Zixi-Pipe™

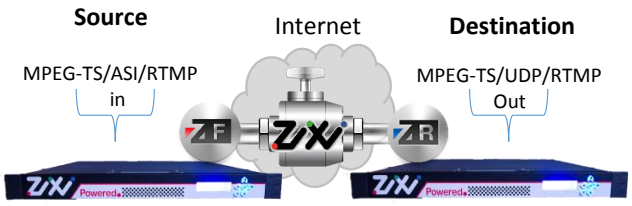
Point-to-Point Secure IP Video Multi Channel Transmission

The point-to-point Zixi-Pipe™ solution is a one-way, QoS protected, secure, distance-agnostic connection between Zixi Edge Points™ (ZEP) – Zixi Feeder™ and Zixi Receiver™. A Zixi-Pipe is seamless to integrate and easy to configure. High quality, high bitrate content delivery using Zixi-Pipe has gained a reputation for reliable primary contribution for live events, disaster recovery, satellite backup, and more. Leveraging the Zixi Transport Stream Protocol, Zixi-Pipe is an economical alternative for reliably and securely sending high-quality video over any distance compared to satellite or fiber without the limitations. Expand your reach using commodity hardware for high quality delivery over the internet.

Quick & Easy

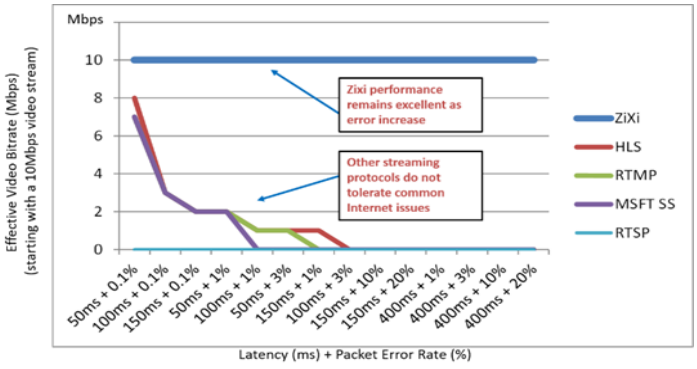
Zixi-Pipe is comprised of two software components – Zixi Feeder and Zixi Receiver – that can run on a dedicated Zixi Server appliance or generic server appliance that meets Zixi specifications.

When running Zixi-Pipe, the Zixi Feeder encapsulates the video feed in the Zixi transport stream and delivers the feed via a standard Internet connection to a Zixi Receiver. This economical connection is quick and easy to configure and implement.



Secure, Reliable, Network Aware, Distance Agnostic

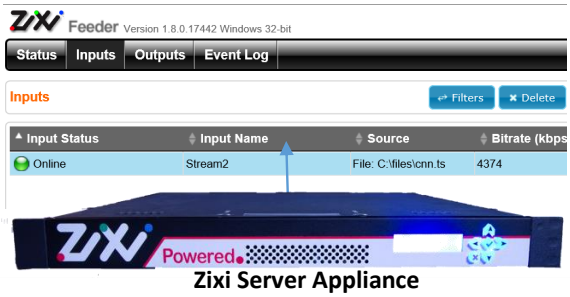
Zixi stream resiliency as compared with traditional protocols



Zixi-Pipe Components and Zixi GUI

To create a point-to-point Zixi-Pipe connection, users simply need to load Zixi Feeder on a dedicated appliance or Zixi Server located at the point of acquisition, and a Zixi Receiver on another dedicated appliance or Zixi Server located at the receive point. Use the Zixi GUI to create the link to enable an error-free transmission of a live feed, VOD feed, or multi-channel TV feed over a standard unmanaged internet connection.

The Zixi Appliance is a 1RU server that is qualified to run all of the Zixi modules, including Zixi Feeder and Zixi Receiver.



Zixi Server Appliance

Zixi-Pipe™ Benefits

- High Quality ☑
- Fixed Latency ☑
- Error Free Stream ☑
- Distance Agnostic ☑
- Network Aware ☑

Zixi-Pipe™ Applications

- Primary Contribution ☑
- Disaster Recovery ☑
- Satellite Backup ☑
- Point to Point Distribution ☑

969 Horsham Road • Horsham, Pennsylvania 19044 USA • Phone: 215-675-2053 Fax: 215-675-7543 • info@tonercable.com

toner
cable equipment, inc.
www.tonercable.com

Zixi-Pipe™

Point-to-Point Secure IP Video Multi Channel Transmission

Zixi Feeder™

Supported Protocols

Input:

- MPEG-TS over UDP (unicast and/or multicast) and/or RTP
- RTMP
- ASI

Output:

- Zixi protected transport to Zixi Broadcaster
- UDP to specified IP address and port

Quality of Service and Error Correction

- Transport protocol used between Zixi Feeder and Zixi Receiver which optimizes bandwidth to deliver Broadcast Quality
- Maximum stream latency can be specified, and then guaranteed, assuming available bandwidth
- Zixi Error Recovery based on Hybrid Zixi FEC and Zixi ARQ correcting jitter and packet loss
- For low latency applications, Zixi FEC maximum overhead can be specified as a percentage of the original bit rate

Performance, Availability, and Security

- Stream password protection
- Stream encryption with up to 256-bit AES encryption
- SMPTE 2022 FEC decoding allows recovery of input streams coming from a managed network
- Web administration app for configuration
- TR-101-290 MPEG stream analysis (priorities 1 and 2)
- SSH secure tunnel access to Zixi Feeder for configuration and management
- Programmable HTTP/JSON API for monitoring, automation, and customization

Zixi Receiver™

Supported Protocols

Input:

- Zixi protected transport with SMPTE-support from Zixi Feeder to Zixi Receiver

Output:

- UDP
- Output to compatible ASI cards
- MPEG transport stream output to local file system
- File output segmented by user selected time interval
- Re-multiplex output streams to strict CBR for extensive compatibility with integrated receiver decoders (IRDs)

Availability and Reliability

- Ability to assign fallback source to Zixi Receiver output to ensure continuity
- Stream monitoring available statistics, throughput, packet rate, FEC, and ARQ measurements
- Zixi simultaneously monitoring program channels while still delivering the muxed or MPTS stream intact

System Management

- Web administration app for configuration SSH access via secure tunnel

Security

- Stream password protection
- Decryption of inbound video using up to AES 256-bit encryption

Zixi Server

- Specifically designed to run all components of the Zixi product family, including Zixi Feeder and Zixi Receiver
- 1RU rack mountable appliance:
  - Linux OS
  - 4x Gigabit Ethernet
  - 1000BASE-T
  - RJ45 cards capable of up to 800Mpbs per interface
- Available pre-configured and can be drop shipped anywhere in the world

Products

Zixi Feeder

Zixi Receiver

Zixi Appliance

Zixi-Pipe Service

Specifications Subject To Change Without Notice

Rev 08-15

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969 Horsham Road • Horsham, Pennsylvania 19044 USA • Phone: 215-675-2053 Fax: 215-675-7543 • info@tonercable.com