EtronTech　　　　eSP268

鈺創科技 *EtronTech*

eSP268

USB 2.0 Camera Bridge Controller

BRIEF DATASHEET

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1. Introduction

    eSP268 is a USB 2.0 High-speed (HS) and Full-speed (FS) compatible PC camera controller.   These built-in LDOs can support power to CIS module and bridge chip itself. That's eSP268 can meet the requirement in lower system BOM and small form factor.
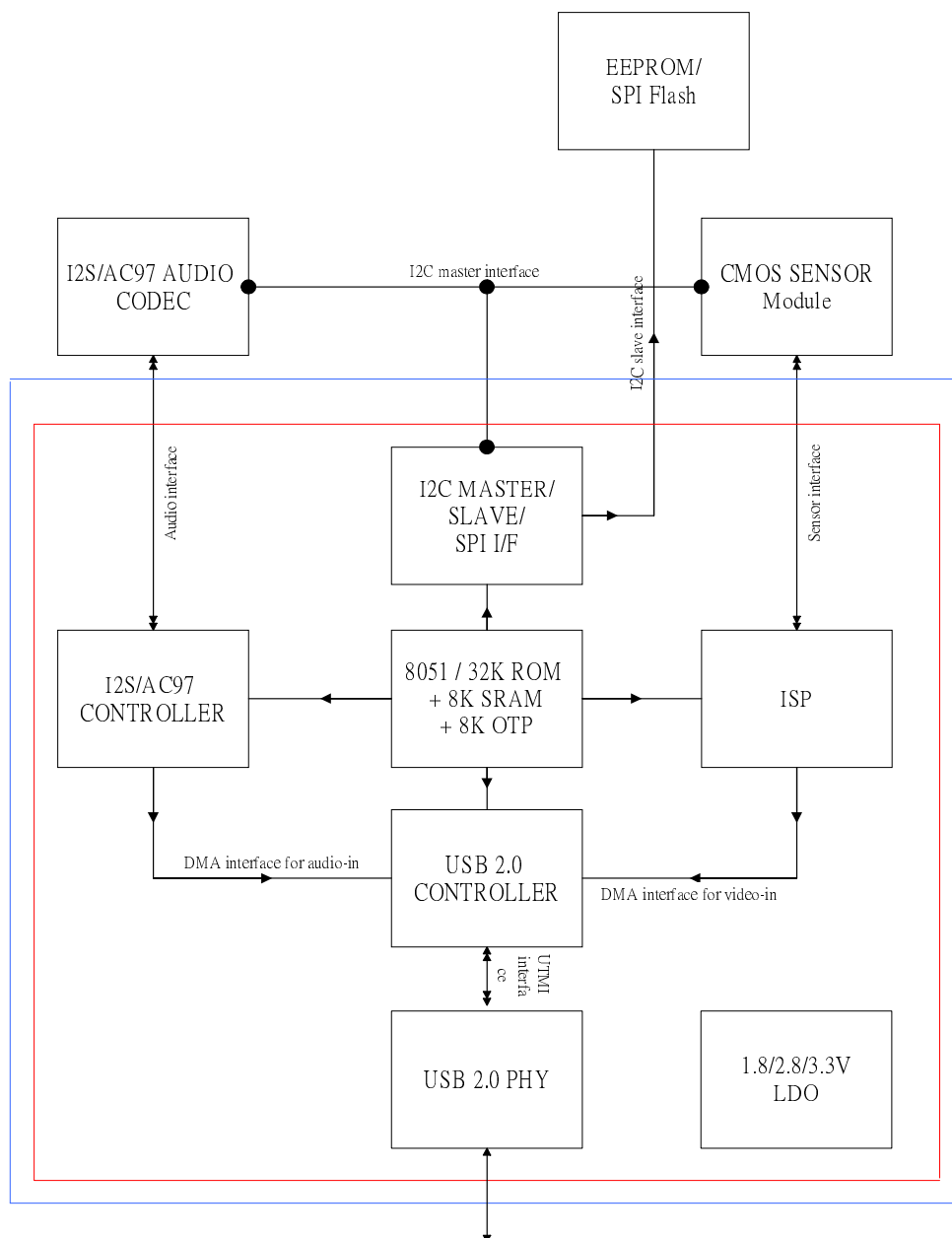

Figure 1   eSP268 Block Diagram

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2. Features

- **CMOS Sensor Module Interface**
  - Input: 8-bit YUV422 Bayer pattern
  - Resolution: VGA (640x480) and 1.3M (1280x1024) in uncompressed format
  - Support encoded JPEG stream via bypass mode
- **USB 2.0 high-speed and full-speed compatible**
  - UVC 1.1/UAC1.0 compliant
  - Support Isochronous endpoint (video, 24MB/s max.)
  - Support remote wakeup from USB event
- **Embedded 8051 with 32KB mask ROM, 8KB SRAM and 8KB OTP**
  - Up to 48MHz
  - UART for debug
  - Up to 16 GPIOs (4GPIOs for 46-LQFN)
  - F/W upgrade to OTP/EEPROM/SPI Flash via USB
- **Control Interface**
  - Support I2C/SPI master for CIS/EEPROM/SPI Flash control
  - Support I2C slave by external HOST
  - Auto load code from EEPROM/SPI Flash via DMA
- **Support AC97/I2S audio format**
- **ISP functions**
  - Support AE, AWB, Gamma mapping
  - Brightness, Contrast for luminance
  - Hue, Saturation, Gain and Offset for chroma
  - Window cropping
  - Downsampling
- **Single 5V power supply**
  - Built-in 1.8V/3.3V LDO for core/peripheral power
  - Built-in 2.8V LDO for CIS
  - Lower power consumption: < 50mA when operation and < 250uA when suspend
- **Crystal oscillator 12MHz**
- **Certified by Microsoft WHQL & USB-IF**
- **Support platforms: Window XP SP2, Window XP 64, Vista 32, Vista 64, Mac OS X, and Linux with UVC driver**
- **Package**
  - 46-LQFN (4.5mm x 6.5mm)/48-LQFP (7mm x 7mm)/64-LQFP (7mm x 7mm)