

D9350DDRC DDR5 Tx Compliance Test Software

The Keysight Technologies DDR5 compliance test application software provides a fast and easy way to test, debug and characterize your DDR5 designs. DDR5 technology offers high data rate of up to 9.2GT/s which enables higher bandwidth for data transfer with lower power. The DDR5 compliance test application offers full test coverage to enable testing of transmitter physical layer of the DDR5 DRAM, data buffer and register chips.

Features

The DDR5 compliance test application offers several key features to simplify the validation of your designs.

- Intuitive setup wizard for quick test setup, configuration, and test.
- Comprehensive test coverage of the DDR5 electrical, timing, eye diagram, and jitter tests.
- Offline testing capability with waveform files for completeness of simulation to validation workflow.



Comprehensive Test Coverage

The DDR5 compliance test application allows you to use the oscilloscope to perform automated testing and margin analysis on your DDR5 design. The application automatically configures the oscilloscope for each test and provides informative test result. It includes margin analysis indicating how close your device comes to passing or failing each test parameter. The DDR5 compliance test application automates the measurement as specified in the specification, which helps save test time and design cost.

Easy Test Definition

The DDR5 compliance test application enhances the usability of Keysight Infiniium oscilloscopes for testing DDR5 devices which includes the DRAM, register and data buffer. The Keysight automated test framework guides you quickly through the steps required to define the setup, perform the tests and view the test results. You can select a category of tests or select an individual test. The user interface is designed to minimize unnecessary reconnections, which will help save test time and minimize potential operator error. You can save the tests and configurations as project files and recall them for quick testing and review previous results. You can also run the compliance test with saved waveform files from the oscilloscope or the ADS simulation tool on your PC, freeing the oscilloscope for other data acquisition purposes.

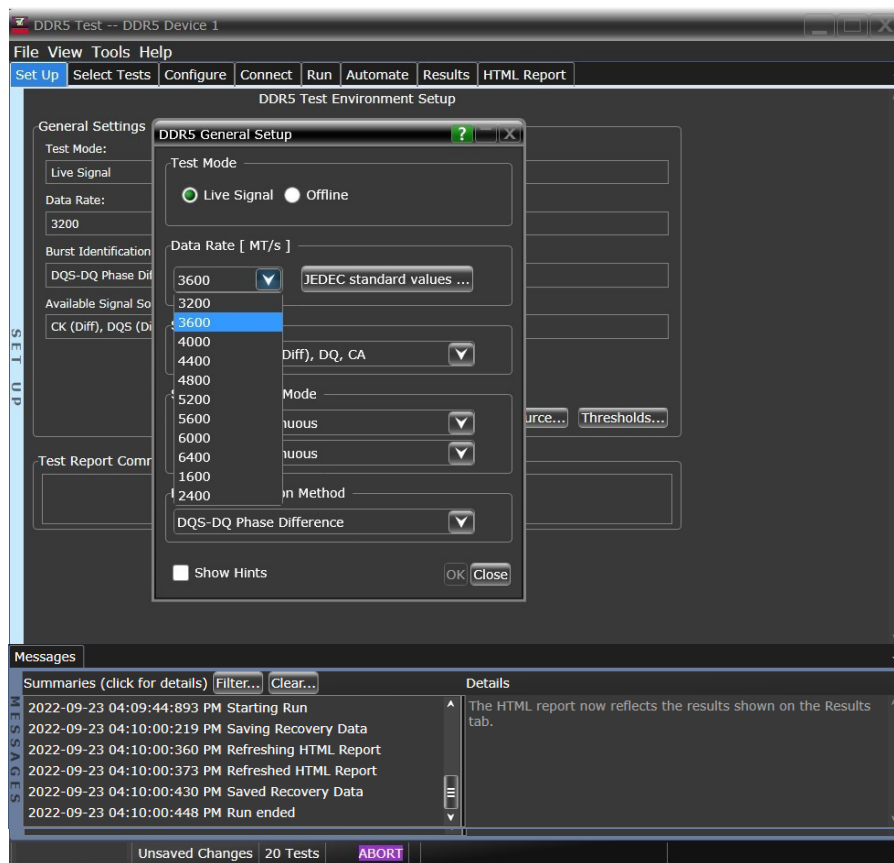


Figure 1. Set Up screen. Select the speed grade of your device.

