WLAN and IoT Testing

CATALOG



KEYSIGHT

Table of Contents

3
Introduction

4
IoT Design Solutions

7
IoT Regulatory Compliance

8
Wi-Fi® Testers

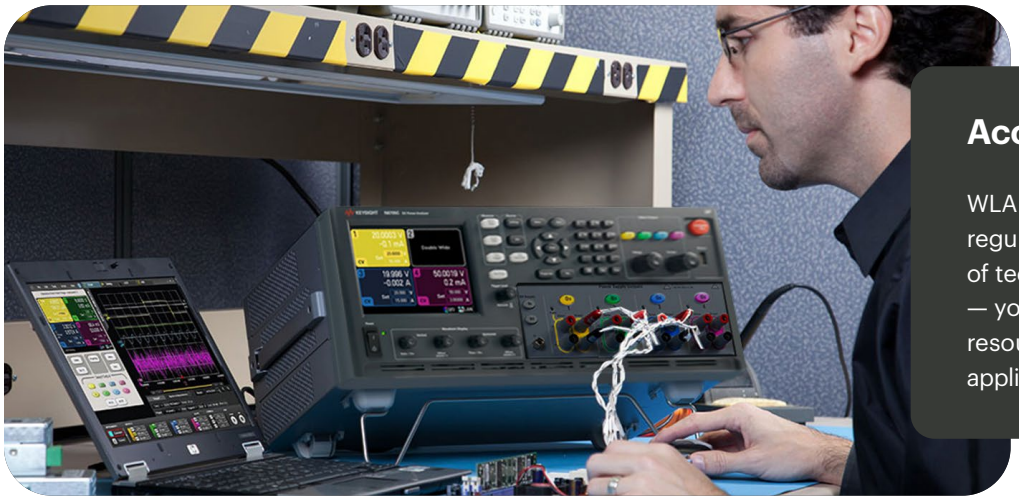
9
Software

10
Keysight Support Services

Introduction

WLAN and IoT Testing — from battery life analysis to regulatory compliance

Explore our wide range of Internet of Things (IoT) compliance test solutions designed to meet your needs throughout the product life cycle — from design to test validation. With a broad variety of WLAN and IoT testing solutions to select from, you can make informed decisions and get the most from your WLAN and IoT test solution by understanding the capabilities that will best suit your application needs. That's why we offer a comprehensive library of WLAN and IoT testing resources.

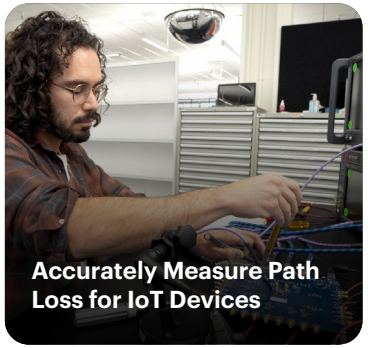


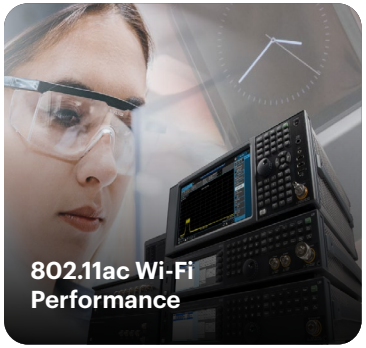
Accelerate WLAN and IoT testing with confidence

WLAN and IoT test solutions help ensure your connected devices meet regulatory, interoperability, and performance standards. With a wide range of technologies to test — from *Bluetooth*® Low Energy and WLAN to Wi-Fi 7 — you need accurate, reliable automation tools to succeed. Keysight resources cover everything from foundational concepts to complex applications, helping you accelerate certification.

