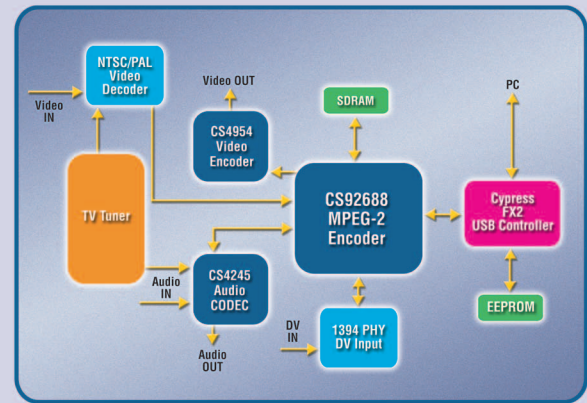
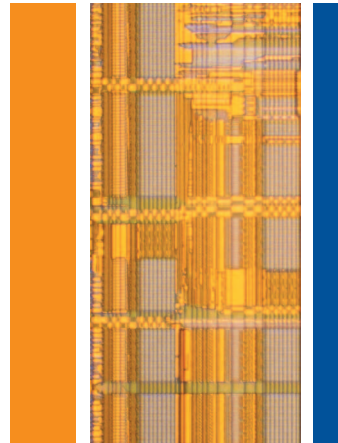


USB-DVR 3.0



USB-DVR 3.0 FEATURES

- USB 3.0 reference design for MPEG-1 or MPEG-2 audio/video encoding/decoding
- Supports USB 2.0 and 1.1
- Includes hardware, software, firmware, schematics, Gerbers, layout, BOM files and system manual
- Computer display of MPEG-1 and MPEG-2 video (requires DVD decoder software and license)
- Composite and S-video inputs and outputs
- Real-time two channel MPEG (Layer II) audio encoding/decoding
- Real-time MPEG-1 or MPEG-2 ML@MP video encoding/decoding
- Variable recording rates (4MB/s – DVD, 2.2MB/s – SVCD, 1.1MB/s – VCD)
- Cypress® EZ-USB® FX2 Controller
- Cirrus Logic® CS4245 audio CODEC with INPUT volume control (105 db dynamic range)
- Supports the Philips® SAA7115a video decoder
- Hardware-based audio/video multiplexing and demultiplexing for perfect A/V synchronization
- Hardware-based audio/video multiplexing for perfect A/V synchronization
- Optional support for AC3/Dolby® Digital audio decode (requires license from Dolby)
- Enables fast development of aggressively priced products

Advanced CS92688 Processor Powers USB-Based Digital Video Recorder Reference Design

USB-DVR 3.0

The USB-DVR 3.0 reference design makes it easy to capture, edit, view, and store audio, video and television signals on Microsoft® Windows® operating system-based personal computers with USB ports. MPEG video can be displayed on a computer monitor or a standard NTSC/PAL video monitor. The cost-effective USB-DVR 3.0 design incorporates the CS92688 MPEG-2 audio/video CODEC, the CS4245 Audio CODEC, a DV (1394) PHY, a video digitizer and SDRAM memory. Optional components include the CS4954 NTSC/PAL video encoder and an NTSC or PAL/SECAM Cable TV tuner.

The CS92688 MPEG-2 audio/video CODEC is the heart of the reference design. It's a single-chip, real-time MPEG audio/video encoder/decoder featuring a programmable system mux/demux that encodes/decodes MPEG-1/2 compatible bitstreams with frame accurate lip sync.

USB-DVR 3.0 Differentiators

- DV (1394) input and camcorder control
- Converts DV to MPEG-2 in real-time
- CODEC architecture enables analog audio/video output to VCRs and televisions
- Based on the new CS92688 low-cost MPEG-2 CODEC with built-in DV support

System Requirements

The minimum system requirements are:

- Intel® 800 MHz Pentium® III/AMD® 800 MHz K6-2
- Microsoft Windows operating systems 98SE/ME/XP/2000
- 64 MB minimum RAM
- 60 MB free HDD space (time-shifting applications will require significantly more space)
- Graphic accelerator with MS-DirectDraw® overlay support (determined by DVD decoder software)
- SVGA monitor (800x600)
- USB 2.0 or 1.1 port (1.1 port will limit performance)

USB-DVR 3.0

DELIVERABLES

- USB-DVR 3.0
 - 4-Layer PCB
 - TV Tuner (PAL/SECAM or NTSC)
- USB cable
- Power supply
- USB-DVR 3.0 w/DV HW reference CD containing:
 - Schematics (Orcad)
 - Gerbers
 - Job/layout files (PADS)
 - Bill of materials (MS Excel®)
- USB-DVR 3.0 w/DV SW reference CD containing:
 - Windows 98SE/ME/XP/2000 device drivers for x86-based systems
 - Demo application
 - Demo application source code (in C++)
 - Release/application notes
 - Demo copy of OEM DVD decode software
 - Manufacturing test program
 - USB-DVR 3.0 w/DV system manual
 - USB-DVR 3.0 w/DV manufacturing test program manual
- CS4245 product bulletin

DV INPUT Support

The USB-DVR 3.0 with DV board allows the end-user to connect their new digital video camera with DV OUTPUT directly to the DV INPUT of the board. The DV is then converted to MPEG-2 in real-time and the camcorder can be directly controlled via the PC, enabling software control (and automation) of the entire editing and conversion process.

Software Licenses

The USB-DVR Reference Design Kit includes a demo copy of an OEM DVD decoder software package. It is the customer's responsibility to acquire the appropriate number of software licenses for this bundled DVD decoder software to support the manufacturing and selling of products based on the USB-DVR 3.0 design.