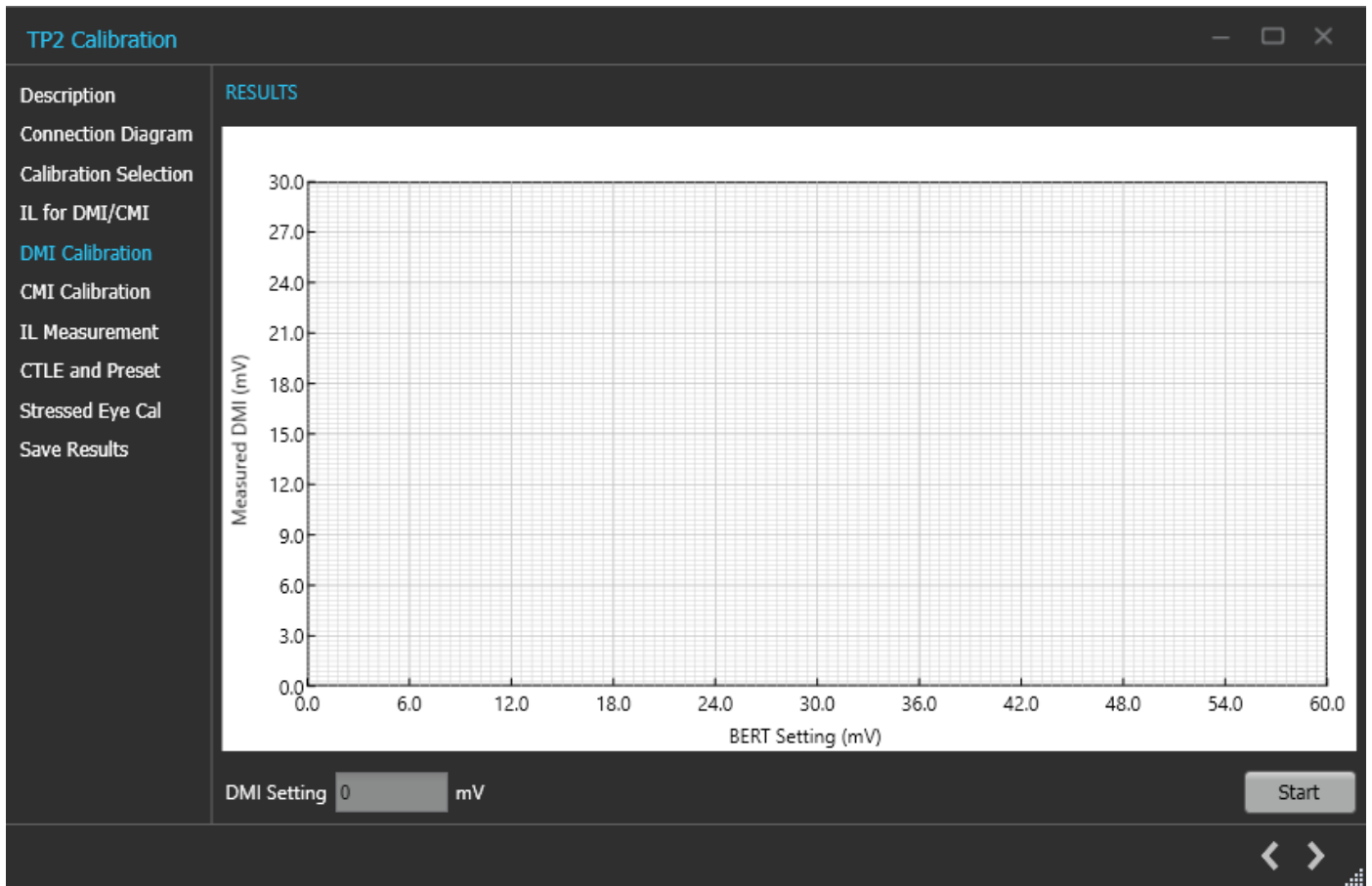
TP2 Calibration: IL for DMI/CMI

Parameter	Description
#Scope acqs	The number of scope acquisitions that allows the algorithm to make multiple insertion loss measurements and report the mean insertion loss. This way, any error in a particular acquisition will get averaged out. The mean of scope noise is usually zero. If we have a large number of samples and we average out those samples, then the noise component in the averaged sample will be zero.
# avgs	The number of averages that will run the insertion loss measurement multiple times and calculate the average value. This way, any error in a particular acquisition will get averaged out.
Start	Click Start to run the measurements.



Click to move to the next screen.

3. **DMI Calibration:** This tab displays the graph plots of DMI calibration.



TP2 Calibration: DMI Calibration

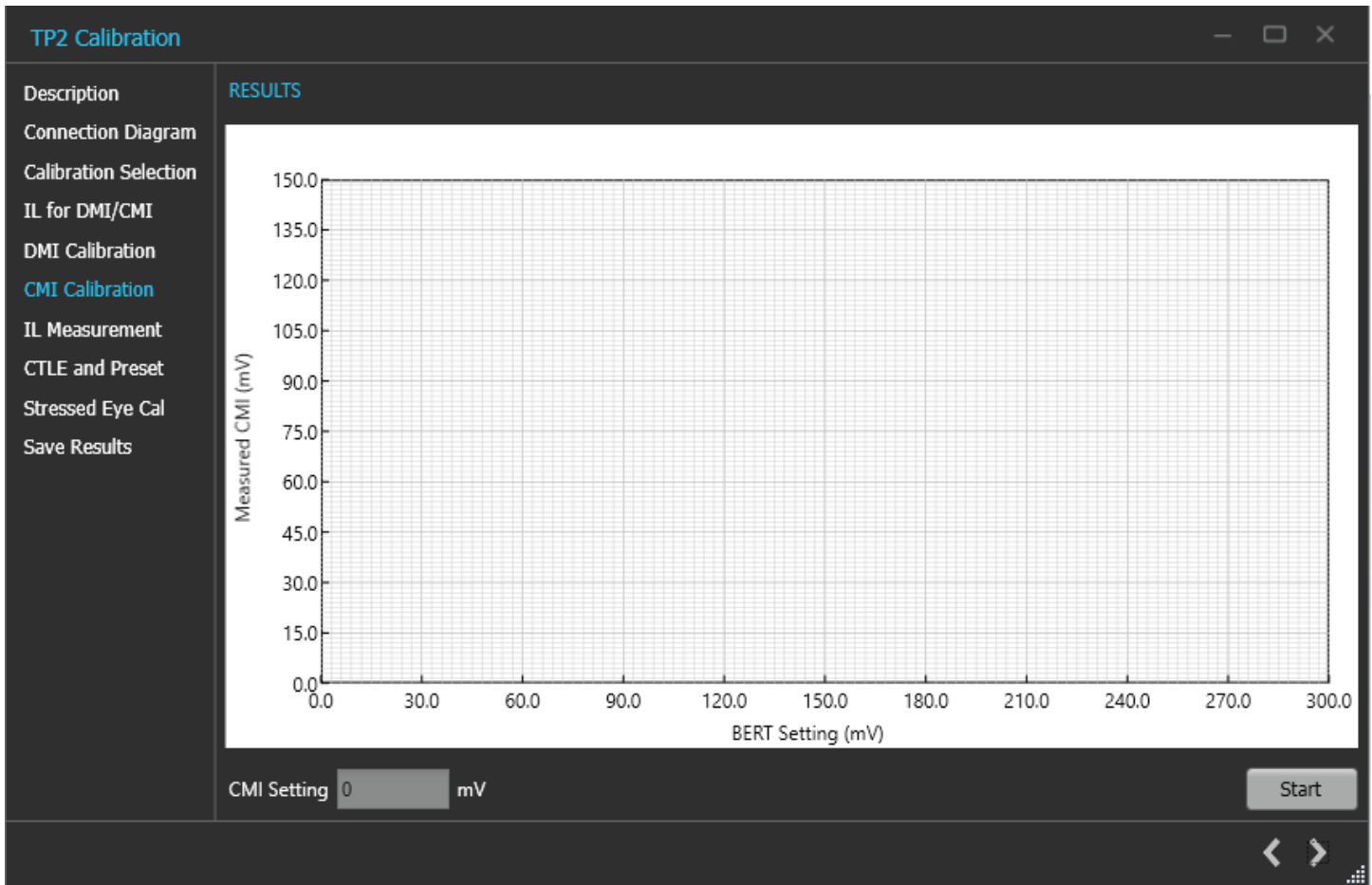
TP2 Calibration: DMI Calibration

Parameter	Description
DMI Setting	Displays the calibrated DMI setting corresponding to nominal value.
Start	Click Start to run the measurement.



Click  to move to the next screen.

4. **CMI Calibration:** This tab displays the graph plots of CMI calibration.



TP2 Calibration: CMI Calibration

TP2 Calibration: CMI Calibration

Parameter	Description
CMI Setting	Displays the calibrated CMI setting corresponding to nominal value.
Start	Click Start to run the measurement.



Click  to move to the next screen.

1. IL Measurement:

The Stressed Eye calibration including CTLE selection and optimal preset identification needs to be performed with a full physical channel loss between 27 dB to 30 dB. This includes the package embedding loss.

TP2 Calibration

Description

Connection Diagram

Calibration Selection

IL for DMI/CMI

DMI Calibration

CMI Calibration

IL Measurement

CTLE and Preset

Stressed Eye Cal

Save Results

1. This module returns the full channel loss in the present set-up.

2. The user is expected to change the ISI pair number on the board to start with a full channel loss of 28 dB before proceeding with the next step.

```

            graph LR
            BERT[BERT] -- "1 m 2.92 mm cable (TP1)" --> Fixture[Gen 4 Base Fixture and Replica Channel (TP3)]
            Fixture -- "1 m 2.92 mm cable (TP2)" --> RTScope[RT Scope]
            RTScope -- "Behavioral Rx package, Rx Eq and CDR (TP2P)" --> StressedEye[Stressed Eye]
            subgraph IL_Measurement [27 dB - 30 dB (IL Measurement)]
            Fixture
            RTScope
            end
            
```

Measure Loss Manual Entry

Settings

Scope acqs: # avgs:

Loss Value: dB

TP2 Calibration: IL Measurement

TP2 Calibration: IL Measurement

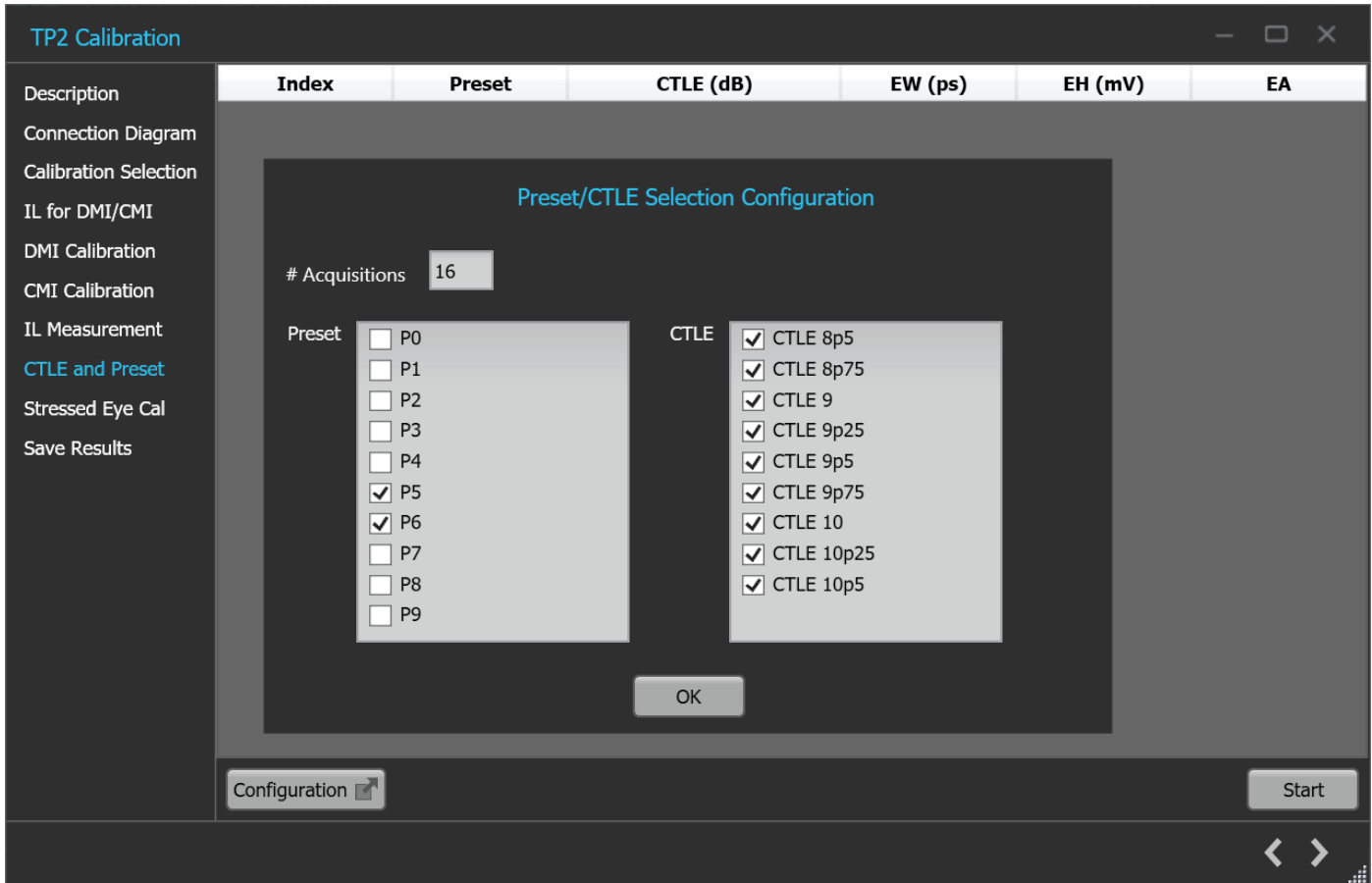
Parameter	Description
Manual Entry	Select the manual entry option and enter the loss value in dB.
Measure Loss	Select the measure loss option for the TekRxTest application to initiate measure loss
Settings	
#Scope acqs	The number of scope acquisitions that allows the algorithm to make multiple insertion loss measurements and report the mean insertion loss. This way, any error in a particular acquisition will get averaged out. The mean of scope noise is usually zero. If we have a large number of samples and we average out those samples, then the noise component in the averaged sample will be zero.
# avgs	The number of averages that will run the insertion loss measurement multiple times and calculate the average value. This way, any error in a particular acquisition will get averaged out.
Loss Value	Displays the final loss value after computing.
Start	Click Start to run the measurements.



Click  to move to the next screen.

