Z-IP Connect

Military-Grade IPTV Full Motion Video Multicast and Unicast HD/SD Stream Reflect/Recaster

Z-IP Connect
Product Overview

Product Description

Z-Band Technologies' Z-IP Connect Military-Grade IPTV Reflector bridges enterprise LANs by converting multicast video traffic to unicast and vice versa to enable accurate, network-efficient transmission of IP streams over WANs. It is ideal for transmitting full motion video (FMV) between LANs across WANs—even those that use low-bandwidth network reflection links and have restricted multicast capabilities.

Z-IP Connect's IPTV Reflector intercepts, reflects and redistributes real-time IP traffic with ultra-low latency and without any interruption in service. All critical geo-location and telemetry Cursor on Target (CoT) and key length value (KLV) metadata are fully retained. Once multicast traffic is repackaged as unicast MPEG streams, it can be encrypted or transmitted via VPN to ensure secure transmission. At the destination, the video may be broadcast as unicast or repackaged as multicast by another Z-IP Connect IPTV Reflector for playback by PC players and IP set-top boxes.

The Z-IP Connect IPTV Reflector uses industry standard MPEG protocols for playback on MPEG-compliant devices and is fully interoperable with MPEG-2 and MPEG-4, H.264, SD and HD IPTV encoders. An advanced traffic shaping algorithm ensures quality of service (QoS) reflecting video payload on any network while maintaining consistent bandwidth utilization.

Product Highlights

- High density MPEG reflection of up to 50 streams in a 1 RU device
- Bidirectional processing of multicast to unicast and unicast to multicast
- Ultralow latency of less than 20 milliseconds per service
- Supports AES encrypted streams
- Real-time SAP detection and announcement generation
- Web-based management interface for remote configuration

- Transmits video quickly and efficiently in real time
- Overcomes WAN bandwidth and capacity limitations
- Compatible with existing encryption systems and VPNs to ensure data security
- Enables sharing of secure content with designated users through private unicast streams
- Compatible with Z-Band IP System's ZIP Portal Enterprise IPTV Systems and 3rd party MPEG-2/4 encoders

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Benefits	
• Enables fast, efficient transmission of video in real time • Overcomes WAN bandwidth and capacity limitations • Compatible with existing encryption systems and VPNS to ensure data security	• Enables sharing of secure content with specific users using private unicast streams • Compatible with ZIP Portal IPTV and third-party MPEG-2 and MPEG-4 IP decoders

Applications	
• Bridging LAN sites over non-multicast WAN connections • Distribution of multicast streams to multiple unicast recipients • Dissemination of FMV content with metadata to remote users	• Conversion of incoming unicast sources to multicast for efficient distribution to LAN users • Bridging physical networks via reflection between distinct network adaptors

Key Features	
• Highly dense MPEG reflection up to 50 streams in a 1-RU server • Two-way processing: Multicast to Unicast and Unicast to Multicast • Ultra-low processing latency - less than 20 milliseconds per service	• Supports AES Encrypted streams - eliminates the need to unlock feeds in distribution centers • Real-time SAP detection and announcement generation • Intuitive HTTP management interface for remote configuration

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Z-IP Connect Flow Diagram

Main Site

Service Provider

Over the Air

Live Video

Z-IP Encoders

3rd Party Encoders

LAN **Multicast**

TV's w/ STB   Desktops

Z-IP Connect Server

Unicast
- Private WAN
- Public Internet
- Dedicated
- T1/E1 LineS

Z-IP Connect Server

LAN **Multicast**

TV's w/ STB   Desktops

Remote Site A

TV's w/ STB   Desktops

Remote Site B