

z8655 Vector Signal Analyzer PXIe

Overview

The z8655 Vector Signal Analyzer provides 1GHz of instantaneous analysis bandwidth for wideband modulated signals. Offering up to 7.2GHz spectrum analysis with up to 160MHz bandwidth, the VSA is fully capable of supporting existing as well as the emerging high efficiency Wi-Fi standard 802.11ax 1024 QAM.

The PXIe module exceeds the necessary phase noise, EVM and power performance required to meet the exacting needs of Wi-Fi 6 which makes use of advanced techniques like OFDMA and MU-MIMO.

Advantages

- Offers extremely low EVM floor of <math><-50\text{ dB}</math>, required for 802.11ax
- Supports wideband RF capture for Digital Pre-Distortion
- 1 GHz covers single capture for fast mask testing

Key Specifications

- Multi band support 2.4 GHz, 5 GHz, U-NII-4/5/6/7/8 with comprehensive range of operation from 250 MHz – 7.2 GHz
- High IF provides image-protection for capture of signals with carrier aggregation such as 802.11ax 80+80, 160 or LTE-A
- 20 GHz Spectrum Analyzer extension with module z8612

Remarkable Test Capabilities

- Ideal for MIMO applications (up to 8x8 true MIMO in a single zSeries 18-slot chassis)
- PA/FEM characterization and DVT
- Comprehensive testing capability on all Modulation and coding schemes (MCS) - BPSK up to 1024-QAM
- Supports all Modulation Bandwidths: 160 MHz, 80 MHz, 40 MHz & 20 MHz



Configurations

Frequently used with:

- z8752 Vector Signal Generator
- z8817 Front End Module
- zSeries 9-slot or 18-slot chassis
- z8612 RF Downconverter Module set
- z3975/ z3985 Embedded Controller (Intel® Core™ i5/i7 processor)
- z8820 DC Power & Digital IO Controller
- z475 Remote DC Power supply
- z8801/z8802 Local Oscillator

RF Downconverter: z8612

- 20 GHz Spectrum Analyzer extension to z8655 VSA
- Adds Harmonic, Spurious Emission & Band-Edge test coverage
- 250 MHz to 20 GHz frequency range

z8655 Specifications

RF Input/output	Value
RF Input Frequency	250 MHz to 7.2 GHz
RF Input Level Range (10 dB headroom)	-120 dBm to +30 dBm
RF Input EVM Floor 802.11ax 80 MHz, 5Ghz band	<-50 dB
Bandwidth	Value
Instantaneous Bandwidth	1 GHz to 100 Hz
Analog-to-Digital Converter (ADC)	Value
ADC Vertical Resolution	12 Bits 0.024% of full-scale range
ADC Clock Frequency	2.5 GSa/s sampling
I/Q Waveform Size	up to 128 MSamples
Differential baseband Input	Value
Channel	One Differential Input, IN±
Input Voltage Range	+4 dBm (1 Vppd) Channel
Analog bandwidth	10 kHz to 1.015 GHz
Digital I/O	Value
Functionality	4-bit bi-directional Digital I/O software programmable. Future serial interfaces such as MIPI, SPI, I2C, etc.
Output Level	Programmable Level: Default: +1.2V into open load Range: +1.2V to +3.6V into open load Level accuracy: ±5% Output Drive: ±3 mA @ 1.2V ±8 mA @ 1.8V ±12 mA @ 3.6V
Programmable Clock Rate	Up to 50 MHz
Physical	Value
Physical Size	2-Slot 3U PXIe