



太欣半導體股份有限公司  
Syntek Semiconductor Co., Ltd.

## DC1100 USB 2.0 Video Camera Controller



### Product Overview:

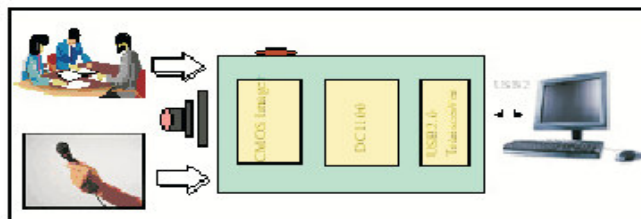
The CT-DC1100 is a High Speed USB 2.0 compliant digital video camera controller. Utilizing a high-speed high-bandwidth isochronous pipe, it is able to provide 30 frames per second of uncompressed video data at VGA resolution or 24 frames per second at XGA resolution. The device is able to record audio stream in addition to video stream.

The device supports low cost CMOS image sensors and also video decoder devices. The device also provides a simple connection to audio equipment without external component

## Product Features:

- Uncompressed video streaming capability
  - ◆ Supports 1024x768 sensors up to 24 fps
  - ◆ Supports 800x600 sensors up to 27 fps
  - ◆ Supports 640x480 sensors up to 30 fps
- Software image enhancement filter
- No external frame or line buffer required
- Sensor Interface
  - ◆ Interfaces with off the shelf CMOS Image Sensor chips
  - ◆ Support 8/10 bit per pixel Bayer format
  - ◆ Support ITU 656 YUV 4:2:2 format (8 bit) video input
- Host Interface
  - ◆ USB2.0 High Speed Device compliant also backward compatible to USB 1.1 Full Speed transaction
  - ◆ USB2.0 video and audio composite device
  - ◆ Interface with external Transceiver Macrocell Interface (UTMI) transceivers at different modes
  - ◆ Interface with Philips ISP1501 transceiver
  - ◆ Supports USB2.0 Control, Interrupt, Bulk and Isochronous pipes
  - ◆ USB2.0 Isochronous video pipe up to 24MB/sec
  - ◆ USB2.0 Isochronous audio pipe up to 8kB/sec
  - ◆ USB bus powered
  - ◆ Support USB remote wake-up
  - ◆ Video data interface
  - ◆ Audio control and audio data interfaces
- Audio Processor
  - ◆ Support 8-bit mono audio recording at 8KHz sample rate
  - ◆ Integrated ADC
  - ◆ USB audio class compliant
- General Purpose Input/Output Interface
  - ◆ 10 general purpose input/output ports
  - ◆ 17 bit power-on strapping register

- External serial EEPROM interface
- Power management
  - ◆ 2.5v core supply voltage
  - ◆ 3.3v input/output tolerance
  - ◆ Internal PLL to generate sensor clock and sync signals
- Package
  - ◆ 80 pin LQFP package
- System Block Diagram:



- Internal Block Diagram:

