

ZIXI DELIVERY WITH SYNAMEDIA SOLUTIONS

SECURE AND RELIABLE VIDEO TRANSPORT WITH ZIXI NOW AVAILABLE ON SYNAMEDIA D9800 AND VDCM MODELS

AT A GLANCE

SYNAMEDIA SOLUTIONS WITH ZIXI INTEGRATION

- D9800
- vDCM

KEY FEATURES:

- Easily enable secure and reliable distribution for error-free video streaming over IP using Zixi technology
- Integrated monitoring and reporting with Zixi's ZEN Master control plane
- The Zixi functionality is enabled on the D9800-SS or D9800-MS through a license

KEY BENEFITS:

- Supports single Zixi stream with full transponder capacity (up to 80Mbps) on the D9800-SS
- Supports two Zixi MPTS streams at 80 Mbps each, totaling 160 Mbps on the D9800-MS or 4 Zixi MPTS streams at 30 Mbps each
- Push and Pull support on all Synamedia distribution solutions
- **ZEN Master Certified** – Synamedia is a ZEN Master Certified partner



Synamedia and Zixi's joint delivery solution will allow programmers to gracefully migrate any programming from satellite to terrestrial distribution methods when and where it makes sense, without disruption or big new capital investments.

INTEGRATED SOLUTIONS

Synamedia has integrated Zixi into the **Virtual Digital Content Manager (vDCM)** platform to offer virtualized and software-based video processing. The Virtual DCM encoding and multiplexing platform is a key component for video processing in both content and service provider headends, offering:

- Advanced video processing: Multiplexing, scrambling, splicing etc.
- Advanced video encoder and transcoder: HEVC, AVC, MPEG2, ABR, packaging, Statmux
- Support of MPEGoIP, Zixi, HLS reception and transmission

Synamedia has also integrated Zixi into the **D9800**, the most versatile network transport receiver for today's rapidly changing media environment, that allows content providers the flexibility

to switch easily from satellite to terrestrial technologies in one device.

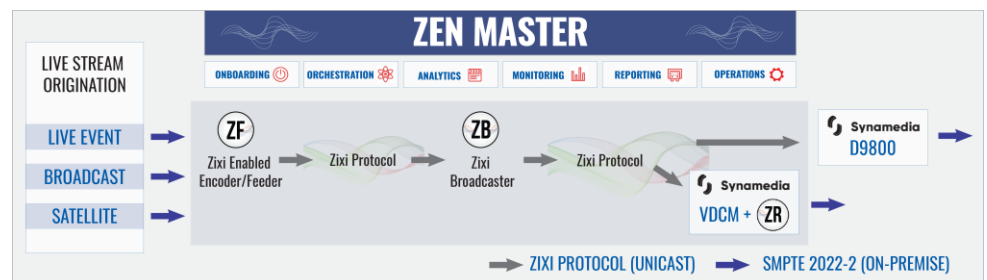
Managed locally or remotely via the ZEN Master control plane or Synamedia's PowerVu Network Control (PNC) system, the D9800:

- Supports Satellite, MPEGoIP, Zixi and HLS reception concurrently, or as Disaster Recovery options in any combination
- Supports BISS, PowerVu Decryption and with DVB-CI module, also DVB based CAS. All transparent through the Zixi link. Also supports Zixi encryption
- Supports MPEG2/AVC/HEVC Decoding on D9800-SS with HD/SD-SDI output options
- Supports Transcoding on the D9800-MS from HD/SD AVC or HEVC input to AVC or MPEG2 HD/SD output

TRANSPORT

D9800 and vDCM customers benefit from Zixi's well-proven methods of optimizing IP-networks for delivering live video content in real-time.

