

**USB Controller - Quick Interface II**

**General Description**

The USB2 Controller is a single chip that provides the capability to interface to a peripheral device to the Universal Serial Bus (USB). The USB controller consists of a central 16-bit processor, mask ROM, RAM buffer, clock generator, and a series of interfaces. The interfaces, shown in the block diagram below, provide control and data access, and USB data reception and transmission. The SIE is fully compatible with the USB specification. The USB2 has been specifically designed to provide a simple and fast method of designing interfaces for peripheral devices to the USB port. The USB2 is ideally suited to interface the USB to a wide variety of peripheral devices such as keyboards, cameras, scanners, communications, and other peripheral devices. Should analog capability be required, the USB3 contains an eight-channel 10-bit analog to digital converter.

**Features**

- Advanced 16 Bit processor for USB transaction processing and control data processing
- USB interface ver 1.0/1.1 compliant
- Built-in transceivers and SIE (Serial Interface Engine)
- Internal Clock Generation
- I<sup>2</sup>C interface
- Low cost external crystal circuitry required
- Watchdog Timer
- 1.5K x 16 Internal RAM buffer
- General purpose I/O
- 5K user programmable gates
- 1KB RAM
- 4KB ROM

**Block Diagram**

