

Development platform streamlines base station design process

Analog Devices, Inc. collaborated with industry leading programmable-logic vendor Xilinx Inc. to introduce a radio architecture development platform that helps multi-carrier cellular base station manufacturers reduce engineering resources and improve time to market. ADI's MS-DPD (mixed-signal, digital pre-distortion) development platform simplifies the wireless infrastructure design process by allowing OEMs to quickly assess and reprogram the radio to remove non-linearities from the transmit paths and enhance radio power efficiency.

ADI's MS-DPD platform incorporates a high-performance RF and mixed-signal transmit and observation receiver chain supporting 2G, 3G and emerging 4G wireless protocols. Xilinx's Virtex-6 FPGA ML605 (field-programmable gate array) Evaluation Kit connects to the MS-DPD board through an industry-standard VITA-57 FMC connector. Using this system, the FPGA can be used to implement required radio algorithms leveraging the ADI signal chain available on the MS-DPD.

"In collaboration with Xilinx, customers now have everything needed to demonstrate the transmit section of a base station radio," said Martin Cotter, segment director, Communications Infrastructure, Analog Devices. "ADI has combined high performance transceiver components into a single development platform for speeding the evaluation of critical DPD algorithms running on Xilinx's Virtex-6 ML605 Evaluation Kit. The MS-DPD platform allows our customers to focus on differentiating their DPD algorithm from their competitors' solutions."

With the highest dynamic performance in its class, the multi-carrier MS-DPD development platform simplifies component selection and board layout to make it easier for designers of multi-carrier GSM and multi-standard SDR (software-defined radio) base stations to develop FPGA-based DPD algorithms. FPGAs also provide the flexibility to optimize the solution that competing fixed-function ASICs (application-specific integrated circuits) cannot, while providing a highly integrated, low cost, low power and high reliability solution to present day base station needs.

"In collaborating with Analog Devices, we have been able to create a more modular approach to radio development, leveraging the new industry-standard FMC connectors," said Manuel Uhm, director, Wireless Communications Business, Xilinx. "Customers are able to rapidly evaluate Xilinx's crest factor reduction (CFR) and DPD algorithms in conjunction with ADI's high-performance transmitter solutions, saving considerable engineering time. Furthermore, customers can leverage the Virtex-6 ML605 FPGA Evaluation Kit and MS-DPD to develop and evaluate their own IP."

ADI's Development Platform Components

Development platform streamlines base station design process

Published on Electronic Component News (<http://www.ecnmag.com>)

ADI's MS-DPD development board includes more than 12 Analog Devices RF and mixed-signal components, including the recently announced AD9122 1.2-GSPS DAC (digital-to-analog converter) and ADL5375 quadrature modulator, in addition to amplifiers, mixers, clock ICs, power management ICs, and PLL (phase-locked-loop) circuits. The observation path includes the AD9230 12-bit, 250-MSPS ADC (analog-to-digital converter) to maximize the bandwidth available for DPD.

Availability and Pricing

MS-DPD development boards are available today to qualified customers from ADI for \$3,995 each. The Virtex-6 FPGA ML605 Evaluation Kit is available today from Xilinx and is priced at \$1,995. For more information and to contact Xilinx click here <http://www.xilinx.com/ml605> [1]. For more information and to contact ADI click here.

<http://www.analog.com> [2].

Source URL (retrieved on 07/09/2014 - 9:50pm):

<http://www.ecnmag.com/product-releases/2010/07/development-platform-streamlines-base-station-design-process>

Links:

[1] <http://www.xilinx.com/ml605>

[2] <http://www.analog.com>