IQxel-MW™ 7G

Wi-Fi 6, Wi-Fi 6E and Wi-Fi 7 160 MHz Measurement Solution

LITEPOINT

First fully integrated tester for Wi-Fi 6 and Wi-Fi 6E in the 6 GHz band, with Wi-Fi 7 EHT160 MHz support

To address the demand of unlicensed applications in the 6 GHz band, LitePoint's IQxel-MW 7G family of testers was designed to verify the performance of connectivity and cellular technologies up to 7.3 GHz. Working closely with major chipset manufacturers and engaging them from the earliest stages of chipset development, the IQxel-MW 7G is tailored to provide cost-effective, seamless transition from the lab to production.

This fully integrated test solution, supports a continuous frequency range from 400 MHz to 7.3 GHz, thereby ensuring coverage for Wi-Fi testing in the 2.4 and 5 GHz and 6 GHz bands and the most popular wireless connectivity standards (Bluetooth, Bluetooth 5, Bluetooth 5.x, Zigbee, Z-Wave) as well as LPWAN technologies (Sigfox, LoRa).

Additionally, this truly versatile platform includes support for TDD and FDD cellular signals for legacy 2G/3G and mainstream 4G LTE, LAA, and 5G 3GPP NR technologies, securing a future-proof test solution for FR1 testing and an ideal platform for testing Wi-Fi and cellular coexistence.

For R&D characterization or high volume production, the IQxel-MW 7G family is available in three configurations: 2 ports (2 VSA/VSG), 8 ports (2 VSA/VSG), and 16 ports (4 VSA/VSG). These support up to 2x2 and 4x4 true MIMO testing (extensible to 8x8) and high efficiency parallel testing for up to 16 devices.
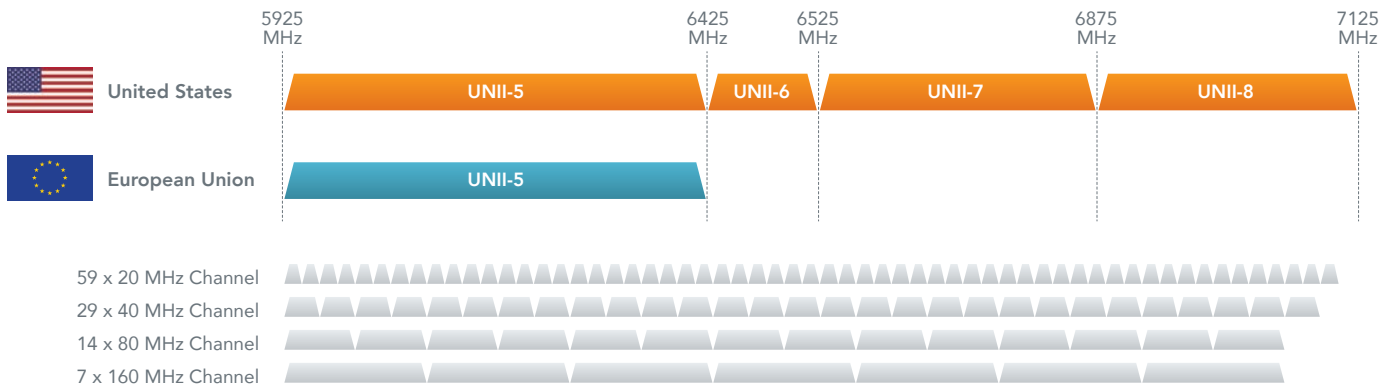

2-port

8-port

16-port

System Capabilities and Features

Wi-Fi channels in the 6 GHz frequency band

Fully integrated tester for Wi-Fi 6 and Wi-Fi 6E testing in the 2.4 GHz, 5 GHz and 6 GHz bands

