

mediaHUB™-HD Pro MPEG 2 High Definition Encoder

The mediaHUB-HD Pro is a real-time Contribution-quality MPEG 2 High Definition encoder. It is designed to support the most demanding Contribution, ATSC, DVB and IPTV Distribution and Cable Labs compliant VOD and DPI studio encoding requirements. The auto-detect HD/SD SDI video input eliminates the need for user resolution and frame rate configuration. It boasts dual stream on-board audio encoding of Dolby Digital and MPEG 1 Layer 2 audio with Dolby E and Dolby 5.1 passthrough support.

Standard Adtec features include three ASI outputs as well as a GIGE output, AES3 Digital Audio, SDI and Analog audio inputs and BISS 1/E encryption.

User interfaces include an easy-to-use front panel interface and on-board Web application server for configuration and monitoring. Unique features include a built-in confidence decoder with HDSDI, HDMI and D1 outputs and "Constant Capture" hard drive acquisition for studio, contribution and distribution applications.



benefits

All in one Encode Solution: Support MPEG 2 SD and HD Contribution, Distribution and Studio encoding applications with mediaHUB-HD Pro.

SDI Plug and Encode: Automatic SDI detection (HD and SD) of standards and frame rates.

High and Standard Definition: One box - both formats.

Decode While Encode (DWE): Built-in confidence decoder nearly eliminates the need for external local decoders.

Configure: Rapidly and accurately configure mediaHUB-HD Pro via the front panel or on-board web application.

Highest quality MPEG 2 HD and SD: When it comes to the best on-air look, mediaHUB-HD Pro delivers with excellent quality Standard and High Definition video encoding.

Control with accuracy: mediaHUB-HD Pro can control VTR sources or be controlled by a non linear editor (NLE) via RS-422 for frame accurate mark in/out encoding.

Create VOD and DPI-ready files: Create Cable Labs compliant Transport streams for use with VOD and DPI.

Constant Capture: Automatically capture encodes in user-defined segmented lengths. Useful for maintaining distribution archives, capture of a contribution stream or general studio use.

Monitor: Web Browser, front panel LED and LCD visual alarms, and event logging are standard.

Options & Accessories

BISS Encryption: BISS 1 and BISS E Encryption

mediaUB-SD Pro: The mediaHUB-HD Pro comes standard with the ability to encode High Definition content. For price reduction, the device can be purchased with the a lock on High Definition Encoding with the ability to upgrade at a later time.

Related Products

DTA-3050:

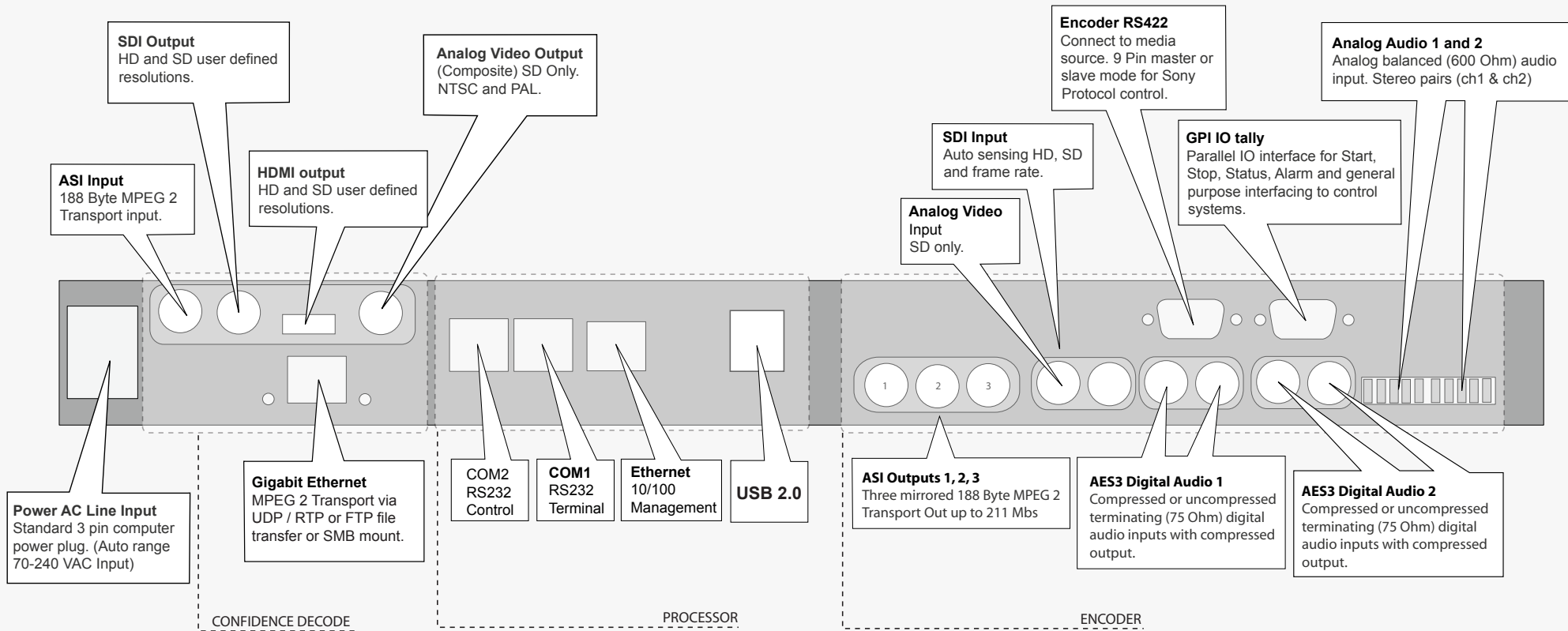
Digital turn around router for transporting MPEG 2 via ASI and IP sources to ASI, SMPTE-310 and IP outputs.

Soloist-HD Pro:

Broadcast quality high definition MPEG 2 and MPEG 4 AVC decoder for broadcast applications



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Encoder Video Profiles

MPEG 2 SD Profile 1:
Adaptive Field Frame (AFF) ISO13818-2 MP@ML
MPEG 2 SD Profile 2:
AFF ISO13818-2 422P@ML
MPEG 2 HD Profile
ISO13818-2 MP@HL (1920 x 1080 or 1280 x 720)

Video Encoding Data Rates

MPEG 2 MP@ML SD / 1 Mbs-15 Mbs - NTSC and PAL
MPEG 2 422P@ML SD / 1 Mbs-50 Mbs - NTSC and PAL
MPEG 2 MP@HL 7 Mbs-59.5 Mbs

High Definition Video Frame Formats

720p24, 720p50, 720p60, 1080i50, 1080i60

High Definition Video Encode Resolutions

Horizontal Resolutions
1280, 1920
Vertical Resolutions
720, 1080

Standard Definition Video Frame Formats

480i, 576i, 480p, 567p

Standard Definition Video Encode Resolutions

Horizontal Resolutions
720, 704, 640, 544, 528, 480, 352
Vertical Resolutions
480, 576

Video Processing

Encoder Filters (SD Only)
Temporal & Spatial (Median)
Time Base Corrector (TBC) on SDI inputs for SD only
Chroma filtering and scaling for NTSC/PAL

Encoder Video Input

Standard Definition (SD) Video Inputs (Encoder)

Analog NTSC and PAL Composite (BNC)
SDI (SMPTE 259M) with embedded audio (SMPTE 272M)
Auto detect SD 270Mbps for SD
D1 Encoding Only - no internal up-conversion.

High Definition (HD) Video Inputs (Encoder)

HD-SDI input video, (SMPTE 292M) with embedded audio
(SMPTE 299M)
Auto detect HD 1.485 Gbs.

* SDI and HD-SDI are the same connector with auto standard (resolution and frame rate) detection.