ZIXI TRANSPORT USING SYNAMEDIA SOLUTIONS



ZIXI DELIVERY WITH SYNAMEDIA SOLUTIONS

SYNAMEDIA REQUIREMENTS

- Enabling Zixi on the D9800 requires a license (L-D9800-ZIXI) and a unit that has GbE ports (D9800-SS-MPEGOIP or D9800-MS-MPEGOIP)
- Enabling Zixi on the vDCM requires Xgress credits (L-VDCM-XGRESS) based on the BW needs for the Zixi feeds

ZIXI REQUIREMENTS

- Zixi Broadcaster or AWS MediaConnect is required to deliver Zixi streams to the D9800 or vDCM
- A Zixi Broadcaster or AWS MediaConnect is required to receive streams from the vDCM

ABOUT SYNAMEDIA

We're helping service providers around the world to deliver, protect, and monetize video content so they can win in the age of Infinite Entertainment. We do that with the world's most complete, secure, and advanced end-to-end open video delivery solution. And we're trusted by over 200 top satellite DTH, cable, telco, and OTT operators, broadcasters, and media companies. For more information, contact us at: <https://www.synamedia.com/>

ABOUT ZIXI

Zixi provides a cloud based and on-premise software platform enabling the management, orchestration, monitoring, and delivery of broadcast-quality live and live linear video over IP and hybrid IP networks to broadcasters, enterprises, over-the-top video providers, and mobile service providers around the world. Over 10+ years, the Zixi Enabled Network (ZEN) of partners has grown to over 100 OEM and service providers with whom Zixi serves well over 500 customers representing most of the top media brands around the world with 10,000+ channels delivered daily. <https://zixi.com/>

Contact: sales@zixi.com

Zixi provides best-in-class resiliency using a combination of content-aware and network adaptive forward error correction, error recovery, congestion avoidance, bonding of multiple transmission paths and dynamic feedback to control encoder bitrate, all at a minimal latency.

The Zixi ecosystem consists of three components:

- Zixi Feeder** receives MPEG2TS over IP from an encoder/multiplexer or is integrated directly into an encoder or DCM and embeds the data into Zixi protocol to send to the Broadcaster.
- Zixi Broadcaster** receives multiple feeds, either in Zixi protocol or in MPEG2TS over IP. The Zixi Broadcaster then provides the feeds it receives to a number of Zixi Receivers.
- Zixi Receiver** requests the data from the Broadcaster, converts the Zixi protocol back into MPEG2TS over IP, and sends that out over a network interface or is integrated directly into a receiver/decoder device.

The flow from Zixi Feeder input to Zixi Receiver output is transparent for MPEG2TS packets.

With minimum overhead to physical bandwidth, this dynamic mechanism removes jitter, recovers and re-orders packets, smooths video delivery enabling the streaming of broadcast-quality video over any distance, while overcoming the varying network conditions of the public Internet.

MONITOR AND REPORT

Synamedia customers can leverage ZEN Master, Zixi's control plane to manage large-scale live stream deployments.

ZEN Master provides a centralized global view of the entire Zixi Enabled Network. ZEN Master offers visual tools and analytics to configure, orchestrate, and monitor live broadcast channels and events across the Zixi Enabled Platform, and gives partners and customers enhanced control and visibility over large complex networks.

SPECIFICATIONS WHEN USING D9800 AS A ZIXI RECEIVER:

Product Variant	D9800 SS R4.25	D9800 MS R4.25
Transport mode	Push/Pull	Push/Pull
Zixi FEC	Supported	Supported
Zixi Encryption	AES128/196/256	AES128/196/256
Zixi DTLS	Supported (3.75 and up)	Supported (3.75 and up)
Zixi input Stream Redundancy	Supported(2)	Supported(2)
Max safe TS rate No AES	Tested with <u>15%</u> packet loss 80 Mbps - single Zixi Stream (75 Mbps content)	Tested with <u>15%</u> packet loss 160 Mbps : 2 Zixi Streams at 80 Mbps each. 120 Mbps : 4 Zixi Streams at 30 Mbps each. (respectively 2x75 & 4x27 Mbps content)
Max safe TS rate AES	Tested with <u>15%</u> packet loss 40 Mbps - single Zixi Stream (36 Mbps content)	Tested with <u>15%</u> packet loss 80 Mbps : 2 Zixi Streams at 40 Mbps each. 80 Mbps : 4 Zixi Streams at 20 Mbps each. (respectively 2x36 & 4x18 Mbps content)

NOTE: Zixi supports both SPTS and MPTS. The combined bitrate in the case of MPTS should be below the suggested max rate above.