

LitePoint IQgig WiGig Test Systems



Introduction

802.11ad, also known as WiGig, is a break-through wireless technology, optimizing multi-gigabit transmission speeds in the 60 GHz unlicensed band. The 60 GHz unlicensed band has many advantages, such as its uncongested spectrum when compared to traditional Wi-Fi's 2.4 and 5 GHz, and the availability of up to 10 GHz contiguous spectrum. With its 2 GHz of instantaneous bandwidth, WiGig allows multi-Gbps transmission speeds, making it an ideal standard for ultra-high-speed content distributions with low latency.

Applications such as virtual reality headsets and UHD video streaming via TVs and smartphones can take advantage of 802.11ad's massive content distribution capability. In addition, WiGig usage, along with other 5G technologies, includes backhaul applications, extending the reach of high-speed internet farther and with better economics than optical fiber cables in the past. Bringing millimeter wave products into commercial reality is a challenge, but with IQgig, LitePoint brings expertise and confidence in wireless device testing to the new frontier of volume production.

The Smart 802.11ad Test Systems for the R&D Lab and Manufacturing Floor

IQgig is a scalable physical-layer test solution, tailored to verify the performance of 802.11ad devices. IQgig-RF is an easy-to-use Over-the-Air (OTA) test system, targeted for characterizing WiGig RF modules and end-products. Combining millimeter wave equipment and accessories to perform 802.11ad measurements can be time-consuming and costly. Instead, IQgig-RF enables complete test coverage in the 802.11ad's 60 GHz band with the full 2 GHz bandwidth in one box. IQgig-RF's direct baseband-to-60 GHz design minimizes spurs and provides high-quality low-noise performance. And its flexible, remote test heads are specifically designed for OTA testing. Millimeter wave test chamber integration can pose a challenge in bringing WiGig products into volume production testing, but IQgig's small test head simplifies the design complexity and keeps dissipated heat to a minimum.

IQgig-RF is available in two configurations: single-DUT and dual-DUT. The single-DUT IQgig-RF test system includes one vector test head to perform all 802.11ad physical layer test items. In addition, it can be configured with up to 4 CW test heads for flexible and rapid power measurements. The dual-DUT IQgig-RF is ideal for deploying in volume production, as two vector test heads are independently and simultaneously controlled to allow true parallel testing to maximize throughput. IQgig-IF is a compact test system which supports the same WiGig measurements as the IQgig-RF, but uses conducted testing in the baseband module frequency bands. It is designed for 4.9 to 19.4 GHz, covering the wide ranges of major chipset companies' proprietary IF frequency ranges. By sharing the same test platform—an intuitive GUI and automated test solution—IQgig-RF and IQgig-IF are complementary WiGig test solutions that provide a simple data correlation and ensure high quality in all of your WiGig testing needs.



IQgig-RF Test System¹

IQgig-IF Test System

¹ Horn antenna and stand not included

Key Capabilities and Features

IQgig-RF: Reliable Over-the-Air WiGig test system

- Complete physical layer test coverage of 802.11ad standards
- Full 802.11ad band coverage: 55 GHz to 68 GHz
- Unique zero-IF tester architecture delivers better than -30 dB EVM and low noise floor
- Optional 1 to 4 CW test heads can be added to perform flexible power measurements

IQgig-IF: Purpose-built WiGig test system for IF frequency range

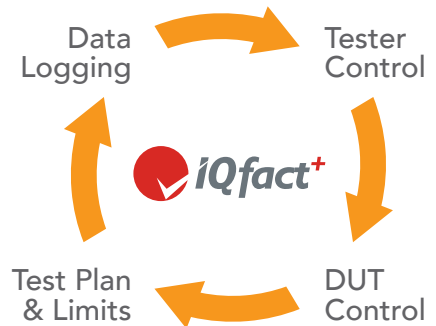
- Optimally designed for the complete frequency coverage for commercial IF interfaces
- Provides better than -35 dB EVM for high performance measurements
- Eases the correlation between IF and RF measurements with a standardized test platform

Superior test throughput for manufacturing

- LitePoint's patented Packet Engine™ technology delivers industry-leading test speed
- Dual-DUT option enables true x2 throughput with efficient multi-DUT parallel testing
- LitePoint's patented phase shift measurement technique thoroughly validates beamforming capability in a fraction of standard test time

IQfact+ automated test software solution streamlines test sequence

- Turnkey automated test software, which includes built-in chipset support and automatic data logging, dramatically reduces software development time
- Provides reliable and accurate test measurements with optimized tester and chipset control
- Offered as a stand-alone program or as easy-to-integrate API



IQgig-RF Test System



IQgig-RF Dual-DUT Test System

Order Information

Part Number	Description
0100-IGIG-001	IQgig-RF Test System. Includes 1 Vector Test Head. Can be optionally configured with 1 to 4 CW test heads.
0100-IGIG-003	IQgig-RF Dual-DUT Test System. Includes 2 Vector Test Heads. Can be optionally configured with 1 to 8 CW test heads.
0150-IGIG-001	IQgig-RF CW test head
0100-IGIG-002	IQgig-IF Test System

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