2. CTLE and Preset

The PCIe Gen4 TekRxTest application provides the facility to automatically compute and present the total physical channel loss in the TP2 set-up. Selection of optimum physical channel loss (obtained by means of changing the ISI pair), optimum CTLE, and Preset is a prerequisite for to obtain the stressed eye as per the specification. While arriving at the optimum combination of the parameters, the TekRxTest application guides you through the various steps in this process by means of pop-up messages in taking suitable actions.



TP2 Calibration: CTLE and Preset

TP2 Calibration: CTLE and Preset

Parameter	Description
# Acquisitions	Enter the number of waveforms to be acquired for CTLE and Preset.
Preset	Select the presets from which the optimum will be chosen for TP2 calibration.
CTLE	Select the CTLE's from which the optimum will be chosen for TP2 calibration.
Configuration	Select to Configure the Preset and CTLE configuration.
OK	Select to apply the configuration for Preset and CTLE.

Start	Click Start to run the measurements.
-------	---



Click  to move to the next screen.

3. Stressed Eye Calibration:

TP2 calibration for stressed eye requires information from the TP1 calibration that is performed for the set-up under consideration or from one of the saved TP1 results. The relevant TP1 calibration file can be chosen from the calibration selection page shown from a drop-down button listing all the TP1 calibration files stored in the PCIe Gen4 TekRxTest application repository.

TP2 Calibration
— □ ×

	Index	SJ (ps)	SJ Setting (UI p-p)	DMI (mV)	DMI Setting (mV)	Ampl (mV)	Ampl Setting (mV)	EW (ps)	EH (mV)

Manual Calibration Run

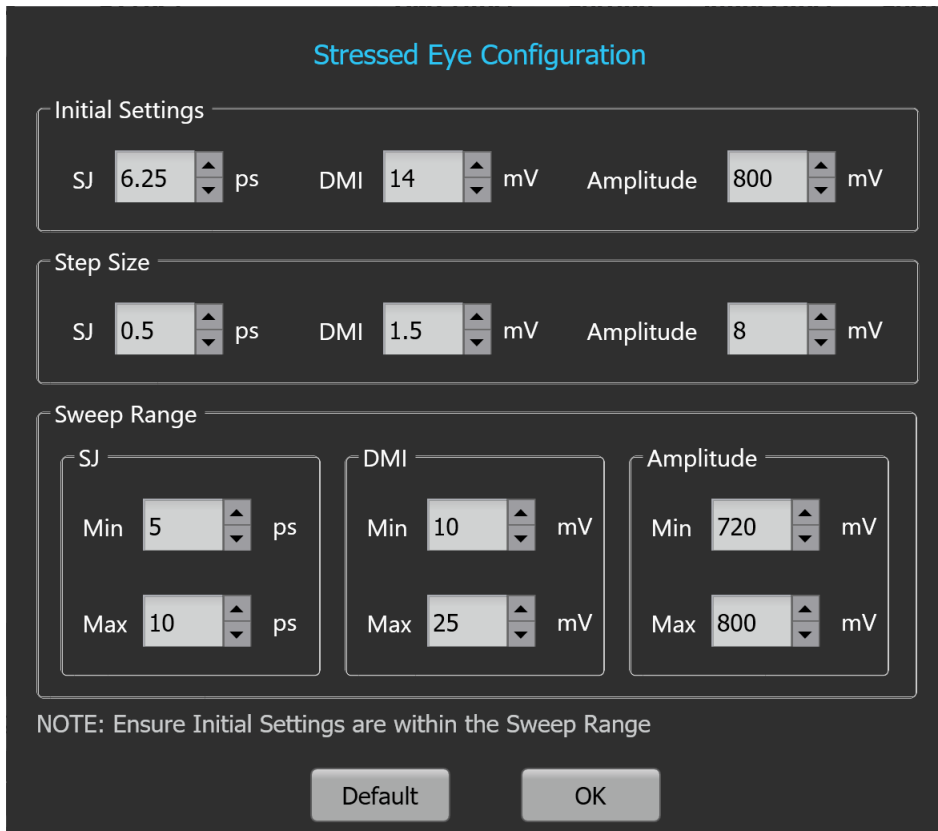
Exhaustive Sweep

SJ ps DMI mV Amplitude mV # acqs

Eye Height Limit: (13.5 - 16.5) mV, Eye Width Limit: (18.25 - 19.25) ps, Selected Preset: NA, Selected CTLE: NA
 SJ Limits: (5 - 10) ps, DMI Limits: (10 - 25) mV, Amplitude Limits: (720 - 800) mV

< >

TP2 Calibration: Stressed Eye Cal




TP2 Calibration: Stressed Eye Configuration

TP2 Calibration: Stressed Eye Cal

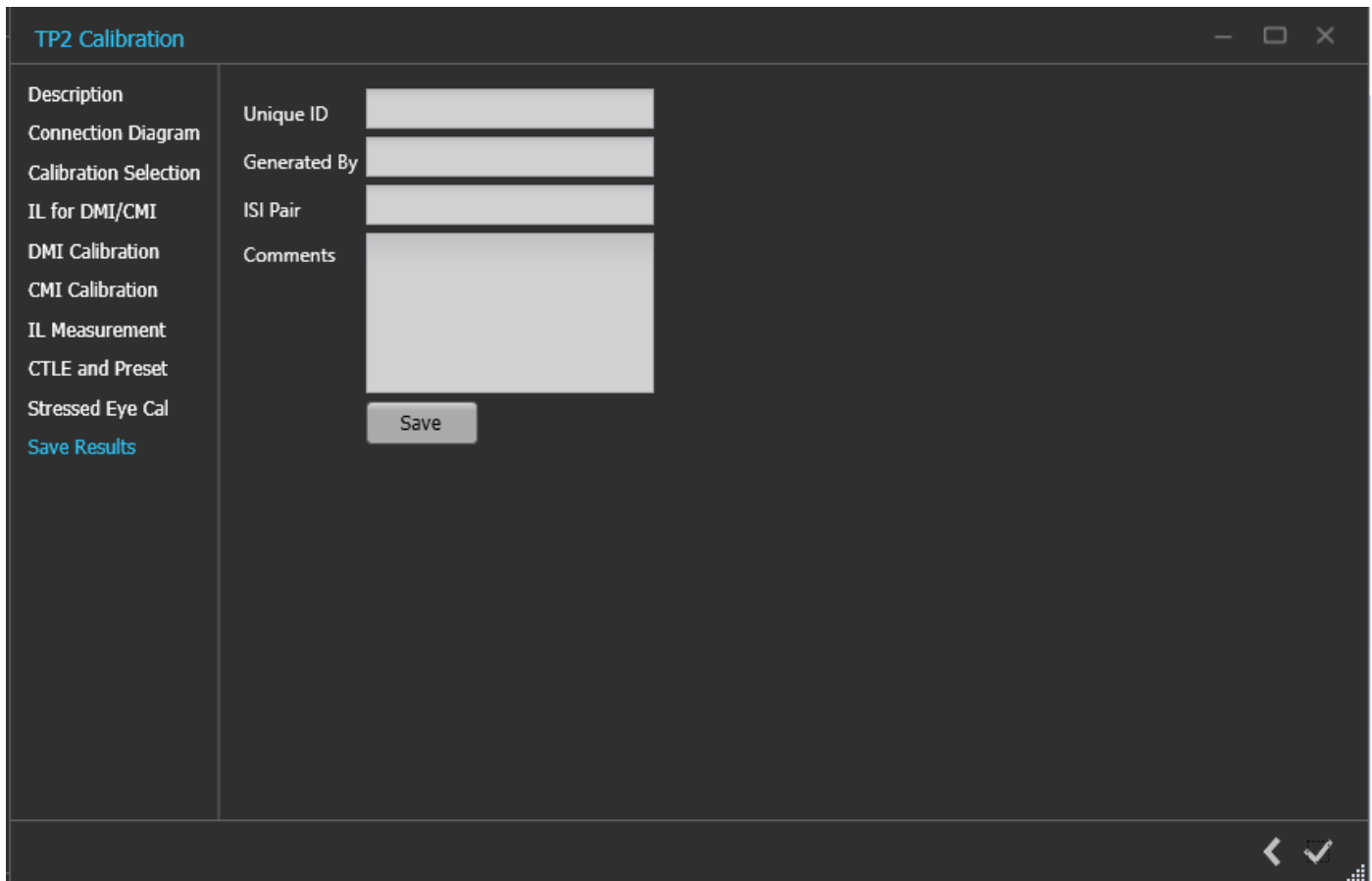
Parameter	Description
Manual Calibration Run	Select to manually enter the SJ, DMI and Amplitude values for Stressed Eye calibration.
SJ	Displays the SJ value at which Eye Width (EW) and Eye height (EH) needs to be computed.
DMI	Displays the DMI value at which Eye Width (EW) and Eye height (EH) needs to be computed.
Amplitude	Displays the amplitude level at which Eye Width (EW) and Eye height (EH) needs to be computed.
Exhaustive Sweep	Select to run the stressed eye calibration for all combinations of Amplitude, SJ, and DMI within the sweep range with defined step sizes.
# acqs	Enter the number of waveforms used to obtain the average EW and EH.

<p>Configuration</p>	<p>Select to configure initial settings, step size, sweep range.</p> <ul style="list-style-type: none"> • Initial Settings - Configure the Initial SJ / DMI / Amplitude value from which your Linear Sweep should start (Not applicable for Exhaustive Sweep). • Step Size - Configure the SJ / DMI / Amplitude step size value by which the increment or decrement of your SJ / DMI / Amplitude values should happen for Stressed Eye Calibration. • Sweep Range - Configure the SJ / DMI / Amplitude min and max sweep range for which the Stressed Eye Calibration is executed. • Default - Select to apply the initial settings, step size and sweep range to the default values. • OK - Select to apply the configured values of initial settings, step size, sweep range.
<p>Start</p>	<p>Click Start to run the measurements.</p>



Click  to move to the next screen.

4. **Save Results:** This tab allows you to save all the TP2 calibration results.




TP2 Calibration: Save Results

TP2 Calibration: Save Results

Parameter	Description
Unique ID	Enter the Unique ID of the calibrated equipment in the text box.
Generated By	Enter the user name in the text box.
ISI Pair	Enter the ISI pair used during calibration.
Comments (Optional)	Enter the required comments in the comment box.
Save	Click to save the results.



Click  to complete the TP2 calibration and close the wizard.

NOTE: Completion of the TP2 calibration process or in the event of cancellation of the process, the BERT data generator is turned off automatically by the PCIe4.0 (Base) Test Application.

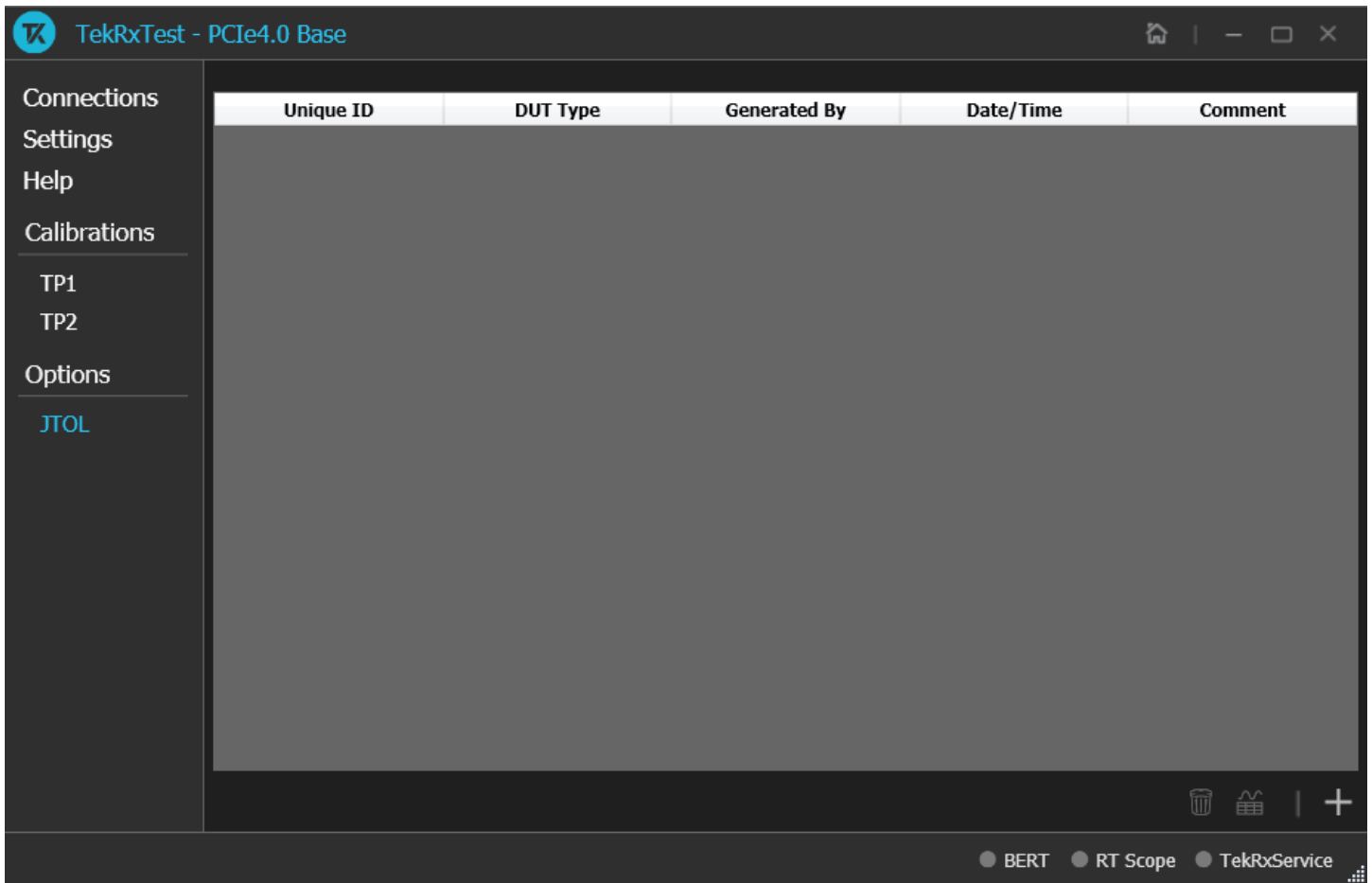
Tests panel

JTOL Test


To test SJ at multiple frequencies for the JTOL test, you need to perform Multi-tone SJ calibration during TP1 Calibration. You can generate 30 KHz to 100 MHz with a maximum of 14 different frequencies.

The frequency settings table lists the frequencies calibrated during Multi-tone SJ calibration while performing TP1 calibration. If the newly generated frequency doesn't match with the calibrated frequency, then nearby calibrated frequency data will be used for running the JTOL test.

