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3.3V/5V 20Mbps RS-485 Transceiver Family Provides $\pm 60V$ Fault Protection for Improved System Reliability

FREMONT, Calif., Feb. 10, 2016 /PRNewswire/ -- Exar Corporation (NYSE: EXAR), a leading supplier of analog mixed-signal products serving the industrial, high-end consumer and infrastructure markets, introduces a new family of $\pm 60V$ fault protected RS-485/RS-422 (TIA-485/TIA-422) transceivers able to withstand direct shorts and achieve overvoltage protection with no external components. Designed for improved performance in noisy industrial environments and increased tolerance to system faults, these transceivers simplify design in building automation, HVAC networks, energy metering, process control and other industrial automation applications.

At initial launch, the family includes four parts: [XR33053](#), [XR33152](#), [XR33156](#) and [XR33158](#). The XR33156 is the most feature-rich $\pm 60V$ tolerant device on the market with cable invert control to correct for reversed bus pins and a low voltage logic pin, eliminating the need for a level shifter in low voltage applications. Other inherent protection features include $\pm 25V$ common mode voltage, hot swap glitch protection, overload protection and enhanced receiver fail-safe protection for open, shorted or terminated but idle data lines.

"These transceivers protect against wiring faults up to $\pm 60V$ and simultaneously protect against ESD events exceeding $\pm 15kV$," said Dale Wedel, Exar's vice president, analog products. "This family is a welcome addition to Exar's rich portfolio of serial transceiver products and enhances our excellent support to our broad industrial customer base."

The XR33053, XR33152, XR33156 and XR33158 operate over a wide 3V to 5.5V supply voltage range and feature the industry's lowest standby current of 1uA (max), 1nA (typ). They support data rates up to 20Mbps in either full- or half-duplex configurations, exceed $\pm 15kV$ ESD protection on the bus pins and operate over the standard industrial temperature range of $-40^{\circ}C$ to $85^{\circ}C$.

Specified over the standard industrial temperature range of $-40^{\circ}C$ to $85^{\circ}C$, the XR33053, XR33152, XR33156 and XR33158 are offered in RoHS compliant, green/halogen free, SOIC-8 and SOIC-14 packages. 1,000-piece pricing starts at \$1.49 each. For more information, visit www.exar.com/60Vtransceivers. Evaluation boards and samples are available at www.exar.com/connectivity/transceiver/#rs485.

Summary of features:

- Wide 3.0V to 5.5V supply operation
- $\pm 60V$ fault tolerance on analog bus pins
- Extended $\pm 25V$ common mode operation

- 1.65V to 5.5V I/O logic interface V_L pin (XR33156)
- <1uA (max) standby current
- 20Mbps maximum data rate
- Robust ESD (Electrostatic Discharge) protection for RS-485 bus pins

About Exar

Exar Corporation designs, develops and markets analog mixed-signal products for the industrial and embedded systems communications, high-end consumer and infrastructure markets. Exar's broad product portfolio includes power management, signal conditioning, interface, display, data management and video processing solutions. Exar has locations worldwide providing real-time customer support. For more information, visit www.exar.com.

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