

UNPLUG!



Bluetooth® Low Energy testing reinvented

Introducing the world's first radio controlled Bluetooth® Low Energy Test Mode. At Rohde & Schwarz, we developed the most easy and accurate way of testing Bluetooth® Low Energy.

- ▶ Simplifying the test setup
- ▶ Unifying all Bluetooth® testing (Bluetooth® Classic and Bluetooth® Low Energy)
- ▶ Supporting all RF conformance tests
- ▶ Simplifying OTA measurements (TRP/TIS)
- ▶ Enabling bit rate and packet error rate measurements

www.rohde-schwarz.com/ble-testing



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BLUETOOTH® LOW ENERGY TESTING REINVENTED

World's first radio controlled Bluetooth® Low Energy Test Mode

Rohde & Schwarz has developed the world's first cable-less Bluetooth® Low Energy Test Mode, just as we are used to with Bluetooth® Classic. With the Bluetooth® Low Energy Test Mode control cable will no longer be needed. This control cable was a challenge when testing small or encapsulated devices where there is no possibility of access to the Direct Test Mode (DTM) physical interface. The Bluetooth® Low Energy Test Mode leads to greatly simplified and more flexible testing procedures.

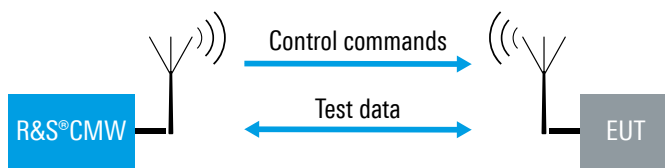
Simple, precise OTA testing

The Bluetooth® Low Energy Test Mode is achieved via a signaling connection and is able to cover all Bluetooth® Low Energy RF PHY test cases to complement the existing Direct Test Mode (DTM). This enables the full wireless execution of all RF pre-conformance tests required equivalent to DTM.

BER and PER enabled

In addition to all RF test parameters, the Bluetooth® Low Energy Test Mode can also provide the BER (Bit Error Rate) in conjunction to the PER (Packet Error Rate). The BER value can be determined enabling receiver quality analysis at a payload bit level as we expect from Bluetooth® Classic measurements.

Bluetooth® Low Energy Test Mode



The Bluetooth® Low Energy device and the R&S®CMW radio communication tester are in a Bluetooth® connection and using adaptive frequency hopping (AFH). Via this signaling connection the EUT and the R&S®CMW tester transmit both control commands and test data. During the hopping connection all RX and TX tests with the required Bluetooth® Low Energy RF PHY test packets can be tested accurately on all channels.

Unifying all Bluetooth® testing

The Bluetooth® Low Energy Test Mode on the R&S®CMW radio communication tester platform offers a simple and precise signaling test solution, perfectly suited for Bluetooth® Low Energy radio tests in development, RF conformance and production testing. From now on, all Bluetooth® Low Energy radios and Bluetooth® Classic radios measurements are unified and can be performed with only one test setup and fully over the air in a signaling connection.

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