

EM2600

USB2.0 Skype phone + Dect phone application

EM2600 supports SKYPE, MSN, YAHOO MESSENGER and other Instant-Messengener type of application.

It support AC97 or PCM interfaces, command serral bus interface and general I/O port for Keypad or LCD panel funtions.

It also provide an embedded 8051 MCU for any extended USB or control functions.



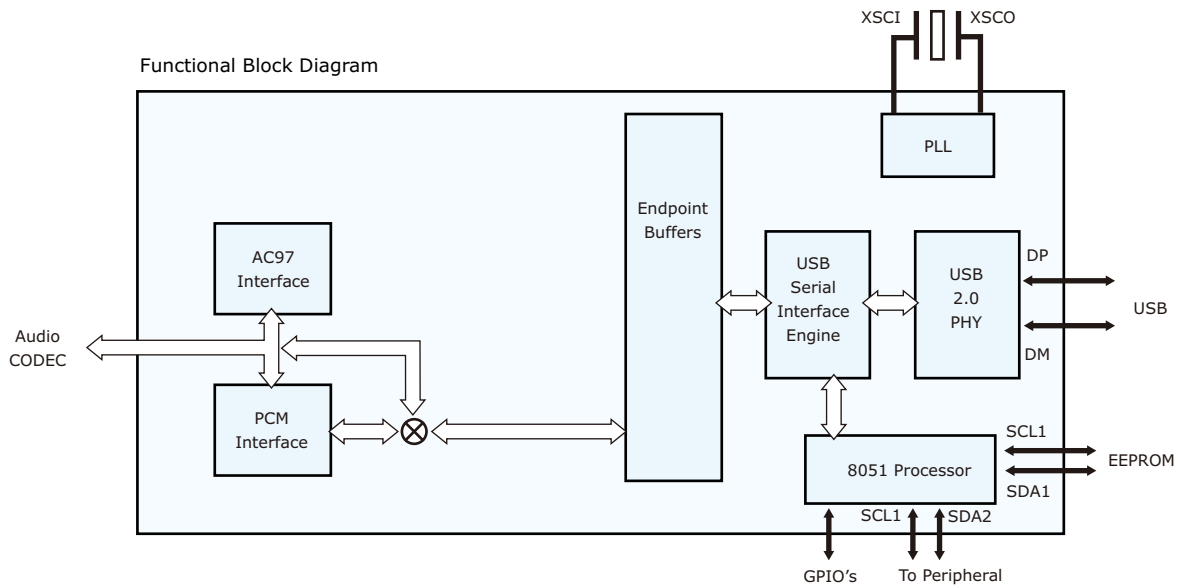
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USB2.0 Skype phone application

EM2600



Features

Major Spec

Audio In/Out

- compliant to USB Audio class
- Support 2 ch ADC (micro phone) and 2 ch DAC (speaker) streaming
- Support AC97 CODEC interface
- Support PCM interface
- Support Linear PCM-16, A-Law / u-Law, ADPCM for audio formats
- Support direct - access to AC97 CODEC registers
- Support stereo and mono audio configuration
- Support audio sample rate from 8KHz to 48 KHz

General

- USB2.0 High Speed mode and USB1.1 full speed mode
- Embedded turbo 8051 MCU, average 2 to 4 clocks per instruction
- Many General I/O ports for 8051 MCU
- Support 2 Timers for 8051 MCU
- Support basic and extended interrupts for 8051 MCU
- Support UART for 8051 MCU with 9600,38400 baud rates
- Fully customizable Microcode in external EEPROM, sized 8KB or 20KB
- Customizable Vendor ID, product ID, Vendor String, product string
- 2 set of 2-wire command serial bus for peripheral devices control
- USB suspend output to peripheral devices
- 64 pin LQNP packages



EM2770/2775



USB2.0 PC Camera Controller

EM277X USB2.0 PC Camera Controller is a mature solution for USB2.0 PC Camera application.

EM277X support up to 3M pixels sensors, with digital Microphone function, final video data would be transferred to the USB host via isochronous or bulk mode. Application of such a system can be video conference, external web camera video mail and embedded note book Camera.