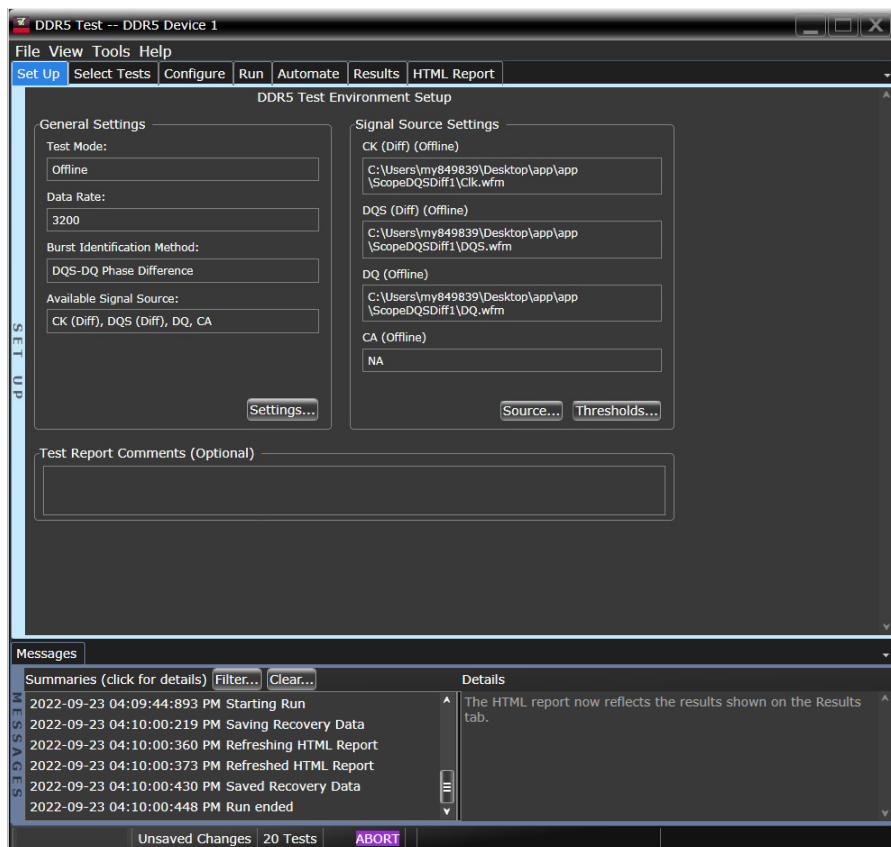


Figure 2. Offline test setup. Supports waveform files in .wfm or .h5 format.

Configurability and Guided Connection

The DDR5 compliance test application provides flexibility in your test setup. The application lets you define controls for critical test parameters such as voltage threshold values, number of waveforms used for analysis and customizable violation settings. Once you have configured the tests, the connection page will display the connection diagram for the test you have selected.

You can also specify the number of test trials and only stop running selected tests when the stop condition is met. The application will save the worst-case test result to help you track down the anomalies in your signals.

