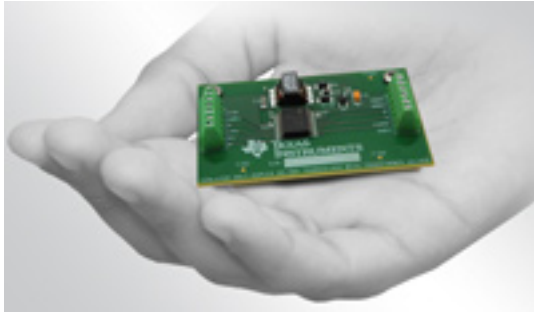


Ultra-Small Profibus RS-485 Transceiver Features Integrated Driver for High Efficiency and Low EMI



Texas Instruments Incorporated (TI) recently introduced an isolated half-duplex differential line transceiver with integrated transformer driver. The ISO1176T provides the primary voltage for an isolation transformer and, in conjunction with an external transformer, rectifier and regulator, provides the smallest isolated signal and power system design with highest efficiency and lowest electromagnetic interference (EMI). Download datasheets, order free samples, and request evaluation modules (EVMs) and reference designs here: www.ti.com/iso1176t-pr.

Applications include Profibus systems, factory and building automation, networked sensors, motor/motion control, HVAC, and networked security stations. The ISO1176T is compatible with regulators like TI's TPS76350, a low-dropout (LDO) voltage regulator that offers the benefits of low-power operation, and small package. These regulators feature low-dropout voltages and quiescent currents when compared to conventional LDO regulators, and is suitable for cost-sensitive designs and applications where board space is at a premium.

Key features and benefits of the ISO1176T include:

- * Greater lifetime and reliability: TI's capacitive isolation technique uses SiO₂ as isolation dielectric to increase reliability and lifetime by more than double that of magnetic or optical isolation techniques. Provides 2500 V_{rms} of isolation between the line transceiver and logic-level interface to reduce risk of data corruption and damage to expensive control circuits over long transmission lines.
- * Less space and cost: Integrating the transformer driver in the transceiver enables component reduction and board space savings of 20 percent as compared to competitive solutions.
 - * Higher speed: Operates at 40 Mbps or more than twice that of the nearest competitor, enabling faster data transmission.
- * More nodes: Supports 160 nodes, reducing the number of repeaters required and system cost.

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The ISO1176T is available now in a 16-pin SOIC package, with a suggested resale price of \$3.30 in quantities of 1,000. Two other isolated full-duplex RS-485 transceivers with transformer drivers, one operating at 5 V and other operating at 3.3 V, will be available by end of 1Q11.

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