



# Exar Releases Rugged, High Throughput USB to Serial Bridge Devices

## XR21B142x Family Provides Superior Performance and Ease of Design

FREMONT, Calif., Sept. 22, 2014 /PRNewswire/ -- Exar Corporation (NYSE: EXAR), a leading supplier of high-performance integrated circuits and system solutions, today announced a new family of USB to serial bridge devices for industrial applications. The XR21B142x family provides a convenient and straightforward way to interface with RS-232 or RS-485 serial networks through USB using a minimum of components and PCB space. The XR21B1420, XR21B1422, and XR21B1424 provide 1, 2, and 4 UART channels respectively. The XR21B1421 provides a single channel UART and uses the native operating system HID (Human Interface Device) driver.

The XR21B142x devices are fully compliant to the USB 2.0 (Full-Speed) specification with 12Mbps USB data transfer rate, and deliver significantly higher data throughput compared to competing devices, especially when multiple channels are operating simultaneously. Large 512-byte transmit (TX) and receive (RX) FIFOs enable a maximum data throughput of 9Mbps across up to four UART channels.

"While nearly all new processors and MCUs include numerous USB ports, legacy peripherals and networks remain RS-232 or RS-485/422. This drives a continued need to bridge USB to serial protocols," said John Cantelmo, vice president of Connectivity Products at Exar. "The XR21B142x family offers best-in-class performance with higher data throughput and large FIFOs preventing buffer overflow."

### Rugged and Space Saving

The XR21B142x family offers industry-leading  $\pm 15\text{kV}$  Electro-Static Discharge (ESD) protection on the USB pins, eliminating the need for additional protection components and reducing PCB real estate. This makes these devices ideal for rugged applications such as smart grid data collection, data aggregators and concentrators, security and access control systems, ATM and gaming terminals, and rugged USB to serial converters. The devices feature an internal oscillator, removing the need for an external crystal, further reducing the board area consumed. The devices can be powered directly from the USB host's 5V supply and an integrated LDO provides a regulated 3.3V power supply output, removing the need for an external LDO.

### Flexibility and Driver Options Speeds Implementation

The XR21B1421 uses the native HID drivers in Windows, Linux, and Mac OS X distributions, removing the need for installing custom drivers, simplifying the integration process. The XR21B1420/2/4 devices use native OS CDC-ACM drivers, or a custom driver to activate advanced features. Exar provides WHQL/HCK-certified software drivers

for Windows 2000, XP, Vista, 7, 8, 8.1 as well as drivers for Windows CE, Linux and Mac OS X. Full source code is provided on request.

The XR21B142x family supports USB suspend, resume and remote wakeup operations. Any baud rate up to 12 Mbps may be generated with the internal clock and the fractional baud rate generator. Automatic half-duplex direction control and optional multi drop (9-bit) mode features simplify both hardware and software in half-duplex RS-485 applications. Each UART port includes full modem control signals, which can also be configured as GPIO pins with direction, state, output driver type and input pull-up or pull-down resistors programmed either through on chip OTP, or on the fly via memory mapped registers. The devices operate from a single 3.3V or 5V power supply, or can be powered by the USB 5V supply.

Exar will be demonstrating this new family of devices at booth A6.169 at Electronica 2014 in Munich, Germany, November 11-14th. To request a meeting please email [press@exar.com](mailto:press@exar.com).

### **Product Availability and Pricing**

The XR21B1424 is available now in a 64 LQFP package. The XR21B1420/1 devices are packaged in either a 24-pin or a 28-pin QFN package, and are expected to sample in September of 2014. The XR21B1422 comes in a 40-pin QFN package, and will begin sampling in October. The XR21B142x pricing starts at \$3.73 in 1,000 piece quantities.

### **Additional Information**

To request samples please visit Exar's website at [www.exar.com](http://www.exar.com) or contact Customer Service at [customersupport@exar.com](mailto:customersupport@exar.com). Additional information is available online at <http://www.exar.com/connectivity/uart-and-bridging-solutions>.

### **About Exar**

Exar Corporation designs, develops and markets high-performance integrated circuits and system solutions for the Communications, High-End Consumer, Industrial & Embedded Systems, and Networking & Storage markets. Exar's broad product portfolio includes analog, display, LED lighting, mixed-signal, power management, connectivity, data management, and video processing solutions. Exar has locations worldwide providing real-time customer support. For more information about Exar, visit <http://www.exar.com>.

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