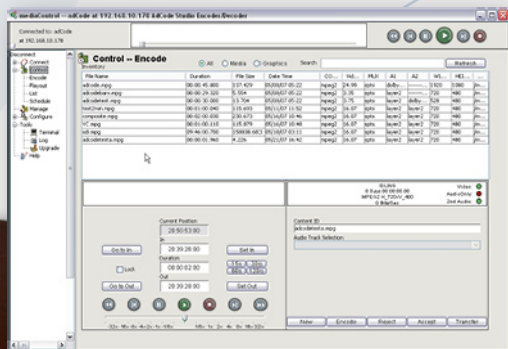


mediaHUB™ MPEG 2 Media Ingest Station & Studio Encoder

Regardless of your source (SDI, S-Video, Composite or DV25 via Firewire), mediaHUB provides broadcast quality MPEG 2 standard definition video as well as MPEG Layer 2 and Dolby Digital audio encoding for excellent on-air presentation which can be used for Commercial Insertion, Video On Demand, or Long Form applications.



mediaHUB is a realtime standard definition MPEG 2 video, MPEG and Dolby audio encoder. With the ability to capture standard definition video and multiple stereo audio streams in realtime, mediaHUB allows users to view a confidence decode of the video as well as audio track selection while capturing. When capture is completed, mediaHUB provides review, accept and transfer options. Transfers can be made to the local host computer, a remote FTP server and directly to one or many Adtec video servers. mediaHUB includes control of professional VTRs over serial RS-422 or FireWire

for accurate selection of acquisition material. Live feeds from satellite or newsroom sources can also be recorded on command by mediaHUB. If you work in a non-linear editor like Final Cut, you can export directly to mediaHUB without rolling tape in real time. Regardless of your source, mediaHUB provides broadcast quality MPEG 2 SD encoding for the best on-air presentation.



applications

- **Commercial Insertion:** Encode commercials from tape or directly from Final Cut for digital program insertion (DPI) or linear insertion. Review encoded files from any source before they are released to the enterprise.
- **Video On Demand (VOD):** Encode commercials from tape or directly from Final Cut for Video On Demand (VOD) compliant to the Cable Labs ADI specification.
- **Program Acquisition:** Encode long form material from tape or satellite based on time, serial, Ethernet or GPI control.
- **Multimedia:** Create files that provide the best quality playback on any Adtec digital media player or server.
- **Non-Linear Editing:** Use mediaHUB to offload the rendering process in Final Cut for real-time production of your work. Useful when creating content for video servers or DVD content distribution.

benefits

- **Ingest with less work:** mediaHUB is designed to make the tedious task of media ingest more streamlined and accurate with configurable work profiles that set up parameters with just one click. All you have to do is select your source material, encode and review while mediaHUB transfers the approved file where you want it automatically.
- **See what you encode:** Real-time confidence decode of the ingested material lets you immediately see and hear what you have captured with control to switch audio channels, abort and re-encode right away. After content is encoded, it can also be reviewed as many times as you want before final approval and transfer.
- **Control with accuracy:** mediaHUB can control VTR sources from RS-422 and FireWire for accurate mark in/out of material to ensure that you get what you want.
- **Get the highest quality MPEG 2 SD:** When it comes to the best on-air look, mediaHUB delivers with CableLabs VOD compliant files or ramp up to full frame D1 quality MPEG 2 standard definition video encoded from low bit rates up to 15Mbps with concurrent multiple Dolby Digital 2/0 (AC-3) and mixed MPEG 1 Layer 2 Musicam audio tracks.
- **Ingest what you need:** mediaHUB interoperates with Adtec's commercial insertion enterprise server, adManage. As a content management server, adManage provides mediaHUB with a prioritized list of commercials scheduled for ad insertion. Once the file is encoded and accepted, the adManage database is updated with valuable metadata including actual duration, ingest time, operator and optional expiration date.
- **Crash record anytime:** For live "crash recording" from satellite or newsroom sources, simply press encode, connect a GPI interface or schedule a time and duration with mediaHUB to automate the encode process.
- **Encode right from Final Cut Pro:** If you spend most of your day in Final Cut, you will appreciate the way mediaHUB offloads your work using Print To Video (Pro and Express) for near frame accurate or Edit to Tape (Pro only) frame accurate media acquisition over FireWire.
- **Create DPI-ready files:** Whether you currently splice local content into a digital transport stream or you are planning for DPI in the future, mediaHUB can create files that work in switched SDI, analog ad insertion and DPI ad servers from Adtec or other vendors.

