National Instruments Advances IEEE 802.11n Wireless LAN Test with WLAN Measurement Suite 2.0

National Instruments announced the availability of its new solution for IEEE 802.11n wireless LAN (WLAN) testing, the NI WLAN Measurement Suite 2.0, which includes enhanced software toolkits for IEEE 802.11n WLAN signal generation and analysis. The suite integrates with NI 6.6 GHz PXI Express multichannel RF signal generators and analyzers to deliver true, phase-coherent multiple-input, multiple-output (MIMO) RF measurements required for IEEE 802.11n WLAN testing. The suite also delivers the industry's fastest measurement speed for those including error vector magnitude (EVM) and spectrum mask and provides the highest class of measurement accuracy for IEEE 802.11n and a/b/g WLAN test. Using a software-defined architecture based on PXI and NI LabVIEW graphical system development software, engineers can significantly lower their cost of test and reduce the size of their test systems by testing multiple wireless standards, such as IEEE 802.11a/b/g/n, GPS, Bluetooth, GSM/EDGE, WCDMA, WiMAX and others, using the same PXI test system. The WLAN Measurement Suite 2.0 adds IEEE 802.11n support to the generation and analysis toolkits to facilitate MIMO testing with true port-to-port phase coherency. For measurements, the toolkit integrates with NI PXIe-5663E 6.6 GHz two-, three- and four-channel vector signal analyzers (VSAs) to provide engineers highly accurate multistream MIMO measurements. For signal generation, the toolkit integrates with NI-PXIe-5673E 6.6 GHz two-, three- and four-channel vector signal generators (VSGs) to generate true phase-coherent, multistream RF signals. In addition to 802.11n MIMO support, the latest version of the NI WLAN Measurement Suite improves on the previous version with faster measurement time. When combined with the latest NI PXIe-8133 quad-core embedded controller, the system can perform composite EVM and power measurements in 7.0 ms, the fastest in the industry. A result of the toolkit's multicore-enabled measurement algorithms, the fast measurement speed is crucial for reducing test times and lowering the costs of testing wireless devices. The new NI WLAN Measurement Suite also adds a variety of software features to improve measurement performance and ease of use. Engineers can software-enable its new resolution bandwidth filter feature to remove broadband noise and increase EVM measurement accuracy. With front-end filtering engaged, engineers can achieve residual EVM accuracy of better than -47 dB when testing WLAN devices. The measurement suite includes soft front panels for signal generation and analysis to support a wide range of WLAN IEEE 802.11n configurations, including 4x4 MIMO, and to report measurement results and traces. Additionally, engineers can use the measurement suite as either a standalone executable or as an API in LabVIEW, NI LabWindows™/CVI ANSI C development environment or in other C, C++ and .NET development systems. To learn more about the NI WLAN Measurement Suite 2.0, readers can visit www.ni.com/wlan.

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