

TLF3000® RF-PHY Tester



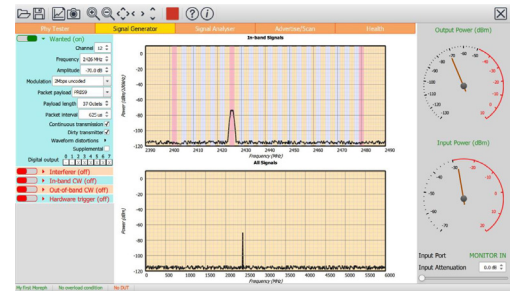
Key Features and Benefits

- Eliminates the need for multiple pieces of test equipment
- Flexible solution covering multiple 2.4 GHz technologies including Bluetooth® LE and BR/EDR, and 802.15.4
- Fast - 2 second boot time
- In-band emissions test completes in 2.5 ms
- Fully configurable test coverage and test time
- Performs RF-PHY testing on live links
- Signal generation and analysis in one package
- Simple and intuitive GUI quickly identifies faults
- Standalone mode - test scripts can reside on a USB drive
- Export reporting results to HTML, XML, CSV, and raw data
- Python + C API available for production environment

TLF3000 Wireless RF PHY tester is a wideband, ultra-high dynamic range 2.4 GHz software-defined receiver, signal analyzer and signal generator. It captures and analyses the entire 2402-2480 MHz band simultaneously providing RF PHY testing, signal generation, signal analysis in one powerful package. The TLF3000 hardware supports a number of different licensing options covering different RF technologies and customer use cases.

True OBT

A significant barrier to speed to market has traditionally been the daunting range of test equipment needed for thorough testing of the RF interface. With one portable package, the TLF3000 negates the need for multiple pieces of RF test equipment. TLF3000 has packetized signal generator, signal generator for in-band and out-of-band interferers and a signal analyzer all build-in to the one-box-solution.



Developer Configuration

The developer configurations includes an easy to use GUI for PHY layer testing for a test lab/developer environment for the following Technologies:

- Bluetooth LE
- Bluetooth Classic (BR/EDR)
- 802.15.4

The GUI provides access to predefined RF PHY test cases for the supported technology and the user can select test cases to create test script files. The GUI enables the user to test to the specification as a default but it also provides the ability to change the parameters so that the DUT can be tested beyond the limits of the test specification.

Production Configuration

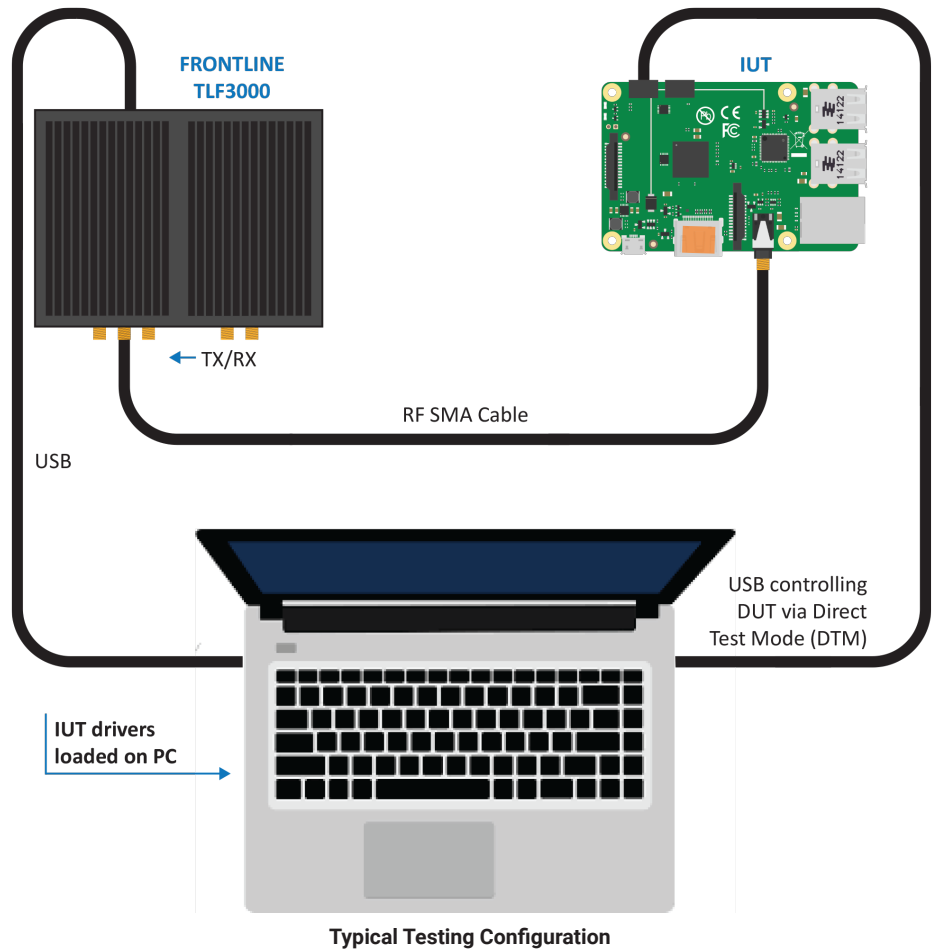
Provides a limited GUI to preselect test cases that can be run remotely in a Production line test environment covering the following technologies:

