太 欣 半 導 體 股 份 有 限 公 司
Syntek Semiconductor Co., Ltd.

# DC1120


The CT-DC1125 is a highly integrated, single chip high-speed USB 2.0 compliant digital video imaging controller. Utilizing a high-speed, high-bandwidth isochronous pipe, it is able to transfer 30+ frames per second of raw video data without compression, or to capture ITU-R 656 format NTSC/PAL video. In addition, it provides 16 bit stereo audio stream through a USB 2.0 Isochronous pipe.

CT-DC1125 supports a wide range of low cost CMOS image sensors and video decoders. The device also provides an interface to an inexpensive AC97 external stereo audio codec, or uses an integrated low cost 8-bit mono ADC.

## Uncompressed video data stream

- 1280x1024 resolution at 10 to 15 fps
- 800x600 resolution at up to 27 fps
- 640x480 resolution at up to 30 fps
- Software image enhancement filter and Video source control for maximum flexibility
- Hardware windowing and decimation
- No external buffer RAM required

## Sensor Interface

- Glueless interface to most CMOS Image Sensor chips up to 1.3M pixel
- Programmable clock, vertical and horizontal blanking signals in slave or master mode
- Supports 8 and 10 bit per pixel Bayer format data
- Programmable serial interface for serial communication with video source
- Supports bad pixel correction

## Video Decoder Interface

- Supports 8 bits per pixel ITU-R 656 and YUV 4:2:2 data
- Programmable serial interface for serial communication with video source
- Supports Irda for remote control devices.

## Integrated USB 2.0 Transceiver

- USB2.0 High Speed and USB 1.1 Full Speed functionality
- USB composite device with video and audio interfaces
- USB2.0 Isochronous video pipe can transfer up to 24MB/sec
- USB2.0 Isochronous audio pipe can transfer up to 192kB/sec
- USB bus powered
- Supports USB remote wake-up
- VendorID, product IDs and string descriptors can be stored in an external serial EEPROM

## Audio Processor

- Supports 8-bit mono audio recording at 8KHz sample rate with integrated ADC
- PCM audio format
- USB audio class compliant
- Supports 16-bit audio recording at 48KHz sample rate

## General Purpose Input/Output

- 10 general purpose input/output pins
- 20 bit power-on strapping register

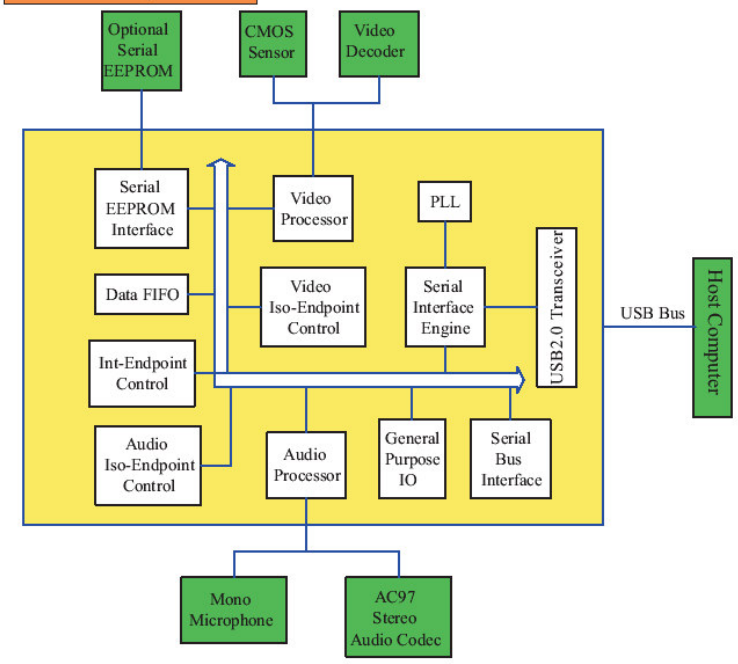
## External serial EEPROM

- Supports up to 16k bit serial EEPROM.

## Power management

- 2.5V Core Supply Voltage
- Internal PLL to generate sensor clock and control signals
- 100 pin LQFP package

## Internal Block Diagram




Reference design kit is available

System Block Diagram