Remote / At-Home Production over IP.

Deliver multi-camera feeds from remote location to the studio.

JVC Professional camcorders feature built-in streaming encoders with LAN/Wi-Fi connectivity to provide broadcast-quality Video-over-IP directly from the camera, no additional backpacks or encoders needed.
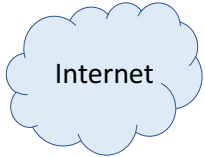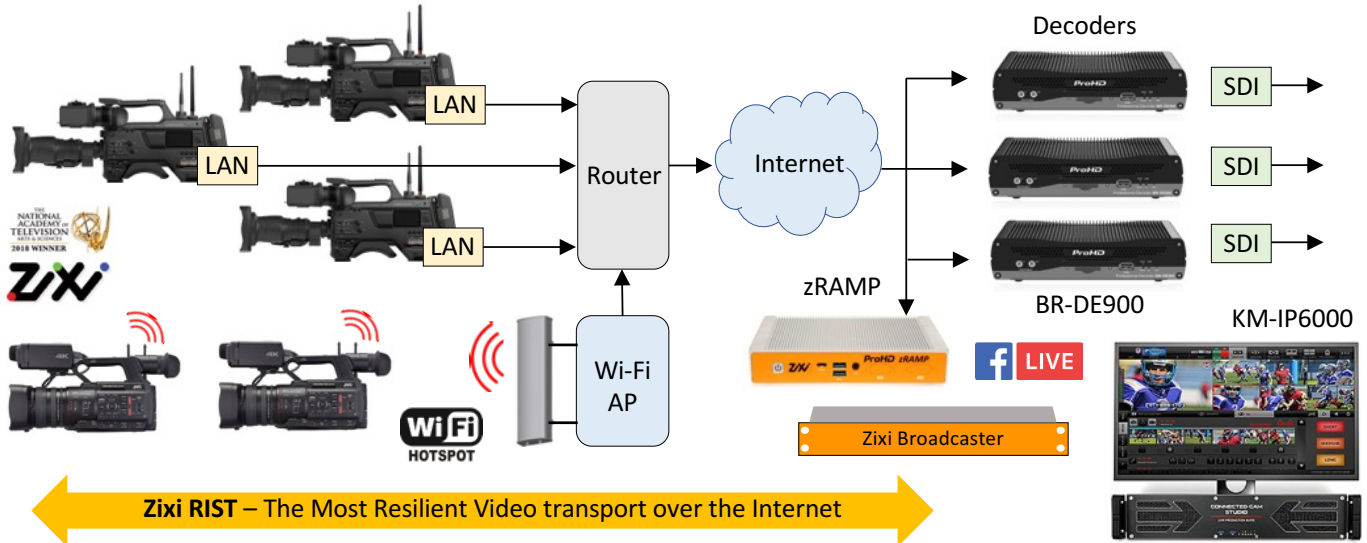
GY-HC550   GY-HC900

Wi-Fi
LAN
Internet

Model	Sensor	Lens	Recording	Video-over-IP	Protocols	Error Correction
GY-HC900	3 x 2/3" CMOS	B4 mount	10-bit 4:2:2	1080 60p up to 24 Mbps H.264	UDP, RTP, RTMP, RTSP, **Zixi RIST**	SMPTE 2022 **Zixi RIST**
GY-HC550	1" CMOS	24x Zoom				

Workflow:

When the broadband Internet connection is available on location and at the studio, the workflow is simply connecting camera LAN to the router or using built-in camera Wi-Fi for wireless connectivity.
The BR-DE900 decoders placed at the studio will provide the HD-SDI/HDMI outputs for video switcher.

Decoders
LAN
LAN
LAN
Router
Internet
SDI
SDI
SDI
zRAMP
BR-DE900
KM-IP6000
Wi-Fi AP
Wi-Fi HOTSPOT
Zixi Broadcaster
LIVE

Zixi RIST – The Most Resilient Video transport over the Internet

The IP Video Servers zRAMP and Zixi Broadcaster support Zixi RIST error correction which includes FEC, ARQ, and Adaptive Bitrate. IP Stream routing allows "one-to-one" and "one-to-many" streaming for simultaneous output to multiple CDNs, decoders and IP Video switchers (ProHD Studio, vMix, etc.)

