Overview

We believe the DVEO MPEG-4 Shuttle/IP™ leads the industry in its ability to instantly deliver your content to distant locations at affordable rates over affordable DSL and T1 circuits. It is designed with the latest industry standard ASIC based MPEG-4 encoder technology that is available commercially – with the latest version of the Pro-MPEG Forum’s standard, Code of Practice (COP) 3 release 2 with Forward Error Correction (FEC) for reliable and interoperable video transport.

As an encoder, the MPEG-4 Shuttle/IP digitizes SDI digital or composite analog video signals, along with stereo audio, compresses them using MPEG-2 (MP@ML) or MPEG-4 (SP/L1, L2 & L3, Full D1 & interlacing) 4:2:0 and MPEG-1 Layer-II audio compressions, multiplexes the video and audio streams, and produces a DVB-compliant MPEG-2 Transport Stream. It can accommodate both PAL and NTSC video formats. As a decoder, it will accept any Pro-MPEG, RTP/IP, or UDP/IP encapsulated MPEG-2 video transport stream, and decode video through its digital SDI and analog composite video outputs. It encapsulates the video transport stream into IP packets using the UDP or Real Time Protocol (RTP) for complete interoperability with Set-Top Boxes (STB) and other UDP and RTP compliant gateways.

We made these as close to appliances as we can make them today – simple to setup and operate. They are designed to come up to known state after a power failure and will recover elegantly when the signal is removed and restored. We do not offer many settings, having optimized for the cable industry.

Features

- MPEG-4 over IP – Sends and receives video simultaneously
- MPEG Encoding up to 9 Mbps
- Pro-MPEG COP 3 Release 2 FEC maintains video transport quality
- Standalone Preconfigured appliances requiring no setup at all
- Sold as pairs for a complete video/IP end-to-end solution
- Provides same image quality at MPEG-4 at 2 Mbps as MPEG-2 at 4 Mbps
- Complete end to end solution - Real time video in and video out
- All you supply is the T1/E1/DSL or dedicated Internet line with guaranteed bandwidth, and video
- Designed for 24x7 operation -- setup and forget!
- Optimized for T1 rates if content is uncompressed previously
- For previously compressed material, encode bit rate needs to be increased by 50%-100%
- Video input and output: SDI, composite, or IP (UDP/RTP)
- Audio input and output is SMPTE 272M-ABC SDI-embedded AES audio, or analog
- Note: picture artifacts depends on bandwidth available and motion in pictures
- Standard T1/E/DSL 1 line requirements
- Optional quality requires two T1/E1 lines

Applications

- Studio to Transmitter (STL)
- Studio to studio
- Headend to Headend
- Teleport to Headend
- Headend to Teleport
- Traffic Cam
- Sports venue infrastructure

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GUI’s

Encoder Configuration

Decoder Configuration

Network Configuration

Web Management Configuration

Highlights

- Advanced error correction – Pro-MPEG COP 3 Release 2
  FEC maintains video transport quality despite packet loss, reordering, and duplication
- Two units provide a complete end-to-end solution for transmission of analog video and audio over IP networks – sends and receive audio and video simultaneously.
- Advanced packet pacing & configurable jitter buffer eliminates large packet bursts
- Silent fan-less design completely eliminates any added noise and insures reliability
- Transport of serial RS-232 data over IP for remote camera control

Application Example

Rear Panel
Specifications

Network Interface:
- 1 IEEE 802.3 100/10 Base-TX Ethernet (RJ-45)

IP Network Stream Conditioning & Error Correction (FEC):
- Packet pacing
- Pro-MPEG Forum COP #3 Release 2 FEC
- FEC packet linearization as per Pro-MPEG Forum COP #3.2, Annex A
- 4-20 Rows x 4-25 Columns FEC Matrix

Network Protocols:
- IP Encapsulation: RTP/UDP/IP and UDP/IP
- IETF DiffServ and IEEE TOS compliance
- IGMP v.2 Multicast, SNMP v.2 traps
- DHCP

Audio/Video Interfaces:
- One SMPTE 259M SDI video input (BNC connector)
- One SMPTE 259M SDI video output (BNC connector)
- SMPTE 272M-ABC SDI-embedded 2-ch AES audio
- One Composite video input (BNC connector)
- Two Unbalanced audio inputs (RCA connectors)
- One Composite video output (BNC connector)
- Two Unbalanced audio outputs (RCA connectors)

Transport Stream Bitrate (Audio & Video):
- 400 Kbps to 9.0 Mbps (encode or decode no EC)
- 400 Kbps to 7.5 Mbps (encode or decode with EC)
- 400 Kbps to 4.5 Mbps (bi-directional no EC)
- 400 Kbps to 3.0 Mbps (bi-directional with EC)

Audio:
- MPEG-1 Layer-II audio encoding, ISO/IEC-11172-3 Layer 2 standards compliant
- Stereo bit rates: 64K, 128K, 192K, 256K & 384 Kbps
- SDI embedded audio at 48 K samples/sec, 20 & 24-bit
- Input audio signal levels up to -1 dBu (0.976 Vpeak)

Video:
- 4:2:0 MPEG-2 MP@ML encoding: ISO/IEC-13818-2 standards compliant
- 4:2:0 MPEG-4 Simple Profile @ L1, L2, & L3 with extensions for D1 and interlacing
- NTSC: 720x480, 704x480, 640x480, 480x480, 352x480, 352x240, 320x240
- PAL: 720x576, 704x576, 352x288
- SDI: 720x480, 720x576
- De-multiplex: MPEG-2 Transport & Program Streams
- Encode Line 21 Closed Captioning (Teletext optional)

Serial Interfaces:
- DB-9 RS-232 Interface: remote camera control over IP
- USB Port for future expansion (storage, networking)

Configuration and Monitoring:
- Web setup & monitoring interface over IP network
- SNMP v1 & v2c traps

Electrical:
- AC Power Input: 100-240Vac 50/60Hz, 30VA
- Auto sensing AC power adapter included

Mechanical:
- Dimensions: 8.25” (W) x 6.5” (D) x 1.75” (H)
- Dimensions (mm): 208 (W) x 165 (D) x 44 (H)
- Unit Weight: 2.25 lbs (1.0 Kg)
- Rack mount bracket

Environmental:
- Operating temperature: 0 to 50 °C
- Operating humidity: 0 to 90% non-condensing relative humidity
- Non-operating temperature: -20 to 70 °C
- Non-operating humidity: 0 to 95% non-condensing relative humidity

Regulatory:
- RoHS, CE and FCC compliant

Warranty:
- Parts and labor: One year

Ordering Info

MPEG-4 Shuttle/IP – Sold in pairs

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