

ChannelLink

IP Distribution Gateway



More and more video feeds are transmitted live over various IP transmission links making it complex for organisations to efficiently and reliably manage those feeds. ChannelLink allows organisations to deliver IP content anywhere, anytime, with the ease of use of legacy baseband video matrices.

ChannelLink acts as a central hub where IP channels from the field can be received and retransmitted live reliably, acting as an efficient gateway across any IP network. It is especially well suited for stream management, routing, rebroadcasting or IPTV stream reflection over WAN/the internet. It can receive any number of input streams and translate them into a multicast or unicast MPEG Transport Stream over UDP (UDP TS), RTMP/RTMPS or a SRT protected stream. ChannelLink's future proof design ensures support of more transport protocols in the future, allowing it to stay ahead of the game.

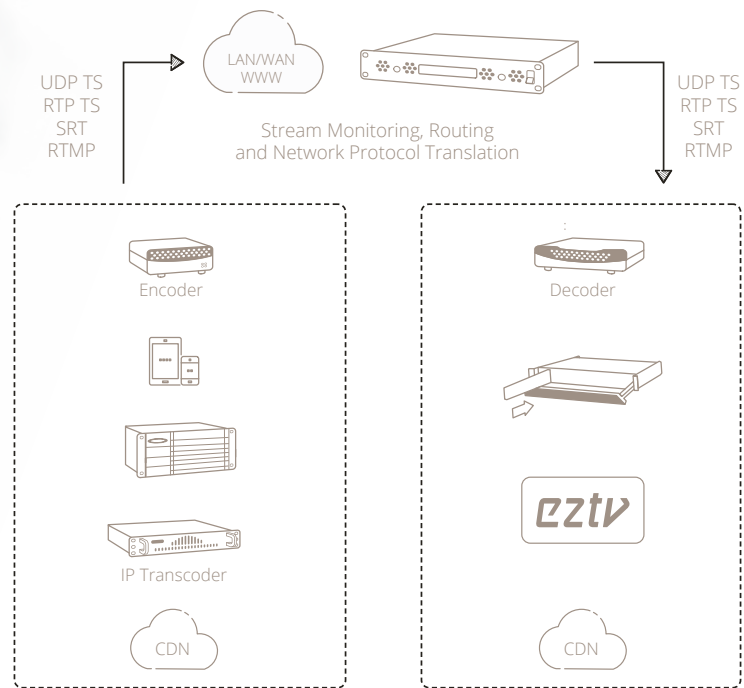
For broadcasters, ChannelLink simplifies content delivery of live channels from news agencies, sports or entertainment venues. Designed to meet stringent security criteria, it is also suited for secure government and military full motion video (FMV) applications.

Features and Benefits

- Network Protocol Translation from source to destination
- Centralised gateway for simplified stream management Sports Venue, eSports, In-House and Multi-site IP video distribution
- IP video routing across LANs, WAN and other IP network types
- IPTV Channel Reflection: Multicast to Unicast and Unicast to Multicast
- Ultra-low processing time
- Intuitive web management interface for remote configuration

Applications

- Content Blackhaul / Contribution
- Remote Production over the Internet (REMI)
- Sports Venue, eSports, In-House and Multi-site IP video distribution
- Full Motion Video stream management and distribution



Best End-to-End latency delivered with MGW Ace Encoder/Decoder

As latency is key in any IP streaming application, Channellink achieves the lowest processing time for IP-based channels. When used in conjunction with VITEC's MGW Ace Encoder/Decoder in its Ultra Low Latency HEVC profile, Channellink provides the best end-to-end latency without compromising video quality. The solution enables contribution over the internet and avoids the use of expensive fibre or satellite transmission infrastructure, leading to dramatically reduced operating expenses (OPEX).

Interoperable

Channellink ensures full compatibility with third-party encoders and decoders. Compatible with MPEG-2, H.264 and HEVC codecs, the gateway is compression standard agnostic and is engineered to evolve and support future transport protocols.

Easy to Set up and Use

Channellink is designed to facilitate the set-up for operators. An unlimited number of channel sources (encoders) can be set to target a single IP address associated with Channellink. Tailored to streamline IP video contribution, backhaul and distribution, the user-friendly interface simplifies channel source-to-destination routing. Users can view information and statistics such as quality of the network link and packet loss. The gateway provides users with a centralised location for aggregating content and monitoring incoming streams.

End-to-end Content Protection

VITEC encoders and decoders provide the capability to encrypt the audio and video stream. Channellink handles the management of such encrypted streams to secure your content end-to-end. To ensure full compatibility with civilian and governmental secure environments, Channellink has been designed to conform to the most stringent network and information assurance security standards. Specific accreditations can be provided by VITEC upon request.

Technical Specification

Source & Destination Channels

- Support for HEVC, H.264 and MPEG-2 channels
- Network Protocol Translation (NPT) from source to destination
- Ultra-low processing time
- Live channel analytics to monitor quality of service
- Up to 500Mbps inbound and 500Mbps outbound traffic per server (x125 4Mbps channels can be managed using a single server)
- Failover / Source fallback feature for increased Quality of Service.

Network Protocols

- UDP TS: MPEG Transport Stream over UDP
- RTP TS: MPEG Transport Stream over RTP
- SRT (Caller, Listener):
 - SRT Listener multi-destination with capability to limit the number of remote clients/decoders
 - Stream ID / tagging for multiple stream routing over one single IP port
- RTMP/RTMPS
- Zixi™, RIST, HLS to be supported
- Unicast / Multicast / IGMPv3 Source Filtering (SSM)

Encryption

- Real-time AES encryption for video, audio and metadata
- 128 and 256-bit encryption key support
- Interoperability with AES compliant systems such as VITEC EZ TV and FITIS distribution platforms

Management

- Dashboard with channel statistics and system performance information
- Secure Web-based remote management interface (HTTPS), password protected
- SRT streaming statistics for easier configuration and enhanced Quality of Service
- Accounts with configurable privileges
- Custom SSL certificate loading capability
- Customisable Notice and Consent login banner
- Save, Export and Load configurations
- System and channel event logging
- API for integration with third party systems
- Firmware upgrade via command line or Web UI
- SNMP v3

Footprint

ChannelLink is offered as a 1-RU physical server or as a software package that can be installed on any third-party machine, or as a virtual machine.

Physical server specifications

- HP DL360 (1RU)
- 32GB RAM
- 4 x 1Gbps network interfaces
- Option for additional 2 x 10Gbps SFP+ port
- Redundant Power Supply (2 x Power supplies 500W AC 110/240V 50/60 Hz)
- 2x300GB Disk Space
- Red Hat Enterprise Linux Server release 8
- Dimensions: 1.70" (4.32cm) Height x 17.11" (43.46cm) Width x 27.5" (69.85cm) Depth
- Weight: 33.3lb (15.31kg)
- Regulation: CE / FCC Part 15 Class A / RoHS / WEEE / TAA Compliant

Minimum requirements for installation on third-party servers or as a virtual machine

- 1 x Quad Core 3.0GHz CPU
- 4GB RAM
- 2 x 1Gbps network interfaces
- 50GB disk space
- Red Hat Enterprise Linux Server release 8

Ordering information

- 17629 - ChannelLink Server
- 17630 - ChannelLink Virtual Machine
- 17749 - Additional 2x10Gb SFP + Ethernet ports for ChannelLink Server
- 17750 - SFP + to Optical 10Gbit - SR LC Transceiver