Encode Features

- SDI: SDI input video with embedded SMPTE 259M AES-EBU channel 1, 2, 3, 4 audio.
- Analog: Composite or YC video
- Dual Stereo analog audio input.
- Dual Stereo Digital AES-EBU audio input.
- Supports mixed, SDI embedded, Analog, AES-EBU, or Firewire audio inputs
- Firewire (DV25): Video, audio and VTR control on one Firewire cable.
- Non-Linear Editors (NLE): Final Cut Print To Video via Firewire or SDI, Composite or YC if third party card (Decklink Pro or equivalent) is available.
- VOD Compliant to MD-Sp-VOD-CEP-101-040107 excluding HD.

VTR Control Features

- Frame accurate Sony Protocol compatible RS-422 control.
- FireWire protocol compatible.

Note: Some FireWire decks are not frame accurate and may provide +/- 1 to 3 frame accuracy.

- Source control with Play, Stop, FF, RW, Jog, Shuttle, Set In/Out, Goto In/Out and Duration.

Decode Features

- Composite video and analog audio decode.
- Real time confidence decode during encode with abort.
- Decode playback of encoded file.
- Monitor video from composite or S-Video (YC).
- Select audio track 1 or 2 to quality control both audio tracks.

Video Specifications

Video Inputs

- Composite (BNC)
- S-Video (4 Pin Mini-Din YC) analog to digital conversion 9 bit with scaling Horizontal and Vertical 16 tap filters.
- SDI input video with embedded SMPTE 259M AES-EBU audio on BNC.
- (Option) Firewire: DV25 with PCM audio and control on Mini-Firewire connector.

Video Outputs

- One decode configurable to DVI-I, S-Video (4 Pin Mini-Din YC), Composite (BNC). Cable required for VGA, YUV, HDMI, RGBHV and RGB.

VBI Support

- Line 21-Closed Captioning DVS053 Rev 6
- V-Chip DVS157
- Teletext: NABTS-DVS053 Rev 6 and PAL
- Neilson Source Identification (SID) DVS053
- Automated Measurement of Lineups (AMOL) DVS053

Video Encoding and Decoding

- MPEG 1 SD 1 Profile: SIF ISO 11172-2
- MPEG 2 SD 2 Profile: Adaptive Field Frame (AFF) ISO13818 MP@ML
- MPEG 2 SD Profile: AFF ISO13818 422P@ML (encode only option)
- Encoder Filters: Temporal; Spatial Vertically and Horizontally Temporal and Horizontal Spatial can be concurrent
- Chroma filtering and full scaling
- Video bit rates: MPEG 2 SD 300K-15 Mbs
- Video bit rates: MPEG 1 SIF 300K-5 Mbs
- Multiplexing Formats: Program (MPEG 1) and Transport (MPEG 2)
- MPEG Program Specific Information (PSI) Table Compliance: PAT, PMT; All PIDs user definable
- DVB Service Information (SI) Table Compliance: SDT, NIT; All PIDs user definable
- SCTE 35 Splice Point injection

Video Resolutions

- Per Macro Block (16x16) Note: Non-standard Vertical resolutions may adversely effect STB decoders, PC decoders have more flexibility when scaling.
- Horizontal NTSC examples: 720x480 (Full D1 NTSC), 544x480, 528x480, 512x480, 496x480, 480x480, 352x480 (Half D1 NTSC).
- Vertical NTSC example: 720x 464
- Horizontal and Vertical example: 528x464 etc.
- PAL resolutions examples: 720x576 (FullD1 PAL), 720x560, 544x544 etc

Audio Specifications

Audio Inputs

- Analog Audio 1 Stereo Balanced (5 Pin Removable Screw Terminal)
- Analog Audio 2 Stereo (SAP) Balanced (5 Pin Removable Screw Terminal)
- User level control on Analog inputs
- AES-1 digital audio (PCM or uncompressed) for Dolby AC-3 channel 1,2 encoding (5 Pin RST - 110 Ohm).
- AES-2 digital audio (PCM or uncompressed) for Dolby AC-3 channel 3,4 encoding (5 Pin RST - 110 Ohm).
- SDI embedded with video per SMPTE 272M A, B, C, (BNC)
- Digital PCM audio via Firewire
- Audio inputs can be mixed, one Analog, one AES-EBU, or One AES-EBU and one SDI etc.

