



RF/IF Instruments

Accurate Testing for 802.11ac Standards and WiMAX Protocols



Product	Resolution	Maximum Sample Rate	Maximum Analog Bandwidth	Real-Time Sig. Processing	Platform	Channels			Maximum Record Length
						PCI PXI	VXI	LXI	
ZT844X Series	16 bit	400 MS/s	1 GHz	100 Hz to 160 MHz FPGA based DDC w/ fractional resampling	PCI, PXI, VXI, LXI	IF or Dual IQ			512 MiB

Instrument Overview

The new 802.11ac Wi-Fi standard will achieve a 1 Gbps data rate by increasing the instantaneous bandwidth to 160 MHz with 80 dB spurious-free dynamic range (SFDR). With In-Stat studies expecting that one billion 802.11ac devices will ship by 2015, engineers must be prepared to meet market demands and test these devices with adequate and accurate tools. To test the 802.11ac Wi-Fi standard, engineers need the ZT844x devices, high-performance instruments that provide a combination of instantaneous bandwidth and dynamic range.

In addition, the ZT844x will be able to receive and analyze 802.11n (as well as other Wi-Fi standards that use OFDM modulation, including 802.11a and 802.11g) signals. ZTEC begins with the 802.11n protocol and adds 802.11ac functionality to extend the 802.11n standard with instantaneous bandwidth up to 160MHz, more MIMO channels, and higher density modulation, up to 256QAM.

Product Specifications for the ZT8441/2 RF/IF Digitizer:

- PCI, PXI, LXI, VXI platform device
- DC to 1 GHz frequency
- 100 Hz to 160 MHz instantaneous IF bandwidth
- FPGA-based DDC with fractional resampling real-time signal processing
- 100 S/s to 400 MS/s alias-free sample rate
- Dual 400 MS/s 14-bit ADC
- More than 80 dBc spurious-free dynamic range
- RF/IF channels or dual I/Q inputs
- 512 MB (up to 128 MSamples of complex I/Q data pairs) memory
- +10 dBm maximum signal range
- Synchronization of multiple ZT844x instruments for systems with more than 2-channel MIMO

A Flexible Solution for Test Engineers

The ZT844x series of RF/IF digitizers provide the core digital communication signal processing functionality of a vector signal analyzer (VSA) used to receive, capture and measure digital communication signals. As a stand-alone instrument, the ZT844x can be used as a baseband, IF or low-frequency RF VSA covering a frequency range from DC up to 1 GHz. When combined with a microwave down-converter, the VSA capability of the ZT844x can be extended to microwave frequencies of 50 GHz or more.

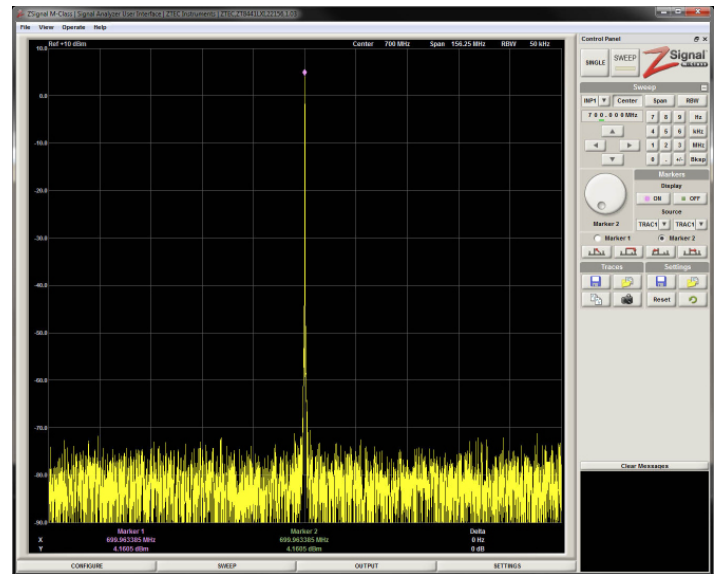
In addition to instantaneous bandwidth and high dynamic range capabilities, the ZT844x Series of devices provide on-instrument data processing, protocol-specific processing, and advanced triggering and synchronization. On-instrument data processing offers engineers real-time processing including digital downconversion (DDC), zoom FFT, RBW-optimized windowing, and marker measurements to increase test throughput and ease the development of automated tests. With protocol-specific processing, engineers can achieve demodulation, symbol extraction and intelligent measurements such as error vector magnitude (EVM) for next-generation wireless standards. In addition, advanced triggering and synchronization provides the ability to extract and measure symbols of the digital modulation coding, as well as the ability to capture other pulsed or time-domain modulated signals.

Award-Winning Device To Serve and Support Future RF Needs

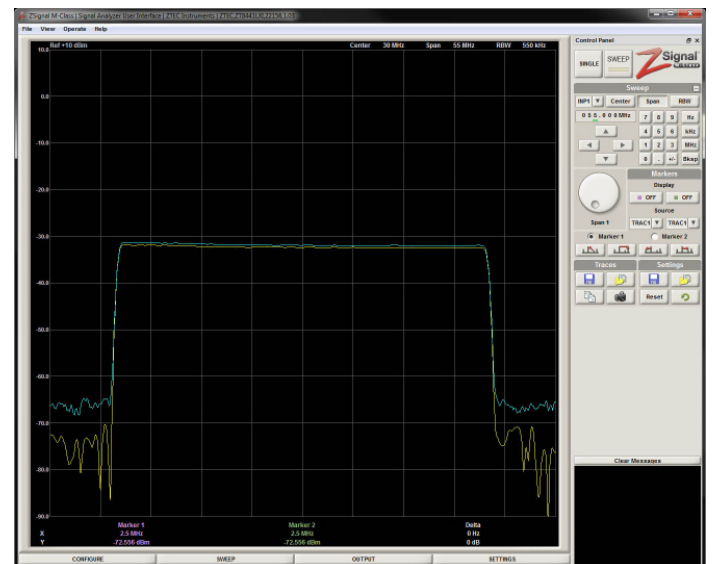


The ZT8441 RF/IF digitizer was named as a finalist for the Test & Measurement World Best in Test award. Selected as finalists because of the full-featured, on-instrument spectrum analyzer and unmatched technical specifications, the ZTEC instruments are

poised to supply the rapidly growing RF market with a world-class testing solution at a competitive price for applications from testing military aircraft to testing Wi-Fi standards, such as the up and coming 802.11ac standard.



ZT844x has 160MHz of instantaneous bandwidth while maintaining >80 dBc SFDR



ZT844x can easily capture and analyze wideband signals such as 802.11ac and 802.11n

Ordering Information

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