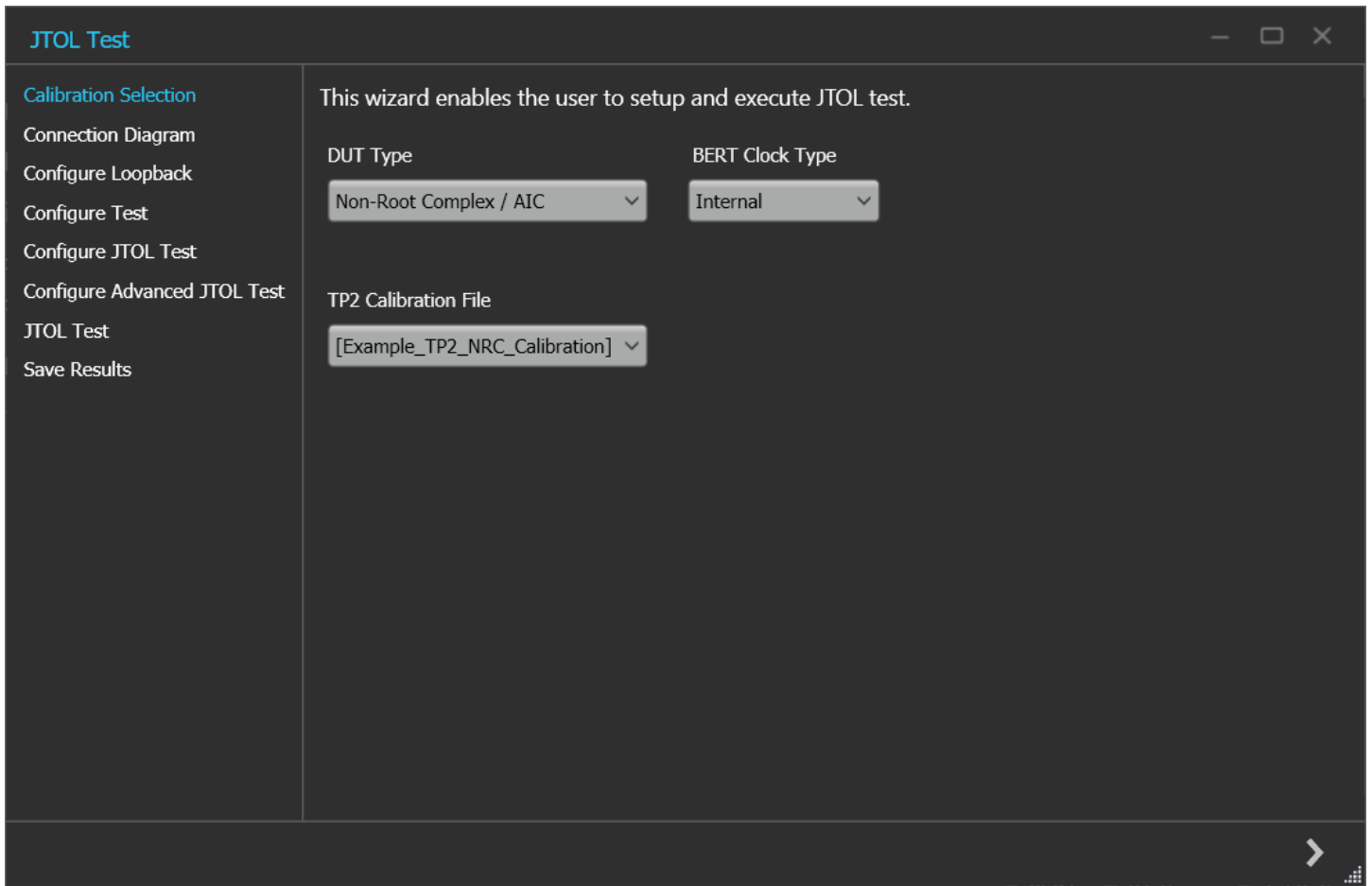
JTOL Test procedure



JTOL Test

Click **JTOL Test** under the Tests panel to view the measurement results. Click  at the right end corner of the application, to launch the JTOL test wizard. This wizard will guide you through the sequential procedure to perform the test.

Calibration Selection: This tab allows you to select the calibration file from the drop-down list. The drop-down lists all the TP2 calibration files available as per the choice made under DUT Type selection.



JTOL Test: Calibration Selection

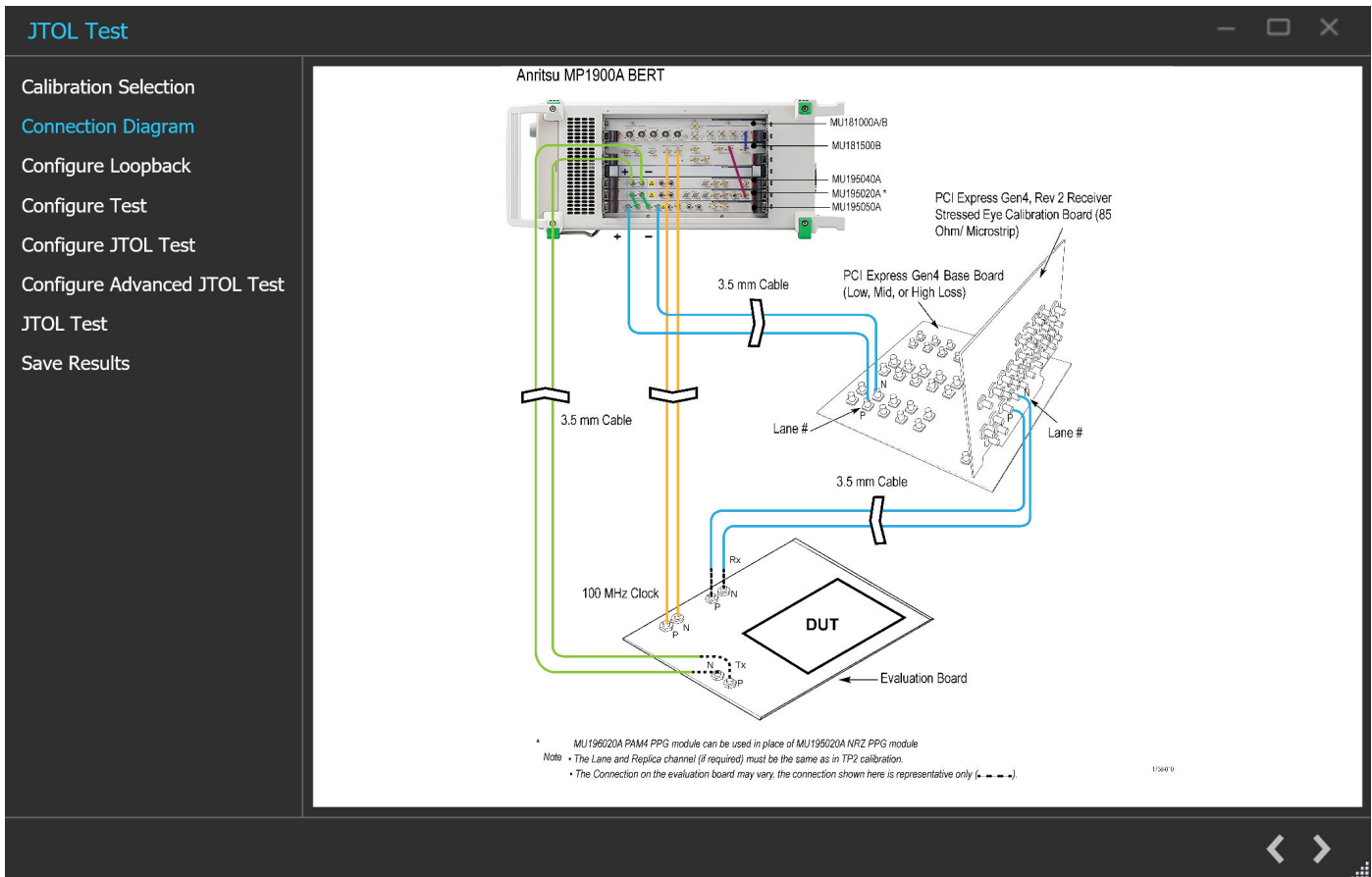
JTOL Test: Calibration Selection

Parameter	Description
DUT Type	Select the required DUT type. <ul style="list-style-type: none"> • Non-Root Complex / AIC • Root Complex / System
BERT Clock Type	Select the required DUT clock type. <ul style="list-style-type: none"> • 100 MHz External • Internal
TP2 Calibration File	Select the required TP2 calibration file.



Click  to move to the next screen.

1. **Connection Diagram:** This tab displays the connection diagram for the JTOL test. The connection diagram is the same for Non-Root Complex and Root Complex in case of JTOL test.



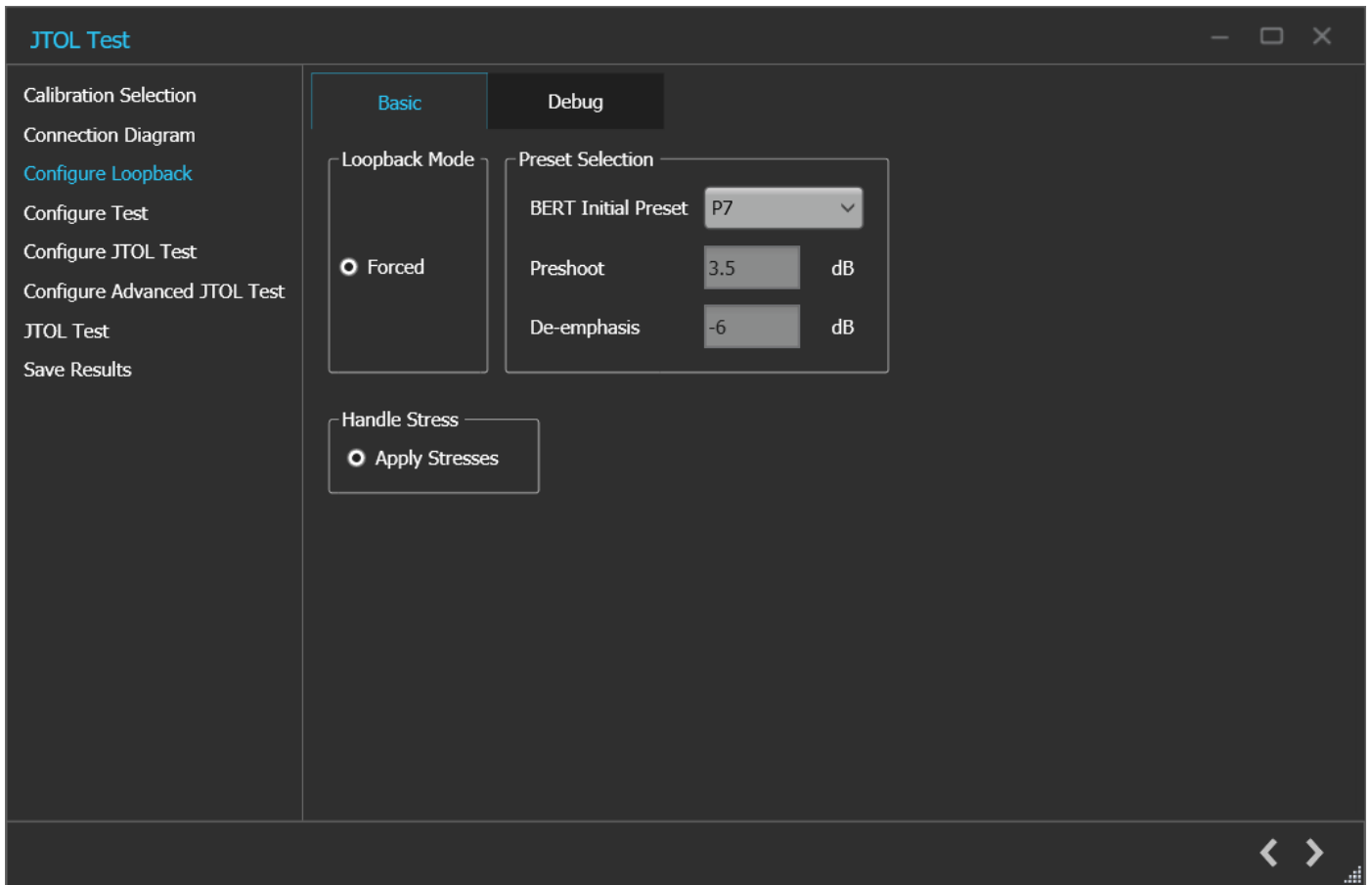
JTOL Test: Connection Diagram (AIC)



Click to move to the next screen.

2. Configure Loopback:

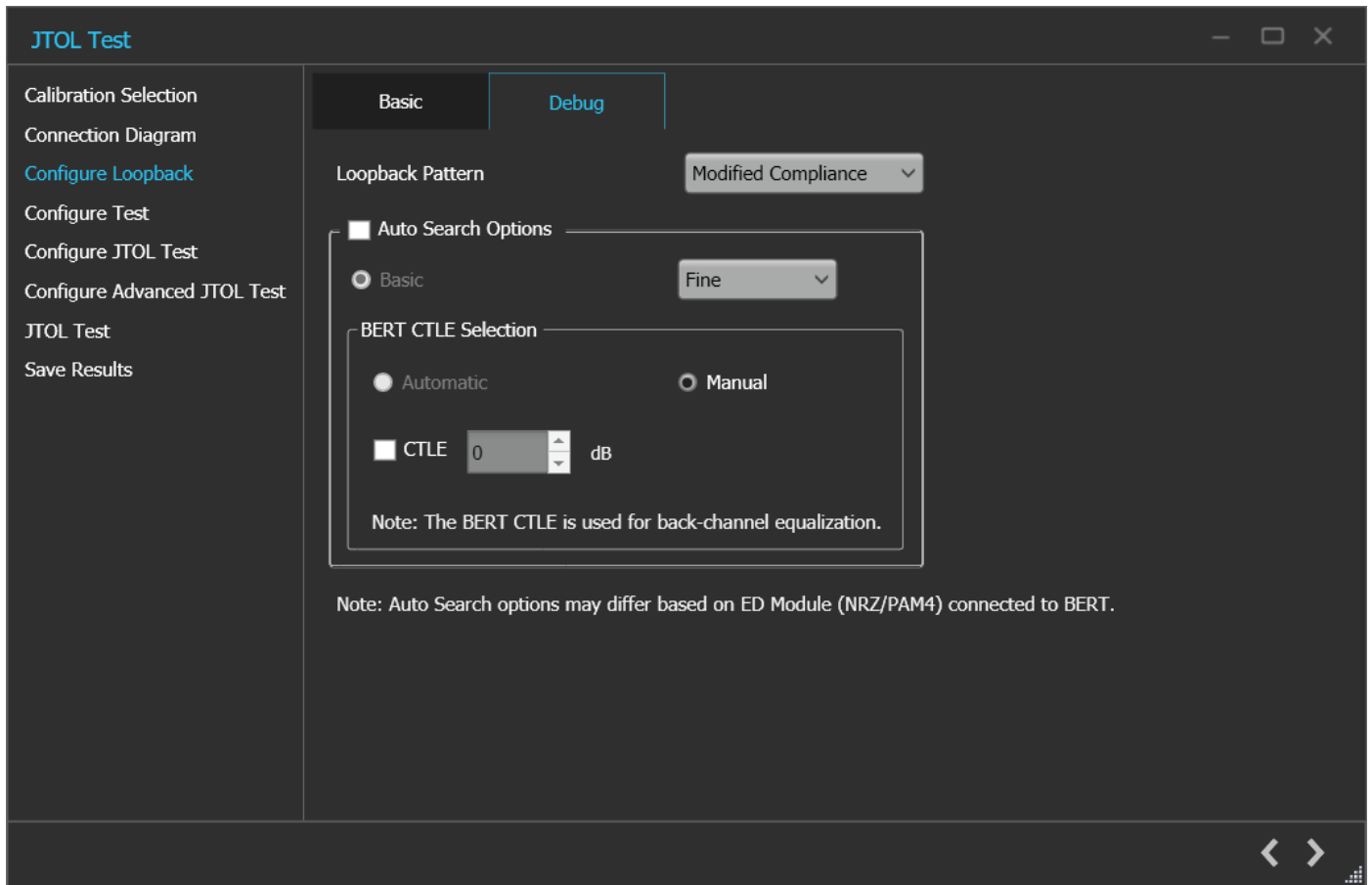
This tab allows you to configure the loopback settings (Basic and Debug).



