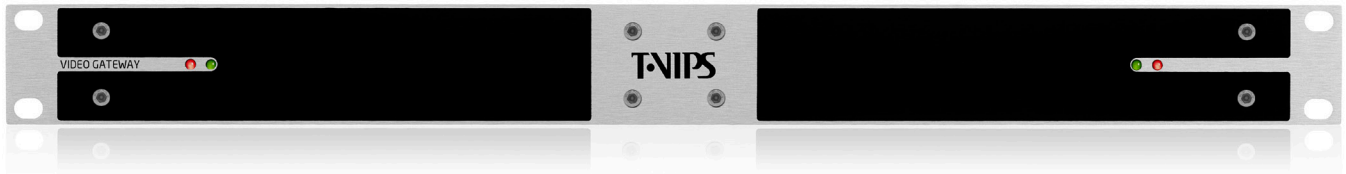


TVG610 MPEG-4 Contribution Decoder



The TVG610 MPEG-4 Contribution Decoder offers best-in-class video quality with MPEG-4 AVC 10-bit 4:2:2 decoding for SD and HD, combined with DVB-S/S2, ASI and IP input interfaces.

Designed for professional broadcast contribution, the TVG610 is ideal for decoding of sports, news and other live events contributed in MPEG-2 or MPEG-4 via satellite or IP links.

The TVG610 is part of T-VIPS' Video Gateway line of compact, powerful and cost-effective products designed for real-time contribution and distribution of broadcast quality video signals.

The TVG610 MPEG-4 Contribution Decoder is a future-proof platform for MPEG-4 decoding, offering support for 10-bit and 4:2:2 coding, as well as future upgrade path to 3G/1080p 50/60 Hz. At the same time, the TVG610 includes support for MPEG-2 4:2:0 and 4:2:2 SD and HD decoding, ensuring full compatibility with existing contribution infrastructure.

The TVG610 is ideal for live contribution over satellite links, offering redundant integrated L-band inputs with DVB-S/S2 demodulation. Automatic input redundancy is also supported for ASI and IP/Ethernet inputs. Content protection is ensured by support for BISS 1/E descrambling.

Applications

- Professional broadcast contribution
- Satellite and IP contribution
- Outside Broadcast productions
- Live event coverage (Sports/News)
- Studio-to-studio media exchange
- Primary distribution

Key Features

- **High quality MPEG-4 AVC decoding**
 - SD up to 30 Mbit/s, HD up to 60 Mbit/s
 - 10-bit and 8-bit resolution
 - 4:2:0 and 4:2:2 chroma sampling
- **Support for MPEG-2 decoding**
 - SD up to 30 Mbit/s, HD up to 60 Mbit/s
 - 4:2:0 and 4:2:2 chroma sampling
- **Integrated DVB-S/S2 demodulator**
 - Dual RF inputs with monitoring of transmission signal parameters
- **ASI and IP/Ethernet interfaces**
 - Input switching between redundant IP or ASI sources
 - Transport Stream on IP output forwarding
 - Flexible Forward Error Correction
- **Low latency modes**
 - Less than 300 ms decoder latency
- **Ancillary data support**
 - Extensive support for ancillary data and broadcast signalling
 - Closed captioning, time code, AFD, WSS, VPI, teletext
- **Compact, flexible cost-effective solutions**
 - 1 RU 19" integrated chassis with dual AC power supply
 - Integrated frame synchronizer
 - Integrated HD-to-SD down conversion
- **User-friendly configuration and control**
 - Integrated web-based user interface
 - SNMP MIB for easy integration with NMS systems
 - Integrated with T-VIPS Connect and Skyline's Dataminer



TVG610 MPEG-4 Contribution Decoder

Input interfaces

ASI input: 2 DVB-ASI inputs
 Female BNC connector, 75 ohm

IP/Ethernet input: 2 Gigabit Ethernet, 100/1000Base-T with RJ-45 connector

IP Encapsulation: RTP/UDP/IP, UDP/IP (SMPTE 2022-1/2)