Here are a few examples of the resources you will find to help you select the WLAN and IoT test solution that is right for you:

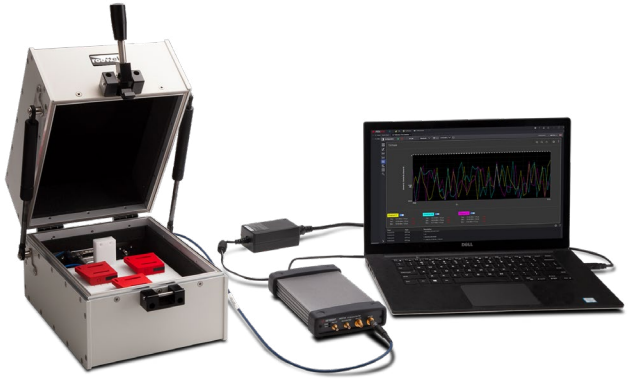






IoT Design Solutions

Keysight IoT design solutions enable you to accelerate device certification with enhanced wireless and battery life testing, helping you optimize performance, functionality, and efficiency. Choose the WLAN and IoT test solution that best suits your application needs.



IoT wireless test

Simplifies OTA and conducted testing of BLE and WLAN (802.11a / b / g / n / ac) devices.

Explore



IoT battery life solutions

Measures and optimizes the power consumption of IoT devices.

Explore

IoT Wireless Test

Accelerate IoT testing with precision and efficiency

Keysight IoT wireless test solutions provide a comprehensive platform for both conducted and over-the-air (OTA) testing of *Bluetooth*® Low Energy (BLE) and WLAN (802.11a / b / g / n / ac) devices. Designed to boost production throughput, our IoT wireless test solutions enable true parallel testing of up to four devices simultaneously. They provide transmitter and receiver measurements, including channel power, power envelope, packet error rate (PER), and scan response throughput. With intuitive software tools for streamlined test development and automation, our solutions are ideal for manufacturing, R&D validation, and final assembly testing. Request a quote for one of our popular configurations today.

Learn more about our IoT wireless test

Parallel multidevice test

Test up to four BLE or WLAN devices simultaneously, significantly improving production throughput and reducing time per unit tested.

Broad signal coverage

Supports both conducted and OTA testing for BLE and WLAN standards, enabling complete performance validation across a wide range of wireless IoT devices.

Wide power range

Accommodates diverse testing conditions with a wide dynamic range — input power from -50 to +17 dBm and output power from -28 to -100 dBm.

Test automation tools

Soft front panel and signaling measurement automation software simplify test development and automate manufacturing testing.



Number of DUTs	**1 to 4**
Supported standards	***Bluetooth*® Low Energy, WLAN**
Workflow stage	**Functional**

View popular configurations

IoT Battery Life Solutions

Maximize IoT battery life with precision insights

The Keysight IoT battery life solution is a comprehensive platform for accurately measuring and optimizing the power consumption of IoT devices. It combines precision hardware with enhanced analysis software to capture dynamic current profiles across all operating states — active, idle, and sleep. With seamless current measurement, long-duration data logging, and automatic correlation of power usage with RF and system events, you can quickly identify power inefficiencies, validate design changes, and confidently estimate battery life under real-world conditions. Accelerate development and improve device reliability — request a quote for a Keysight IoT battery life solution today.

Learn more about our IoT battery life solution

Current drain analysis

Accurately measures current drain from nanoamperes to amperes with high resolution, enabling detailed insights across all operational states.

RF / DC event correlation

Links power consumption to specific system or RF events, helping you isolate and optimize high-energy usage components.

Multiday data logging

Enables up to eight days of continuous current monitoring, supporting long-term behavioral analysis and energy profiling.

Battery life estimation

Automatically calculates battery life from usage patterns, removing guesswork and expediting design validation.



Number of outputs	**4**
Maximum power	**600 W**
Maximum voltage per output	**60 V**
Maximum current per output	**40 A**

Get quote

IoT Regulatory Compliance

Accelerate compliance with streamlined regulatory testing

Keysight regulatory compliance test solutions are designed to accelerate the certification for wireless IoT devices operating in unlicensed frequency bands. They support global regulatory standards, including those from the European Telecommunications Standards Institute (ETSI) and the Federal Communications Commission (FCC), and cover the 2.4 GHz, 5 GHz, and emerging 6 GHz bands. Integrated automation software streamlines test execution and reporting, while a scalable architecture enables parallel testing and future expansion. Use our signal conditioning test set for seamless connectivity or perform fast, accurate MIMO measurements with the four-channel MIMO power test set. Request a quote for one of our popular configurations today.

