

testHarmony

Bluetooth® LE Exerciser



Key Features and Benefits

- Provides regression testing of Bluetooth low energy HCI and Link Layer implementations
- Supports test case packages based on Bluetooth feature groups
- Parameterized test cases - enables the user to change the parameters of subset of test cases to test beyond Bluetooth SIG specification
- Export test results for individual runs or across multiple runs within the same test project for detailed comparison
- Flexible test configuration supports multiple IUTs
- Summarizes and pinpoints root cause of a fail or inconclusive result
- Allows for integration into "no operator required" automated test regression systems
- User can customize test runs based on individual features or full test runs
- Test Manager, Upper Tester and Lower Tester in one small, portable platform
- Automated error recovery of IUT from failures during testing prevents cascade of failures and "false-negatives"

Teledyne LeCroy's testHarmony LE Exerciser is a highly flexible test solution designed to provide debugging, regression and robustness testing for chipset vendors and product manufacturers during the development cycle and post release. The exerciser supports 2 test case package licenses; the first covers test cases from Bluetooth LE specifications up to and including TCRL 2021-2; the second covers test cases from TCRL from 2022-1 onwards. testHarmony supports a number of test cases that enable the user to change specific test case parameters to test above and beyond the Bluetooth SIG LE specification. With the purchase of testHarmony and at least one test case package, the user will also get access to a set of custom test cases that are not part of the specification.

testHarmony is an integrated software/hardware test platform for Bluetooth protocol testing that provides three components: the Test Manager, the Upper Tester, and the Lower tester.

The Test Manager is responsible for test execution and results logging, and running test scripts. Test execution is automated, which allows the system to be integrated into automated regression test systems where no operator intervention is required in order to execute a test suite and parse the pass/fail results. Automated error recovery of the IUT from failures during testing prevents a cascade of failures due to a previous test, limiting failures to just the test that caused the IUT to fail.

The Upper Tester interfaces to the IUT (Implementation Under Test) via HCI UART.

The Lower Tester interfaces to the IUT via RF over the air and RF conducted.

- HCI and over-the-air capture files via X240 Protocol analyzer
- Complete log of test case validations and verdicts

The testHarmony LE Exerciser is a sophisticated protocol analysis and tester platform, providing test case logging and debugging, with the detailed information necessary to help understand and debug each failure.



Optional to the testHarmony LE Exerciser is the addition of the powerful Frontline X240 Bluetooth LE Protocol analyzer to capture and debug OTA and HCI traffic.

Specifications

- **Bluetooth LE controller testing for Link Layer and HCI**

Bluetooth LE 4.0, 4.1, 4.2, 5, 5.1, 5.2, 5.3
Note: Test results from testHarmony cannot be used for Bluetooth SIG certification evidence

- **Timestamp Resolution**
125 nsec

- **Lower Tester interfaces to IUT**
RF over-the-air
RF conducted

- **Upper Tester interfaces to IUT**
HCI UART

- **Power**
AC Adapter supplied
Output of the adapter is 5Vdc, 1.2A

- **Dimensions**
4.1 x 4.1 x 1.0 inches
(104 x 104 x 25 mm)

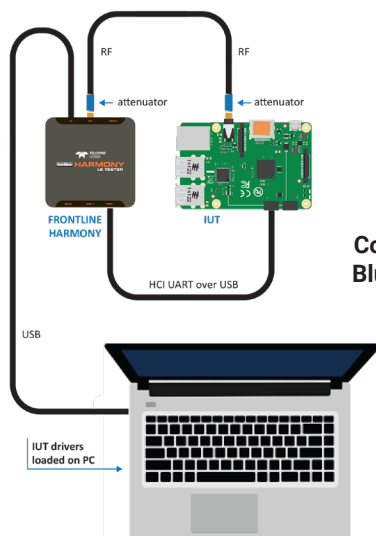
- **Temperature**
0 to 40 degrees C
32 to 104 degrees F

- **Humidity**
Operating: 10% to 90% RH
(noncondensing)

- **Receiver Sensitivity**
-96 dBm

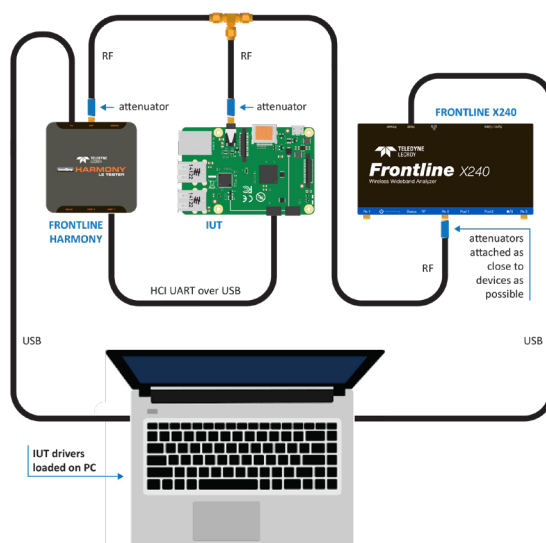
- **Supported Configurations**
OS Supported: Windows 10, 11
USB Port: USB 2.0 or USB 3.0 High Speed

- **Minimum System Requirements**
Processor: Core i5 processor at 2.7 GHz
RAM: 4 GB
Free Hard Disk Space: 20 GB



Configuration without Bluetooth LE Analyzer

Configuration using optional Frontline X240 Protocol Analyzer for over-the-air captures



Ordering Information

Product Description

Frontline Harmony LE Tester

Frontline Harmony LE System Bundle (Harmony Tester and X240 Protocol Analyzer)

Product Code

2014-25100-000

2014-25400-000

Test Case Packages

testHarmony SW License - Package LE TCRL 2022-1, 2022-2, 2023-1 and 2024-1

testHarmony SW License - Package Up to TCRL 2021-2

2013-22251-008

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Visit our website to find the most convenient location.

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