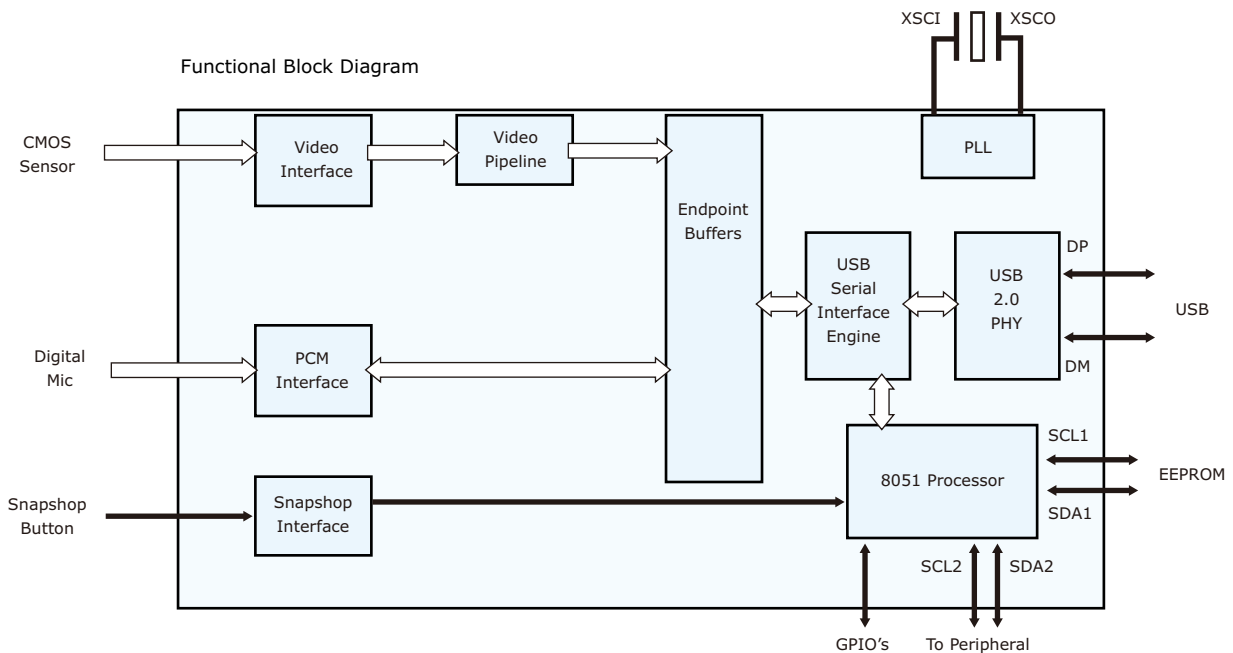
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USB2.0 PC Camera Controller

EM2770/2775



Features

Video In

- Compliant to USB Video Class
- Support snapshot button and still image capture
- Flexible Video Input Port supports various CMOS sensors
- Provide clock to CMOS sensor
- Support CCIR-656 YUV with embedded sync
- Convert Bayer RGB to YUV color space
- Black Clamping
- Gamma Correction
- Gain and offset adjustment in RGB space
- 9-window image statistics collection for AE and AWB
- Defect pixel compensation
- Gain and offset adjustment in YUV space
- Sharpness enhancement
- Random ratio down scaler
- Anti-noise filter to reduce video noise

Audio In

- Compliant to USB Audio Class
- Support in (microphone) streaming
- Interface with Digital Microphone CODEC
- Support Linear PCM-16 format
- Support stereo and mono audio
- Support audio sample rate from 8 KHz to 48 KHz

General

- USB 2.0 compliant
- Support serial and I2C EEPROM interface
- Embedded turbo 8051 microcontroller runs 2 to 4 clocks per instruction

- Many general I/O ports controlled by the 8051
- Support 2 timers in the 8051
- Support basic and extended interrupts in the 8051
- Support UART with baud rates upto 3Mbit/sec in the 8051
- Fully customizable microcode in external EEPROM, sized 12 KB
- Customizable Vendor ID, Product ID, Vendor String, Product String
- 2 sets of 2-wire command serial bus to peripheral devices
- USB suspend output to peripheral devices
- Built-in 1.8V regulator for single supply voltage
- 0.18 micron, 1.8V core, 3.3V I/O CMOS process
- 46 pin LQFN (6.5*4.5) & BGA (4*4) packages

EM27XX Series Selection Guide

	Support VGA 30 FPS	Support 1.3M Pixel	Support 2.0M Pixel	Support Mic Type	Video class
EM2750	RGB/YUV	RGB/YUV	YUV	Analog	N
EM2760	RGB/YUV	RGB/YUV	YUV	N.A.	Y
EM2765	RGB/YUV	RGB/YUV	YUV	Analog	Y
EM2770	RGB/YUV	RGB/YUV	YUV	N.A.	Y
EM2775	RGB/YUV	RGB/YUV	YUV	Digital	Y
Supporting Sensors	OV 7725/7670/60/48. MI360/370/380... Samsung 83A	OV 9650/53/55 MI1310/20/30	MI2010/2020 Samsung 3BAF OV 2640		



EM28XX series



USB2.0 Video Capture Device & A/D PCTV Controller

EM28XX USB2.0 Video Controller is a highly integrated IC that provides a cost-effective solution for both Digital (DVB_T / ATSC / ISDB_T / DMB_T/H) / analog TV Video capture application.