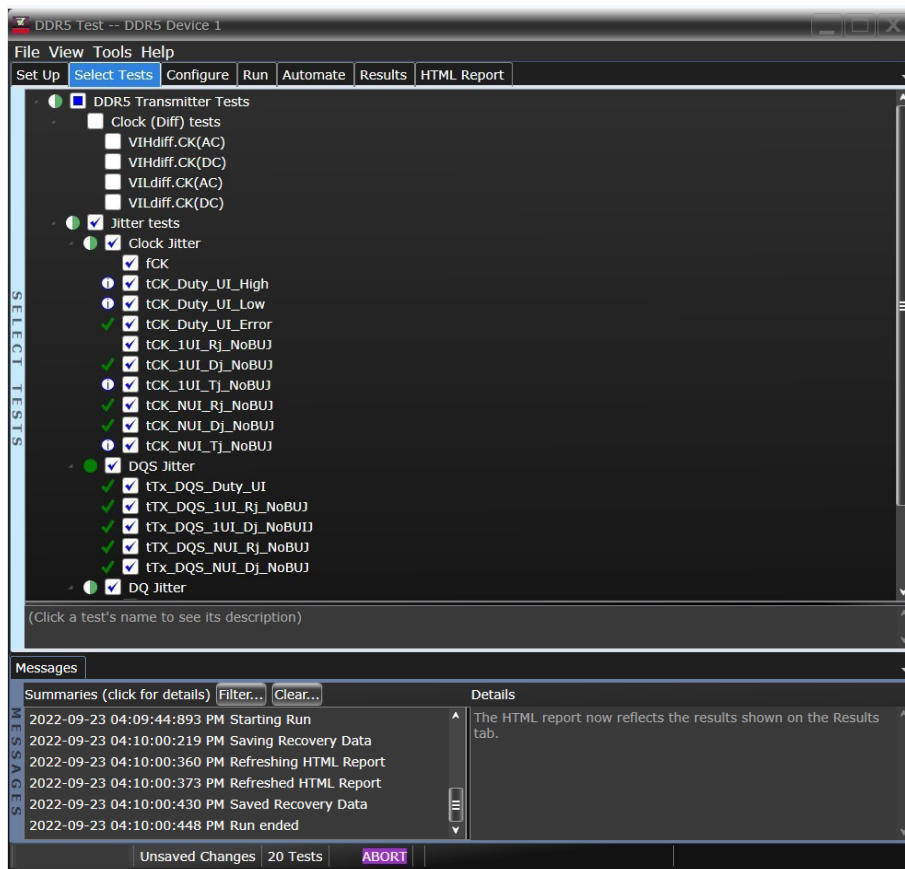


Figure 3. The Select Tests tab list all the tests available in your setup. You can easily setup the individual test or groups of tests.

Comprehensive Result Analysis

In addition to providing you with measurement results, the DDR5 compliance test application reports how close your test results are to the specified test limit. You can specify the level at which warnings are to be issued. You are provided a full array of statistics for each measurement.

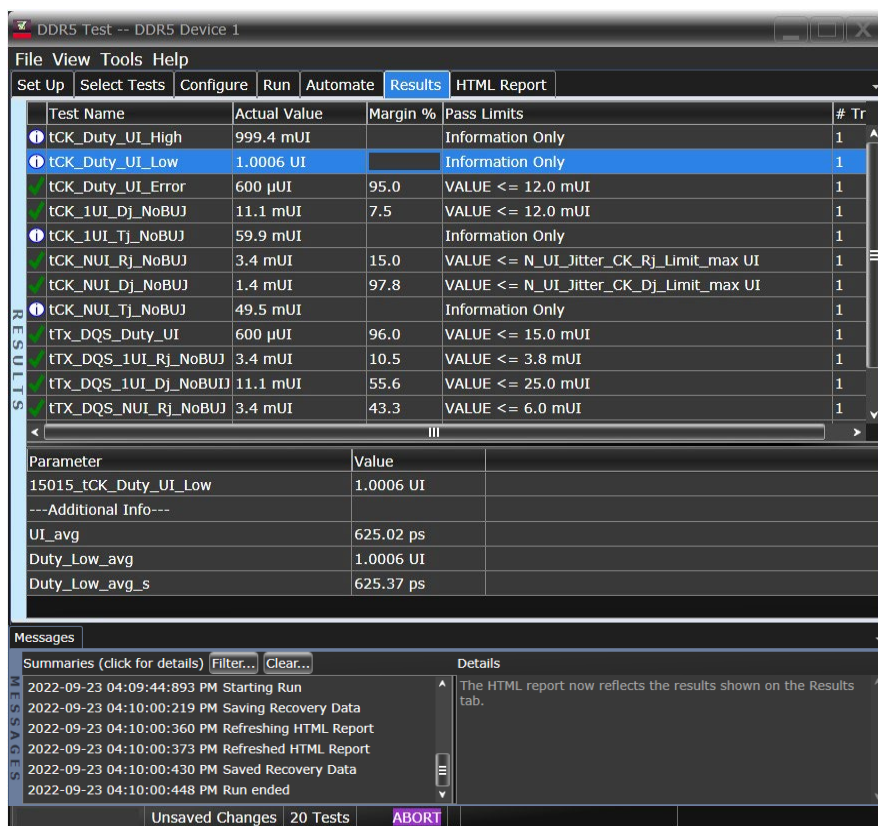


Figure 4. The Results tab documents your test parameters, pass or fail status, test limits, measured values and margin.

Thorough Performance Reporting

The DDR5 compliance test application generates HTML reports that captures the performance, status, and margins of your device under test. It also captures screenshots of critical measurements of your reference and documentation. This report is suitable for printing and sharing with your test vendors, customers, and suppliers.