JTOL Test: Configure Loopback (Basic)

JTOL Test: Configure Loopback (Basic)

Parameter	Description
Loopback Mode	Displays the default loopback mode selected.
Preset Selection	
BERT Initial Preset	Select the Preset to be set on the BERT PPG during loopback from the drop-down list.
Preshoot	Displays the Preshoot to be set on the BERT PPG during loopback.
De-emphasis	Displays the De-emphasis to be set on the BERT PPG during loopback.
Handle Stress	Displays the default handle stress option selected.




JTOL Test: Configure Loopback (Debug)

JTOL Test: Configure Loopback (Debug)

Parameter	Description
Loopback pattern	Select the pattern to be used during loopback from the drop-down list. The drop-down list contains the following elements: <ul style="list-style-type: none"> • Modified Compliance • Compliance • Clock Pattern • PRBS7 • PRBS9 • PRBS10 • PRBS11 • PRBS15 • PRBS20 • PRBS23 • PRBS31
Auto Search	Select to enable the auto search basic mode and choose from the drop-down. The drop-down contains the following elements: <ul style="list-style-type: none"> • Fine • Coarse

BERT CTLE Selection	Select the type of CTLE selection.
BERT CTLE	Enable the BERT CTLE value in dB. This parameter is used for back channel equalization.



Click  to move to the next screen.

3. **Configure Test:** This tab allows you to configure the test settings.



JTOL Test: Configure Test

JTOL Test: Configure Test (Basic)

Parameter	Description
Apply SSC to data and clock output	Select to apply SSC to data and clock output.
BER Settings	<ul style="list-style-type: none"> BER - Enter the number of bits in error that can be tolerated. Error Limit - Enter the required error limit. The default value is 1.
Test Length	<ul style="list-style-type: none"> Duration - Enter the test length duration value. Confidence - Displays the test length confidence value.
Stress Configuration	Select the required stress configuration among calibrated, customized, un-calibrated.
CMI	Displays the CMI value in mV. The stress on the waveform is defined by the parameters of CMI.

DMI	Displays the DMI value in mV. The stress on the waveform is defined by the parameters of DMI.
Amplitude	Displays the Amplitude value in mV. The stress on the waveform is defined by the parameters of Amplitude.
RJ	Displays the RJ value in ps or UIp-p. The stress on the waveform is defined by the parameters of RJ.
SJ	Displays the SJ value in ps or UIp-p. The stress on the waveform is defined by the parameters of SJ.
Load Stresses	Click Load Stresses to apply all the configured stress parameters CMI, DMI, SJ, and amplitude in the BERT. NOTE: Use the Load Stresses option exclusively to load preset and stress parameters into BERT.
BER Measurement Pattern	Select the required BER measurement pattern from the drop-down list.



Click  to move to the next screen.

4. **Configure JTOL Test:** This tab allows you to configure the JTOL test settings.

JTOL Test
— □ ×

- Calibration Selection
- Connection Diagram
- Configure Loopback
- Configure Test
- Configure JTOL Test
- Configure Advanced JTOL Test
- JTOL Test
- Save Results

Frequency Settings

Min Frequency MHz

Max Frequency MHz

Frequencies

Frequency (MHz)	Lower Amp Limit (UI p-p)	Higher Amp Limit (UI p-p)
0.03	0.10	20.80
0.40	0.01	4.60
1.00	0.01	1.30
5.00	0.01	0.26
10.00	0.01	0.20
20.00	0.01	0.20
30.00	0.01	0.20
40.00	0.01	0.20
50.00	0.01	0.20
60.00	0.01	0.20

Note: Changing Frequency will cause change in Lower/Higher Amplitude Limit

JTOL Custom Mask

Mask Settings

Frequency (MHz)	Amp (UI p-p)
0.03	16.00
0.40	3.54
1.00	1.00
5.00	0.20
11.00	0.10
20.00	0.10
50.00	0.10
100.00	0.10

< >

Configure JTOL Test

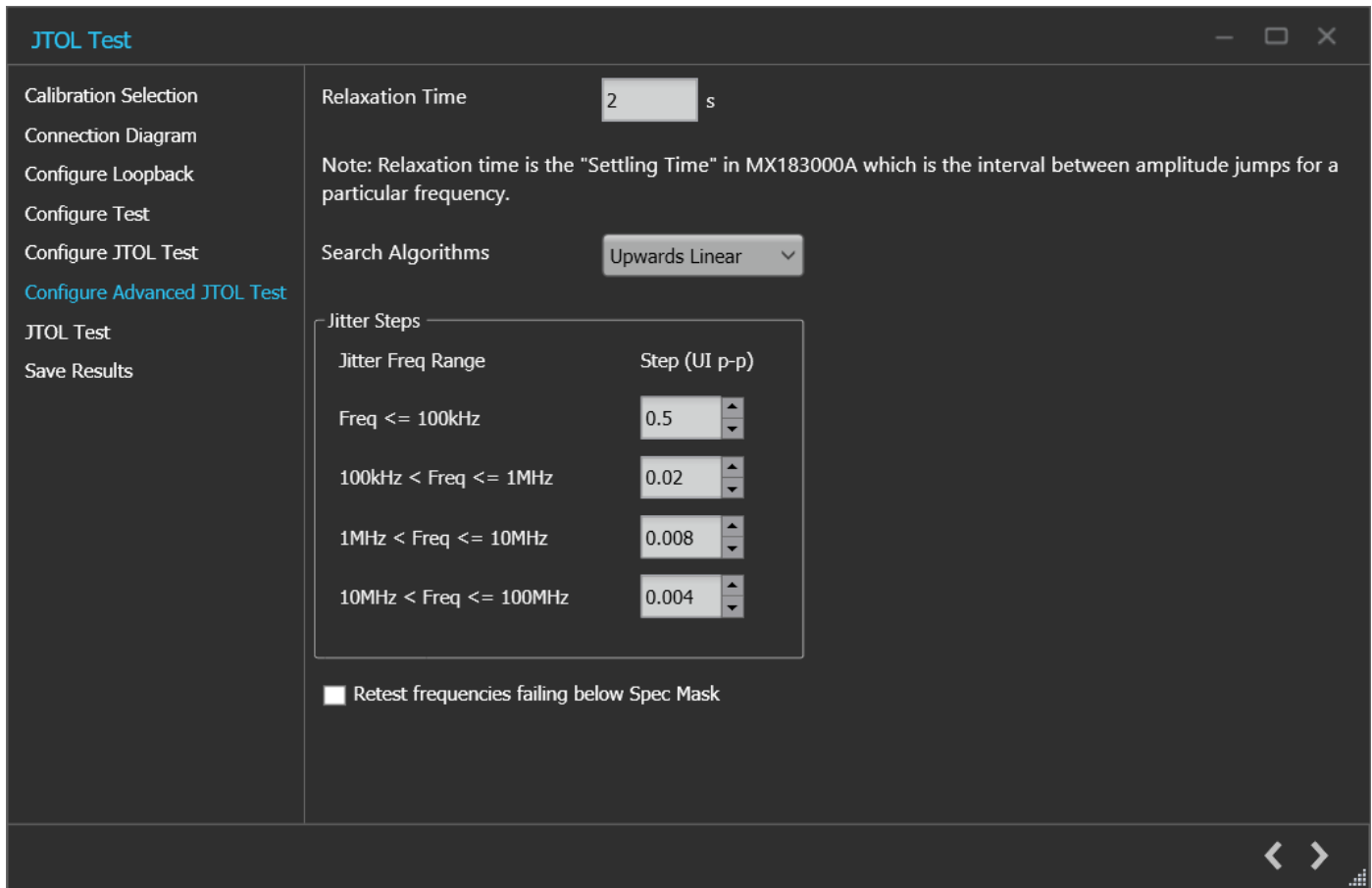
JTOL Test: Configure JTOL Test

Parameter	Description
Frequency Settings	
Frequency (MHz)	Displays the table of frequencies in MHz for which JTOL test is to be performed.
Lower Amplitude Limit (UI p-p)	Displays the table of lower amplitude limit values at which JTOL test starts for that frequency.
Higher Amplitude Limit (UI p-p)	Displays the table of higher amplitude limit values at which JTOL test ends for that frequency.
Min Frequency	Enter the minimum frequency value.
Max Frequency	Enter the maximum frequency value.
# Frequencies	Enter the desired number of frequencies within the specified range.
Generate	Click to view the table populated with the frequencies.
Default	Click to view the table populated with default list of frequencies.
JTOL Custom Mask	Select to enable the JTOL Custom mask. On JTOL custom mask selection with the defined mask settings, mask will get generated on the plot.
Mask Settings	
Frequency (MHz)	Displays the table of knee frequencies for the mask.
Amplitude (UI p-p)	Displays the amplitude of SJ at each knee frequency.



Click  to move to the next screen.

5. **Configure Advanced JTOL Test:** This tab allows you to configure the advanced JTOL test settings.



JTOL Test: Configure Advanced JTOL Test

JTOL Test: Configure Advanced JTOL Test

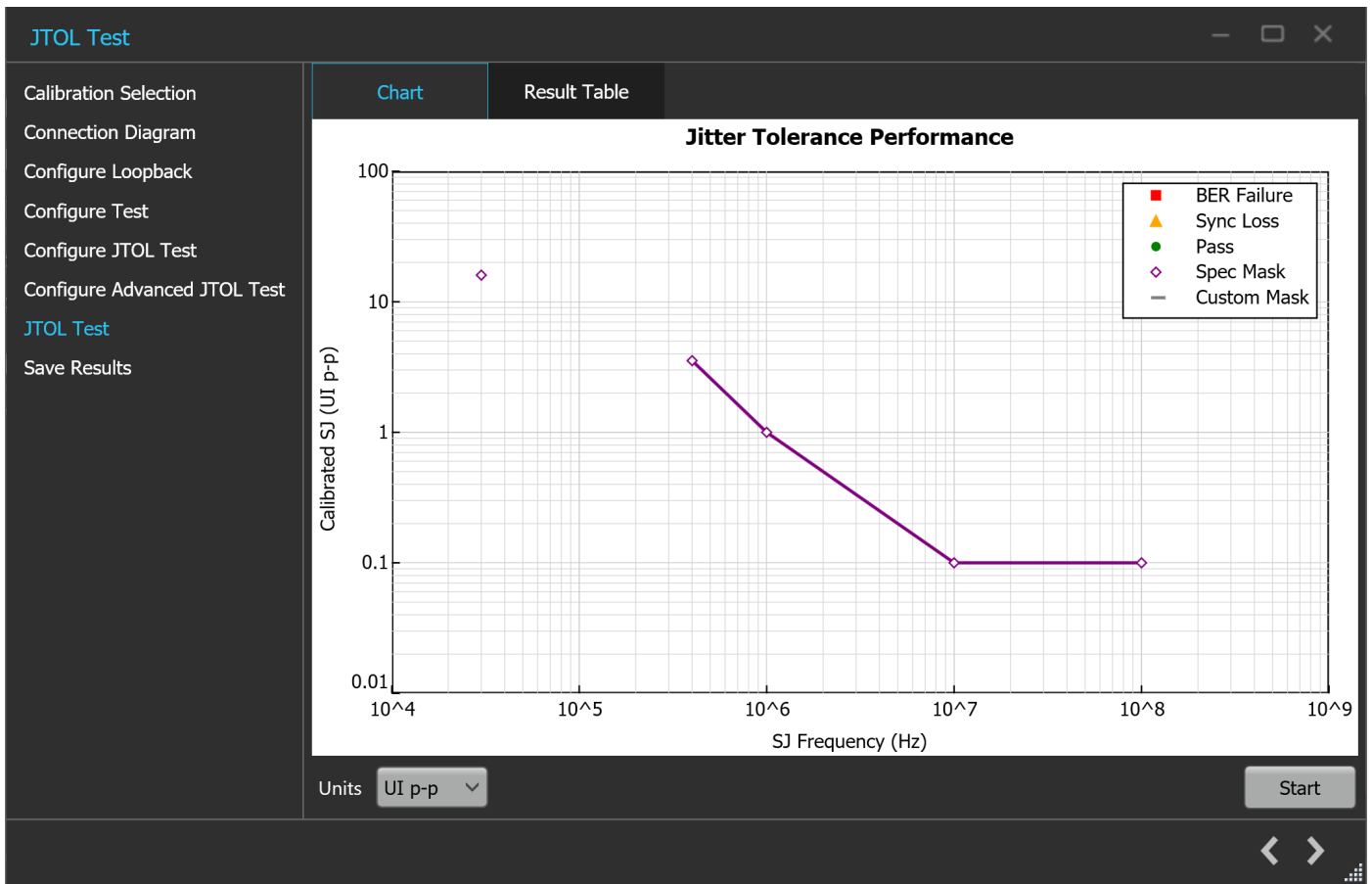
Parameter	Description
Relaxation Time	Enter the amount of time BERT needs to relax before running BER for each amplitude point.
Search Algorithms	Select the required search algorithm from the drop-down for JTOL test. Binary Downwards Linear Downwards Log Upwards Log Upwards Linear Binary + Linear
Jitter Steps	
Jitter Freq Range	The different frequency ranges can have different step size for SJ amplitude sweep. Freq <= 100 KHz 100KHz < Freq <=1 MHz 1 MHz < Freq <=10 MHz 10 MHz <Freq <= 100 MHz

Step (UI p-p)	<p>Sets the SJ amplitude step size for different frequency ranges.</p> <p>Sets the ratios for Downward and Upward-Log search algorithms.</p> <p>No steps size is defined for Binary + Linear search algorithm.</p>
Retest frequencies failing below Spec Mask	<p>In case a user-configured SJ tone fails below the limit as provided by the specification, the TekRxTest application will throw a prompt. In such a scenario, the user can either retest the tone or proceed with the test. We also allow the user to perform auto search before retesting at this point in case retesting the tone alone doesn't help.</p>



Click  to move to the next screen.

