



JMB310 USB2.0 UVC WebCam Controller

Overview

JMB310 is a low power USB2.0 PC/NB camera controller. It incorporates a high speed USB2.0 transceiver, a CMOS sensor interface, a SPI serial interface and low-power 8051 CPU.

JMB310 is fully compliant with USB Video Class (UVC) 1.1. With the flexible and programmable CMOS sensor interface, it can support a variety of sensor sources such as Omnivision, Micron/Aptina, Samsung and others, up to UXGA (1600 x 1200). JMB310 also provides real-time VGA-size preview mode up to 30 frames per second on different resolutions. In addition, a built-in 5V/3.3V voltage regulator could reduce the system BOM cost.

Overall

- 3.3V single power, 1.8V core power from internal regulator.
- Built-in regulator from 5V to 3.3V
- Lower power consumption (Operation < 55mA, Standby < 45mA & Suspend < 300uA)
- Built-in DP8051 (16KB code SRAM for easy update)
- Built-in JTAG interface for easy debugging.
- GPIO for LED indicator, shutter button, module flip detection, sensor power-down control, sensor reset, I2C (SCL & SDA) and SPI I/F (CS, SCLK, SI & SO)
- Built-in watch dog timer
- 46-pin LQFN (4.5mm*6.5mm)

Sensor Interface

- Support YUY2 (8 bit), RGB (565) and RGB Bayer patter (8 bit)
- Down-sampling frames for flow control
- Video streaming up to 30fps@VGA, 9fps@SXGA ad 6fps@UXGA at high-speed operation
- VGA preview mode 30fps for SXGA & UXGA
- Output maximum 60MHz sensor clock
- Support clock divider (1/2, 1/4, ...) for 30 fps series (30, 15, .5.. fps) and 25 fps series (25, 12.5, 6.25)

USB

- USB 2.0 interface
- USB Video Class 1.1 compliant
- Remote wake-up
- Support 3 Endpoints: Control x 1, Isochronous x 1 and Interrupt x 1



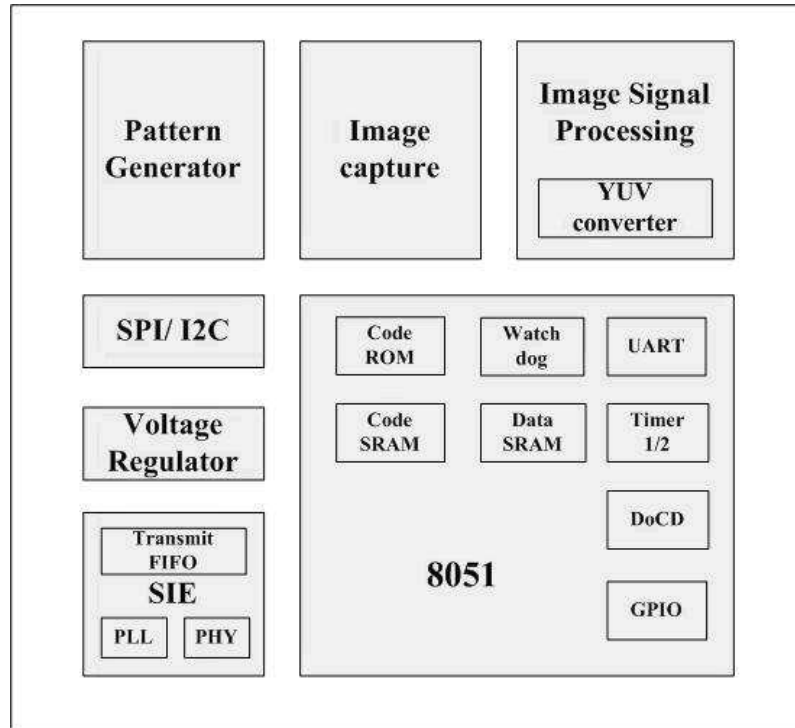
UVC

- Built-in UVC Camera Terminal Control
 - Auto-Exposure mode control
 - Auto-Exposure priority control
 - Exposure control
 - Privacy control
 - Pan and Tilt control
- Built-in UVC Color Processing Control
 - Backlight compensation control
 - Brightness control
 - Contrast control
 - Gain control
 - Power Line Control
 - Hue Control
 - Gamma Control
 - White Balance Control

Debug Interface

- Built-in JTAG interface in 100-pin LQFP
- UART debug interface to access sensor registers
- Easy download program with Xmodem protocol
- Support Atmel(AT25F512A), MXIC(MX25L512), pFlash(PM25LV512A) & SST(SST25VF512A) serial flash

Block Diagram



Supporting Document

1	Product Brief
2	Data Sheet
3	Hardware Design Guide
4	Application Schematic

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