Agilent Technologies' X-Series Signal Generator Enhancements Enable Faster, More Effective Verification

Agilent Technologies Inc.

Santa Clara, CA -- Agilent Technologies Inc. [1] [NYSE: A [2]] has introduced several key enhancements to its high-performance MXG and cost-effective EXG X-Series vector signal generators.

The enhancements are designed to improve measurement accuracy, accelerate research and development, and provide in-depth signal simulation for even the most comprehensive receiver verification. These enhancements, coupled with the unmatched performance of Agilent's X-Series signal generators, make these systems ideal for component and receiver development in RADAR, military communications and consumer wireless applications.

"The ongoing innovation and performance realized in our X-Series signal generators further strengthen our technology leadership in this market and reaffirm our commitment to meeting the needs of customers testing the highest performance devices," said Andy Botka, vice president and general manager of Agilent's Microwave and Communications Division. "Our new enhancements build on this commitment by enabling our customers do their jobs better, faster and more effectively."

Improved Measurement Accuracy

The enhanced MXG and EXG X-Series RF vector signal generators allow users to apply channel corrections directly to their fixtures and devices under test. A proprietary ASIC, in concert with an Agilent USB power sensor, enables automatic amplitude and phase flatness corrections or equalization. This industry-first capability is ideal for engineers working on WLAN 802.11ac or LTE-Advanced transceivers and components.

Accelerated R&D Verification

Two new X-Series connectivity options enable realistic complex-modulated direct digital stimulus (output mode) and digital upconversion (input mode) using an N5102A digital signal interface module. This DSIM enhancement allows users to employ realistic complex IQ waveforms, which in turn enables faster verification of FPGA algorithms or digital-to-RF performance. It also helps minimize re-design by catching baseband subsystem problems earlier in the design cycle.

A power servo enhancement speeds verification by allowing automatic leveling for external RF amplifiers. The alternative – manually adjusting output power in the amplifier's nonlinear range – is both tedious and time consuming. With the power

servo enhancement, users can quickly ensure they are at the exact power required for making power-sensitive measurements like error vector magnitude and adjacent channel power ratio.

Comprehensive Receiver Verification

In-depth signal simulation solutions provided by Agilent X-Series signal generators now enable the industry's most comprehensive receiver verification. Agilent's new N7620B Signal Studio software for pulse-building connectivity, for example, features robust RADAR verification tests designed to minimize field testing and offer highly accurate characterization. Users can leverage the X-Series' advanced sequencing engine to obtain realistic 500-second RADAR antenna scan patterns. They can also reproduce highly accurate FM CHIRP RADAR signals by leveraging the X-Series' factory channel correction for up to +/- 0.2 dB amplitude flatness and +/- 2 degrees phase error across the full bandwidth support on both the MXG and EXG.

Agilent's N7609B Signal Studio for Global Navigation Satellite Systems (GNSS) software features an advanced Beidou real-time mode that allows users to perform real-time, multi-satellite simulation for China's Beidou system. Leveraging the X-Series' advanced real-time baseband subsystem, users can simultaneously simulate a combination of 40 channels of satellites plus multipath for GPS, GLONASS and Beidou, with 16 additional channels for Galileo satellites plus multipath. With the system's ability to model receiver trajectories and map antenna strength, users can also do more robust testing of multi-constellation chipsets for improved quality of service and performance.

For more information visit www.agilent.com [1].

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