- Frequency range from 400 MHz to 7300 MHz
- Addresses the requirements of the IEEE 802.11ax (Wi-Fi 6, Wi-Fi 6E) and 802.11ac (Wi-Fi 5) specifications and tests all IEEE 802.11 legacy specifications, including 802.11 a/b/g/n/p/ac/ah/af/j
- Native support for per-port 160 MHz and 80+80 MHz signal combination
- Exceptional residual EVM performance at 1024-QAM
- WiFi 6 testing capabilities: Single-user OFDMA, Trigger based multi-user OFDMA, Uplink and Downlink testing with easy-to-edit RU allocations
- Wi-Fi 6 Carrier Frequency Offset (CFO), power and timing control verification

802.11be EHT160 Product Option

- Support for 802.11be (Wi-Fi 7) EHT 160 MHz bandwidth
- 802.11be waveform generation and analysis
- Wi-Fi 7 testing capabilities: EHT MU (OFDMA, non-OFDMA SU, non-OFDMA MU), EHT TB, EHT Sounding NDP

Scalable MIMO support

- True MIMO testing with 4x4 testing capability and expandable architecture supports up to 8x8 true MIMO

Test support for full range of connectivity technologies

- All Bluetooth device standards (1.x, 2.x, 3.0, 4.x, 5.x)
- Connectivity standards DECT (ETSI EN 300 176-1), 802.15.4-based standards including ZigBee, Z-Wave and WiSUN
- LPWAN technologies LoRa and Sigfox

Supports full range of cellular technologies

- TDD and FDD non-signaling test modes supported
- Legacy 2G/3G and mainstream 4G LTE, LAA, and 5G 3GPP NR technologies

High test throughput for manufacturing

- LitePoint's patented Packet Engine technology provides industry-leading test speed and built-in parallel test capability for high test system efficiency
- Efficient parallel multi-DUT test enhances production capacity

Flexible Programming Interface

- The IQxel-MW 7G is backward compatible with existing LitePoint connectivity test systems, making the transition from older generations seamless
- Supports programming over Ethernet using text-based SCPI programming

Turnkey Test Software Solutions

- LitePoint IQfact+ software provides turnkey solutions for customized testing of leading chipsets, enabling thorough design verification and rapid volume manufacturing with minimal engineering effort
- To facilitate accurate test synchronization, IQfact+ controls both the LitePoint tester and the DUTs. In addition, each IQfact+ is tailored to provide the best test efficiency for a specific chipset and designed specifically for the LitePoint tester architecture, resulting in drastically reduced test time and engineering effort
- IQfact+ encompasses a growing library of over 350 chipsets and supports all key wireless connectivity technologies

Data Logging → Tester Control

IQfact+

Test Plan & Limits ← DUT Control
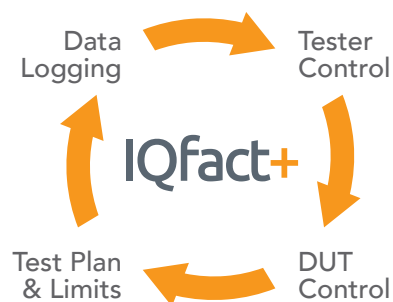
Available Technology Licenses

Technology	Support	
IEEE 802.11a/b/g/n/p/j	Standard	
Wi-Fi 5 (IEEE 802.11ac)	Optional	
Wi-Fi 6/6E (IEEE 802.11ax)	Optional	
Wi-Fi 7 (IEEE 802.11be) EHT160	Optional	up to 160 MHz channel bandwidth
IEEE 802.11af	Optional	
IEEE 802.11ah	Optional	
Bluetooth 1.x, 2.x, 3.0, 4.x	Optional	
Bluetooth 5.x	Optional	
DECT	Optional	
Zigbee/ Z-Wave/WiSUN	Optional	IEEE 802.15.4 based standards
SigFox	Optional	
LoRa	Optional	
Navigation	Standard	Carrier to Noise testing for GPS (L1, L2, L5), GLONASS, COMPASS, Galileo
WCDMA/HSPA+	Optional	
GSM/EDGE	Optional	
TD-SCDMA	Optional	
CDMA2000/1xEV-DO	Optional	
LTE	Optional	Includes LTE FDD and LTE TDD
LTE Advanced Pro	Optional	Includes LTE FDD and LTE TDD
3GPP 5G NR	Optional	Includes 5G FDD and 5G TDD
C-V2X	Optional	

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