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## Industry's Highest Dynamic-Range Quad, 16-bit D/A Converter Supports All Wireless and Mobile Device Frequency Standards

*Highly integrated AD9154 quad, 16-bit D/A converter delivers 2.4-GSPS bandwidth, enabling superior performance and multi-carrier generation to the Nyquist frequency in baseband mode.*

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) (NASDAQ: ADI), a global leader in high-performance semiconductors for signal processing applications, today introduced a quad-channel, 2.4-GSPS, 16-bit D/A converter with industry leading dynamic range performance in the 100- to 300-MHz band for complex IF transmitters. The highly integrated AD9154 quad, 16-bit D/A converter is the only device of its kind to include an on-chip PLL (phase-locked loop) and eight-lane JESD204B interface. The combination of features allows designers to use a single device to meet all of their requirements in multicarrier GSM and LTE transmitters designed for wireless macro base stations, point-to-point microwave radio, military radios and radio test equipment. The new converter includes a range of features optimized for complex IF (intermediate frequency) transmit applications, including complex digital modulation, input-signal power detection, and gain, phase and offset compensation. Watch a video on the new high speed D/A converter: [www.analog.com/AD9154video](http://www.analog.com/AD9154video)

- Download data sheet, view product page and order samples: <http://www.analog.com/AD9154>
- Get questions answered by ADI engineers on EngineerZone™, ADI's online technical support community: [https://ez.analog.com/community/data\\_converters/high-speed\\_dacs](https://ez.analog.com/community/data_converters/high-speed_dacs)

The AD9154 quad, 2.4-GSPS, 16-bit D/A converter is designed to up-convert a pair of I/Q digital input signals, creating a complex IF signal at the input to a pair of on-chip D/A converter cores. The new device features several interpolation modes, increasing the sampling rate of the digital signal to the Nyquist frequency to enable simpler, less costly transmitter filters following the D/A converter analog output. The AD9154 additionally includes digital-signal correction for quadrature modulator up-converters to cancel RF (radio frequency) local oscillator feed-through and unwanted side-bands.

The AD9154 converter was designed with an eight-lane JESD204B interface that simplifies board layout by providing deterministic latency and multi-device synchronization for radio transmitters that use multiple antennas—an increasingly common feature in wireless base stations, radar and military radio communications.

The AD9154 quad, 16-bit D/A converters extends ADI's transmit capabilities to the 100- to 300-MHz range, and joins the AD9144 quad, 16-bit D/A converter, which operates in the DC to 100-MHz range, and will be joined later in 2015 by a 16-bit dual-channel D/A converter.

### AD9154 Key Features:

- Single-carrier LTE 20-MHz bandwidth ACLR = 76.7 dBC at 180-MHz IF
- Six-carrier GSM IMD = 78-dBC, 600-kHz carrier spacing at 180-MHz IF
- SFDR = 72-dBC at 180-MHz IF, -6 dBFS
- 8-lane JESD204B interface
- Support for quad-DAC or dual-DAC mode
- Low power: 2.1-W at 1.5 GSPS

### Pricing, Availability and Complementary Components

Product	Production Availability	Price	Packaging
AD9154BCPZ	NOW	\$80.00 each in 1,000-unit quantities	12mm x12mm 88-lead LFCSP
AD9154-EBZ Evaluation Board	NOW	\$495.00 each	--

AD9154-FMC-EBZ Evaluation Board w/ FMC	NOW	\$495.00 each	--
AD9154-M6720-EBZ Evaluation Board w/ 6720 Mod	NOW	\$495.00 each	--

[Digi-Key](#) and [Mouser](#) are now stocking the evaluation boards.

The AD9154 quad, 16-bit D/A converter's outputs are optimized to interface with ADI's [ADRF672x](#) line of RF quadrature modulators, the [ADL5375](#) quadrature modulator, [ADM7150](#) low-dropout linear regulator and the [ADF4351](#) wideband synthesizer with integrated VCO.

## About 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 100,000 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. <http://www.analog.com>

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