



Innovative Integration shipping PXIe module with >3 GHz bandwidth for 5G Design & Testing

Camarillo, CA November 5, 2016, [Innovative Integration](#), a trusted supplier of signal processing and data acquisition hardware and software solutions, today announced that Innovative Integration has introduced a programmable [PXIe module](#) which is a vector transmitter with a 3GHz bandwidth for 5G design & testing.

This is a 5.6 GHz RF vector signal generator which can be programmed using C++ to create specific designs or test configurations. The [XU-TX XMC module](#), has a user-programmable Kintex UltraScale FPGA with high-speed serial and parallel digital interfaces in an 8HP PXI Express module. The module's wide 3 GHz analog bandwidth will allow it to be used for 802.11ac/ax device testing as well as early stage 5G design and testing.

Wi-Fi has evolved from 20 to 40 to 160MHz in the latest 802.11ax standard. Mobile communication channels have evolved from 200kHz in GSM to 100MHz in current LTE-Advanced technology. In the future, technologies like LTE-Advanced Pro and 5G will drive this trend even further.

When testing semiconductor devices, the bandwidth requirements of the instrument typically must exceed the bandwidth of the signal. For example, when testing RF power amplifiers (PAs) under digital pre-distortion (DPD) conditions, the test equipment itself must extract a PA model, correct for nonlinear behavior, and then generate a corrected waveform. Advanced DPD algorithms often require 3X to 5X the RF signal bandwidth. As a result, instrument bandwidth requirements can be up to 500MHz for LTE-Advanced (100MHz signal) and 800MHz for 802.11ac/ax (160MHz signal).

So the module's 3GHz of instantaneous bandwidth can also be used for digital pre-distortion (DPD) test and wide-band signals such as radar, LTE-Advanced Pro and 5G. Multiple channel synchronization will allow for up to 8 channel multiple output (MO) configuration in a small 6-slot PXIe chassis.

About Innovative Integration – a Molex company

Innovative Integration is a data acquisition company that designs embedded boards, for digital signal processing, software defined radio and data acquisition with digital & analog interfaces which incorporates re-configurable FPGA products available in the XMC, FMC, PCIe, VPX and PXIe form-factors.

About Molex, LLC

[Molex](#) brings together innovation and technology to deliver electronic solutions to customers worldwide. With a presence in more than 40 countries, Molex offers a full suite of solutions and services for many markets, including data communications, consumer electronics, industrial, automotive, commercial vehicle and medical. For more information, please visit www.molex.com



PXIe Module
3 GHz bandwidth for 5G

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