Not only pure PC TV function, we also support Nand Flash interface on this series.

EM28XX is the bus powered device that providing application of such a system can analog / digital PC TV Box.

PC TV stick with pen drive function, Camcroder video capture, editing and others USB2.0 Video devices.



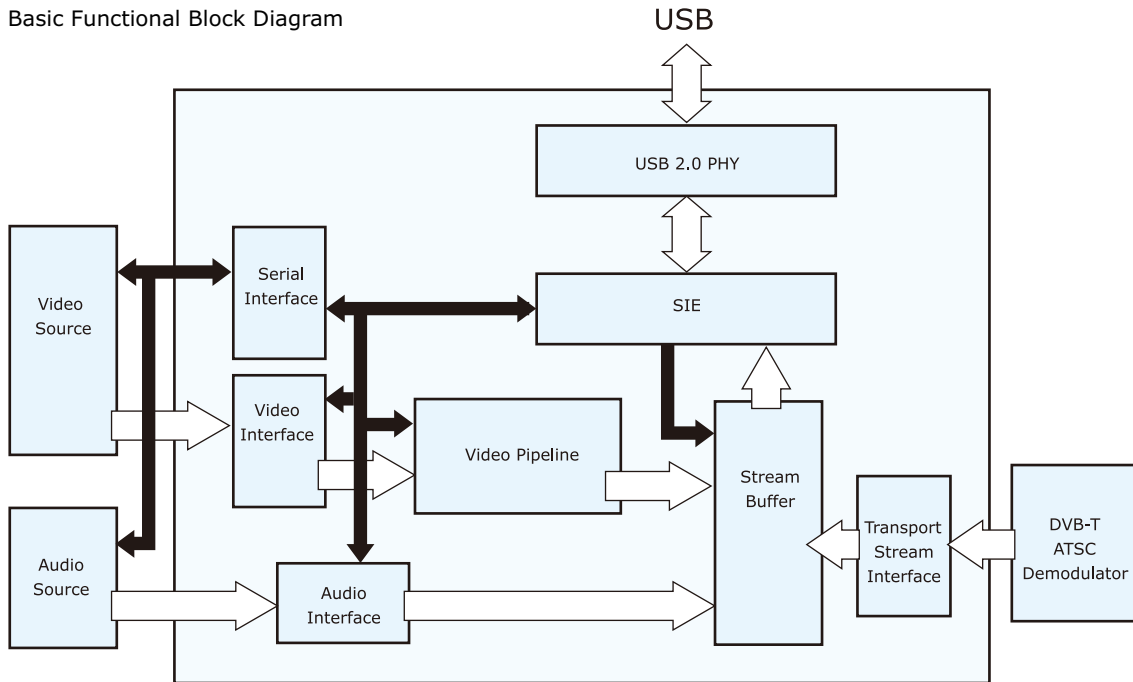
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USB2.0 Video Capture Device & A/D PCTV Controller EM28XX

Basic Functional Block Diagram



Features

DTV Transport Stream

- Support DVBT, ATSC, ISDB_T, DMB_T/H, QAM or DVBS demodulators
- Dual transport stream input ports
- Receive serial form transport streams
- Transport stream PID filters allowing in packets of 15 PID's
- Null PID filter rejecting null packets
- Transport stream endpoint type can be isochronous or bulk
- Transport streams are DMA'ed to USB for max performance
- AES-128 encryption for transport stream data
- Decode infrared remote control protocols NEC, RC5, and RC6

NAND Flash Interface (EM28x8)

- Compliant to USB Mass Storage Class, Bulk-Only Transport
- Support up to four 8-bit NAND Flash chips
- Support 1-bit (standard SMC spec.) or 2-bit error correcting capability
- Flexible command set and adjustable interface timing support various types of devices

General

- USB 2.0 and 1.1 compliant
- Embedded turbo 8051 microcontroller runs 2 to 4 clocks per instruction
- Many general I/O ports controlled by the 8051
- Support 2 timers in the 8051

- Support basic and extended interrupts in the 8051
- Support UART with baud rates 9600, 38400 in the 8051
- Fully customizable microcode in external EEPROM or NAND Flash, sized 8 KB or 20 KB
- Customizable Vendor ID, Product ID, Vendor String, Product String
- 2 sets of 2-wire command serial bus to peripheral devices
- USB suspend output to peripheral devices
- 0.18 micron, 1.8V core, 3.3V I/O CMOS process

EM28XX Series Selection Guide

	Support HDTV	Support 720x576	MTS/VBI	MCE	Support Flash	NTSC PAL ECAM	Support Tuner
EM2860		●	●			●	Analog
EM2862		●	●	●		●	Analog
EM2868		●	●	●	●	●	Analog
EM2872	●			●			Dual digital
EM2874	●			●			ISDB-T
EM2878	●			●	●		ISDB-T
EM2882	●	●	●	●		●	A/D Hybrid
EM2888	●	●	●	●	●	●	A/D Hybrid



EM2970



USB2.0 World first Digital PCTV + PC Camera Controller

EM2970 is a multi-function USB device that supports PC camera and Digital TV functions into a single chip. This chip has transport streaming interface, command serial bus interface, and general I/O ports. You could just use one device with EM2970 and then get Digital TV and Video Conference functions at the same time.



