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Analog Devices Unveils New RF and Microwave Innovations at IMS2013

-New microwave power detector, integrated RF mixer and VGA offer high levels of integration and set new performance benchmarks.

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](#) (ADI) today introduced three RF and microwave ICs designed for high-performance transmitters and receivers used in high-dynamic-range applications, such as wireless infrastructure, defense systems, industrial, microwave point-to-point radios and more. The new products offer breakthrough performance and expand ADI's portfolio of more than 1,000 high-performance RF ICs covering the entire signal chain, from antenna to bits and back. Featured in [Booth #2411 at the International Microwave Symposium in Seattle, Wash., June 2-7](#), the new devices include:

- Incorporating ADI's leading high-performance broadband power detection technology, the [ADL6010](#) microwave power detector offers unprecedented linearity and stability over temperature. Unlike alternative devices based on commonly used non-linear and non-temperature-stable Schottky diodes, the ADL6010 features a simple, proprietary linearization system that eliminates distortion due to source loading—an important benefit in applications where a low-ratio coupler is used to extract a sample of the primary signal. The ADL6010's linearization system achieves leading accuracy and improves the temperature performance to ± 0.5 dB over the range of -40°C to $+85^{\circ}\text{C}$. The ADL6010 microwave detector is accurate from 500 MHz to 40 GHz, has a 50-ohm input impedance and an input range of -30 dBm to 15 dBm.
- Designed for high performance digital pre-distortion (DPD) receivers, the [ADRF6620](#) provides a full-featured solution in a compact form factor. The device integrates a 700 MHz to 2.7 GHz wideband synthesizer, an active mixer, a high-dynamic-range digital VGA, RF DSA, 4:1 RF input switch, RF balun and LDO. The ADRF6620 offers significant bill of material savings while maintaining low noise and high linearity performance. The 4:1 RF input switch makes the ADRF6620 ideal for DPD receivers in MIMO infrastructure applications. With an OIP3 of up to 44 dBm from RF input to DGA output, the ADRF6620 is well suited for high-performance UMTS, LTE-A and MC-GSM DPD applications.
- Designed for new high-bandwidth microwave point-to-point receivers, the [ADRF6518](#) is a high-dynamic-range, low-noise, dual-channel baseband VGA with dual 63 MHz programmable low-pass filters and dual power detectors. The device offers significant bill of materials savings by replacing discrete filters and amplifiers and replacing them with a highly integrated programmable bandwidth and gain device. The ADRF6518 features excellent channel-to-channel match and flexible gain control and can be used in receivers supporting up to 112-MHz channel bandwidth, as well as new E-Band receivers with up to 1-GHz of channel bandwidth. The new VGA is capable of rejecting large out-of-band interferers while amplifying the desired signal, reducing the bandwidth and dynamic range requirements of the ADC.

Pricing, Availability and Complementary Products

Part Number	Pricing in 1,000 Unit Quantities	Package	Sample Availability	Complementary Products
ADL6010	\$15.33	6-lead, 2-mm x 2-mm LFCSP package	Now; Volume Production in Summer 2013	AD7466 ADC
ADRF6620	\$12.95	48-lead, 7-mm x 7-mm LFCSP	Now; Volume Production in Summer 2013	AD9434 ADC
ADRF6518	\$11.95	32-lead, 5-mm x 5-mm LFCSP	Now; Volume Production in Summer 2013	ADRF6806 , ADRF6807 , ADL5380 demodulators; AD9643 ADC

ADI at IMS2013

In addition to these new RF ICs, Analog Devices will showcase its industry-leading, high-performance RF and microwave ICs including PLLs and VCOs, data converters, clocks and timing ICs, JESD204B interface options and an analog front-end hardware platform for a wide range of compute-intensive FPGA-based radio applications. ADI will also deliver a variety of

technical presentations providing useful tips for RF and microwave system designers. Learn more about ADI's participation at IMS at www.analog.com/ims2013.

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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