



## adc16S310

### USB 1.1 Core Embedded Microprocessor 16bit EISC SE1608A

#### Description

The adc16S310 is a USB 1.1 core embedded microprocessor based on the SE1608A, 16 bit 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 IO. 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 64Kbyte program/data memory space each. With on-chip 4Kbyte 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 4Kbyte.

#### Features

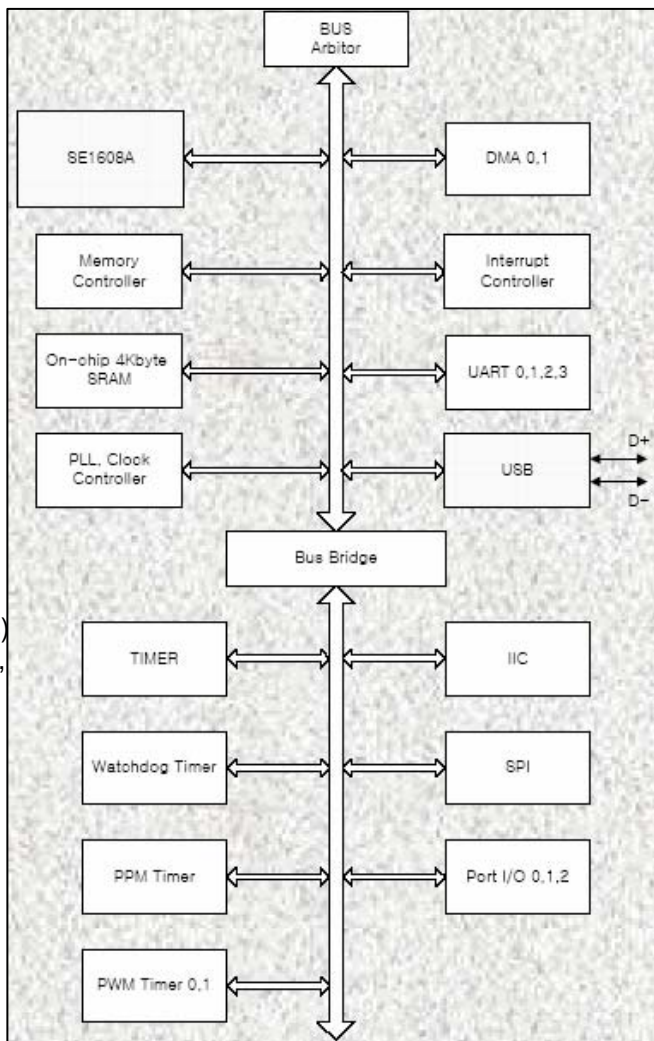
- 16 bit EISC processor SE1608A
  - 50MHz speed, 64Kbyte program/data (total 128K)
- Memory
  - 4Kbyte on-chip RAM
  - I2C or SPI serial EEPROM (4Kbyte) boot loader
  - Supports external 8/16 bit ROM, 8/16 bit SRAM
- Peripherals
  - 24 bit Timer
  - 30 bit Watch dog timer
  - Pulse Period Measurement timer (24bit)
  - 2 PWM timer (24bit)-5 External interrupts
  - 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 bytes 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
- 3.3V 0.35um CMOS technology
  - 64 pin TQFP package (10x10mm)

#### Application Areas

USB 1.1 applications, Low-end Embedded

#### Related Documents

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



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