adc16S310

Product Information

USB Embedded Function Microcontroller

16bit EISC SE1608

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Description

The adc16S310 is a USB 1.1 core embedded microprocessor based on the SE1608A, 16bit EISC core of Advanced Digital Chips Inc. Including USB 1.1 applications, the adc16S310 provides various embedded system solutions by the support of built-in 16bit CPU, and useful peripherals such as DMA, serial interface devices of 4 channel UART, I2C, and SPI, multi-function timer units and 48 port PIO.

The USB core has full-speed data rate - 12Mbps, and is compatible with the USB specification ver. 1.1. In addition to control endpoint, Interrupt IN, 2 Bulk IN/OUT, 2 Isochronous IN/OUT endpoints are provided (total 6 endpoints).

SE1608A can operate at 50MHz rate, and has 64K byte program/data memory space each. With on-chip 4K btye RAM and boot loader, the external ROM (or even SRAM) can be replaced with serial I2C or SPI EEPROM if a user program size is less than 4K byte.

Features

- 16bit EISC processor SE1608A
  - 50MHz speed, 64K byte program/data (total 128K)
- Memory
  - 4K byte on-chip RAM
  - I2C or SPI serial EEPROM (4K byte) boot loader
  - Supports external 8/16bit ROM, 8/16bit SRAM
- Peripherals
  - 24bit Timer
  - 30bit Watch dog timer
  - Pulse Period Measurement timer (24bit)
  - 2 PWM timer (24bit)
  - 5 External interrupt
  - 2 DMA of cycle steal/burst transfer mode
  - 4 UART with 4 byte TX FIFO / 8 byte RX FIFO
  - I2C, SPI
  - 48 Port I/O
- USB ver. 1.1 compatible
  - supports full-speed data rate 12Mbps
  - 6 endpoints (Control, Interrupt, 2 Bulk, 2 Isochronous)
  - 16 byte FIFO for Control / Interrupt, 64 byte for Bulk, 512 bytes for Iso.
- PLL and Low-power design
  - x4 PLL (12MHz input for 48MHz USB clock)
  - Power save mode (IDLE, STOP)
  - EPB (EISC peripheral Bus) for slow peripherals
- Operating Voltage 3.3V(+/- 10%)
- 64 pin TQFP package
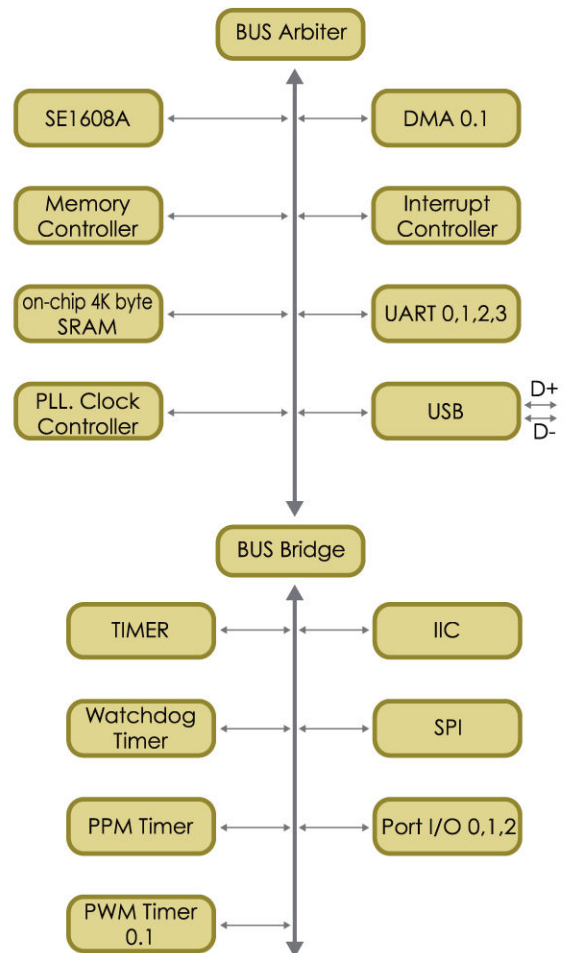
Application Areas

USB 1.1 applications, Low-end Embedded systems

Related Documents

adc16S310 Data Book, SE1608A Reference Guide, EISC Software Reference/User Guide

For More Information Contact:

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