



XR20V2170 / XR20V2172

Single / Dual Channel I2C/SPI UART with 64-Byte FIFO and Integrated RS-232 Transceiver

Features

- * 2.25 to 3.6 Volt Operation
- * S/W compatible to Philips' SC16IS760/750/740
- * Selectable I2C/SPI Interface
- * ESD protection for RS-232 I/O pins at
 - o +/-15kV - Human Body Model
 - o +/-15kV - IEC 61000-4-2, Air-Gap Discharge
 - o +/- 8kV - IEC 61000-4-2, Contact Discharge
- * Full-featured UART
 - o Data rate of up to 1 Mbps at 3.3V
 - o Data rate of up to 1 Mbps at 2.5V
 - o Fractional Baud Rate Generator
 - o Transmit and Receive FIFOs of 64 bytes
 - o 16 Selectable TX and RX FIFO Trigger Levels
 - o Automatic Hardware (RTS/CTS) Flow Control
 - o Automatic Software (Xon/Xoff) Flow Control
 - o Halt and Resume Transmission Control
 - o Automatic RS-485 Half-duplex Direction Control Output via RTS#
 - o Automatic sleep mode (< 15 uA at 3.3V)
 - o General Purpose I/Os
 - o Full modem interface
- * Crystal oscillator (up to 24MHz) or external clock (up to 64MHz) input
- * 40-QFN packages
- * Pb-Free, RoHS Compliant Versions Offered

Applications

- * Portable Appliances
- * Battery-Operated Devices
- * Cellular Data Devices
- * Factory Automation and Process Controls

Product Description

The XR20V2170¹ (V2170) is a high performance universal asynchronous receiver and transmitter (UART) with 64 byte TX and RX FIFOs, a selectable I2C/SPI slave interface and RS232 transceiver. The V2170 operates from 2.25 to 3.63 volts. It is software compatible to the SC16CIS760/750/740, but with additional features such as a programmable fractional baud rate generator, and 8X and 4X sampling rate that allows for a maximum baud rate of 1 Mbps at 3.3V. The standard features include 16 selectable TX and RX FIFO trigger levels, automatic hardware (RTS/CTS) and software (Xon/Xoff) flow control, and a complete modem interface. Onboard registers provide the user with operational status and data error flags. An internal loopback capability allows system diagnostics. The V2170 is available in the 40-pin QFN.