L-band input: 2 F-type connectors, 75 ohm
 Level -65dBm to -25dBm
 Frequency range 950-2150 MHz

Demodulation: DVB-S and DVB-S2
 DVB-S: DVB-S QPSK to 45 Mbaud
 Viterbi/Reed-Solomon decoding

DVB-S2: QPSK to 45 Mbaud, 8PSK to 37 Mbaud
 LDPC/BCH decoding
 Roll of factor 20 % - 25 % -35 %

Video Decoding

Video Decoding: MPEG-4 AVC/H.264 and MPEG-2

Profiles Supported: MPEG-4: Main, High, High10, High 4:2:2
 Profile up to Level 4.1

MPEG-2: 422P@ML/HL

Decoding bit rate: SD up to 30 Mbit/s, HD up to 60 Mbit/s

Video Processing: HD to SD down conversion, 3:2 pull-down

Video Formats

SD 625 / 525 lines: 25i / 29i / 30i
 1280x720: 50p / 59p / 60p
 1920x1080: 25i / 29i / 30i / 24psf / 50p / 59p

Audio Decoding

Audio channels: Native decoding of up to 8 stereo pair
 Multi-channel 5.1 audio service support

Audio encoding: MPEG-1 Layer II, MPEG-2/4 AAC-LC
 HE-AAC v1 & v2

Audio pass-through: Dolby E, Dolby Digital/AC-3 and Dolby Digital Plus/E-AC-3

Audio processing: 5.1 decoding to stereo mix down

Video Output

Video output: 3 SD-SDI, HD-SDI, ASI
 Connector: Female BNC (75 ohm)

Audio output: Embedded in SDI, 8 pairs (16 channels)

External audio output: AES/EBU up to 4 stereo pairs (XLR connector, balanced audio, 110 ohm)

Ancillary data SD

SD VBI: VITC timecode (IEC 60461)
 WSS (ITU-R BT.1119-2)
 VPS (ETSI EN 300 23)
 WST (ITU-R BT.653-3)
 Enhanced Teletext (ETSI EN 300 706)
 Closed Captioning (CEA/EIA 608-D)

Ancillary data HD

VANC data: Ancillary timecode (ST 12M-2)
 AFD (ST 2016-1), VPI (ST 352M)
 Closed Captioning (CEA/EIA 608/708, ST 334-1/2, ARIB STD-B37),
 Teletext/VPS (ST 2031M),
 SCTE 104 messages (ST 2010)

MPEG-2 Transport Stream

Conformance: MPEG-2 (PSI), DVB (SI), ATSC (PSIP)
 ISDB, SBTVD (ISDB-T International)

MPEG-2 TS: SPTS/MPTS, max bit rate 200 Mbit/s

Content protection: DVB Descrambling BISS 0/1/E
 IP Output: SMPTE 2022-1/2

Control and Management

Type: 100/1000 Base-T Ethernet (RJ-45)
 Features: Web-based GUI, SNMP traps/config
 Alarm Relay: 9 pin D-SUB
 Maintenance Port: USB

Physical and Power

Input Voltage: 100-240V AC 50/60 Hz
 Dual PSU with load sharing

Dimensions: 1 RU 19", 482 x 508 x 44.5mm (WxDxH)

Power consumption: ~130W

Environmental Conditions

Operating Temperature: +5 to +40 °C
 Storage Temperature: -20°C to +70°C
 Relative Humidity: 5% to 90% (non condensing)

Compliance

ROHS, CE and FCC class B Certifications, ECM Compliancy:
 EN 55022: 2006, EN 55024: 1998 / A1 : 2001 / A2 : 2003,
 FCC PART 15 Class B: 2006, EN 61000-3-2: 2000 / A2 : 2005,
 EN 61000-3-3: 1995 / A1 : 2001 / A2 : 2005
 Safety: EN/UL/CA 60950-1