Integrated, Eight Channel, Front End Receiver

Supertex, a recognized leader in integrated circuits (ICs) for ultrasound imaging applications, today introduced MD3872, an integrated, eight channel, front end ultrasound receiver. Its excellent low power dynamic performance makes it ideally suited for portable medical ultrasound applications.

Each channel of MD3872 features an SPI-programmable low noise pre-amplifier (LNA), a voltage-controlled attenuator (VCA), a programmable gain amplifier (PGA), an anti-aliasing filter (AAF) and a 12 bit, 50MHz analog-to-digital converter (ADC). The LNA gain can be set to either 14dB or 18dB and its input range can be up to 480mV peak-to-peak. The PGA gain can be set to one of four discrete values: 23.5dB, 29dB, 34.5dB or 40dB. The VCA can be continuously varied by a control voltage from -47dB to a maximum of 0dB. The IC features very low input voltage noise of 1.1nV per square root Hertz t 5.0MHz, and low input current noise at 1.0pA per square root Hertz at 5.0MHz.

“With its low power consumption, fast recovery time, and accurate gain control, the MD3872 offers medical ultrasound system designers a dense, robust receiver in a multi-layered format,” states Jimes Lei, Director of Applications Engineering for Supertex. “This precision analog IC reflects Supertex’s long-standing commitment to developing leading-edge products for its customers in demanding end markets such as medical ultrasound imaging.“

The MD3872 is available in a 128-lead TQFP package with a heat slug (MD3872HF-G). The part is RoHS compliant. Samples are available from stock. Lead-time for production quantities is 4-6 weeks ARO. Pricing is US $23.78 each for the MD3872HF-G in 1K quantities.

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