



Perfect Video over Any Network

QVidium® SDI MPEG2+4 IP Codec

The QVidium® SDI MPEG2+4 IP Codec provides a compact and reliable solution for transporting live standard-definition SDI video with embedded audio, NTSC and PAL streams across an IP network. QVidium's SDI MPEG2+4 IP Codec implements QVidium's patent-pending ARQ error correction as well as 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.

The QVidium® SDI MPEG2+4 IP Codec can be quickly configured through its intuitive web interface as either an encoder or decoder, or both. As an encoder 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 accepts any ProMPEG, RTP/IP, or UDP/IP encapsulated MPEG-2 Transport Stream, and decodes MPEG2 or MPEG4-SP video through its digital SDI and 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. The encoder



is fully compliant with the Pro-MPEG COP #3 Standard for complete interoperability with QVidium's and third-party networked video devices that also comply with the Pro-MPEG standard.

The QVidium® SDI MPEG2+4 IP Codec includes two forms of error correction: ProMPEG FEC and QVidium's patent-pending ARQ. Full video transport quality can be maintained even in the face of packet loss, packet duplication and packet re-ordering from the IP network when used in conjunction with a Pro-MPEG FEC or QVidium ARQ compatible receiver.

The QVidium® SDI MPEG2+4 IP Codec is simple to set up and maintain. An intuitive web interface control allows configuration and monitoring from any location on the network using a standard web browser from any networked computer. The system also supports Telnet access.

Benefits and Features

- Advanced **error correction**, selectable between Pro-MPEG COP 3 Release 2 FEC and QVidium's patented ARQ, maintains video transport quality despite packet loss, reordering, and duplication.
- QVidium's advanced **packet pacing & configurable jitter buffer** eliminates and handles large packet bursts.
- Compliance with **DVB standards** insures interoperability. Interoperable with Set-Top Boxes (STB).
- **MPEG Encoding up to 9 Mbps** and very low cost per channel provides a very cost-effective solution.
- **Send & receive audio & video** simultaneously. Two Codecs provide a complete video/IP end-to-end solution.
- **Silent fan-less design** with built-in power supply and removable rack-mount bracket.
- Includes **SDI, composite video**, and analog audio inputs and outputs. Handles SDI embedded AES audio.
- Composite and SDI video signal front-panel indicator lights for inputs and outputs.
- Transport of serial RS-232 data over IP for **remote camera control**.

Specifications

Network Interface:

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

IP Network Stream Conditioning & Error Correction (EC):

- QVidium patented ARQ error correction
- QVidium 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:

- 1 SMPTE 259M SDI video input (BNC connector)
- 1 SMPTE 259M SDI video output (BNC connector)
- SMPTE 272M-ABC SDI-embedded 2-ch AES audio
- 1 Composite video input (BNC connector)
- 2 Unbalanced audio inputs (RCA connectors)
- 1 Composite video output (BNC connector)
- 2 Unbalanced audio outputs (RCA connectors)

Stream Bitrate (Audio & Video):

- 400 Kbps to 9.0 Mbps (encode or decode no EC)
- 400 Kbps to 7.5 Mbps (encode or decode w/EC)
- 400 Kbps to 4.5 Mbps (bi-directional no EC)
- 400 Kbps to 3.0 Mbps (bi-directional w/EC)

Audio:

- MPEG-1 Layer-II audio encoding, ISO/IEC-11172-3 Layer 2 standards compliant
- Stereo bit rates: 64K, 128K, 192K, 256K & 384K bps
- Sampling rates: 32K, 44.1K & 48K samp/sec
- SDI embedded audio at 48 Ksamples/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% R.H., non-condensing
- Non-operating temperature: -20 to 70° C
- Non-operating humidity: 0 to 95% R.H., non-condensing

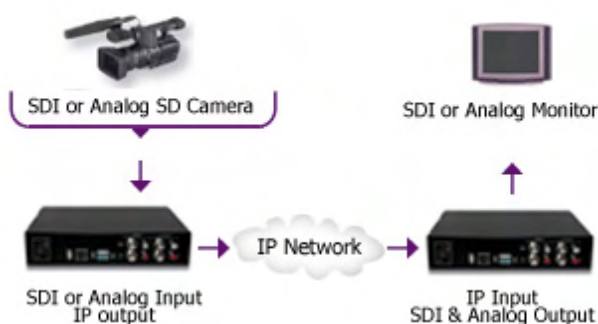
Regulatory:

- RoHS, CE, and FCC compliant

Warranty:

- Parts and labor: 1-year

Application Example



Ordering info: Model# QVSDI-11-IP

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