6. **JTOL Test:** This tab displays a graphical representation of JTOL test result. It includes the result table tab which displays the JTOL test results in a tabular form.

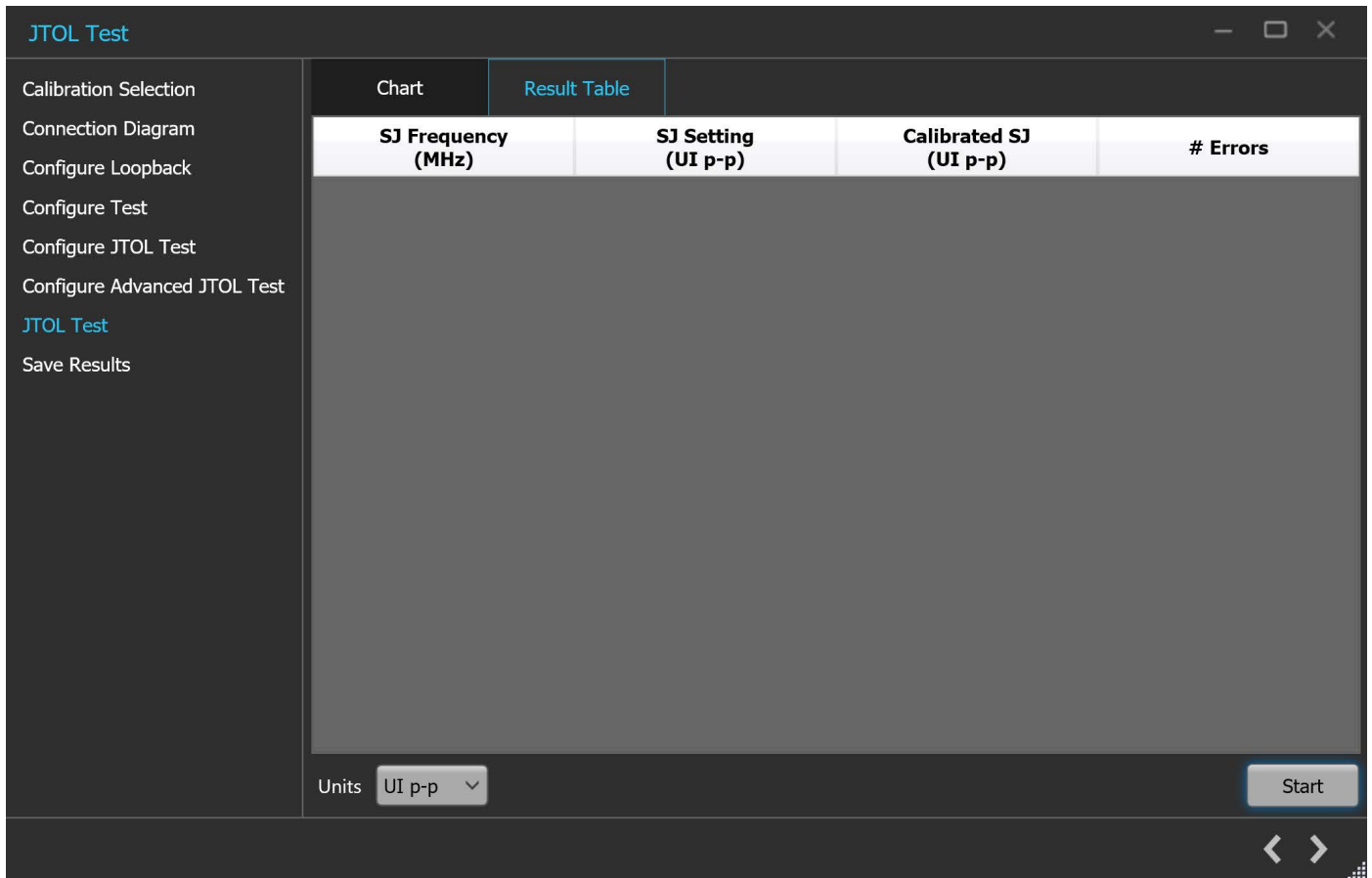


JTOL Test: JTOL Chart

JTOL Test: JTOL Chart

Parameter	Description
Units	<p>Select the required unit from the drop-down list. The list contains the following elements:</p> <ul style="list-style-type: none"> ps UI_{p-p}

Start	Click Start to run the test.
-------	-------------------------------------



JTOL Test (Result Table)

JTOL Test (Results Table)

Parameter	Description
SJ Frequency (MHz)	Displays the frequencies for which JTOL Test was performed.
SJ Setting (UI _{p-p} / ps)	Displays the SJ Amplitude on the BERT.
Calibrated SJ (UI _{p-p} / ps)	Displays the Calibrated SJ Amplitude.
#Errors	Displays the Error count reported by MX183000A.



Click  to move to the next screen.

7. **Save Results:** This tab allows you to save the JTOL test results.

JTOL Test: Save Results

JTOL Test: Save Results

Parameter	Description
Unique ID	Enter the Unique ID of the calibrated equipment in the text box.
Generated By	Enter the user name in the text box.
Comments (Optional)	Enter the required comments in the comment box.
Save	Click to save the results.

Click  to complete the JTOL Test and close the wizard.

Programmatic interface commands

TEKRXTEST:SELECT:HOME

This command selects the home button.

Syntax

```
TEKRXTEST:SELECT:HOME
```

Inputs

NA

Outputs

NA

TEKRXTEST:SELECT:PCle4Base

This command selects the PCIe 4.0 Base application.

Syntax

```
TEKRXTEST:SELECT:PCle4Base
```

Inputs

NA

Outputs

NA

PREF:BERT:IP

This command sets or returns the IP address of the BERT used to connect with the TekRxTest application.

Syntax

```
PREF:BERT:IP <IP address>
```

```
PREF:BERT:IP?
```

Inputs

<IP address> = <String>

Outputs

<String>

PREF:RTS:IP

This command sets or returns the IP address of the Real Time Oscilloscope used to connect with the TekRxTest application.

Syntax

```
PREF:RTS:IP <IP address>
```

```
PREF:RTS:IP?
```

Inputs

<IP address> = <String>

Outputs

<String>

CONN:BERT

This command sets or returns the connection status of the BERT with TekRxTest application.

Syntax

```
CONN:BERT <0 | 1>
```

```
CONN:BERT?
```

Inputs

<0 | 1>

0 indicates to disconnect the BERT.

1 indicates to connect the BERT.

Outputs

<0 | 1>

CONN:RTS

This command sets or returns the connection status of the Real Time Oscilloscope with TekRxTest application.

Syntax

```
CONN:RTS <0 | 1>
```

```
CONN:RTS?
```

Inputs

<0 | 1>

0 indicates to disconnect the Real Time Oscilloscope.

1 indicates to connect the Real Time Oscilloscope.

Outputs

<0 | 1>

SETTINGS:RTS:POSITIVECHANNEL

This command sets or returns the real time scope channel number for positive channel.

Syntax

```
SETTINGS:RTS:POSITIVECHANNEL <0 | 1 | 2 | 3>
```

```
SETTINGS:RTS:POSITIVECHANNEL?
```

Inputs

```
<0 | 1 | 2 | 3>
```

0 - Indicates the CH1.

1 - Indicates the CH2.

2 - Indicates the CH3.

3 - Indicates the CH4.

Outputs

```
<0 | 1 | 2 | 3>
```

SETTINGS:RTS:NEGATIVECHANNEL

This command sets or returns the real time scope channel number for negative channel.

Syntax

```
SETTINGS:RTS:NEGATIVECHANNEL <0 | 1 | 2 | 3>
```

```
SETTINGS:RTS:NEGATIVECHANNEL?
```

Inputs

```
<0 | 1 | 2 | 3>
```

0 - Indicates the CH1.

1 - Indicates the CH2.

2 - Indicates the CH3.

3 - Indicates the CH4.

Outputs

```
<0 | 1 | 2 | 3>
```

SETTINGS:RTS:SAMPLERATE

This command returns the sample rate of Real Time oscilloscope.

Syntax

```
SETTINGS:RTS:SAMPLERATE?
```

Inputs

NA

Outputs

<int>

SETTINGS:TEKRXSERVICE:ANALYSISTIMEOUT

This command sets or returns TekRxService analysis time out value.

Syntax

```
SETTINGS:TEKRXSERVICE:ANALYSISTIMEOUT<int>
```

```
SETTINGS:TEKRXSERVICE:ANALYSISTIMEOUT?
```

Inputs

<int> 15 to 1000

Outputs

<int>

SETTINGS:SIGTEST:VERSION

This command sets or returns the sigtest version number.

Syntax

```
SETTINGS:SIGTEST:VERSION <String>
```

```
SETTINGS:SIGTEST:VERSION?
```

Inputs

<String>

Outputs

<String>

SETTINGS:MULTITONESJCAL:ENABLE

This command sets or returns the enable or disable status of Multi-tone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:ENABLE {0|1}
```

```
SETTINGS:MULTITONESJCAL:ENABLE?
```

Inputs

{0 | 1}

0 indicates to disable the multi-tone SJ calibration.

1 indicates to enable the multi-tone SJ calibration.

Outputs

{0 | 1}

SETTINGS:SOCKETSERVER:IP

This command returns the IP address of the socket server.

Syntax

```
SETTINGS:SOCKETSERVER:IP?
```

Inputs

NA

Outputs

<String>

SETTINGS:SOCKETSERVER:LISTENINGPORT

This command returns the listening port of the socket server.

Syntax

```
SETTINGS:SOCKETSERVER:LISTENINGPORT?
```

Inputs

NA

Outputs

<String>

SETTINGS:SOCKETSERVER:TIMEOUT

This command returns the time out value of the socket server.

Syntax

```
SETTINGS:SOCKETSERVER:TIMEOUT?
```

Inputs

NA

Outputs

<int>

SETTINGS:MULTITONESJCAL:FREQUENCYCOUNT

This command sets or returns the frequency count value for Multi-tone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:FREQUENCYCOUNT <NR1>
```

```
SETTINGS:MULTITONESJCAL:FREQUENCYCOUNT?
```

Inputs

<NR1> 1 to 14

Outputs

<NR1>

SETTINGS:MULTITONESJCAL:MAXFREQUENCY

This command sets or returns the maximum frequency value for Multi-tone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:MAXFREQUENCY <NR1>
```

```
SETTINGS:MULTITONESJCAL:MAXFREQUENCY?
```

Inputs

<NR1> 1 to 100 MHz

Outputs

<NR1>

SETTINGS:MULTITONESJCAL:MINFREQUENCY

This command sets or returns the minimum frequency value for Multi-tone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:MINFREQUENCY <NR1>
```

```
SETTINGS:MULTITONESJCAL:MINFREQUENCY?
```

Inputs

<NR1> 0.03 to 99 MHz

Outputs

<NR1>

SETTINGS:MULTITONESJCAL:POINTS

This command sets or returns the number of points for Multi-tone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:POINTS <NR1>
```

```
SETTINGS:MULTITONESJCAL:POINTS?
```

Inputs

<NR1> 2 to 8

Outputs

<NR1>

SETTINGS:EYE:ACQUISITIONS

This command sets or returns the number of acquisitions for stressed eye calibration.

Syntax

```
SETTINGS:EYE:ACQUISITIONS <int>
```

```
SETTINGS:EYE:ACQUISITIONS?
```

Inputs

<int> 1 to 20

Outputs

<int>

SETTINGS:MULTITONESJCAL:DEFAULT

This command sets the SJ Frequencies to its default value for multitone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:DEFAULT
```

Inputs

NA

Outputs

NA

SETTINGS:MULTITONESJCAL:GENERATE

This command generates the SJ frequencies for multitone SJ calibration.

Syntax

```
SETTINGS:MULTITONESJCAL:GENERATE
```

Inputs

NA

Outputs

NA

SETTINGS:TP1:CH1:EXTERNALATTEN

This command sets or returns the external attenuation of CH1 for calibration.

Syntax

```
SETTINGS:TP1:CH1:EXTERNALATTEN <int>
```

```
SETTINGS:TP1:CH1:EXTERNALATTEN?
```

Inputs

<int> 0 to 10

Outputs

<int>

SETTINGS:TP1:CH2:EXTERNALATTEN

This command sets or returns the external attenuation of CH2 for calibration.

Syntax

SETTINGS:TP1:CH2:EXTERNALATTEN <int>

SETTINGS:TP1:CH2:EXTERNALATTEN?

Inputs

<int> 0 to 10

Outputs

<int>

SETTINGS:TP2:CH1:EXTERNALATTEN

This command sets or returns the external attenuation of CH1 for TP2 calibration.

Syntax

SETTINGS:TP2:CH1:EXTERNALATTEN <int>

SETTINGS:TP2:CH1:EXTERNALATTEN?

Inputs

<int> 0 to 10

Outputs

<int>

SETTINGS:TP2:CH2:EXTERNALATTEN

This command sets or returns the external attenuation of CH2 for TP2 calibration.

Syntax

SETTINGS:TP2:CH2:EXTERNALATTEN <int>

SETTINGS:TP2:CH2:EXTERNALATTEN?

Inputs

<int> 0 to 10

Outputs

<int>

SETTINGS:TP2:ENBLEREPLICACHDEMBED

This command sets or returns the enables or disable status for the use of replica channel cable de-embedding in TP2 calibration.

Syntax

```
SETTINGS:TP2:ENBLEREPLICACHDEMBED {0 | 1}
```

```
SETTINGS:TP2:ENBLEREPLICACHDEMBED?
```

Inputs

{0 | 1}

0 - Disable the use of replica channel cable de-embedding.

1 - Enable the use of replica channel cable de-embedding.

Outputs

{0 | 1}

SETTINGS:TP2:REPLICACHDEEMBEDDIFF

This command sets or returns the differential filter file path for replica channel cable de-embedding in TP2 calibration.

Syntax

```
SETTINGS:TP2:REPLICACHDEEMBEDDIFF <"File path">
```

```
SETTINGS:TP2:REPLICACHDEEMBEDDIFF?
```

Inputs

<"File path"> = <String>

Outputs

<String>

SETTINGS:TP2:REPLICACHDEEMBEDCH1

This command sets or returns the Ch1 filter file path for replica channel cable de-embedding in TP2 calibration.

