

Signal Conditioner Shrinks Board Space and System BOM



Dresden, Germany, May 5, 2011 - ZMD AG

today introduced a single-chip sensor signal conditioner IC for resistive bridge sensors. This new single chip solution is ZMDI's first device combining a fast and precise sensor conditioning IC with a robust LIN transceiver. The ZSSC3170 is designed for direct 12V supply provided by the vehicle power system. It enables the development of a complete sensor application with a single IC and helps to save component costs and board space.

The ZSSC3170 targets air-conditioning, level measurement and seat adjustment applications. The ZSSC3170 is ideal for comfort applications in modern cars which require integrated LIN interface.

"The small size of the ZSSC3170 and the robust LIN interface help designers to reduce system space and cost," stated Steve Ramdin, SSC Product Manager. "By the combination of LIN and sensor signal conditioning in one IC only the sensor element and a few passive components are needed to develop a complete sensor application."

The integrated LIN transceiver meets the LIN specifications 1.3, 2.0 and 2.1. An EMC immunity of up to $\pm 8\text{kV}$ of the LIN interface makes the ZSSC3170 ideal for the use in cars.

Since the ZSSC3170 is designed for harsh automotive environments, it incorporates special protection circuitry, excellent electromagnetic compatibility and numerous diagnostic features. It also offers an excellent EMC resistance. The device can be calibrated in-system where coefficients are stored in on-chip automotive-grade

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EEPROM. With ZMDI's unique single-pass calibration technique, no external trimming components are required. This unique feature further reduces the bill of materials and manufacturing costs.

The ZSSC3170 operates on supply voltages from 7 to 18 volts and over a temperature range of -40°C to +125°C, or extended up to 150°C. Accuracy is $\pm 0.25\%$ FSO over a temperature range of -20°C to +85°C, $\pm 0.50\%$ FSO at -40°C to 125°C and $\pm 1.00\%$ FSO at -40°C to 150°C. The IC comes as die or in a SSOP20 package.

The ZSSC3170 development kit includes a development board, samples and software for quick and easy evaluation and support for calibrating prototypes. Application notes are available for download.

Pricing and Availability Now

Samples are available now. Packaged parts are priced at €2.30 (USD 3,04) in low quantities.

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