LITEPOINT

iQwave

Simplified WLAN Product Testing

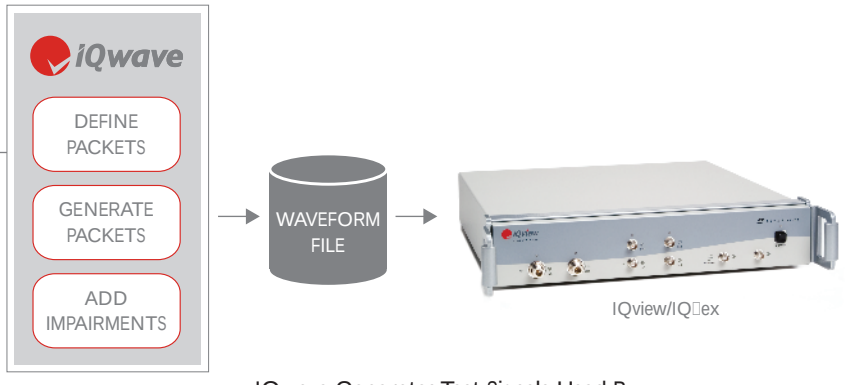
The LitePoint IQwave™ WLAN Waveform Generator Software operates in combination with LitePoint IQview® or IQ□ex™ 802.11a/b/g WLAN Test Solution to facilitate both the development and manufacture of WLAN products.

IQwave is a PC-based tool that simpli□es the generation of 802.11a/b/g test signals to verify the operation of receiver hardware or receiver algorithms. By modeling typical and worst-case conditions in a controlled and fully replicable manner, IQwave helps create tests for conformance, interoperability, and volume production quality assurance.

Customized Test Signals

Receiver testing can be conducted at either RF or baseband once the test waveform □les generated by IQwave are transferred to the IQview or IQ□ex Vector Signal Generator (VSG).

With IQwave, the content of transmitted single- or multiple packets can be de□ned, the spectrum of the signal can be controlled, and various signal impairments can be applied to test and verify receiver performance under a variety of conditions.



IQwave Generates Test Signals Used By IQview/IQ□ex's VSG Hardware

- Generates complex 802.11a/b/g test waveforms for use by IQview or IQ□ex 802.11a/b/g WLAN Test Solutions to test receiver hardware or receiver algorithms
- Allows signal parameters to be modi□ed as needed for both design and manufacturing test purposes
- Supports all 802.11a/b/g standard data rates and modulation types as well as Turbo, ½, and ¼ a/g 802.11rates
- Models component distortions and channel impairments
  - LO leakage
  - I/Q amplitude imbalance
  - I/Q phase imbalance
  - Carrier frequency offset
  - Offsets between A/D and D/A sample clocks
  - ETSI HiperLAN/2 channel models (including multi-path channel models)
  - User-de□ned channel impulse response
  - Phase noise
  - Power ampli□er non-linearity
- Generates single- or multi-packet outputs
  - Supports 802.11b/g DSSS preambles, 802.11a/g OFDM preambles, or PDSU without preamble
  - User-de□ned MAC address or MAC header can be disabled
  - Automatically generated random or repeating PDSU data or user-de□ned
- Models 802.11b/g modulation □ltering and 802.11a/g OFDM windowing