

# ZIXI-INTEGRATED HYDRA LIVE ENCODER/DECODER

HYDRA LEVERAGES ZIXI TO HELP BROADCASTERS OVERCOME THE CHALLENGES OF UNMANAGED TERRESTRIAL AND SATELLITE IP

## AT A GLANCE

### GIGCASTERS SOLUTIONS WITH ZIXI INTEGRATION

- **Hydra Live Encoder** - software-defined h.264/h.265 encoding system
- **Hydra Integrated Decoder** - software-defined decoding system designed to receive and output IP feeds to SDI

### KEY FEATURES

- **High Quality** – High quality h.264 and h.265 support from 500 kbit/s to 80 mbit/s at resolutions up to 4K.
- **Flexible** – Video and audio cross conversion
- **Reliable** – Full Zixi integration to enable successful delivery over unmanaged IP connections
- **Closed Captions** – Supports CEA-608/708
- **Monitoring** – Integrated monitoring and reporting with Zixi's ZEN Master control plane
- **ZEN Master Certified** – Gigcasters is a ZEN Master Certified partner



## REMOTE BROADCASTERS' CONNECTIVITY CHALLENGES

Broadcasters wishing to provide live video contribution from remote locations are often faced with severe connectivity challenges. In many cases they must rely on limited broadband and cellular connectivity, or sometimes even no connectivity at all, requiring them to rely on satellite uplinks.

## GIGCASTERS ZIXI-INTEGRATED LIVE CONTRIBUTION AND DISTRIBUTION SOLUTIONS

Gigcasters has partnered with Zixi to provide video contribution and distribution over unmanaged IP networks with unmatched quality and reliability at an affordable cost.

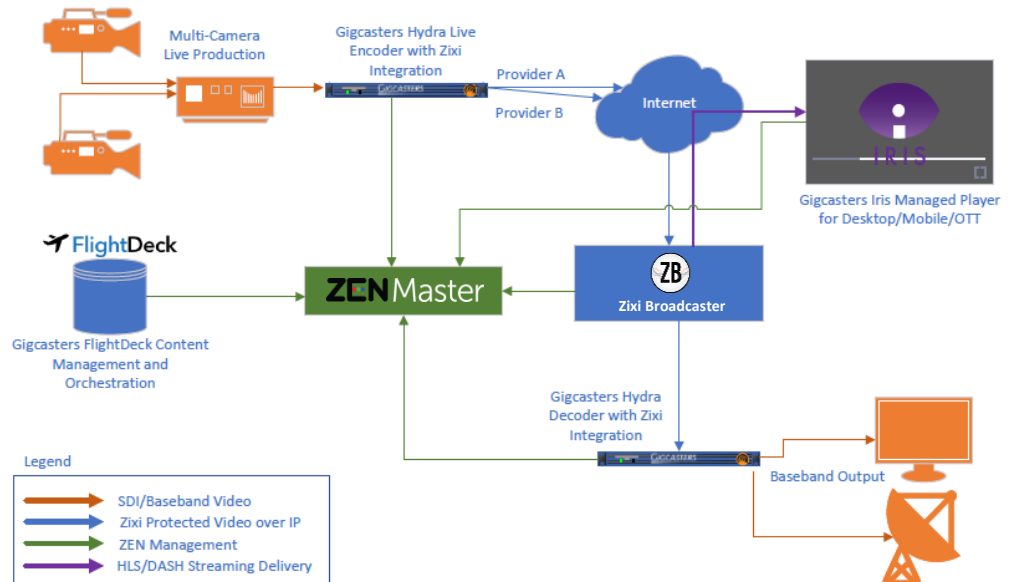
Using Zixi's technology, remote broadcasters can overcome their connectivity challenges, even in the most challenging network conditions.

## ZIXI-INTEGRATED HYDRA LIVE ENCODER

The Hydra Live Encoder allows customers to send live contributions feeds over unmanaged IP for OTT streaming, broadcast, backhaul, and more.

Zixi's integration helps maximize throughput and ensure the feed from Hydra encoders reaches the cloud or Master Control Room (MCR) destination even on high-latency links that suffer from persistent packet loss.

By using the Zixi-enabled Hydra encoder, remote broadcasters can produce live video contribution from field locations in an end-to-end IP workflow at a price point lower than traditional Ku-band satellite uplinks and at bitrates lower than standard fiber transport.



# END-TO-END LIVE VIDEO CONTRIBUTION & DISTRIBUTION

## KEY ZIXI BENEFITS

- **Centralized Management** – ZEN Master provides a centralized view of the entire Zixi enabled contribution and distribution network
- **Security** – Zixi provides best-in-class security enhanced with DTLS and AES standards-based protection
- **Reliability** – Contribute source streams with 99.999+% broadcast reliability with hitless failover which provides redundant transmission options for higher reliability and disaster recovery
- **Low Latency** – With network adaptive forward error correction and recovery, proven sub 1 second live linear latency
- **Interoperability** – Zixi is compatible with the largest ecosystem of encoding devices and contribution sources

## ABOUT GIGCASTERS

Gigcasters provides software tools and integrated solutions to execute complex live, linear, and on-demand workflows. The Hydra product line offers turnkey, software-defined video contribution and distribution over IP with unmatched quality, reliability, and flexibility. Our products have been designed to meet the needs of professional content producers and content owners operating at the intersection of broadcast and OTT. We power collegiate and professional sporting events, 24/7 network affiliate feeds, brand activations, concerts, and more. <http://www.gigcasters.com/>

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## 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](mailto:sales@zixi.com)

## ZIXI-INTEGRATED HYDRA DECODER

The Hydra Integrated Decoder allows customers to decode IP feeds in a wide variety of formats and codecs to baseband or ASI for use in broadcast facilities, MCRs, and displays.

The Zixi-integrated decoder can augment IP-based contribution by allowing decoding of feeds into existing SDI-based central production facilities, leveraging cost-effective satellite IP and business-grade broadband circuits like cable-modems versus dedicated fiber links, MPLS circuits, or leased satellite time.

## SUPPORTING COMPLEX LIVE, LINEAR, AND ON-DEMAND WORKFLOWS

The Hydra product line offers turnkey, software-defined video contribution and distribution, while supporting complex live, linear, and on-demand workflows with unmatched quality of service.

Professional content creators can enjoy Zixi's best-in-class resiliency by using Zixi's transport protocol across the path in the following manner:

- **Hydra Live Encoders** are bundled with **Zixi Feeder**. **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 Zixi 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.
- **Hydra Live Decoders**, which include

an integrated **Zixi Receiver**, request 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.

Zixi transport uses 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 and with the security of AES-128/256 or DTLS.

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 unmanaged IP networks including the public Internet.

## SIMPLE CONFIGURATION, ORCHESTRATION AND MONITORING

As a ZEN Master Certified partner, the Gigcasters product line is integrated with **ZEN Master** for the simple configuration, orchestration and monitoring of the devices and appliances that are part of the video transport network.

**ZEN Master** provides a centralized global view of the entire network, while offering visual tools and analytics to configure, orchestrate, and monitor live broadcast channels and events at scale.