Blood Flow Velocity Comes to Ultrasound Images

Texas Instruments Inc. has introduced two new fully integrated analog front ends (AFEs) with a continuous wave (CW) Doppler mixer for mid- to high-end, Spectral Doppler ultrasound equipment. The AFE5807 and AFE5808 address ultrasound designers' need for superior performance and image quality with the best noise performance at 0.75 nV/rtHz. In addition, the integrated CW mode measures and displays blood flow velocity in ultrasound images. These new devices are 25% smaller than competing solutions, ensuring a compact system footprint for higher channel count.

Additional key features and benefits of the AFE5807 and the AFE5808 include:

- Integrated CW Doppler mixer and summing amplifier with a very low close-in phase noise better than -155 dBc/Hz at 1 KHz off a 2.5 MHz carrier to ease design with CW beamforming
- AFE5807 is a low-power solution with 88 mW/Ch at 1.1 nV/rtHz, 40 MSPS, 12-bit sampling.
- AFE5808 is a high-performance solution with low-noise optimization of 0.75 nV/rtHz, 149 mW/ch, 65 MSPS and a 14-bit analog-to-digital converter (ADC) with 77 dBFS SNR (signal-to-noise ratio).

AFE5807 and AFE5808 extend TI's AFE58xx family of fully integrated ultrasound analog front ends, including the AFE5805 and AFE5804 for portable to mid-range ultrasound and the AFE5801 and AFE5851 for handheld, ultra-portable ultrasound. All AFE58xx devices are complemented on the transmit side by TI's TX810 T/R switch and join TI's full portfolio of embedded processing, analog, and power management solutions for ultrasound applications, allowing manufacturers to bring innovative ultrasound systems to market faster.

Source URL (retrieved on *10/26/2014 - 12:31am*):
http://www.mdtmag.com/product-releases/2010/09/blood-flow-velocity-comes-ultrasound-images?qt-video_of_the_day=0