Learn more about our IoT regulatory compliance solutions

Broad frequency coverage

Supports regulatory testing across 2.4 GHz, 5 GHz, and 6 GHz unlicensed bands, addressing signaling test requirements of most recent versions of the ETSI and FCC standards.

Automated test software

Includes built-in test plans, automated test sequencing, pass / fail verdicts, and report generation to simplify and accelerate certification workflows.

Scalable architecture

Modular system design supports multidevice parallel testing and future expansion to cover regulatory updates without major hardware changes.

Multiple device types and tests

Supports a broad range of IoT device types and tests, including frequency hopping, MIMO, and popular wireless formats like WLAN, *Bluetooth*®, and Zigbee®.



Number of DUTs	**1**
Test types	**Signal conditioning, MIMO**
Supported standards	**ETSI EN 300 328, EN 301 893, EN 303 687, FCC part 15.247, FCC 15.407 (inclusive KDB987594 for U-NII 6 GHz), KC KS-X-3123 2024, MIC, SRRC**

View popular configurations

Wi-Fi® Testers

Scalable, real-world device performance test

Keysight WLAN test solutions provide comprehensive tools for validating Wi-Fi® device performance across all IEEE 802.11 standards, including Wi-Fi 5, 6 / 6E, and 7. These solutions support RF calibration, throughput analysis, protocol validation, and interoperability testing throughout the product life cycle. With enhanced emulation, full-stack visibility, and integration with cellular networks, you can ensure faster development, robust performance validation, and accelerated time to market for your Wi-Fi-enabled devices and infrastructure. Request a quote for one of our popular configurations today.

Learn more about our Wi-Fi testers

Traffic simulation

Generates real-world traffic patterns and network conditions to evaluate device behavior under actual usage scenarios, including congestion and roaming.

Layered protocol analysis

Delivers insight from the physical to application layers, including rate-versus-range testing, resource unit sweep, and receiver sensitivity for optimizing device behavior.

Wi-Fi and cellular interworking

Validates performance of devices operating across Wi-Fi and cellular networks, ensuring smooth transitions and optimal fixed wireless access performance.

Multistandard support

Covers all Wi-Fi standards (802.11a / b / g / n / ac / ax / be), enabling you to validate legacy, current, and future devices with a single solution.



Technology	**WLAN 5 / 6 / 6E / 7**
Test types	**WLAN, RF, and data performance testing, system test, performance test**
Use cases	**Real-world fading performance, benchmarking, real-world scenarios (in-lab), load test, soak test**

View popular configurations

Software

Find compatible software for your WLAN and IoT test solution

Explore the wide variety of regulatory test software to address the test requirements of the most recent versions of the ETSI and FCC standards. When paired with the Keysight WLAN and IoT testing solutions and Wi-Fi testers, the software enables you to simplify and accelerate wireless testing, gain valuable test insights, and ensure your products meet regulatory standards.



Intuitively control your WLAN and IoT test products to quickly understand your measurements and optimize your testing:

- IoT wireless test soft front panel
- IoT wireless test signaling measurement
- ETSI regulatory test software
- FCC regulatory test software
- DFS test software
- ETSI regulatory test software for non-signaling tests
- ETSI regulatory test software for signaling tests
- power analysis software
- battery test and emulation software

Explore software

Keysight Support Services

Explore the services that are right for you

Keysight Support Services can reduce your learning curve, enhance your uptime, guarantee the accuracy of your testing equipment, and provide the expertise you require, precisely when and where you need it.

Maximize your instrument uptime, quickly optimize your test measurements, and get the answers you need at our fastest available times. KeysightCare curated support plans bundle critical services with prioritized response and turnaround times. **High-performance instruments include one year of KeysightCare Assured.**

Explore support services



Calibration

Ensure your test system performs to specification and meets local and global standards.



Repair

Restore equipment to original functionality and specifications with trained technicians.



KeysightCare

Innovate at speed with curated support plans and prioritized response and turnaround times.



Education

Make measurements quickly with eLearning and in-house, instructor-led training.



Keysight Support

Get 24x7 access to service requests, case management help, and technical articles.



Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.

This information is subject to change without notice.
© Keysight Technologies, 2026, Published in USA, March 6, 2026, 7125-1063.EN