



Introduction

The IQflex™ 802.11a/b/g/n WLAN and Bluetooth Test System is an all-in-one test instrument developed specifically for RF testing of 802.11a/b/g/n WLAN and Bluetooth products. Targeted for manufacturing environments, the IQflex test system integrates a vector signal analyzer (VSA) and a vector signal generator (VSG) into a single instrument.

Functionality

The IQflex test system is expressly designed to test WLAN and Bluetooth products, including network interface cards, access points, and embedded components/modules.

The IQflex test system's VSA capability replaces traditional spectrum analyzers and power meters, enabling the user to analyze a device under test's transmitter output and perform true error vector magnitude (EVM) measurements. Designed to receive large input signals without distortion, the IQflex test system employs a wide-bandwidth Capture-Once Measure-All approach so that the device under test's transmit signal is sampled and stored in a single measurement for subsequent analysis of all desired parameters resulting in reduced test times.

Similarly, the IQflex test system's VSG capability replaces traditional golden units with a test signal source of much higher quality, allowing detailed analysis of the receiver performance of the device under test. The IQflex test system is designed to output high-quality test signals over the full expected operating range of a WLAN or Bluetooth receiver.

The IQflex test system supports testing in both the 2.4 GHz and 5 GHz frequency bands utilized worldwide for 802.11a/b/g/n and Bluetooth products. Inputs and outputs at both RF and baseband are provided, enabling detailed testing of all aspects of a WLAN product's analog design.

Features

- Seamless analysis of DSSS (802.11b/g), OFDM (802.11a/g/n) WLAN and Bluetooth (1.0 / 2.0 / 2.1) signals
- Advanced Vector Signal Analyzer (VSA) and Vector Signal Generator (VSG) combined with the capabilities of a power meter and spectrum analyzer in a single instrument
- Operation in both 2.4 GHz and 5 GHz bands
- High-performance VSA
 - Wide bandwidth (60 MHz)
 - Capture-Once Measure-All operation
 - Graphical and numerical display of measurement results
- High-performance VSG
 - Pre-defined 802.11a/b/g/n and Bluetooth transmit test signals
 - Impairments can be introduced in real-time to the transmit test signal
 - Generation of arbitrary 802.11a/b/g/n waveforms simplified by optional IQwave WLAN Waveform software
- Simple control interfaces
 - LitePoint API supports Visual C/C++ test scripts for use in manufacturing
 - LabVIEW 8.2 and 8.5 libraries for LabVIEW programming



VSA Performance

Parameters	Specification
Frequency	<ul style="list-style-type: none">• 2400 - 2500 MHz• 4900 - 6000 MHz
RF Port	
Input amp level (max)	<ul style="list-style-type: none">• 2400 - 2500 MHz: +30 dBm• 4900 - 6000 MHz: +30 dBm

VSG Performance

Parameters	Specification
Frequency	<ul style="list-style-type: none">• 2400 - 2500 MHz• 4900 - 6000 MHz
RF Port	
Output level	<ul style="list-style-type: none">• 2400 - 2500 MHz: -95 to 0 dBm• 4900 - 6000 MHz: -95 to -10 dBm

System Requirements

IQdebug Monitor and Control Tool

PC	Intel Pentium processor or higher
Operating system	Microsoft Windows 2000; Windows XP Professional; Windows XP Home Edition
Memory	≥ 128MB of RAM
Disk space	≥ 200MB of available hard disk space
Monitor	At least 1024 x 768 resolution
Connectivity	TCP/IP over 10/100BaseT Ethernet

Physical & Environmental

Dimensions	450 mm x 100 mm x 500 mm
Weight	8.2 kg
Power consumption	300W max
Operating temperature	0°C to +55°C (68-2-1, 2, 14)
Guaranteed Specification	+20°C to +30°C ambient
Storage temperature	-40°C to +70°C (68-2-1, 2, 14)
Operating humidity	15% to 95% relative humidity, non-condensing (68-2-30)

Order Code

Order Code	Description
IQF 802-11 ABG201	WLAN A/B/G 802.11 + Bluetooth
IQF 802-11 BG201	WLAN B/G 802.11 + Bluetooth (2.4 GHz only)

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