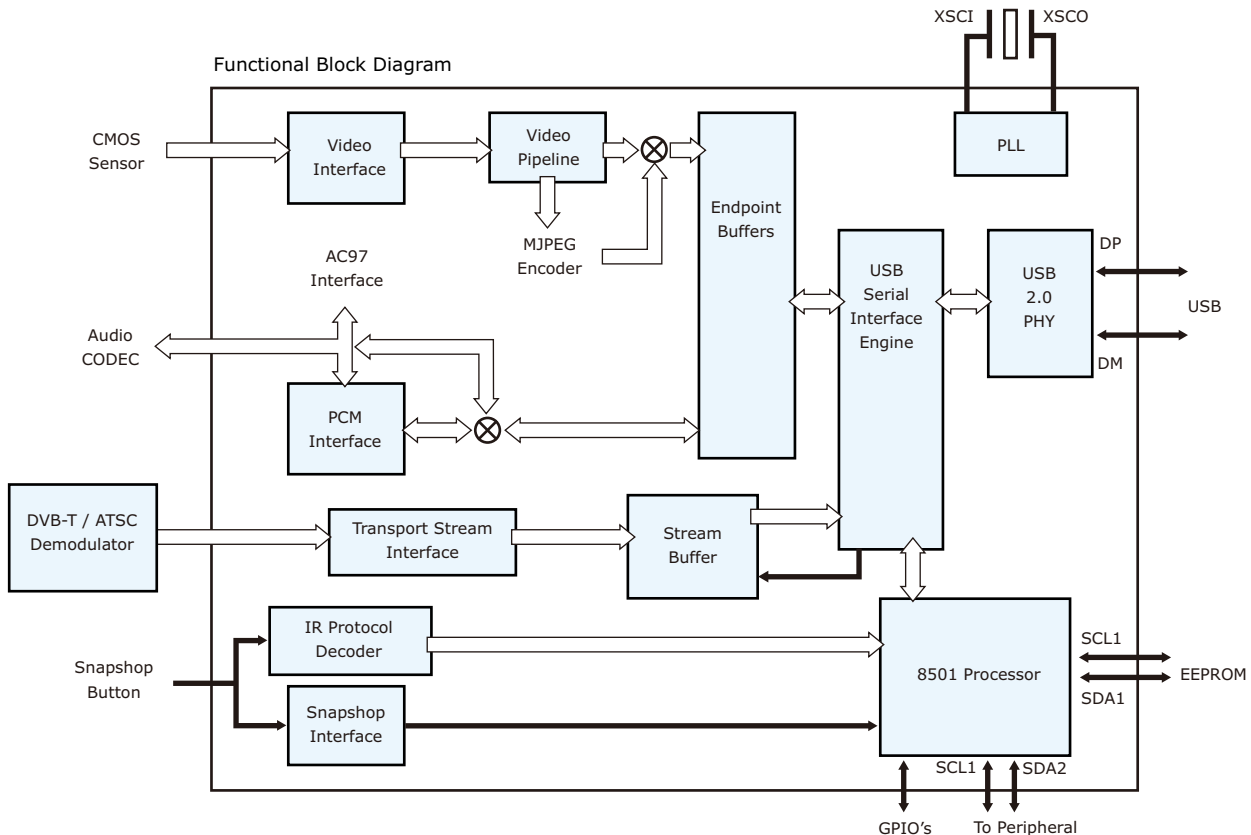
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USB2.0 Digital PCTV + PC Camera Controller

EM2970



Features

Transport Stream Interface

- Parallel transport stream input port
- Serial transport stream input port
- Interface with DVB-T/H, ATSC, ISDB-T or DVB_S demodulator

Video In

- Compliant with USB Video Class
- Support snapshot button and still image capture
- Support up to 2M/1.3 M/VGA CMOS sensors and CCD sensor in YUV format
- Provide clock to CMOS sensor
- Support CCIR-656 YUV with embedded sync
- Convert Bayer RGB to YUV color space
- Black Clamping
- Gamma Correction
- Gain and offset adjustment in RGB space
- 9-window image statistics collection for AE and AWB
- Defect pixel compensation
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- Sharpness enhancement
- Random ratio down scaler

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Remote Controller Infrared Sensor Interface

- Support NEC and RC5 remote control protocols

