Sundance Multiprocessor Technology

embedded signal processing solutions

Communications, Wireless & Satellite

- MIMO LTE
- WiMAX
- SATCOM

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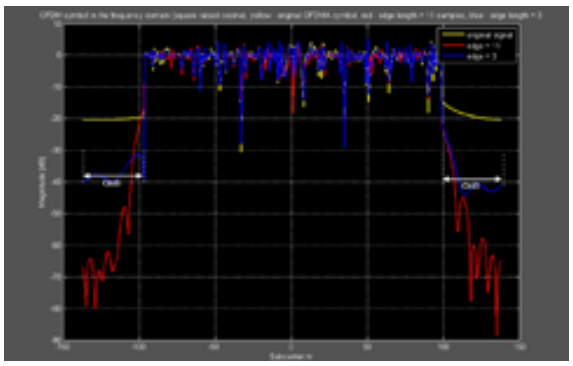
Strategic alliance with LTE and WiMAX technology experts

Sundance has teamed up with **Innovative Solutions** to support customers in the design and implementation of optimised wireless access systems.



By offering on-demand training and on-site technical courses, telecoms specialists would be able to master the major areas of broadband communication networks: ***3GPP-LTE, WiMAX, OFDM, OFDMA, MIMO, radio network planning and radio interface design***.

Furthermore, comprehensive MATLAB software model implementations of **LTE** *(3GPP Release 8 E-UTRA)* and **WiMAX** physical layers are also available for purchase. The **LTE PHY Lab** and **WiMAX PHY Lab** licenses can be used at all stages of the software and hardware development from research, prototyping and implementation, up to system benchmarking, verification and testing.

innovative Solutions™ for wireless systems

Highlights: MIMO LTE and WiMAX Developer's platform

Check the 360-spin virtual view!

Sundance's **MIMO LTE** and **WiMAX** hardware development platforms are based on two 1GHz C6455 fixed-point DSP processors and one large Virtex-5 FPGA device. Together these offer the ultimate balance between ***performance, flexibility and reconfigurability***. They are both ideal software defined and device prototyping platforms for system engineers to get started on their wireless based applications.

The **2.4GHz and 5GHz ISM bands MIMO LTE** and **2.3-2.7GHz WiMAX** RF front-ends are the elementary bricks for all 2n x 2m multichannel inputs and outputs systems. Both platforms feature a ***dual 12-bit A/D*** digitizer and ***dual 12-bit D/A*** converters to guarantee a good sampling resolution of the two I/Q Rx and Tx signals.

MIMO LTE and **WiMAX** hardware kits are also respectively compliant with the **3GPP LTE** and the **WiMAX** physical layer models offered by ***Innovative Solutions***. The hardware implementation of such **LTE** and **WIMAX PHY Labs** onto Sundance's hardware is also possible.

More information: MIMO LTE Development Kit | WiMAX Development Kit

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Zoom in on: 3U PXI Express "beamforming" equipment

SMT702-based High-speed Multichannel beamformer

Sundance is supporting the Wireless Networking Systems Laboratory at Tennessee Technological University, under the responsibility of Dr. Robert C. Qiu, in their developments of ***UWB sensors and applications in tactical communications and networking***.

The delivery of a complete **4-channel I/Q receiver** system featuring an advanced, flexible and scaleable architecture will enable the laboratory with the necessary infrastructure to boost their research and innovative approach to **cognitive radio and real-time smart grid testbeds.**

The multichannel beamformer is built around five **SMT702s** ***(two 3GHz A/D digitizer with large Virtex-5 FPGA module)*** and an embedded controller from National Instruments fully integrated in an 18-slot wide, 3U compact PXI Express chassis (NI PXIe-1075).

Download the application note: SMT702-based beamformer