Syntax

```
SETTINGS:TP2:REPLICACHDEEMBEDCH1 <"File path">
```

```
SETTINGS:TP2:REPLICACHDEEMBEDCH1?
```

Inputs

<"File path"> = <String>

Outputs

<String>

SETTINGS:TP2:REPLICACHDEEMBEDCH2

This command sets or returns the Ch2 filter file path for replica channel cable de-embedding in TP2 calibration.

Syntax

SETTINGS:TP2:REPLICACHDEEMBEDCH2 <"File path">

SETTINGS:TP2:REPLICACHDEEMBEDCH2?

Inputs

<"File path"> = <String>

Outputs

<String>

SETTINGS:TP2:REPLICACHDEEMBEDFILETYPE

This command sets or returns the filter file type for replica channel deembedding in TP2 calibration.

Syntax

SETTINGS:TP2:REPLICACHDEEMBEDFILETYPE <0 | 1>

SETTINGS:TP2:REPLICACHDEEMBEDFILETYPE?

Inputs

<0 | 1>

0 - Indicates Differential as the filter type for replica channel de-embedding.

1 - Indicates Single-ended as the filter type for replica channel de-embedding.

Outputs

<0 | 1>

SETTINGS:EYE:ALGO

This command sets or returns the algorithm for stressed eye.

Syntax

SETTINGS:EYE:ALGO <0 | 1>

SETTINGS:EYE:ALGO?

Inputs

<0 | 1>

0 - Indicates linear sweep is the algorithm for stressed eye.

1 - Indicates Efficient is the algorithm for stressed eye.

Outputs

<0 | 1>

SETTINGS:CTLE:ANALYSISTOOL

This command sets or returns the analysis tool selected for preset selection and stressed eye calibration.

Syntax

```
SETTINGS:CTLE:ANALYSISTOOL <0 | 1>
```

```
SETTINGS:CTLE:ANALYSISTOOL?
```

Inputs

```
<0 | 1>
```

0 - Indicates Seasim is the the analysis tool.

1 - Indicates Sigtest is the analysis tool.

Outputs

```
<0 | 1>
```

SETTINGS:RESTORE

This command resets the application to default settings.

Syntax

```
Settings:Restore
```

Inputs

NA

Outputs

NA

SETTINGS:RECALL

This command recalls the settings as per specified file.

Syntax

```
SETTINGS:RECALL <"File path">
```

Inputs

```
<"File path"> = <String>
```

Outputs

NA

SETTINGS:SAVE

This command saves the settings into the specified file.

Syntax

```
Settings:Save <"File path">
```

Inputs

```
<"File path"> = <String>
```

Outputs

NA

SETTINGS:RECALL:STATUS

This command returns the status of the recall command execution.

Syntax

```
SETTINGS:RECALL:STATUS?
```

Inputs

NA

Outputs

```
<String>
```

SETTINGS:RESTORE:STATUS

This command returns the status of restore command execution.

Syntax

```
SETTINGS:RESTORE:STATUS?
```

Inputs

NA

Outputs

```
<String>
```

SETTINGS:SAVE:STATUS

This command returns the status of the save command execution.

Syntax

```
SETTINGS:SAVE:STATUS?
```

Inputs

NA

Outputs

```
<String>
```

TP1CAL:OPEN

This command opens the calibration panel.

Syntax

```
TP1CAL:OPEN
```

Inputs

NA

Outputs

NA

TP1CAL:WIZARD:OPEN

This command opens the calibration wizard.

Syntax

```
TP1CAL:WIZARD:OPEN
```

Inputs

NA

Outputs

NA

TP1CAL:WIZARD:CLOSE

This command closes the calibration wizard.

Syntax

```
TP1CAL:WIZARD:CLOSE
```

Inputs

NA

Outputs

NA

TP1CAL:DELETE

This command deletes the selected calibration file.

Syntax

```
TP1CAL:DELETE
```

Inputs

NA

Outputs

NA

TP1CAL:REPORT

This command generates the report for the selected calibration.

Syntax

```
TP1CAL:REPORT
```

Inputs

NA

Outputs

NA

TP1CAL:SAVE

This command saves the current Calibration file to the database.

Syntax

```
TP1CAL:SAVE
```

Inputs

NA

Outputs

NA

TP1CAL:EQUIP:INIT

This command sets the equipment initialization run status for calibration.

Syntax

```
TP1CAL:EQUIP:INIT <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the equipment initialization to run.

1 - Start the equipment initialization to run.

Outputs

NA

TP1CAL:EQUIP:SKIPSIGNALVALIDATION

This allows the user to skip signal validation as a part of equipment initialization.

Syntax

```
TP1CAL:EQUIP:SKIPSIGNALVALIDATION <0 | 1>
```

```
TP1CAL:EQUIP:SKIPSIGNALVALIDATION?
```

Input

<0 | 1>

1- Skip signal validation.

0 - Perform signal validation.

Output

<0 | 1>

TP1CAL:AUTOCAL

This command sets the automatic calibration run status.

Syntax

```
TP1CAL:AUTOCAL <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the automatic calibration run.

1 - Start the automatic calibration run.

Outputs

NA

TP1CAL:AMPLITUDE:RUN

This command sets the Amplitude calibration run status.

Syntax

```
TP1CAL:AMPLITUDE:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the Amplitude calibration run.

1 - Start the Amplitude calibration run.

Outputs

NA

TP1CAL:PRESET:RUN

This command sets the Preset calibration run status.

Syntax

```
TP1CAL:PRESET:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the the Preset calibration run.

1 - Start the the Preset calibration run.

Outputs

NA

TP1CAL:RJ:RUN

This command sets the RJ calibration run status.

Syntax

```
TP1CAL:RJ:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the RJ calibration run.

1 - Start the RJ calibration run.

Outputs

NA

TP1CAL:SJ:RUN

This command sets the SJ calibration run status.

Syntax

```
TP1CAL:SJ:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the SJ calibration run.

1 - Start the SJ calibration run.

Outputs

NA

TP1CAL:MULTITONESJCAL:RUN

This command sets the Multi-tone SJ calibration run status.

Syntax

```
TP1CAL:MULTITONESJCAL:RUN <0|1>
```

Inputs

<0 | 1>

0 - Stop the Multi-tone SJ calibration run.

1 - Start the Multi-tone SJ calibration run.

Outputs

NA

TP1CAL:EQUIP:STATUS

This command returns the equipment initialization run status for calibration.

Syntax

```
TP1CAL:EQUIP:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:AMPLITUDE:STATUS

This command returns the amplitude calibration run status.

Syntax

```
TP1CAL:AMPLITUDE:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:PRESET:STATUS

This command returns the preset calibration run status.

Syntax

```
TP1CAL:PRESET:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:RJ:STATUS

This command returns the RJ calibration run status.

Syntax

```
TP1CAL:RJ:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:SJ:STATUS

This command returns the SJ calibration run status.

Syntax

```
TP1CAL:SJ:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:MULTITONESJCAL:STATUS

This command returns the Multi-tone SJ calibration run status.

Syntax

```
TP1CAL:MULTITONESJCAL:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:AMPLITUDE:SETTING

This command returns the amplitude value for calibration.

Syntax

```
TP1CAL:AMPLITUDE:SETTING?
```

Inputs

NA

Outputs

TP1CAL:RJ:SETTING

This command returns the RJ calibrated value for calibration.

Syntax

```
TP1CAL:RJ:SETTING?
```

Inputs

NA

Outputs

<float>

TP1CAL:SJ:SETTING

This command returns the SJ calibrated value for calibration.

Syntax

```
TP1CAL:SJ:SETTING?
```

Inputs

NA

Outputs

<float>

TP1CAL:SAVE:ID

This command sets or returns the unique identifier used as key to save the report in database for calibration.

Syntax

```
TP1CAL:SAVE:ID <String>
```

```
TP1CAL:SAVE:ID?
```

Inputs

<String>

Outputs

<String>

TP1CAL:SAVE:GENERATEDBY

This command sets or returns the creator name who save the report in database for calibration.

Syntax

```
TP1CAL:SAVE:GENERATEDBY <String>
```

```
TP1CAL:SAVE:GENERATEDBY?
```

Inputs

<String>

Outputs

<String>

TP1CAL:SAVE:COMMENTS

This command sets or returns the comments given to save the report in database for calibration.

Syntax

```
TP1CAL:SAVE:COMMENTS <String>
```

```
TP1CAL:SAVE:COMMENTS?
```

Inputs

<String>

Outputs

<String>

TP1CAL:ACDC:RUN

This command runs the AC-DC balance calibration process.

Syntax

```
TP1CAL:ACDC:RUN <0 | 1>
```

Inputs

<0 | 1>

1 - Start the AC-DC balance calibration run.

0 - Stop the AC-DC balance calibration run.

Outputs

NA

TP1CAL:ACDC:STATUS

This command returns the AC-DC balance calibration run status.

Syntax

```
TP1CAL:ACDC:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:ACDC:SETTING

This command returns the AC-DC balanced value for calibration.

Syntax

```
TP1CAL:ACDC:SETTING?
```

Inputs

NA

Outputs

<float>

TP1CAL:SJ@210MHz:RUN

This command sets the SJ@210MHz calibration run status.

Syntax

```
TP1CAL:SJ@210MHz:RUN <0 | 1>
```

Inputs

<0 | 1>

1 - Start the SJ@210 MHz calibration run.

0 - Stop the SJ@210 MHz calibration run.

Outputs

NA

TP1CAL:SJ@210MHz:STATUS

This command returns the status of SJ@210 MHz Calibration run status.

Syntax

```
TP1CAL:SJ@210MHz:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP1CAL:INSERTIONLOSS:MODE

This command sets or returns the type of insertion loss in TP3 calibration.

Syntax

```
TP1CAL:INSERTIONLOSS:MODE <0 | 1>
```

```
TP1CAL:INSERTIONLOSS:MODE?
```

Inputs

<0 | 1>

0 - Indicates the insertion loss type is in manual mode.

1 - Indicates the insertion loss type is in measure mode.

Outputs

<0 | 1>

TP1CAL:MANUAL:INSERTIONLOSS

This command sets or returns the manual insertion loss value for TP3 calibration.

Syntax

```
TP1CAL:MANUAL:INSERTIONLOSS <float>
```

```
TP1CAL:MANUAL:INSERTIONLOSS?
```

Inputs

<float> 0 to 10

Outputs

<float>

TP1CAL:MEASURELOSS:START

This command runs the automatic insertion loss calculation process.

Syntax

```
TP1CAL:MEASURELOSS:START <0 | 1>
```

Inputs

<0 | 1>

1 - Start the insertion loss measurement.

0 - Stop the insertion loss measurement.

Outputs

NA

TP1CAL:MEASURELOSS:STATUS

This command returns the automatic insertion loss measurement run status.

Syntax

```
TP1CAL:MEASURELOSS:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:OPEN

This command opens the TP2 calibration panel.

Syntax

```
TP2CAL:OPEN
```

Inputs

NA

Outputs

NA

TP2CAL:WIZARD:OPEN

This command opens the TP2 calibration wizard.

Syntax

```
TP2CAL:WIZARD:OPEN
```

Inputs

NA

Outputs

NA

TP2CAL:WIZARD:CLOSE

This command closes the TP2 calibration wizard.

Syntax

```
TP2CAL:WIZARD:CLOSE
```

Inputs

NA

Outputs

NA

TP2CAL:DUT:TYPE

This command sets or returns the DUT type used for TP2 calibration.

Syntax

```
TP2CAL:DUT:TYPE <0 | 1>
```

```
TP2CAL:DUT:TYPE?
```

Inputs

<0 | 1>

0 - Indicates the DUT type is Non-Root Complex.

1 - Indicates the DUT type is Root Complex.

Outputs

<0 | 1>

TP2CAL:SELECT:TP1

This command sets or returns the selected calibration file.

Syntax

```
TP2CAL:SELECT:TP1 <String>
```

```
TP2CAL:SELECT:TP1?
```

Inputs

<String>

Outputs

<String>

TP2CAL:DELETE

This command deletes the selected TP2 calibration file.

Syntax

```
TP2CAL:DELETE
```

Inputs

NA

Outputs

Application Help

NA

TP2CAL:REPORT

This command generates the report for selected TP2 calibration.

Syntax

```
TP2CAL:REPORT
```

Inputs

NA

Outputs

NA

TP2CAL:SAVE

This command saves the current TP2 Calibration file to the database.

Syntax

```
TP2CAL:SAVE
```

Inputs

NA

Outputs

NA

TP2CAL:SAVE:ISIPAIR

This command sets or returns ISI Pair stored in Database.

Syntax

```
TP2CAL:SAVE:ISIPAIR <String>
```

```
TP2CAL:SAVE:ISIPAIR?
```

Inputs

<String>

Outputs

<String>

TP2CAL:EQUIP:INIT

This command sets the equipment initialization run status for TP2 calibration.

Syntax

```
TP2CAL:EQUIP:INIT <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the equipment initialization run.

1 - Start the equipment initialization run.

Outputs

NA

TP2CAL:EQUIP:SKIPSIGNALVALIDATION

This allows the user to skip signal validation as a part of equipment initialization.

Syntax

```
TP2CAL:EQUIP:SKIPSIGNALVALIDATION <0 | 1 >
```

```
TP2CAL:EQUIP:SKIPSIGNALVALIDATION?
```

Input

<0 | 1>

1- Skip signal validation.

0 - Perform signal validation.

Output

<0 | 1>

TP2CAL:CMI:RUN

This command sets the CMI calibration run status.

Syntax

```
TP2CAL:CMI:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the CMI calibration run.

1 - Start the CMI calibration run.

Outputs

NA

TP2CAL:ILMEAS:RUN

This command sets the channel loss calculation run status.

Syntax

```
TP2CAL:ILMEAS:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the channel loss calculation run.

1 - Start the channel loss calculation run.

Outputs

NA

TP2CAL:CTLEANDPRESET:RUN

This command sets the CTLE and preset selection run status.

Syntax

```
TP2CAL:CTLEANDPRESET:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the CTLE and preset selection run.

1 - Start the CTLE and preset selection run.

Outputs

NA

TP2CAL:STRESSEDEYE:RUN

This command sets the stressed eye calibration run status.

Syntax

```
TP2CAL:STRESSEDEYE:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the stressed eye calibration run.

1 - Start the stressed eye calibration run.

Outputs

NA

TP2CAL:EQUIP:STATUS

This command returns the equipment initialization run status for TP2 calibration.

Syntax

```
TP2CAL:EQUIP:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:CMI:STATUS

This command returns the CMI calibration run status for TP2 calibration.

Syntax

TP2CAL:CMI:STATUS?

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:ILMEAS:STATUS

This command returns the channel loss calculation run status for TP2 calibration.

Syntax

TP2CAL:ILMEAS:STATUS?

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:CTLEANDPRESET:STATUS

This command returns the CTLe and Preset selection run status for TP2 calibration.

Syntax

TP2CAL:CTLEANDPRESET:STATUS?

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:STRESSEDEYE:STATUS

This command returns the stressed eye calibration run status for TP2 calibration.

Syntax

```
TP2CAL:STRESSEDEYE:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:DMI:SETTING

This command returns the DMI calibrated value for TP2 calibration.

