

frontline

TLF3000

BLUETOOTH® TESTER



Key Features and Benefits

- Full support of Bluetooth 5
- Support for all RF-PHY test cases
- Compliant with all adopted Bluetooth LE core specifications
- Fast - 2 second boot time, and the in-band emissions test completes in 2.5 ms
- Fully configurable test coverage and test time
- Performs RF-PHY testing on live links
- Simple and intuitive GUI quickly identifies faults
- Single signal path eliminates the need for multiple pieces of gear
- Standalone mode - test scripts can reside on a USB stick

In a highly competitive market, bringing high quality and robust products to market quickly is a priority for Bluetooth developers. Teledyne LeCroy's Frontline TLF3000 is a breakthrough for those Bluetooth low energy product developers to enable them to quickly take their devices to production and to get to market first with a thoroughly tested product.

A significant barrier to speed to market has traditionally been the daunting range of test equipment needed for thorough testing, including such gear as:

Vector Signal Generator

Spectrum Analyzer

CW Generator

RF Combiners

The TLF3000 delivers otherwise prohibitive RF testing, signal generation, signal analysis and advertiser scanner in one powerful package. Product developers can focus on their product, and not on mastering a complex collection of test equipment to test it.

The TLF3000 boasts full support for Bluetooth 5 low energy features like 2Mbps speeds, coded PHYs and AoA/AoD directional information, and supports all RF-PHY test cases with no additional test equipment required.

Use the TLF3000 as a production tester for multiple DUTs (support planned for 8) for fine control over test coverage and time, DUT control via serial interface or provocation over the air, and support for a wide range of host interfaces.

The TLF3000 makes an excellent pre-compliance tester, allowing the developer to "pre-test" with confidence before committing to test houses. The developer will also find it to be useful for:

- Silicon evaluation (capture corrupt waveforms for detailed analysis and perform RF-PHY testing on live links)
- Silicon characterization (eliminating the need for additional test equipment and dramatically reducing test time and increasing throughput)
- RMA analysis (simple to use GUI rapidly identifies faults)

Thorough RF and production testing no longer needs to be overcomplicated and cost-prohibitive. The TLF3000 gives the developer the ability to get to market fast with a product that will pass both quality testing and consumer muster.



Specifications

- **Supported Bluetooth Specifications**
Bluetooth LE (4.0, 4.1, 4.2, 5)
- **Supported Host OS**
Windows, Linux (on request) or OS X (on request)
- **Host Interfaces**
USB
Ethernet
- **DUT Interfaces**
Direct test mode
H4
H5
BCSP
HCI commands via host
Proprietary command sets on request
Planned support for up to 8 DUTs
- **Input Power**
12 VDC, 2A – tip positive (AC Adapter is provided)
- **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

Monitor In

Function	High sensitivity in 2.4 GHz RF input. Suitable for radiated measurements
Connector Type	SMA
Noise Figure	6 dB
IP3 at Max Sensitivity	+7 dBm
SNR in 1 MHz Bandwidth	80 dB
Maximum Input Signal	27 dBm
Maximum Usable Signal	-10 dBm
Frequency Range	2401-2481 MHz
Impedance	50Ω
Coupling	AC
Maximum DC Voltage	50V

TX/RX

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

Video Port

Function	Video output
Connector Type	SMA
Impedance	50Ω
Coupling	DC
Maximum DC Voltage	+5 V
Minimum DC Voltage	0 V

External Clock Input

Function	External clock input. Permits internal RF, sampling and timestamp clocks to be locked to an external reference
Connector Type	SMA
Maximum Input Signal	-10 dBm
Minimum Input Signal	+20 dBm
Frequency Range	10 MHz
Impedance	50Ω
Coupling	AC
Maximum DC Voltage	50V

To order or for more information:

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