- Bluetooth LE
- Bluetooth Classic (BR/EDR)
- 802.15.4

The user preselects test cases for the supported technology and saves as a test script. The TLF3000 has a native language to control test case functionality and an API that can be driven via Python or C/C++ scripts.

Specifications

- **Supported Host OS**
Windows 7 and Windows 10
- **Host Interfaces**
USB
- Connector type: Micro-USB
- Speed Rating: High Speed
- VBUS Load: 2.2 μ F, > 10 k Ω
Ethernet
- Connector type: RJ45
- Speed: 10 / 100 / 1000
- **Input Power**
- Connector type: 2.5 mm jack
- Input voltage: 12 V DC
- Power: 10 W typ (application dependent)
- Reverse polarity protection: Yes
- Over voltage protection: Yes
- Under voltage protection: Yes
- **Dimensions**
158.5 mm x 160.0 mm x 47.0 mm (6.3" X 1.9" X 6.3")
- **Weight**
1.3 kg (2.87 lb)
- **Operating Temperature**
0°C to 40°C
- **Humidity**
0% - 90% (0 °C – 35 °C), noncondensing



TX/RX Port

Function	Low sensitivity 2.4 GHz RF input and signal generator output / Suitable for conducted measurements
Connector Type	SMA
Impedance	50 Ω
Coupling	AC
Maximum DC Voltage	50V

Receiver Specification for TX/RX Port

Noise figure	4.6 dB typ
IP3 @ max sensitivity	+47 dBm typ
SNR in 1MHz bandwidth	80 dB typ
Maximum input signal	27 dBm
Maximum usable signal	27 dBm typ
Frequency range	2401-2481 MHz

Ordering Information

Product Description / Developer Configuration

Frontline TLF3000 Bluetooth LE RF-PHY Tester (Teledyne LeCroy Wire PHY Tester)
 TLF3000 Teledyne LeCroy RF Tester Suite - LE Developer (RF Tester Suite - LE)
 TLF3000 Teledyne LeCroy RF Tester Suite - BR/EDR Developer (RF Tester Suite - BR/EDR)
 TLF3000 Teledyne LeCroy RF Tester Suite - 802.15.4 Developer (RF Tester Suite - 802.15.4)

Product Code

2014-25000-000
 2013-22250-003
 2013-22250-002
 2013-22250-001

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Frontline TLF3000 Bluetooth LE RF-PHY Tester (Teledyne LeCroy Wire PHY Tester)
 TLF3000 Teledyne LeCroy RF Tester Suite - LE Production (RF Tester Suite - LE)
 TLF3000 Teledyne LeCroy RF Tester Suite - BR/EDR Production (RF Tester Suite - BR/EDR)
 TLF3000 Teledyne LeCroy RF Tester Suite - 802.15.4 Production (RF Tester Suite - 802.15.4)

Product Code

2014-25000-000
 2013-22250-004
 2013-22250-005
 2013-22250-006

To order or for more information:

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