Syntax

```
TP2CAL:DMI:SETTING?
```

Inputs

NA

Outputs

<float>

TP2CAL:CMI:SETTING

This command returns the CMI calibrated value for TP2 calibration.

Syntax

```
TP2CAL:CMI:SETTING?
```

Inputs

NA

Outputs

<int>

TP2CAL:SAVE:ID

This command sets or returns the unique identifier used as key to save the report in database for TP2 calibration.

Syntax

```
TP2CAL:SAVE:ID <String>
```

```
TP2CAL:SAVE:ID?
```

Inputs

<String>

Outputs

<String>

TP2CAL:SAVE:GENERATEDBY

This command sets or returns the creator name who save the report in database for TP2 calibration.

Syntax

```
TP2CAL:SAVE:GENERATEDBY <String>
```

```
TP2CAL:SAVE:GENERATEDBY?
```

Inputs

<String>

Outputs

<String>

TP2CAL:SAVE:COMMENTS

This command sets or returns the comments given to save the report in database for TP2 calibration.

Syntax

```
TP2CAL:SAVE:COMMENTS <String>
```

```
TP2CAL:SAVE:COMMENTS?
```

Inputs

<String>

Outputs

<String>

TP2CAL:ILMEASFORDMI:RUN

This command sets the run status for Insertion loss calculation before DMI/CMI in TP2 calibration.

Syntax

```
TP2CAL:ILMEASFORDMI:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the Insertion loss calculation before DMI/CMI.

1 - Start the Insertion loss calculation before DMI/CMI.

Outputs

NA

TP2CAL:ILMEASFORDMI:STATUS

This command returns the run status of Insertion loss calculation before DMI/CMI in TP2 calibration.

Syntax

```
TP2CAL:ILMEASFORDMI:STATUS?
```

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:STRESSEDEYE:ACQUISITIONS

This command sets or returns the number of acquisitions value for TP2 stressed eye calibration.

Syntax

```
TP2CAL:STRESSEDEYE:ACQUISITIONS<int>
```

```
TP2CAL:STRESSEDEYE:ACQUISITIONS?
```

Inputs

<int> 1 to 20

Outputs

<int>

TP2CAL:DMI:RUN

This command sets the run status for TP2 DMI calibration.

Syntax

```
TP2CAL:DMI:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the TP2 DMI calibration.

1 - Start the TP2 DMI calibration.

Outputs

NA

TP2CAL:DMI:STATUS

This command returns the TP2 DMI calibration run status.

Syntax

TP2CAL:DMI:STATUS?

Inputs

NA

Outputs

{InProgress | Done}

TP2CAL:CTLEANDPRESET:ACQUISITIONS

This command sets or returns the number of acquisitions value for CTLE or Preset selection in TP2 calibration.

Syntax

TP2CAL:CTLEANDPRESET:ACQUISITIONS<int>

TP2CAL:CTLEANDPRESET:ACQUISITIONS?

Inputs

<int> 1 to 20

Outputs

<int>

TP2CAL:STRESSEDEYE:SJ

This command sets or returns the SJ stress value for Manual Stressed Eye Calibration run.

Syntax

TP2CAL:STRESSEDEYE:SJ <float>

TP2CAL:STRESSEDEYE:SJ?

Inputs

<float> 5 to 10

Outputs

<float>

TP2CAL:STRESSEDEYE:DMI

This command sets or returns the DMI stress value for Manual Stressed Eye Calibration run.

Syntax

TP2CAL:STRESSEDEYE:DMI <float>

TP2CAL:STRESSEDEYE:DMI?

Inputs

<float> 10 to 25

Outputs

<float>

TP2CAL:STRESSEDEYE:AMPLITUDE

This command sets or returns the amplitude value for Manual Stressed Eye Calibration run.

Syntax

```
TP2CAL:STRESSEDEYE:AMPLITUDE<int>
```

```
TP2CAL:STRESSEDEYE:AMPLITUDE?
```

Inputs

<int> 720 to 800

Outputs

<int>

TP2CAL:STRESSEDEYE:MANUALCALRUN

This command sets or returns the enable or disable status of the manual calibration run for stressed eye.

Syntax

```
TP2CAL:STRESSEDEYE:MANUALCALRUN {0 | 1}
```

```
TP2CAL:STRESSEDEYE:MANUALCALRUN?
```

Inputs

{0 | 1}

0 - Indicates to disable the manual calibration run.

1 - Indicates to enable the manual calibration run.

Outputs

{0 | 1}

TP2CAL:IL:MODE

This command sets or returns the type of insertion loss in TP2 calibration.

Syntax

```
TP2CAL:IL:MODE <0 | 1>
```

```
TP2CAL:IL:MODE?
```

Inputs

<0 | 1>

0 - Indicates the insertion loss type is manual entry.

1 - Indicates the insertion loss type is Measure loss.

Outputs

<0 | 1>

TP2CAL:MANUAL:IL

This command sets or returns the manual insertion loss value for TP2 calibration.

Syntax

TP2CAL:MANUAL:IL <float>

TP2CAL:MANUAL:IL?

Inputs

<float> 0 to 50

Outputs

<float>

TP2CAL:IL:SCOPEACQS

This command sets or returns the value for scope acquisitions for insertion loss in TP2 calibration.

Syntax

TP2CAL:IL:SCOPEACQS <int>

TP2CAL:IL:SCOPEACQS?

Inputs

16 to 10240

Outputs

<int>

TP2CAL:IL:AVGS

This command sets or returns the value for the number of waveforms averages for insertion loss in TP2 calibration.

Syntax

TP2CAL:IL:AVGS <int>

TP2CAL:IL:AVGS?

Inputs

1 to 10

Outputs

<int>

TP2CAL:CTLEANDPRESET:CHKCTLE

This command check and uncheck the check box for specific CTLE's

Syntax

```
TP2CAL:CTLEANDPRESET:CHKCTLE <8.5 to 10.5> <1 | 0>
```

```
TP2CAL:CTLEANDPRESET:CHKCTLE <8.5 to 10.5> ?
```

Inputs

<> corresponds to CTLE's 8p5 to 10p5

<1 | 0>, 1 for check and 0 for uncheck

Outputs

<1 | 0>

TP2CAL:CTLEANDPRESET:CHKPRESET

This command check and uncheck the check box for specific Presets.

Syntax

```
TP2CAL:CTLEANDPRESET:CHKPRESET <0 to 9> <1 | 0>
```

```
TP2CAL:CTLEANDPRESET:CHKPRESET <0 to 9>?
```

Inputs

<0 to 9> corresponds to Presets P0 to P9

<1 | 0>, 1 for check and 0 for uncheck

Outputs

<1 | 0>

TP2CAL:STRESSEDEYE:EXHAUSTIVESWEEP

This command sets or returns the min, max settings for the specified sweep parameter for Exhaustive Sweep.

Syntax

```
TP2CAL:STRESSEDEYE:EXHAUSTIVESWEEP <string> <double/int>
```

```
TP2CAL:STRESSEDEYE:EXHAUSTIVESWEEP? <string>
```

Inputs

<string> (Sweep Parameter) - Indicates the parameter for which min, max value needs to be set. The Sweep parameters can be Amplitude, SJ.

<double/int> (MIN,MAX) - Indicates the min, max settings for the specified sweep parameter.

NOTE: If sweep parameter is amplitude then min, max values should be of type <int> or <double>

The min, max values should be within the below range:

1. 720 – 800 mV for Amplitude.

Example

```
TP2CAL:STRESSEDEYE:EXHAUSTIVESWEEP SJ 5,10.
```

Output

<double/int>

Example

```
TP2CAL:STRESSEDEYE:EXHAUSTIVESWEEP SJ?
5,10.
```

TP2CAL:STRESSEDEYE:LINEARSWEEP

This command sets or returns the initial, min, max settings for the specified sweep parameter for Linear Sweep.

Syntax

```
TP2CAL:STRESSEDEYE:LINEARSWEEP <string> <double/int>
```

```
TP2CAL:STRESSEDEYE:LINEARSWEEP? <string>
```

Inputs

<string> (Sweep Parameter) - Indicates the parameter for which initial, min, max value needs to be set. The Sweep parameters can be

<double/int> (Initial,MIN,MAX) - Indicates the Initial, min, max settings for the specified sweep parameter.

NOTE: If sweep parameter is amplitude then initial, min, max values should be of type <int> or <double>

The initial min, max values should be within the below range:

1. 5 – 10 ps for .
2. 10 – 25

Example

```
TP2CAL:STRESSEDEYE:LINEARSWEEP 6.25,5,10.
```

Output

<double/int>

Example

```
TP2CAL:STRESSEDEYE:LINEARSWEEP ?
6.25,5,10.
```

TP2CAL:STRESSEDEYE:EXHAUSTIVE

This command sets or returns enable or disable status of Exhaustive Sweep for TP2 Stressed Eye Calibration

Syntax

```
TP2CAL:STRESSEDEYE:EXHAUSTIVE <0 / 1>
```

```
TP2CAL:STRESSEDEYE:EXHAUSTIVE?
```

Inputs

<0 / 1>

0 - Indicates the Exhaustive Sweep is disabled.

1 - Indicates the Exhaustive Sweep is enabled.

Output

<0 | 1>

TP2CAL:STRESSEDEYE:STEPSIZE

The Command sets or returns the step size settings for the specified sweep parameter of TP2 Calibration

Syntax

```
TP2CAL:STRESSEDEYE:STEPSIZE <string> <double/int>
```

```
TP2CAL:STRESSEDEYE:STEPSIZE? <string>
```

Inputs

<string> (Sweep Parameter) - Indicates the parameter for which step size value needs to be set. The Sweep parameters can be

<double/int> (Step Size) - Indicates the step size value for the specified sweep parameter

NOTE: If sweep parameter is amplitude then step size value should be of type <int> or <double>

The Step Size values should be within the below range:

1. 0.1 - 0.5 ps for .
2. 0.1 - 1.5

Example

```
TP2CAL:STRESSEDEYE:STEPSIZE 0.5.
```

Output

<double/int>

Example

```
TP2CAL:STRESSEDEYE: STEPSIZE ?
```

0.5.

LOOPBACK:SELECT:PRESETSNAME

This command sets or returns the PCIe Preset, controls preshoot and deemphasis values.

Syntax

```
LOOPBACK:SELECT:PRESETSNAME <int>
```

```
LOOPBACK:SELECT:PRESETSNAME?
```

Inputs

<int> 0-11; P0-P10 for Corresponding Preset and 11 for Custom Preset

Outputs

<int>

LOOPBACK:SELECT:PRESETSPRESHOOT

This command sets or returns the preshoot value to be applied during loopback training.

Syntax

```
LOOPBACK:SELECT:PRESETSPRESHOOT <float>
```

```
LOOPBACK:SELECT:PRESETSPRESHOOT?
```

Inputs

<float> 0 to 12

Outputs

<float>

LOOPBACK:SELECT:PRESETSDEEMPHASIS

This command sets or returns the preset deemphasis value to be applied during loopback training.

Syntax

```
LOOPBACK:SELECT:PRESETSDEEMPHASIS <float>
```

```
LOOPBACK:SELECT:PRESETSDEEMPHASIS?
```

Inputs

<float> -20 to 0

Outputs

<float>

LOOPBACK:SELECT:BERTCTLEMODE

This command sets or returns the BERT CTLE mode.

Syntax

```
LOOPBACK:SELECT:BERTCTLEMODE <0 | 1>
```

```
LOOPBACK:SELECT:BERTCTLEMODE?
```

Inputs

<0 | 1>

0 - Indicates BERT CTLE mode is Automatic.

1 - Indicates BERT CTLE mode is Manual.

Outputs

<0 | 1>

LOOPBACK:SELECT:LFEDFEMODE

This command sets or returns the BERT LFE DFE selection mode.

Syntax

```
LOOPBACK:SELECT:LFEDFEMODE <0 | 1>
```

```
LOOPBACK:SELECT:LFEDFEMODE?
```

Inputs

<0 | 1>

0 - Indicates BERT LFE DFE selection mode is Automatic.

1 - Indicates BERT LFE DFE selection mode is Manual.

Outputs

<0 | 1>

LOOPBACK:SELECT:AUTOSEARCHMODE

This command sets or returns the auto search mode when loopback configuration type selected is forced loopback.

Syntax

```
LOOPBACK:SELECT:AUTOSEARCHMODE <0 | 1>
```

```
LOOPBACK:SELECT:AUTOSEARCHMODE?
```

Inputs

<0 | 1>

0 - Indicates the auto search mode is Fine.

1 - Indicates the auto search mode is Coarse.

Outputs

<0 | 1>

LOOPBACK:SELECT:AUTOSEARCH

This command sets or queries the auto search mode to be performed as a part of JTOL Test

Syntax

```
LOOPBACK:SELECT:AUTOSEARCH <0|1>
```

```
LOOPBACK:SELECT:AUTOSEARCH?
```

Inputs

<0 | 1>

0 - turn OFF the Auto search mode

1 - turn ON the Auto search mode

Outputs

<0 | 1>

LOOPBACK:AUTOSEARCH:TYPE

This command sets or returns the BERT Auto Search Type.

Syntax

```
LOOPBACK:AUTOSEARCH:TYPE <0 | 1>
```

```
LOOPBACK:AUTOSEARCH:TYPE?
```

Inputs

<0 | 1>

0 - Auto search TYPE is Basic

1 - Auto search TYPE is Advanced

Outputs

<0 | 1>

0 - Auto search TYPE is Basic

1 - Auto search TYPE is Advanced

LOOPBACK:SELECT:BERTCTLEVALUE

This command sets or returns the BERT CTLE value.

Syntax

```
LOOPBACK:SELECT:BERTCTLEVALUE <float>
```

```
LOOPBACK:SELECT:BERTCTLEVALUE?
```

Inputs

<float> -30 to 0.

Outputs

<float>

LOOPBACK:SELECT:PATTERNTYPE

This command sets or returns the pattern used for BER Measurement.

Syntax

```
LOOPBACK:SELECT:PatternType <0 | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 >
```

```
LOOPBACK:SELECT:PatternType?
```

Inputs

0 indicates that Pattern type is Modified Compliance

1 indicates that Pattern type is Compliance

3 indicates that Pattern type is PRBS7

- 4 indicates that Pattern type is PRBS9
- 5 indicates that Pattern type is PRBS10
- 6 indicates that Pattern type is PRBS11
- 7 indicates that Pattern type is PRBS15
- 8 indicates that Pattern type is PRBS20
- 9 indicates that Pattern type is PRBS23
- 10 indicates that Pattern type is PRBS31

Outputs

<0 | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 >

LOOPBACK:AAS:DELAYSEARCHTYPE

This command sets or queries the delay search type to be set as a part of JTOL Test

Syntax

LOOPBACK:AAS:DELAYSEARCHTYPE <string>

LOOPBACK:AAS:DELAYSEARCHTYPE?

