APPLICATION: Arbitrary Waveform Generator for WiMedia UWB Testing

Wide Bandwidth, High-Resolution AWG for Test & Measurement Applications for UWB Chipsets

Solution Description

- N6030A, 15-bit, 2 channels, 500 MHz, PXI AWG.
- N6031A, 10-bit, 2 channels, 500 MHz, PXI AWG.
- With the addition of the N7619A software for OFDM UWB signal generation, ADS, or customer MATLAB code, this is a perfect solution for all UWB testing needs.

Key Features and Added Value

- For manufacturers and integrators of UWB silicon chips who require complex signal generation with high fidelity, our product is a modular arbitrary waveform generator that enables designers to simulate a wide range of UWB signals to accurately test their systems.
- Signal quality and fidelity along with a wide bandwidth and the possibility to drive the I and Q input of a PSG is the key added value our solution.
- Availability of powerful and complex software for UWB waveform generation such as Signal Studio or ADS.
- Target applications or markets are:
  - Wireless USB R&D
  - WiMedia PHY Transceiver
  - High-speed Bluetooth
  - Wireless HDMI.

Key Requirements

- Our strengths for these applications are in the signal quality and fidelity as well as the powerful software solutions with ADS, Signal Studio and Matlab.
- Where frequency hopping requirements could be a threat, we can address with a custom solution based on the use of several AWGs (contact us for more information).

Resources

- N6030A, 15-bit , PXI AWG technical overview: http://cp.literature.agilent.com/litweb/pdf/5989-1457EN.pdf
- N6031A, 10-bit, PXI AWG technical overview: http://cp.literature.agilent.com/litweb/pdf/5989-3585EN.pdf
- AWG website: www.agilent.com/find/AWG
- Data Converter product selection guide: http://cp.literature.agilent.com/litweb/pdf/5989-8038EN.pdf

Contact

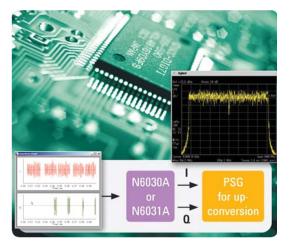- Agilent Technologies – Signal Network Division – Data Converter team: digitizers@agilent.com

Application Overview

WiMedia® is an ISO-published radio platform standard for high-speed ultra wideband (UWB) wireless connectivity. WiMedia UWB has been selected by the Bluetooth SIG and the USB Implementers Forum as the foundation of their specifications for use in next generation consumer electronics. WiMedia uses MB-OFDM modulation spread over 528 MHz to achieve a high rate data transfer in a wireless personal area networks.

Applications include: Testing of chipsets that are integrated into cameras, PCs, printers, mass media, flash drives or flat panel displays.

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