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Analog Devices' Integrated Transceiver and Support Ecosystem Drive Next-Generation Software-Defined Radio Designs

- *RF Agile Transceiver provides up to three times the noise performance of competition and significantly reduces BOM cost.*
- *Design kit, FPGA rapid prototyping environment reduce design times and risk.*

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](#) (NASDAQ: ADI), a global leader in high-performance semiconductors for signal processing applications, today introduced a revolutionary solution for software defined radio (SDR) applications. Designed to enable programmable radio applications that operate over a wide range of modulation schemes and network specifications such as defense electronics, instrumentation equipment and communications infrastructure, the new [AD9361 RF Agile Transceiver](#) achieves best-in-class performance, high integration, wideband operation and flexibility. The [AD9361](#) is supported by a wide range of design resources to expedite time to market including a software design kit and FPGA mezzanine card (FMC) to rapidly develop software defined radio solutions. For more information, watch videos here at www.analog.com/ad9361rftransceiver.

"The AD9361 Agile Transceiver is a complete RF transceiver solution on a single chip — it's an RF architect's dream device," said Matt Ettus, President of [Ettus Research](#)™, a National Instruments Company. "We combined the AD9361, with a Xilinx Spartan-6 FPGA, USB 3.0 interface and comprehensive software support, to create one of the industry's easiest-to-use and most flexible software-defined radio solutions."

- View videos, data sheet, order AD9361 samples and FMC cards: <http://www.analog.com/ad9361rftransceiver>
- Announced today: Order Avnet kits using the AD9361 and Xilinx's Zynq-7000 and start designing:
 - Zynq-7000 AP SoC / AD9361 Software-Defined Radio Evaluation Kit www.em.avnet.com/adizynqsdr2
 - Zynq-7000 AP SoC / AD9361 Software-Defined Radio Systems Development Kit www.em.avnet.com/adizynqsdr3
- Announced today: [Epiq Solutions](#)' Maveriq Multichannel SDR Platform using the AD9361: http://www.epiqsolutions.com/maveriq/maveriq_pr.pdf
- Connect with engineers and ADI product experts on EngineerZone™, an online technical support community: <http://ez.analog.com/community/wide-band-rf-transceivers>

The [AD-FMCOMMS2-EBZ-FMC](#) board provides designers with a rapid prototyping environment that supports multiple communications protocols, including most licensed and unlicensed bands.

"The programming flexibility and configurability of the AD9361 combined with the flexibility of a low power software configurable radio and its small footprint enables new levels of design versatility," said Sam Fuller, chief technology officer, Analog Devices. "This technology advancement is supported by an equally advanced range of customer ecosystem design support features to minimize time-to-market constraints and reduce project risk."

About the AD9361 RF Agile Transceiver

Operating over a frequency range of 70 MHz to 6 GHz, the AD9361 is a complete radio design that combines multiple functions in a single chip. The RF agile transceivers integrate an RF front end, flexible mixed-signal baseband section, frequency synthesizers, two analog-to-digital converters and two direct conversion receivers to simplify design and reduce bill of material cost. The AD9361 supports channel bandwidth from less than 200 kHz to 56 MHz, and is highly programmable, offering the widest dynamic range available in the market today.

Two independent direct conversion receivers have a state-of-the-art noise figure and linearity. Each receive subsystem includes independent automatic gain control, dc offset correction, quadrature correction, and digital filtering, eliminating the need for these functions in the digital baseband. The AD9361 also has flexible manual gain modes that can be externally controlled.

Two high-dynamic-range A/D converters per channel digitize the received I and Q signals and pass them through configurable decimation filters and 128-tap FIR filters to produce a 12-bit output signal at the appropriate sample rate. The transmitters use

a direct conversion architecture that achieves high modulation accuracy with ultra-low noise.

AD9361 Design Resources Available: Software Design Kit and FMC Board

Together with the FPGA mezzanine cards, ADI offers a wide range of AD9361 design resources including Gerber files, code references, Linux sample applications and drivers, and design support packages, which are available for [download](#).

Pricing, Availability and Complementary Products

Part Number	Sample Availability	Production Availability	Price Each in 1,000 Units	Package
AD9361	Now	Now	\$175	10-mm x 10-mm 144-ball CSPBGA
AD-FMCOMMS2-EBZ FMC Board	Now	Now	\$750	Rapid Prototyping System

The AD9361 RF Agile Transceiver is well-suited to work with the [ADL5521](#) and [ADL5523 low noise amplifiers](#), [AD9548 clocking IC](#); [ADP2164 dc-to-dc regulator](#), as well as the [ADP1755](#) and [ADP5040 low dropout regulators](#).

Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices is included in the S&P 500 Index.

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