Touchstone Semiconductor Announces the Single-Supply, 12-Bit, 300ksps Serial-Output ADC

The New TS7003 Is Touchstone's First ADC in its Data Converter Product Family

MILPITAS, Calif. – Oct. 30, 2012 – Touchstone Semiconductor, a developer of high-performance, low power analog integrated circuit solutions, today announced the new TS7003, a single-supply, single-channel, 12-bit analog-to-digital converter (ADC) -- the first ADC in Touchstone's data converter product portfolio.

The TS7003 combines a 10-MHz track-and-hold (T/H), a high-speed serial digital interface, and an internal ±0.6%-initial accuracy +2.5V, 30ppm/°C reference into a very small 3mm x 3mm TDFN package. Operating from +2.7V to +3.6V supplies, it consumes less than 2.8mW when converting at 300ksps.

The TS7003's three-wire serial interface connects directly to any microcontroller or other interface-compatible computing device. The ADC is easy to use and doesn't require separate, external logic. An external serial-interface clock gives the system designer full control over the TS7003's conversion process and its output shift register operation.

The TS7003 is suitable for PCB-space-conscious, low-power, remote-sensor and data-acquisition applications because of its low power, ease of use, and small package footprint. Product applications include process control and factory automation, data and low-frequency signal acquisition, portable data logging, pen digitizers and tablet computers, medical instrumentation and battery-powered instruments.

Key Specifications
- Pin-Compatible, Single-Channel Higher-Speed Upgrade to MAX1286
- Single-Supply Operation: +2.7V to +3.6V
- DNL & INL: ±1LSB (max)
- 300ksps Sampling Rate
- Low Conversion-Mode Supply Current: 0.95mA @ 300ksps
- Low Supply Current in Shutdown: 0.2μA
- Internal 10-MHz Track-and-Hold
- An Internal ±0.6% initial accuracy +2.5V Reference
- SPI™/QSPI™/MICROWIRE™ 3-Wire Serial-Interface
- 8-Pin, 3mm x 3mm TDFN-EP Package

To facilitate easily the dynamic performance evaluation of the TS7003 SAR ADC, Touchstone Semi offers a plug-and-play FFT data acquisition/capture kit – the TSDA-VB kit -- available from Digi-Key (Please reference TSDA-VB-Kit-ND). The kit's straight-forward, easy-to-use GUI makes data capture to the TS7003DB or any other Touchstone Semi data converter product demo board quick and easy.

Priced at 1K, the single-channel TS7003 costs less than the pin-compatible Maxim MAX1286, and operates at a higher throughput speed than the MAX1286 by a factor of 2. It is fully specified over the -40°C to +85°C temperature range and is available in a low-profile, 8-pin 3x3mm TDFN package with an exposed back-side paddle. The TS7003 is in stock and ready to ship from Touchstone's distributor, Digi-Key**.**

Touchstone offers free TS7003 samples and completely assembled/tested demo boards upon request by visiting http://www.touchstonesemi.com/products/analog-to-digital-converters.

About Touchstone
Touchstone Semiconductor, Inc. (www.touchstonesemi.com) creates high-performance analog integrated circuit solutions that solve critical problems for electronics companies. Touchstone's second-source products are pin-compatible, specification identical solutions, offering customers a long-awaited alternative source for hard to get sole-sourced products. Touchstone's proprietary products provide unique combinations of features and performance that cannot be found from any other supplier. Founded in 2010, Touchstone is headquartered in Milpitas, Calif. Its investors include Opus Capital and Khosla Ventures. Follow the company at: Twitter:@touchstonesemi, Facebook: Touchstone Semiconductor and YouTube: The Touchstone Semiconductor Channel.

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Editor's Note: Images and datasheets are available at http://touchstonesemi.com.

Contact: Adolfo A. Garcia   Mary Hain
       Vice President - Marketing   Hain Communications
       agarcia@touchstonesemi.com   mary@hainpr.com
       408.215.1221   925.926.0326