

# Communications

## XR16L651

### 2.5V, 3.3V and 5V Low Power UART with 32-Byte FIFO

#### Features

- 2.5V, 3.3V and 5V Operation w/ 5V tolerant Inputs
- ST16C450/550/580/650A Software Compatible
- Intel, Motorola 2 or PC Mode 8-bit Bus Interface
- Up to 1Mbps Data Rate at 3.3V Operation
- 32-byte Transmit and Receive FIFOs
- Automatic Hardware (RTS/CTS) Flow Control
- Hardware Flow Control Hysteresis
- Automatic Software (Xon/Xoff) Flow Control
- Infrared (IrDA) Encoder/Decoder Enable Input 2
- Programmable Infrared Encoder Pulse Width
- Sleep Mode with Wake-up Indicator
- 48-pin TQFP Package (7x7x1mm)
- Commercial and Industrial Temperature Grades

#### Applications

- Battery Operated Electronics
- Internet Appliances
- Handheld Terminal
- Personal Digital Assistants
- Cellular Phones DataPort
- Wireless Infrared Data Communications Systems

The XR16L651 1 is a 2.5V, 3.3V and 5V Universal Asynchronous Receiver and Transmitter (UART) with 5V tolerant inputs. This new device supports Intel and Motorola data bus interface and is software compatible to industry standard XR16C450, XR16C550, ST16C580 and ST16C650A UARTs.

The XR16L651 has 32 bytes of TX and RX FIFOs and is capable of operating up to serial data rate of 2 Mbps at 3.3V supply voltage. The internal registers include the XR16C550 register set plus Exar's enhanced registers for additional features to support today's highly demanding data communication needs. The enhanced features include automatic hardware and software flow control, selectable TX and RX trigger levels, and wireless infrared (IrDA) encoder/decoder.

The device provides a new capability to give user the ability to program the wireless infrared encoder output pulse width, hence, reduces the power consumption of the handheld unit.

The XR16L651 device comes in in a small 7x7x1mm 48-pin TQFP package with commercial and industrial temperature ranges.

NOTE: Covered by US patents #5,649,122 and #5,949,787