Bluetooth® Specifications

The evolving Bluetooth® market demands both higher data rates and strongly reduced energy consumption in order to improve existing use cases and realize new ones.

The Bluetooth® standard has responded with an evolution from version 1.0 all the way to the new benchmarks of high speed and low energy.

The Bluetooth® core specification version 3.0 + HS introduced the label “High Speed” into Bluetooth® technology, addressing applications and use cases that require higher data throughput. It defines all RF tests necessary for the qualification of modern Bluetooth® products.

Bluetooth® low energy wireless technology, the hallmark feature of the new Bluetooth® core specification version 4.x, has been adopted to meet the demands for ultra-low-power wireless devices. This important development, in combination with the technology advancement previously introduced in version 3.0 + HS, will further expand Bluetooth® technology into new markets and segments.

Test Solution Coverage

The InterLab® Test Solution Bluetooth® RF meets all demands set by the Bluetooth® Qualification scheme by providing complete validated RF test coverage for Bluetooth® standard versions 2.0 + EDR, 2.1 + EDR, 3.0 + HS and 4.x including Bluetooth® low energy, Bluetooth® Smart and Bluetooth® Smart Ready. Extensions to the test portfolio are available on request.

Our strong focus on efficient operation makes this InterLab® Test Solution the ideal RF test platform for any BRTF or BQTF.

Our responsive and highly qualified support personnel complement the end-user experience.

The InterLab® Test Solution Bluetooth® RF helps you to achieve fast, reliable and reproducible results whilst maintaining the ease of use. It provides the highest level of automation in order to speed up repetitive, time-consuming procedures. By reducing human interaction and potential human-related testing errors it ensures reliable and reproducible results. Advanced “object under test” automation techniques, adaptive signaling methods and configurable repeat scenarios ease the test process considerably.
INTERLAB® TEST SOLUTION BLUETOOTH® RF

HARDWARE OPTIONS

- Complete Bluetooth® RF Test System, including all required hardware built into a rack, multiple variants available
- Upgrade of R&S TS8960 / TS8965 Bluetooth® RF Tester, multiple variants available

SOFTWARE

- Available Test Case Packages
  - Basic Rate – RF
  - Enhanced Data Rate (EDR) – RF, incl. Enhanced Power Control – TRM14
  - Baseband EDR Timing – Protocol
  - Low Energy – RF
- Validation Status
  - Validated according to Bluetooth SIG requirements
  - Meeting Bluetooth Qualification requirements for Bluetooth standard versions
  - 2.0 + EDR
  - 2.1 + EDR
  - 3.0 + HS – for applications and use cases requiring higher data throughput
  - 4.x. Bluetooth low energy – for Bluetooth Smart, Bluetooth Smart Ready ultra-low power wireless devices
- InterLab® Test Engine for automation
  - "OUT" descriptor
    - for terminal capability description for test case configuration

DOCUMENTATION

- User manual, "Getting Started", Release Note
- Installation Guide, System Requirements

USER BENEFITS

- Intuitive user interface for selection of test sequences, test groups and repeat scenarios
- Sophisticated test sequence compilation based on test parameters and test conditions
- Configurable repeat scenarios
- High level of automation
  - Object-under-test automation includes initial configuration, test remote control, power cycling...
  - Automated execution and termination of external programs e.g. batch jobs, trace tools, triggered by start and end of tests
  - Full automation of test sequences – optional function:
    - uses the remote control (Host Controller interface) of the object-under-test
    - test sequences can be performed without user interaction, thus decreasing test time and errors
  - Control of auxiliary equipment e.g. power supplies or climatic chambers – optional
  - Adaptive connection management
  - Intelligent link re-establishment in case of link loss during lengthy test cases to safeguard already performed measurements

ADDITIONAL SERVICES

- Set-up services
- Introductory training
- Support & maintenance
- Onsite support