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Exar Introduces Industry-First Solution: Wireless Universal Asynchronous Receiver Transmitter (UART)

Eliminates Cables Easily for Both Serial or Parallel Interfaces With No Software Development Required

Fremont, California, April 1, 2008 - Exar Corporation (Nasdaq: EXAR) released an industry-first wireless UART solution composed of two devices that can be used either as a chipset, or separately. The chipset solution includes the XR18W750 - a wireless UART controller, and the XR18W753 - an RF (868MHz to 956MHz) transceiver. Addressing the growing market evolution away from cabled to wireless connections, especially in industrial environments, the Exar solution increases equipment mobility, simplifies installations, and accelerates time to market. The wireless UART chipset can be designed onto existing boards, or integrated into add-on wireless adapter cards providing wireless capabilities to systems currently using serial cables. The XR18W753 can also be used separately with popular Microcontroller Units (MCUs) via a simple two-wire I2C interface. Point-of-Sale (POS), security systems, data collection, data monitoring and others no longer need to be connected by serial cables, as the Exar wireless UART solution can transmit and receive data in point-to-point, and point-to-multi-point environments.

"As the UART market leader, we are driving the technology and delivering to customers dynamic new options for their OEM products plus widening the innovation gap between Exar and other UART competitors," said Levent Ozcolak, vice president, Interface Product Line. "Exar's XR18W750/753 chipset offers a complete hardware and software solution that can either replace existing serial cable implementations, or upgrade any system currently using a UART and RS-232 or RS-485 transceiver."

Key Product Features

The XR18W753 is a single-chip RF transceiver designed to operate in license-free North American 915MHz ISM, European 868MHz SRD, and 950MHz to 956MHz bands for low-power, short-range wireless applications. Direct Sequence Spread Spectrum (DSSS) technique is employed to provide robust data communication in signal congested RF environments. The device provides extensive hardware support for packet handling, data buffering, packet timing, RSSI, energy detection, link quality indication, clear channel assessment, FCS computation, and CRC detection. RF output power is programmable from -24 dBm to 0 dBm with a maximum data rate of 250Kbps.

The XR18W750 is a wireless UART controller with a two-wire I2C interface to the XR18W753 RF transceiver to complete Exar's wireless UART chipset solution. The XR18W750 supports both the parallel and serial interfaces to any host system thus providing flexibility for system designers to select their interface option. The XR18W750 includes an embedded 8051 microprocessor which provides the power to process the protocol framing for data transmission and to handle error processing. Internally, the XR18W750 has 4KB RAM for data processing. The XR18W750 also includes a 128-bit AES engine for data encoding and decoding.

"In addition to offering a complete wireless solution when used with the XR18W750, Exar's XR18W753 RF transceiver can interface independently with almost any incumbent MCU on existing boards," said Eric Nguyen, director strategic marketing, Interface Product Line. "It delivers for current or new platforms, a new level of design freedom and flexibility for OEMs that want to further differentiate their products by giving their customers the opportunity for early adoption of wireless systems."

Proprietary Firmware

The wireless UART chipset comes with Exar's proprietary firmware that supports several communication modes including point-to-point, point-to-multi-point, and broadcast. Point-to-point mode allows exclusive communication between two wireless UART chipsets, similar to RS-232 communication. Point-to-multipoint mode allows communication between multiple wireless UARTs within the same network, similar to an RS-485 network. Broadcast mode sends data to any wireless UART chipset that is within range.

Interface Products

Exar has one of the broadest portfolios of high-performance interface solutions including UARTs, serial transceivers -- RS-232, RS-485, and multi-protocol -- and integrated UART/transceiver combinations. For chip-to-chip or system-to-system connections, Exar's single and multi-channel interface ICs provides immediate competitive advantages to designers: low power, reduction in board space requirements, increased bandwidth capacity, and enhanced product features. Interface devices are found practically everywhere including point-of-sale (POS) terminals, digital televisions, industrial automation equipment, handheld devices, and networking environments.

Tools and Support

Evaluation boards, reference designs, software drivers and Exar's proprietary firmware for the wireless UART chipset are available. With the availability of these tools and Exar's application support line: uarttechsupport@exar.com, UART customers can accelerate implementation by eliminating driver development, testing and diagnostic procedures.

Prices, Packages, Availability and Additional Information

Samples of the XR18W750 and XR18W753 are available now. Both devices are in a 48-pin QFN package at 2.25V with 3.63V operation with 5V tolerant I/Os over the industrial temperature range. In 1k quantities the XR18W750/XR18W753 chipset is priced at $6.75. Additional information on the XR18W750 can be found at http://www.exar.com/Common/Content/ProductDetails.aspx?ID=XR18W750, and additional information on the XR18W753 can be found at http://www.exar.com/Common/Content/ProductDetails.aspx?ID=XR18W753. Additional information on other UART products can be found at http://www.exar.com/Common/Content/Product.aspx?Parent=1&ID=118.

About Exar

Exar Corporation is Powering Connectivity by delivering highly differentiated silicon solutions empowering products to connect. With distinctive knowledge in analog and digital technologies, Exar enables a wide array of applications such as portable devices, home media gateways, communications systems, and industrial automation equipment. Exar has locations worldwide providing real-time system-level support to drive rapid product innovation. For more information about Exar visit: www.exar.com.

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