

INSTRUMENTS PRESS RELEASE

NI Announces Flexible LTE-U/LAA Testbed

New Platform Enables Researchers to Prototype and Test New 4G+ **Proposals**



AUSTIN, Texas - Feb. 22, 2016 - NI (Nasdaq: NATI), the provider of platformbased systems that enable engineers and scientists to solve the world's greatest engineering challenges, announced today a system for testing, experimenting on and prototyping new LTE Unlicensed (LTE-U) and/or License Assisted Access (LAA) wireless access technologies. Though 5G has generated significant interest and focus, new technologies such as LTE-U and LAA are needed today to enhance the 4G data experience and help close the gap until 5G arrives.

The real-time testbed includes an FPGA-based LTE physical layer in source code so that different scenarios of LTE-U and LAA can be tested, evaluated and potentially augmented to assess performance and increase data rates for systems built on existing LTE and 802.11 infrastructure.

Because both LTE-U and LAA use the 5.9 GHz unlicensed ISM band to augment the cellular spectrum, LTE-U and LAA capable devices must "share" the channel with WiFi equipment such as 802.11a and 802.11ac. The 3GPP Technical Specifications Group is focusing on LAA because it complies more universally with global spectrum regulations while LTE-U may be rolled out regionally.

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Based on the NI USRP RIO software defined radio and the LabVIEW Communications System Design Suite, the NI testbed provides a ready-to-run system composed of the following components:

- LabVIEW Communications System Design Suite
- LabVIEW Communications LTE Application Framework
- Configurable LTE-U and LAA reference software
- Two USRP-2953R FPGA-based software defined radios

"Several proposals have been incorporated in the proposed 3GPP standard to minimize interference with existing unlicensed band users," said James Kimery, director of RF Research and SDR Marketing at NI. "However, with any new standard, thorough prototyping and testing are necessary to ensure a smooth adoption. NI's LTE-U/LAA testbed will help researchers assess the impact of the new standard in specific test scenarios."

Find more information on the LTE-U/LAA testbed at <u>http://www.ni.com/white-paper/53044/en</u>

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