Encoder Audio Profiles

Dolby Digital 2.0 (AC3) dual stream encoders included
MPEG1 Layer 2 dual stream encoders included
Dolby E, Dolby 5.1 and Dolby Digital 2.0 (AC3) passthrough

Encoder Audio Input

2 - Analog Audio Stereo Balanced Inputs

2 - AES3 digital audio input uncompressed (PCM) or compressed bitstream passthrough from external Dolby 2.0, 5.1 or Dolby E encoders (BNC - 75 Ohm). Includes compressed bit stream output.

1 SDI embedded input
- 4 pairs
- Video per SMPTE 272M
- One user selectable group.

User-defined analog and digital level control with sample rate conversion on all inputs

Transport Outputs

ISO13818-1 MPEG 2 Transport Stream (188 byte only)
(x3 mirrored outputs)
MPEG 2 Transport via GIGE (UDP or RTP)
MPEG 2 Transport to local storage Constant Capture to storage (local or NAS)
ASI, IP and Constant Capture operate concurrently

Transport User Data

SMPTE 334 VANC data extraction for IEEE 708/608. Concurrent User defined VANC Line 7-32 data extraction supported
Teletext: (NABTS) DVS053 Rev 6

Conditional Access

BISS 1/E

Table Compliance

MPEG Program Specific Information (PSI) Table Compliance:
PAT
PMT
DVB Service Information (SI) Table Compliance (Static)
SDT
NIT
TDT/TOT
SCTE 35 Splice Point injection
ATSC A65B (PSIP) Table compliance (Static)
MGT (TVCT, STT, RRT, EIT)

*For dynamic DVB-SI use Adtec's DTA-3050 and DTVmanage SI Server
For dynamic A65B PSIP use Adtec's DTA-3051 and DTVGuide web service*

Decoder Video Output

Confidence decode of encode via internal bus,
No ASI loop required
SD/HDS-SDI SMPTE 259M (SD) and SMPTE 292M (HD)
User definable resolution from D1 to 1080i including scaler for Up and Down conversion
Composite D1 Video (NTSC/PAL) Not concurrent with HD HDMI with HDCP and Audio
DVB-ASI Input

Decoder Audio Output

SDI Embedded audio stereo audio pair SMPTE 272M (SD)
SMPTE 299M (HD) User defined PID
HDMI No analog audio output

Decoder Video Profiles

MPEG 2 SD Profile 1:
Adaptive Field Frame (AFF) ISO13818-2 MP@ML
MPEG 2 SD Profile 2: AFF ISO13818-2 422P@ML
MPEG 2 HD Profile 1: ISO13818-2 MP@H-14 (1440 x 1080)
MPEG 2 HD Profile 2:
ISO13818-2 MP@HL (1920 x 1080 or 1280 x 720)
MPEG - 4.10 (AVC/H.264) MP@L3.0 and L3.1 (max 10Mbps)
(1920X1080 or 1280 x 720)
MPEG - 4.10 (AVC/H.264) HP@L4.0 and L4.1 (max 20Mbps)
(1920X1080 or 1280 x 720)

Decoder Audio Profiles

Dolby Digital AC-3: Bit rates up to 640kbps. Sample rates of 32, 44.1 and 48KHz. Multi-channel up to 5.1 on S/PDIF and downmix to 2 channel Dolby Pro Logic on analog.
MPEG 1 and MPEG 2 Layer I, II and III (MP3) 2.0: Bit rates up to 448kbps (Layer I), 384kbps (Layer II) or 320kbps (Layer III).
Sample rates of 16, 22.05, 24, 32, 44.1 and 48KHz. Single channel, dual channel, joint stereo and stereo modes.
AAC-LC MPEG-2 and MPEG-4:(max 384kbps) Sample rates of 7.35, 8, 11.025, 12, 16, 22.05, 24, 32, 44.1 and 48KHz.

Physical

1 RU chassis (19 x 14 x 1.75)
14 pounds

Power

Start-up: 72 Watts
Operational: 60 Watts

User Interface Requirements

Supported Browsers
IE 7 and higher
Firefox 3.0.0 and higher
Safari 3.0.0 and higher
Opera 9.0 and higher