IQxel-M4W Wireless Connectivity and IoT Test System

The IQxel-M4W is a multipurpose wireless tester with support for the widest range of wireless connectivity technologies. This all-in-one test platform covers all your IoT WLAN, Bluetooth®, and LPWAN RF connectivity testing needs.

IoT Challenge: Many Standards and Fast Time To Market

The Internet of Things is not a homogenous block, this term encompasses a multitude of use cases and device types covering numerous verticals. From industrial to smart homes, smart cities, infrastructure, transportation, healthcare or consumer electronics and wearables, the applications are diverse and ubiquitous. IoT devices are entering all aspects of our lives and playing an increasingly important role. The wireless technologies that provide connectivity for these applications are as diverse as the applications they serve. Many wireless standards fall under the IoT umbrella, each technology providing the data rate, range or power consumption tailored for a specific use. As technology trends evolve and new requirements emerge manufacturers need to adapt and quickly ramp up their test coverage.

Internet of Things Markets

- Industrial
- Healthcare
- Consumer Electronics & Wearables
- Smart Home
- Smart City
- Transportation

IoT Challenge: Ensure Reliable Wireless Connections

The common factor behind the success of IoT applications is the need for reliable wireless connections. Whether the devices require high reliability for mission critical healthcare and infrastructure applications or because it ensures quality of experience for consumer electronics and wearables, RF performance verification plays a crucial role in ensuring the success of these devices. Testing during all phases of the product lifecycle from R&D to manufacturing ensures that products meet the highest performance standards.

LITEPOINT

IQxel-M4W

Supported Standards

WLAN
802.11ax (Wi-Fi 6)
802.11ac (Wi-Fi 5)
802.11a/b/g/j/n/p
802.11af
802.11ah (HaLow)
802.11az Next Generation
 Positioning (NGP)
802.11ba Wake Up Radio (WUR)

Bluetooth®
Classic/EDR (1-4.x)
Low Energy (4.0, 4.1, 4.2)
Bluetooth (5.0, 5.1, 5.2)

Connectivity
Zigbee/THREAD
Z-Wave
DECT

LPWAN
LoRA
SigFox
Wi-SUN

Navigation
GPS
GLONASS
Compass
Galileo

Flexible Test with Comprehensive Coverage

Whatever your wireless connectivity testing needs, IQxel-M4W has you covered—now and for future wireless standards. The platform's flexible software support the most prevalent connectivity standards: WLAN 802.11ax (Wi-Fi 6) and legacy (802.11a/b/g/n/ac), Bluetooth® Classic and Low Energy (BT LE) as well as Zigbee/Thread, Z-Wave, LPWAN (Sigfox, LoRa) and navigational technologies.

Simple Test Solution Development

With a library of hundreds of major wireless chipsets, LitePoint's IQfact+™ software combined with the versatility of the IQxel-M4W platform deliver a solution that accelerates your time-to-market while minimizing the total cost of testing. Our turnkey solution is ready to test today's technologies right out of the box and eliminate coding to start testing faster.

Get Your Product to Market Fast—and with Confidence

The IQxel-M4W can help you meet your IoT product's time-to-market and volume goals while ensuring only quality devices hit the shelves.

- All RF signal generation, analysis, processing in a single compact 2U form factor
- Continuous frequency range coverage from 400 to 6000 MHz (a version supporting up to 7300 MHz is also available)
- Flexible and comprehensive software support for the most popular wireless connectivity standards
- Intuitive GUI enables easy setup, custom test flow and optimization
- Superior measurement accuracy performance for product testing spanning R&D, DVT and Manufacturing test environments

Turnkey chipset-specific solutions

- Backed by a library of hundreds of major wireless chipsets, LitePoint's IQfact+™ software harnesses the IQxel-M4W's power to deliver a total solution that accelerates your time-to-market while minimizing the total cost of testing
- Years of partnership with chipset companies means LitePoint products perform the most efficient testing possible and leverage unique, optimized calibration routines that reduce test times

Multi-Device Production Testing

- Parallel testing on up to four devices through fully-integrated signal generator and analyzer
- With embedded intelligent scheduling capability to realize dramatic throughput increases compared to single-device systems
- Rugged and compact 2U-high chassis design fits in a standard 19" rack
- Direct cable connections from tester to fixture, automatic configuration and simple fixture calibration free up precious factory floor space and reduce operational expenses
- Single-insertion for multi-standard devices

Decrease operator training from days to hours

Customization is simple with our flexible APIs, and the intuitive GUI with universal graphics speed operator efficiency.

Key Specifications

Frequency Range
- 400 to 6000 MHz

IF Bandwidth
- 200 MHz

Operating Mode
- TDD or FDD

Input Power Accuracy (Typical)
- ± 0.4 dB (400 MHz – 3800 MHz)
- ± 0.5 dB (3800 MHz – 6000 MHz)

Output Power Range
- 1 port active: +5 to -130 dBm
- All ports active: 0 to -130 dBm

Available Technology Options
- Wi-Fi, 802.11ax (Wi-Fi 6)
- Wi-Fi, 802.11ac (Wi-Fi 5)
- Wi-Fi, 802.11a/b/g/j/n/p
- Wi-Fi, 802.11af
- Wi-Fi, 802.11ah (HaLow)
- Wi-Fi, 802.11az Next Generation Positioning (NGP)
- Wi-Fi, 802.11ba Wake Up Radio (WUR)
- Bluetooth®, Classic/EDR, Low Energy (4.0, 4.1, 4.2) and Bluetooth (5.0, 5.1, 5.2)

- Zigbee, Thread, Z-Wave and Wi-SUN
- DECT
- Sigfox
- LoRa
- Navigation: GPS, GLONASS, Compass and Galileo

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