

frontline

HARMONY

LOW ENERGY TESTER



Key Features and Benefits

- Provides 100% of low energy HCI and Link Layer tests needed to qualify a low energy device
- Flexible test configuration supports multiple IUTs
- Compliant with the latest Bluetooth LE core specification
- Summarizes and pinpoints exact cause of a FAIL or INCONCLUSIVE verdict
- Allows for integration into "no operator required" automated test regression systems
- User can customize testing with no effect on SIG-compliant conformance test suites
- Easily add test results to SIG-generated Test plan (TPG)
- 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"
- Works with Frontline Sodera to understand and debug each failure

The rapid proliferation of Bluetooth development of devices exploiting new low energy features has created the need for more robust testing and greater conformance to Bluetooth standards. The Bluetooth Special Interest Group has defined these conformance standards, and developers who want their implementations to bear the Bluetooth mark will need to be able to prove that they meet them.

Teledyne LeCroy puts robust conformance testing in the palm of your hand with the Frontline Harmony Low Energy Tester, an integrated software/hardware test platform for Bluetooth protocol qualification testing that provides Test Manager, Upper Tester and Lower Tester in one portable package. The Harmony Low Energy Tester performs complete Bluetooth LE controller qualification testing for LE Link Layer and HCI test specifications, providing coverage for Bluetooth LE 4.0, 4.1, 4.2, 5, and upcoming features.

The Harmony LE Tester is comprised of three components. The Test Manager is responsible for test execution and logging, running SIG-compliant test scripts, and automated test execution, 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 (H4), with HCI UART (H5), HCI USB, and HCI SDIO expected in late 2017. The Lower Tester interfaces to the IUT via RF over the air or RF conducted.

Once tests have been run, the Harmony LE further simplifies the conformance process by automating the creation of Test evidence for submission to the Bluetooth SIG, including:

- Validated compliance reporting to submit for SIG certification
- Easy addition of test results to SIG-generated Test plan (TPG)
- HCI and over-the-air capture files
- complete log of test case validations and verdicts

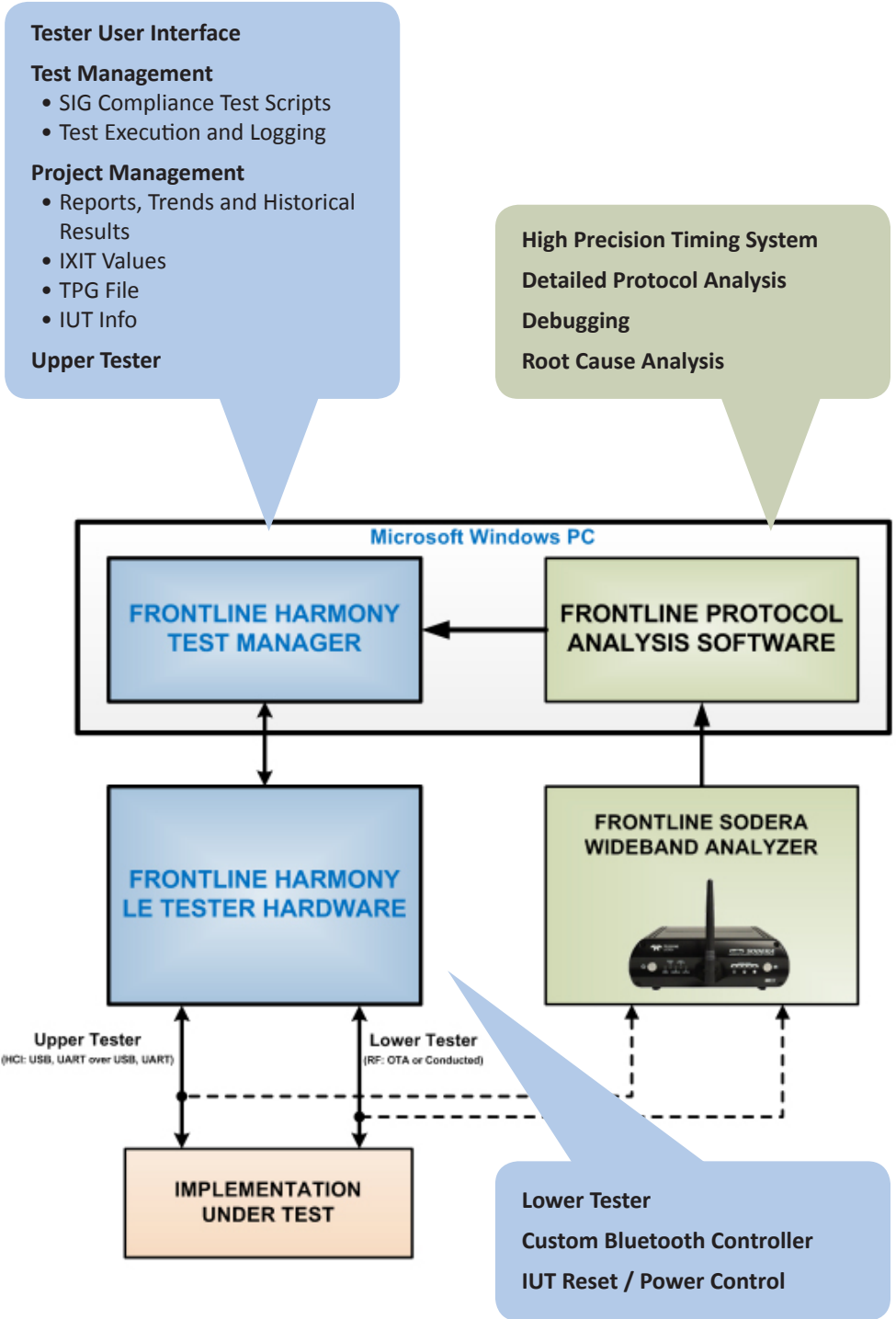
Knowing that your IUT failed a test is important for conformance, but the Harmony LE Tester provides more than just a pass, fail or inconclusive result for conformance certification - it is a sophisticated protocol analysis and tester platform, providing test case logging and debugging. The Harmony LE Tester summarizes and helps to pinpoint the cause of a fail or inconclusive verdict with detailed information to help understand and debug each failure. Combined with the Frontline Sodera Bluetooth Analyzer, the developer can perform thorough root cause analysis and debugging with integrated Bluetooth LE and HCI traces and precise timing measurements.

The Harmony LE Tester is the right tool at every stage of development to help you speed your way to Bluetooth LE certification.



Specifications

- Bluetooth LE controller qualification testing for LE Link Layer and HCI test specifications**
 Bluetooth LE 4.0, 4.1, 4.2, 5
 Upcoming Bluetooth features
- Timestamp Resolution**
 125 nsec
- Lower Tester interfaces to IUT**
 RF over-the-air
 RF conducted
- Upper Tester interfaces to IUT**
 HCI UART (H4)
 HCI UART (H5) (expected in late 2017)
 HCI USB (expected in late 2017)
 HCI SDIO (expected in late 2017)
- 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
 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



To order or for more information:

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