Tektronix Newsroom

Tektronix Announces World's Fastest 10-Bit Commercial DAC

25 GS/s Digital-to-Analog Converter Powers New Tektronix AWG70000; Ideal for Next-Generation Defense Electronics, Aerospace, Optical Systems

PR Newswire
BEAVERTON, Ore.

BEAVERTON, Ore., March 18, 2013 /PRNewswire/ -- Tektronix Component Solutions today announced availability of the world's fastest, most accurate 10-bit commercial digital-to-analog converter (DAC). This 25 GS/s application-specific integrated circuit (ASIC) enables the market-leading performance of the new Tektronix AWG70000 arbitrary waveform generator (see separate release here) and is now available for use in next-generation embedded systems in such areas as defense, commercial aerospace, medical and coherent optical communications.

(Logo: http://photos.prnewswire.com/prnh/20130211/SF56646LOGO)

The TDAC-25 DAC leads the industry with its combined digital-to-analog sample rate performance of 25 GS/s, resolution of 10-bits and dynamic ranges of up to -80 dBc narrowband and -60 dBc wideband. With its performance, the TDAC-25 enables a higher level of integration, thus helping to lower the cost, size, and power requirements of next-generation systems. In RF-based applications, it supports direct-generation of wideband signals, reducing complexity through the elimination of DAC arrays and frequency conversion blocks.

"This new DAC offering showcases the effectiveness of our development model," said Tom Buzak, president of Tektronix Component Solutions. "Our organization brings the expertise in ASIC design, chip packaging, RF microwave and data converters needed to power new Tektronix instrumentation. At the same time, we're able to make these advanced capabilities and technologies available to customers in non-competing industry segments, helping to solve their signal generation challenges and lowering the cost of their systems."

In addition to its use in the new Tektronix AWG70000, the TDAC-25 has already been designed into two next-generation systems under development, including Curtiss-Wright Controls Defense Solutions' CHAMP-WB-DRFM, a 6U Virtex®-7 VPX module. Of particular interest in defense applications is the device's low-latency where it can deliver the fast response needed for electronic warfare systems.

In coherent optical communications applications and research, the device's 10-bit resolution provides a greater effective number of bits (ENOB) and enables the high resolution required by advanced modulation schemes.

In the case of the Tektronix AWG70000, the TDAC-25 contributes to the new arbitrary waveform generator's industry leading specifications, including 50 GS/s sample rate performance, 16 GS of waveform memory and 10-bit vertical resolution. This performance allows the AWG70000 to support the industry's most demanding signal generation requirements.

Availability
The TDAC-25 DAC is available now for non-competitive system design-in worldwide subject to US export law. Customers seeking to incorporate this DAC into next-generation systems will first request the TDAC-25D Design Package which includes the necessary design documentation, dedicated engineering support and two TDAC-25C DAC components to support design-in and prototyping. The TDAC-25C is the assembled DAC component that will be ordered for assembly into production systems.

About Tektronix Component Solutions
Tektronix Component Solutions is a proven microelectronics services provider offering a complete range of custom design, prototyping, manufacturing, and test services to equipment manufacturers. With more than 40 years of experience serving the measurement, military, medical, and communications markets, Tektronix Component Solutions works as an extension of customers' product teams to cost-effectively resolve the most demanding component challenges. Headquartered in Beaverton, Oregon, Tektronix Component Solutions can be found on the Web at http://www.component-solutions.tektronix.com.

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