

VXG⁶

video streaming



real time multi path
H.264/AVC
low delay
unicast/multicast
teletext
direct-to-DVB recoding



The VXG-6 streaming solution provides real-time streaming through low-bandwidth connections (e.g. xDSL) based on H.264/AVC.

P2P / P2MP and variable bit rate

VXG-6 allows Point-to-Point as well as Point-to-Multipoint transmissions. The system requires at least a unidirectional IP-based data link. The data rate is adaptable to the available bandwidth. Lip synchronisation is guaranteed even on transmission errors.

Operation Modes

Star-shaped and cascaded distributions are possible. If more than one transmission path is used, VXG-6 will route the data rate through all available channels to maximize the overall throughput.

Teletext Transmission

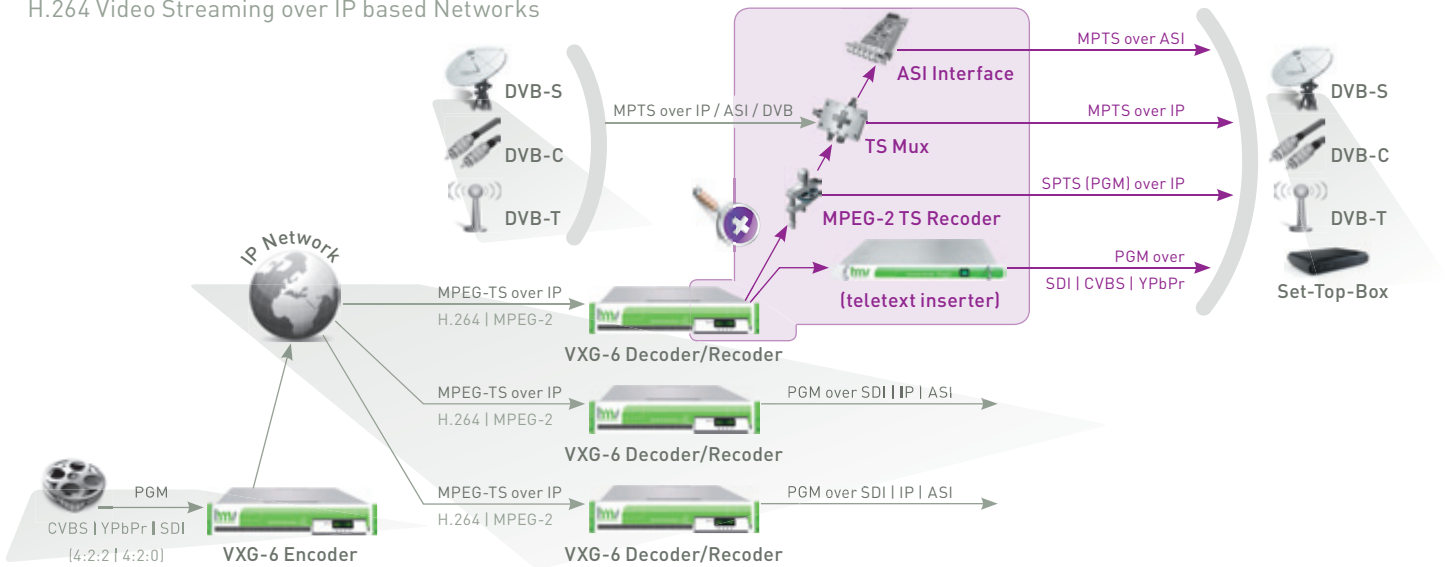
Along with the video, teletext data can be transmitted. At the receiver side, the teletext data is inserted into the VBI.

Direct-to-DVB

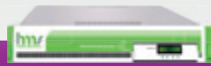
With the Direct-to-DVB interface, the video can be recoded at the receiver side. The teletext data is then transmitted as a separate program stream.

VXG-6 Workflow Example

H.264 Video Streaming over IP based Networks

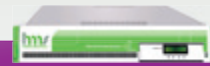


.: VXG-6 Encoder



- video input: Composite | YPbPr | SDI
- video format: PAL | NTSC (4:3 or 16:9)
- video resolution: FD1 720x576 (PAL), 720x480 (NTSC)
- audio input: XLR | S/PDIF | AES/EBU / Embedded
- audio format: 32/48 kHz, 16 Bit, stereo
- stream output: IP Ethernet, MPEG-TS over ASI | QAM | COFDM
- video compression: H.264/AVC | MPEG-2
- audio compression: aacPlus | MPEG-1 Layer 2/3
- video data rate: 48 Kbps up to 10 Mbps
- audio data rate: 64 Kbps up to 384 Kbps (MPEG1L2)
- streaming protocols: MPEG-TS via UDP, RTP or TCP
- streaming mode: unicast | multicast
- case: rack mounted, 2U or 5U
- [miscellaneous]**
- data services: teletext
- control: remote control via front panel, SNMP, ISDN, network
- transport path: single path and multi path transport

.: VXG-6 Decoder / Recorder



- video output: Composite | YPbPr | SDI
- video format: PAL | NTSC (4:3 or 16:9)
- video resolution: FD1 720x576 (PAL), 720x480 (NTSC)
- audio output: XLR | S/PDIF | AES/EBU / Embedded
- audio format: 32/48 kHz, 16 Bit, stereo
- DVB output: MPEG-TS over Ethernet | ASI | QAM | COFDM
- video decompression: H.264/AVC | MPEG-2
- audio decompression: aacPlus | MPEG-1 Layer 2/3
- video data rate: 48 Kbps up to 10 Mbps
- audio data rate: 64 Kbps up to 384 Kbps (MPEG1L2)
- streaming protocols: MPEG-TS via UDP, RTP or TCP
- streaming mode: unicast | multicast
- case: rack mounted, 2U or 5U
- [miscellaneous]**
- data services: teletext
- control: remote control via front panel, SNMP, ISDN, network
- transport path: single path and multi path transport

.: Teletext Inserter



- Video format: PAL
- Video input/output: SDI | Composite | DVB compliant MPEG-TS
- Teletext-Editor: included

Key features

- fully automated teletext carousel update
- unlimited number of pages and subpages
- high priority pages for shorter access time
- roll time of subpage assignable individually

.: Specifications

Applications

Broadcast • Mobile TV • IPTV • webcasting • SNG • Studio links (live events) • Business TV • Corporate TV

Transport Path

Broadband (E1/T1, xDSL, ATM) • Internet • LAN • Wireless LAN • Radio link system • Satellite links

System Features

- real-time H.264/AVC video streaming with full D1 resolution (PAL | NTSC)
- Direct-to-DVB output over ASI | QAM | COFDM | IP Ethernet
- optional recoding (MPEG-2) on decoder side (e.g. for broadcast over DVB-S/C/T)
- robust broadcast streaming architecture
- QoS (RSVP)
- integrated teletext transmission
- unicast/multicast mode
- low delay
- supports multi path and cascading
- robust lip-sync mechanism even on transmission errors
- automated restart after power or network loss
- remote control via front panel or over network
- implemented sync correction
- video sub sampling (e.g. 544x576 o. 480x576)