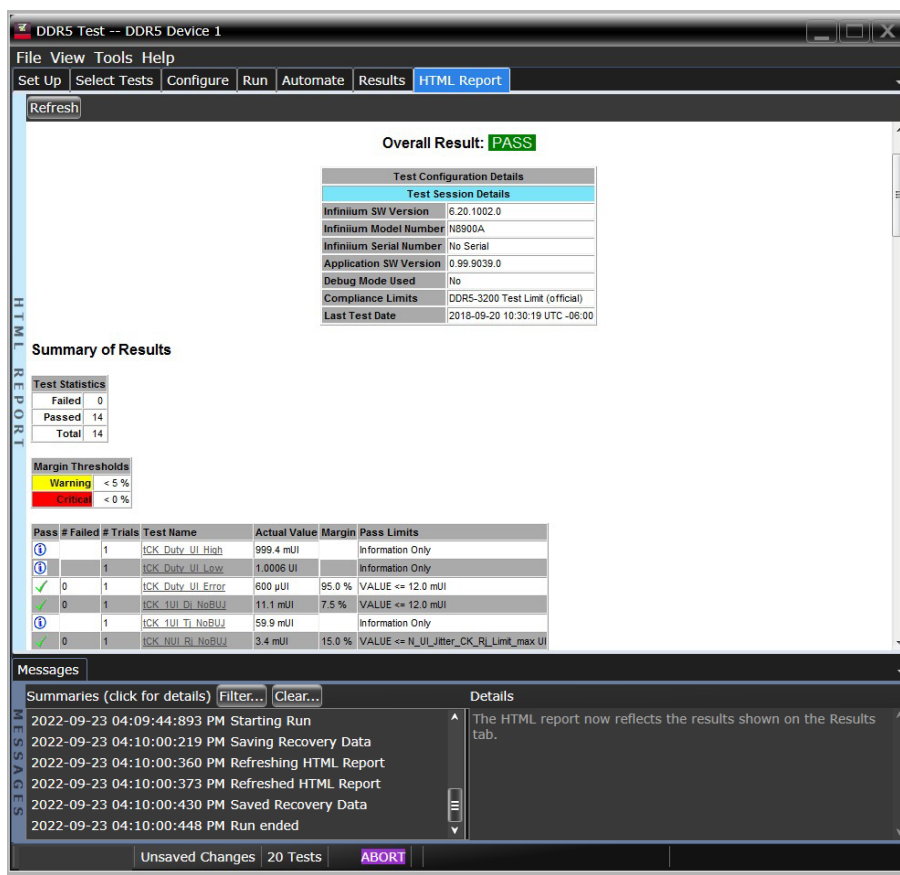


Figure 5. The DDR5 test application generates a summary report for quick results viewing. The report includes details such as test limits, test description and test results.

Recommended Oscilloscope

The DDR5 compliance test application is compatible with various series of oscilloscopes. Please refer to the release notes for the recommended oscilloscope software version.

Data Rate	Minimum Bandwidth	Minimum Channels	Description
Up to 6400 MT/s	16 GHz	4	Infinium XR8, UXR series oscilloscope
> 6400 MT/s	25 GHz		

Ordering Information

Software

Model Number	Description	Note
D9350DDRC	DDR5 Tx Compliance Test Software	Required
D9320JITA	Jitter, vertical and phase noise analysis software	Required
D9320ASIA	Advanced signal integrity software (EQ, InfiniiSim Advanced)	Optional
D9320SCNA	InfiniiScan event identification software	Optional

Example Of Hardware Configuration

Model Number	Description	Quantity
XR804KA-164	16 GHz Infiniium XR8 oscilloscope	1
MX0022A	16 GHz InfiniiMax ultra probe amplifier	4
MX0100A	Micro probe head	1 (includes 5 probe heads, 1 bullet adapter)
MX0103A	Bullet adapter	3

Keysightcare Software Support Subscription Provides Peace of Mind Amid Evolving Technologies

Ensure your software is always current with the latest enhancements and measurement standards.

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Stay on schedule with fast turnaround times and priority escalations when you need support.

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Step 1. Choose your software product (eg. S1234567A).

Step 2. Choose your license term: perpetual or subscription.

Step 3. Choose your license type: node-locked, transportable, USB portable, or floating.

Step 4. Depending on the license term, choose your support subscription duration.

Subscription-Based Compliance Test Software Suites

A new ownership model of multiple Compliance Test Software Applications is now available.

With this new subscription-based model, the DDR software suites bundle the Compliance Test Software Applications under a model number. Using a subscription-based ownership, you can enjoy all the test software features covered under DDR across multiple generations and variants.

Software Support and Continuity

Under the subscription plan, software support is made available with no extra support cost. Ensuring your software always stays up to date with the latest enhancements and measurement standards while having access to our team of technical experts when you need support.

On top of that all upgrades are made available to you as the DDR standards progresses with no additional costs.

Subscription-Based Compliance Test Software Suites

Each suite comes with a 12, 24, or 36-month software suite subscription.

Model Number	Options Available
SW30DDRV DDR Validation License	D9350DDRC DDR5 Compliance Test Software