Inputs

<string> Fine, Coarse, OFF

Outputs

<string> Fine, Coarse, OFF

LOOPBACK:AAS:EYETHRESHOLDTYPE

This command sets or queries the eye threshold type to be set as a part of the JTOL test

Syntax

LOOPBACK:AAS:EYETHRESHOLDTYPE <string>

LOOPBACK:AAS:EYETHRESHOLDTYPE?

Inputs

<string> Fine, Coarse, OFF

Outputs

<string> Fine, Coarse, OFF

TEST:SELECT:TESTDURATION

This command sets or returns the test length duration value.

Syntax

TEST:SELECT:TESTDURATION <float>

TEST:SELECT:TESTDURATION?

Inputs

<float> 1 to 1000

Outputs

<float>

TEST:SELECT:STRESSCONFIGTYPE

This command sets or returns the required stress config type.

Syntax

```
TEST:SELECT:STRESSCONFIGTYPE <0 | 1 | 2>
```

```
TEST:SELECT:STRESSCONFIGTYPE?
```

Inputs

0 indicates that stress config type is calibrated.

1 indicates that stress config type is customized

2 indicates that stress config type is un-calibrated.

Outputs

<0 | 1 | 2>

TEST:SELECT:AMP

This command sets or returns the amplitude value used for the test.

Syntax

```
TEST:SELECT:AMP <int>
```

```
TEST:SELECT:AMP?
```

Inputs

<int> 100 to 800 for customized stress selection.

<int> 100 to 650 for un-calibrated stress selection.

Outputs

<int>

TEST:SELECT:DMI

This command sets or returns the DMI value to be used for non-compliance test.

Syntax

```
TEST:SELECT:DMI <float>
```

```
TEST:SELECT:DMI?
```

Inputs

<float> 0 to 200

Outputs

<float>

TEST:SELECT:CMI

This command sets or returns the CMI value to be used for non-compliance test.

Syntax

```
TEST:SELECT:CMI <float>
```

```
TEST:SELECT:CMI?
```

Inputs

<float> 0 to 250

Outputs

<float>

TEST:SELECT:RJ

This command sets or returns the RJ value used for the test.

Syntax

```
TEST:SELECT:RJ <float>
```

```
TEST:SELECT:RJ?
```

Inputs

<float> 0 to for customized stress selection.

<float> 0 to for un-calibrated stress selection.

Outputs

<float>

TEST:SELECT:SJ

This command sets or returns the SJ value used for the test.

Syntax

```
TEST:SELECT:SJ <float>
```

```
TEST:SELECT:SJ?
```

Inputs

<float> 0 to for customized stress selection.

<float> 0 to 0.5 for un-calibrated stress selection.

Outputs

<float>

TEST:SELECT:BER

This command sets or returns the BER value over which the test should be done.

Syntax

```
TEST:SELECT:BER <int>
```

```
TEST:SELECT:BER?
```

Inputs

<int> 3 to 12

Outputs

<int>

TEST:SELECT:ERRORLIMIT

This command sets or returns the maximum errors limit value.

Syntax

```
TEST:SELECT:ERRORLIMIT <int>
```

```
TEST:SELECT:ERRORLIMIT?
```

Inputs

<int> 1 to 1000

Outputs

<int>

JTOLTEST:OPEN

This command opens the JTOL test panel.

Syntax

```
JTOLTEST:OPEN
```

Inputs

NA

Outputs

NA

JTOLTEST:WIZARD:OPEN

This command opens the JTOL test wizard.

Syntax

Application Help

```
JTOLTEST:WIZARD:OPEN
```

Inputs

NA

Outputs

NA

JTOLTEST:WIZARD:CLOSE

This command closes the JTOL test wizard.

Syntax

```
JTOLTEST:WIZARD:CLOSE
```

Inputs

NA

Outputs

NA

JTOLTEST:SELECT:TP2FILE

This command sets or returns the selected TP2 calibration file for the JTOL test.

Syntax

```
JTOLTEST:SELECT:TP2FILE <String>
```

```
JTOLTEST:SELECT:TP2FILE:FILE?
```

Inputs

<String>

Outputs

<String>

JTOLTEST:SELECT:CUSTOM:MASK

This command sets or returns the enable or disable status of configuring user-defined mask for the JTOL test.

Syntax

```
JTOLTEST:SELECT:CUSTOM:MASK {0 | 1}
```

```
JTOLTEST:SELECT:CUSTOM:MASK?
```

Inputs

{0 | 1}

0 - Indicates that custom mask is disabled.

1 - Indicates that custom mask is enabled.

Outputs

{0 | 1}

JTOLTEST:LOADSTRESS

This command loads stresses to the BERT for the JTOL Test.

Syntax

```
JTOLTEST:LOADSTRESS
```

Input

NA

Output

NA

JTOLTEST:MIN:FREQ

This command sets or returns the minimum frequency value for JTOL test.

Syntax

```
JTOLTEST:MIN:FREQ <float>
```

```
JTOLTEST:MIN:FREQ?
```

Inputs

<float> 0.03 to 99

Outputs

<float>

JTOLTEST:MAX:FREQ

This command sets or returns the maximum frequency value for JTOL test.

Syntax

```
JTOLTEST:MAX:FREQ <float>
```

```
JTOLTEST:MAX:FREQ?
```

Inputs

<float> 1 to 100

Outputs

<float>

JTOLTEST:FREQ:POINTS

This command sets or returns the number of SJ Frequencies for JTOL Test.

Syntax

```
JTOLTEST:FREQ:POINTS <int>
```

```
JTOLTEST:FREQ:POINTS?
```

Inputs

<int> 1 to 14

Outputs

<int>

JTOLTEST:FREQ:GENERATE

This command generates frequency in grid view.

Syntax

```
JTOLTEST:FREQ:GENERATE
```

Inputs

NA

Outputs

NA

JTOLTEST:FREQ:DEFAULT

This command loads the grid with calibrated SJ-tone values.

Syntax

```
JTOLTEST:FREQ:DEFAULT
```

Inputs

NA

Outputs

NA

JTOLTEST:SELECT:RELAXATION

This command sets or returns the relaxation time to ignore the BER bits before running every amplitude points in JTOL test.

Syntax

```
JTOLTEST:SELECT:RELAXATION <int>
```

```
JTOLTEST:SELECT:RELAXATION?
```

Inputs

<int> 1 to 10

Outputs

<int>

JTOLTEST:SEARCH:ALGO

This command sets or returns the selected search algorithm type for JTOL test.

Syntax

```
JTOLTEST:SEARCH:ALGO <0 | 1 | 2 | 3 | 4 | 5>
```

```
JTOLTEST:SEARCH:ALGO?
```

Inputs

0 indicates that search algorithm type is Binary.

1 indicates that search algorithm type is Downwards linear.

2 indicates that search algorithm type is Downwards log.

3 indicates that search algorithm type is Upwards linear.

4 indicates that search algorithm type is Upwards log.

5 indicates that search algorithm type is Binary+Linear.

Outputs

<0 | 1 | 2 | 3 | 4 | 5>

JTOLTEST:RUN

This commands sets the run status of JTOL test.

Syntax

```
JTOLTEST:RUN <0 | 1>
```

Inputs

<0 | 1>

0 - Stop the JTOL test run.

1 - Start the JTOL test run.

Outputs

NA

JTOLTEST:SAVE:ID

This command sets or returns the unique identifier used as key to save the report in database for JTOL test.

Syntax

```
JTOLTEST:SAVE:ID <String>
```

```
JTOLTEST:SAVE:ID?
```

Inputs

Application Help

<String>

Outputs

<String>

JTOLTEST:SAVE:GENERATEDBY

This command sets or returns the creator name who save the report in database for JTOL test.

Syntax

```
JTOLTEST:SAVE:GENERATEDBY <String>
```

```
JTOLTEST:SAVE:GENERATEDBY?
```

Inputs

<String>

Outputs

<String>

JTOLTEST:SAVE:COMMENTS

This command sets or returns the comments given to save the report in database for JTOL test.

Syntax

```
JTOLTEST:SAVE:COMMENTS <String>
```

```
JTOLTEST:SAVE:COMMENTS?
```

Inputs

<String>

Outputs

<String>

JTOLTEST:SAVE

This command saves the current JTOL test file to the database.

Syntax

```
JTOLTEST:SAVE
```

Inputs

NA

Outputs

NA

JTOLTEST:RUNSTATUS

This command returns the JTOL test run status.

Syntax

```
JTOLTEST:RUNSTATUS?
```

Inputs

NA

Outputs

```
{InProgress | Done}
```

JTOLTEST:FREQ

This command returns the JTOL test result for the specified frequency.

Syntax

```
JTOLTEST:FREQ <Freq>?
```

Inputs

<Freq> = <int> Frequency for which JTOL results need to be shown.

Outputs

```
<String>
```

JTOLTEST:PLOT:POINTS

This command returns the number of plotted points in JTOL test plot.

Syntax

```
JTOLTEST:PLOT:POINTS?
```

Inputs

NA

Outputs

```
<int>
```

JTOLTEST:SELECT:SJAMPUNITS

This command sets or returns the SJ Amplitude unit for JTOL test.

Syntax

```
JTOLTEST:SELECT:SJAMPUNITS <0 | 1>
```

```
JTOLTEST:SELECT:SJAMPUNITS?
```

Inputs

<0 | 1>

0 - Indicates the unit is ps.

1 - Indicates the unit is UI p-p.

Outputs

<0 | 1>

JTOLTEST:SELECT:CLOCKTYPE

This command sets or returns the clock type used for JTOL test.

Syntax

```
JTOLTEST:SELECT:CLOCKTYPE <1>
```

```
JTOLTEST:SELECT:CLOCKTYPE?
```

Inputs

<1>

1 - Indicates the clock type is Internal.

Outputs

<1>

JTOLTEST:PLOT

This command displays the JTOL test results plot.

Syntax

```
JTOLTEST:PLOT
```

Inputs

NA

Outputs

NA

JTOLTEST:TABLE

This command displays the JTOL test results table.

Syntax

```
JTOLTEST:TABLE
```

Inputs

NA

Outputs

NA

JTOLTEST:SELECT:DUTTYPE

This command sets or returns the DUT Type used for JTOL test.

Syntax

```
JTOLTEST:SELECT:DUTTYPE <0 | 1>
```

```
JTOLTEST:SELECT:DUTTYPE?
```

Inputs

<0 | 1>

0 - Indicates the DUT type is Non-RootComplex.

1 - Indicates the DUT type is RootComplex.

Outputs

<0 | 1>

JTOLTEST:JITTERSTEP:HIGHFREQ

This command sets or returns the jitter step size/ratio (high frequency) value for linear and log based search algorithms respectively.

Syntax

```
JTOLTEST:JITTERSTEP:HIGHFREQ <int>
```

```
JTOLTEST:JITTERSTEP:HIGHFREQ?
```

Inputs

<int> = 0.01 to 1 for log algorithms / 0.004 to 0.5 for linear algorithms.

Outputs

<int>

JTOLTEST:JITTERSTEP:LOWFREQ

This command sets or returns the jitter step size/ratio (low frequency) value for linear and log based search algorithms respectively.

Syntax

```
JTOLTEST:JITTERSTEP:LOWFREQ <int>
```

```
JTOLTEST:JITTERSTEP:LOWFREQ?
```

Inputs

<int> = 0.01 to 1 for log algorithms / 0.004 to 75 for linear algorithms.

Outputs

<int>

JTOLTEST:JITTERSTEP:MIDDLEFREQ

This command sets or returns the jitter step size/ratio (middle frequency) value for linear and log based search algorithms respectively.

Syntax

```
JTOLTEST:JITTERSTEP:MIDDLEFREQ <int>
```

```
JTOLTEST:JITTERSTEP:MIDDLEFREQ?
```

Inputs

<int> = 0.01 to 1 for log algorithms / 0.004 to 7.5 for linear algorithms.

Outputs

<int>

JTOLTEST:JITTERSTEP:VERYLOWFREQ

This command sets or returns the jitter step size/ratio (very low frequency) value for linear and log based search algorithms respectively.

Syntax

```
JTOLTEST:JITTERSTEP:VERYLOWFREQ <int>
```

```
JTOLTEST:JITTERSTEP:VERYLOWFREQ?
```

Inputs

<int> = 0.01 to 1 for log algorithms / 0.004 to 1000 for linear algorithms.

Outputs

<int>

LOOPBACK:SELECT:AUTOSEARCH

This command sets or queries the auto search mode to be performed as a part of JTOL Test

Syntax

```
LOOPBACK:SELECT:AUTOSEARCH <0|1>
```

```
LOOPBACK:SELECT:AUTOSEARCH?
```

Inputs

<0 | 1>

0 - turn OFF the Auto search mode

1 - turn ON the Auto search mode

Outputs

<0 | 1>

LOOPBACK:AUTOSEARCH:TYPE

This command sets or returns the BERT Auto Search Type.

Syntax

```
LOOPBACK:AUTOSEARCH:TYPE <0 | 1>
```

```
LOOPBACK:AUTOSEARCH:TYPE?
```

Inputs

<0 | 1>

0 - Auto search TYPE is Basic

1 - Auto search TYPE is Advanced

Outputs

<0 | 1>

0 - Auto search TYPE is Basic

1 - Auto search TYPE is Advanced

LOOPBACK:AAS:DELAYSEARCHTYPE

This command sets or queries the delay search type to be set as a part of JTOL Test

Syntax

```
LOOPBACK:AAS:DELAYSEARCHTYPE <string>
```

```
LOOPBACK:AAS:DELAYSEARCHTYPE?
```

Inputs

<string> Fine, Coarse, OFF

Outputs

<string> Fine, Coarse, OFF

LOOPBACK:AAS:EQSEARCH

This command sets or queries if the equalizer (LFE/DFE) is supposed to be applied or not during the JTOL test

Syntax

```
LOOPBACK:AAS:EQSEARCH <0 | 1>
```

```
LOOPBACK:AAS:EQSEARCH?
```

Inputs

<0 | 1>

0 - OFF - No equaliser (LFE/DFE) applied

1 - ON (will find the value of equaliser and apply it during the test)

Outputs

<0 | 1>

0 - OFF

1 - ON

LOOPBACK:AAS:EYETHRESHOLDTYPE

This command sets or queries the eye threshold type to be set as a part of the JTOL test

Syntax

LOOPBACK:AAS:EYETHRESHOLDTYPE <string>

LOOPBACK:AAS:EYETHRESHOLDTYPE?

Inputs

<string> Fine, Coarse, OFF

Outputs

<string> Fine, Coarse, OFF