Multiple streams synchronization:

TC sync:

- TC in/out
- GPS UTC
- NTP

GY-HC550/900

UDP/RTP/Zixi

TC 01:00:02:22
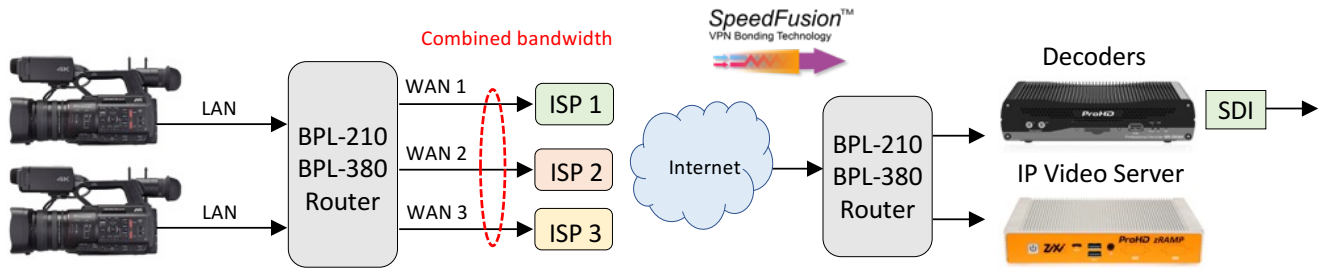
TC is embedded in the SEI packet of H.264 stream

The multiple cameras Timecode (free-run mode) synced on location is embedded in the IP transport streams and synchronized by the KM-IP6000 IP Video switcher in the studio.
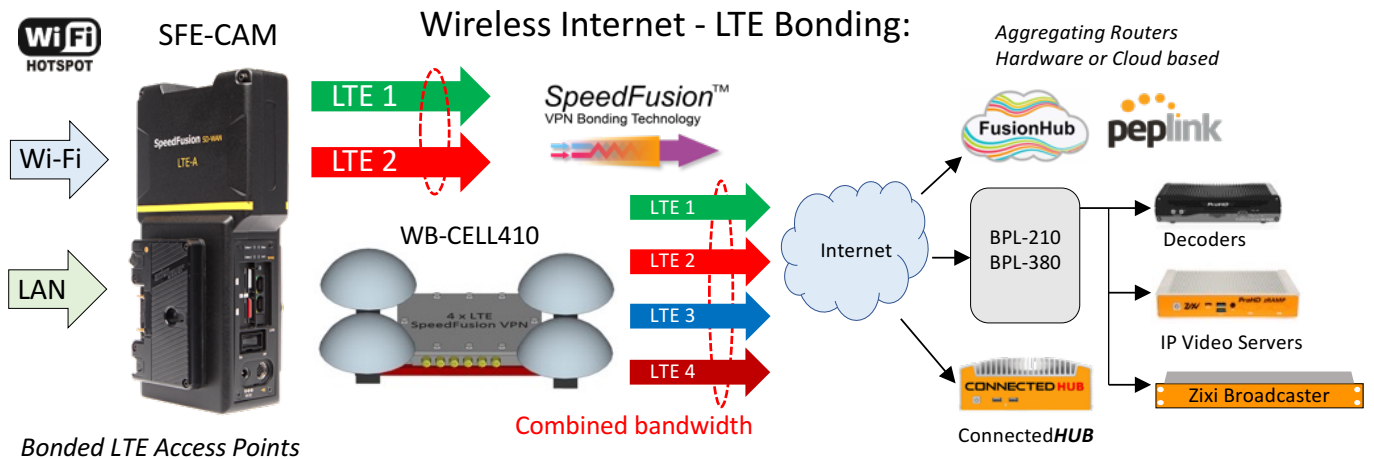
Remote / At-Home Production over IP.

Wired Broadband Internet:

When the on-location Internet connection is slow, unstable or not available, JVC can offer various solutions including multiple WANs bonding, load balancing, and LTE bonding.

Aggregating two or more ISPs provides cost-efficient bandwidth increase for long-format production.
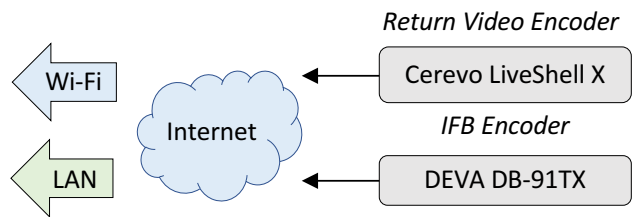
Wireless Internet - LTE Bonding:

Bonded LTE Access Points

Model	LTE-A Modems	Antennas	Wi-Fi Hotspot	Power
SFE-CAM	2	Internal	Built-in	AB / V-mount battery
WB-CELL210	2	High-Gain External	WB-MAP100	12V (car installation)
WB-CELL410	4			

Bonded LTE Access Points provide full Internet connectivity for bidirectional streaming and data transfer from multiple cameras, encoders, decoders and IoT devices in the field. (based on available bandwidth)

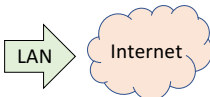## Built-in decoder to receive Return Video and IFB over the Internet:

Return Video over IP display:

- EVF
- LCD
- SDI-2 / HDMI output

Encoder:

HEVC H.264 BR-EN900

Streaming directly from the camera(s) may not fit the workflow and separate encoder is needed to stream the output of a switcher or from other HD-SDI source.
The BR-EN900 Encoder supports HEVC and H.264 and is fully integrated into JVC Remote Production workflow.