Audio Outputs

- encoder module has AES (110 Ohm) out of compressed bit stream or PCM audio during encode (does not work after encode)
- decoder module simultaneous S/PDIF digital audio (RCA female) and unbalanced analog stereo audio (L/R RCA female). Digital audio PCM at 16, 20 and 24 bps up to 5.1 channels compressed.
- decoder module (3.5 mm) selectable between audio tracks 1 and 2 decode.
- decoder module fixed unity analog audio level output

Audio Encoding and Decoding

- Dolby Digital 2/0 or 1/0 (AC-3) encoding from analog, SDI embedded audio or AES input.
- MPEG 1 Layer 1 Profile: ISO11172-3
- MPEG 1 Layer 2 Profile: ISO13818-3
- Audio Delay: Adjustable PTS delay up to 700 milliseconds
- 24 Bit A-D Conversion
- Audio Sampling: 16, 22.05, 24, 32, 44.1 and 48 KHz
- MPEG 2 Audio Bit Rate: 64-384 Kbs
- Dolby Digital AC-3 Bit Rate: 64-640 Kbs

mediaHUB Server

- Adtec optimized POSIX compliant embedded Linux 2.6 kernel
- 300 GB internal storage.
- Power: 70-240 VAC 50-60Hz and 65 Watts (20 Watts typical) of power.
- Size: 1RU rack mount chassis. 19" width, 1.75" height, 16" depth (48.26cm X 4.45cm X 40.64cm)
- Weight: 14 lbs (6.35kg)
- Environmental: Active cooling (Fans), 0 to 90 Degrees Fahrenheit, Less than 70% RH, Non-Condensing

Communications

- Ethernet 10/100 (RJ-45) Half Duplex, Full Duplex, Auto Negotiate
- Ethernet Protocols: Telnet and XCP Adtec command API, FTP, HTTP, SNMP (MIBII)
- Serial Communications: 2-RS232 (38400-115,200K, 8, 1 N)
- Samba, NAS and FTP file mounts or transfers
- Automatically copy files from mediaHUB server to client PC using FTP.

Front Panel

- Keypad: Mode, Select, Enter, Escape, Up, Down, Left, Right
- Blue Translucent LCD (20 character by 2 row)
- Host Status LEDs Power, Alarm, Link, Busy, Storage.
- Encode Status LEDs: Encode Active, Video Present, LTC Active, Audio 1 & 2, Control, Alarm.
- Decode Status LEDs: Decode Active, Video Present, LTC Active, Audio 1 & 2, Control, Alarm.

mediaControl Application

- mediaHUB configuration and control application requires one of the following:
- Windows XP and 2000 or Linux computer: Intel or AMD 32 bit processor at 2 GHz; 512MB memory; 1024x768 32 Bit color capable graphics card; TCP/IP compatible computer network.
 - Macintosh OS-X (10.2 or greater) computer: G4 32 bit processor at 1 GHz, G5 64 bit processor (any); 512MB memory; 1024x768 32 Bit color capable graphics card; TCP/IP compatible computer network.

Availability:

MEDIAHUB: Media ingest and prep station w/RS422 control, DVI in, preview decode, MPEG & Dolby stereo audio w/300GB IDE drive.

MEDIAHUB-FW: Media ingest and prep station w/RS422 control, DVI & FireWire in, preview decode, SDI, MPEG & Dolby stereo audio, w/300GB IDE drive.

MEDIAHUB-PRO: Media ingest and prep station w/RS422 deck control, DVI in, preview decode, SDI, MPEG & Dolby stereo audio w/300GB IDE drive.

What's Included:

- mediaHUB Media Ingest
- mediaControl Application control & configuration software
- Connection Kit: Ethernet cable and serial 9 pin adapter (PN:TERMINALKIT1)
- Audio: Five euro audio removable screw terminal (RST)connectors
- Audio/video cable: AV break out cable with S-Video, SPDIF, Composite video BNC pigtails (PN: Media Cable)
- BNC Composite Video, RCA S/PDIF Audio), power cord, Ethernet cable, serial adapter
- Manual (CAT-014-H-2.0)