PRELIMINARY

KL5KUSB2CF

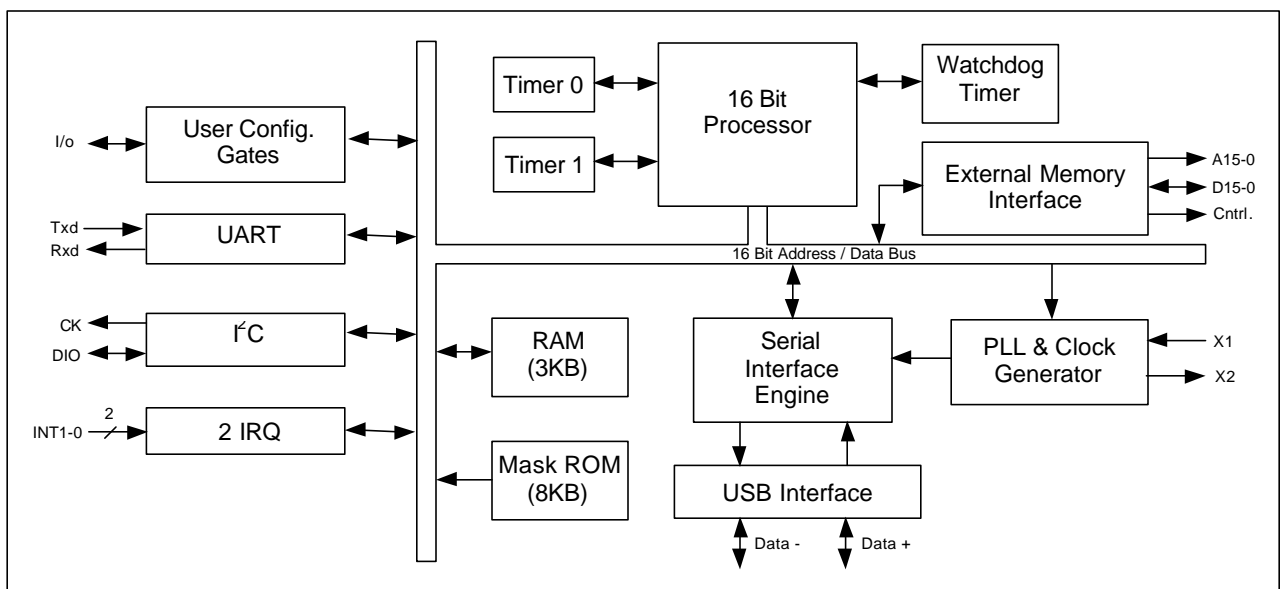## USB 2.0 Controller – Quick Interface

General Description

The Kawasaki KL5KUSB2CF Controller is a quick single chip solution to interface peripheral devices to the Universal Serial Bus (USB) 2.0 specification. The KL5KUSB2CF has been specifically designed to provide a simple and fast method of designing interfaces for peripheral devices to the USB port. This has been accomplished by its highly integrated functionality and flexible General Purpose I/O (GPIO) that can be configured to your system requirements. This device has been configured with a wide range of capabilities for your immediate use or evaluation. The device can then be reconfigured for your specific application. You can directly access the embedded processor's address and data lines to use external programmable logic for evaluation before configuring the GPIO for your final device. The SIE (Serial Interface Engine) is fully compatible with the USB specification.
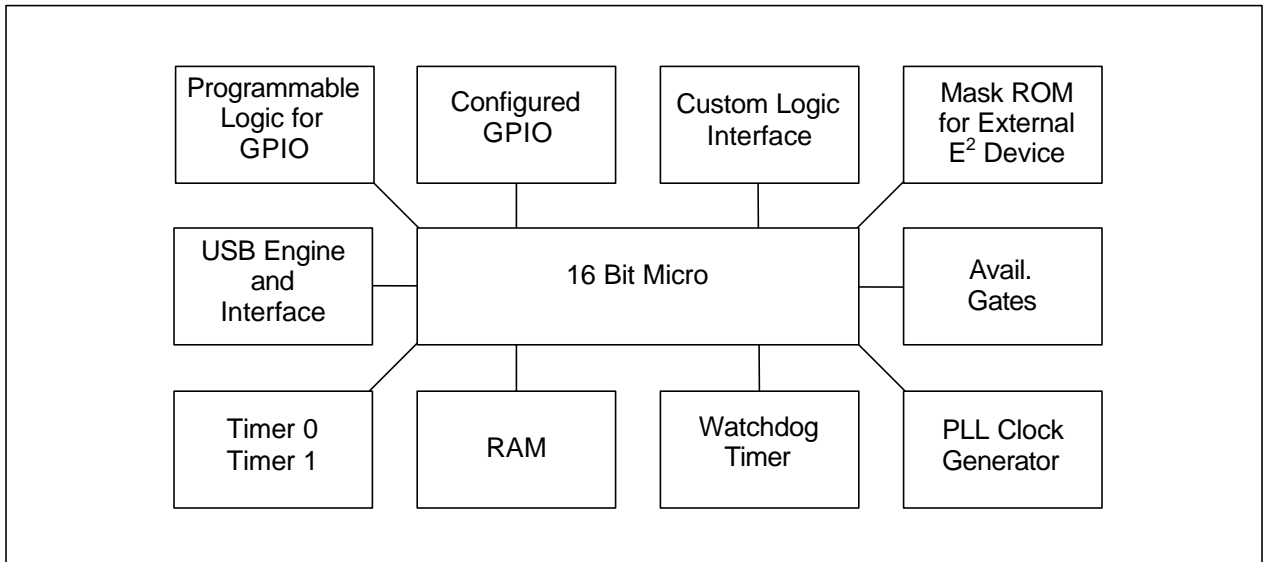
Features

- Advanced 16 Bit processor for USB transaction processing and control data processing

- USB interface ver 2.0 compliant

- Transceivers and SIE (Serial Interface Engine)

- Internal Clock Generation

- Utilizes low cost external crystal circuitry

- 1.5K x 16 Internal RAM buffer

- 2 IRQ

- 8 Channel, 10 Bit A/D

- External Memory Interface for direct access to the 16-bit processor for using external logic or memory.

- User configurable gates

- Watchdog timer

- 8K user programmable gates

- 8K bytes ROM

- I^2C Interface

- 100 pin QFP package

Block Diagram (Application Example)

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KL5KUSB2CF Basic Blocks

Programmable Logic for GPIO	Configured GPIO	Custom Logic Interface	Mask ROM for External E^2 Device
USB Engine and Interface	16 Bit Micro		Avail. Gates
Timer 0 Timer 1	RAM	Watchdog Timer	PLL Clock Generator

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