Quad-Channel 16-bit, 100 MSPS ADC for Faster, Smaller Medical Imaging Equipment

Texas Instruments Incorporated (TI) (NYSE: TXN) today introduced the first quad-channel, 16-bit analog-to-digital converter (ADC) for medical imaging applications, such as magnetic resonance imaging (MRI). The ADS5263 meets designers' needs for clear, crisp signals and faster acquisition times by delivering a high signal-to-noise ratio (SNR) of 84.6 dBFS with 10-MHz input and a sampling frequency of up to 100 MSPS. Along with high performance, the quad-channel architecture, low power consumption of 380 mW/channel and small footprint of the ADS5263 allow engineers to design smaller, more compact medical imaging systems than were previously possible with existing single- or dual-channel devices. A non-magnetic package option allows for use in a strong magnetic field, such as in MRI machines [view video [1]].

"Medical imaging systems like MRI machines typically require numerous high-performance electronics to achieve the clear, high-contrast images that doctors use for early detection of diseases. The large machines often involve a lengthy scan process, during which the patient is required to lie completely still," said Steve Anderson, senior vice president of TI's High Performance Analog business unit. "Taking advantage of both our data converter expertise and our long-standing experience in medical imaging applications, manufacturers can use the performance and compact footprint of the ADS5263 to deliver smaller, faster equipment with outstanding image quality for more efficient scans and increased patient comfort."

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[1] http://focus.ti.com/general/docs/video/Portal.tsp?entryid=0_k8ymmmy4&lang=en