

TACTICAL SURVEILLANCE SOLUTIONS EDGEVIS HD-R700

RUGGEDISED WIRELESS/CELLULAR VIDEO SURVEILLANCE UNIT

The HD-R700 is a ruggedised surveillance solution combining recording and real-time streaming of HD+SD video, audio and data over a variety of networks (such as cellular and Wi-Fi) with integrated alarm and cueing functionality.

Its compact and resilient form factor and integrated features make the HD-R700 unit ideal for deployment into harsh and challenging environments.

Not all wireless video solutions are created equal

EdgeVis wireless encoders are a world-class surveillance solution for secure remote viewing of video over very low bandwidth networks. In comparison to other wireless video technologies, such as MPEG compression, EdgeVis provides a higher quality, lower latency and more resilient approach to real-time video and audio transmission.

MPEG and H.264 solutions rely on standard compression techniques that can result in reduced frame rates, frame skipping, difference coding and high latency. In contrast, by combining a proprietary codec with an adaptive and more efficient approach to managing the underlying comms channel, EdgeVis maintains a fixed frame rate and delivers lower latency video over limited bandwidths.

Practical operational benefits

HD-R700 is an integrated, resilient and ready to deploy remote surveillance solution that combines both HD and SD video and audio streaming with a built-in DVR and an IP hub. Live streaming can be triggered by a range of intelligent or simple alarms, with multiple operators able to access the live output simultaneously on fixed (e.g. PC) and mobile (e.g. smart phone) platforms.

EdgeVis ensures a more efficient representation of detail at lower bandwidths, particularly where motion levels are high, as well as exceptionally low latency in the remote control of cameras. Error resilience is also particularly high, since the EdgeVis video codec is highly tolerant of packet loss.

The HD-R700 supports retrieval of high-resolution images, both live and DVR stored, providing access to frames of particular interest. With secure AES-256 encryption, a ruggedised IP68 compact form factor, and low power consumption (18W down to 49mW in sleep mode) and the flexibility to operate over GPRS, 3G/4G, LTE, satellite and Wi-Fi networks, as well as tactical IP radios and Internet the HD-R700 can be rapidly deployed into a range of operational and environmental settings.

Product codes

HD-R700 Ruggedised form factor wireless video encoder, transmission and DVR unit

Key features

- Complete remote audio/video/data streaming and storage solution for use in harsh environments
- Secure live video and audio transmission in locations with very low bandwidth (supports 9Kbps to 2Mbps)
- Built-in wireless transmission modules (cellular, Wi-Fi), on board DVR and optional GPS input
- Ruggedised IP68 rated enclosure with no moving parts
- Rapidly deployable (in minutes) for operational situations where installation time is critical
- Rule-based triggering of streaming transmissions to optimise battery life for extended deployments
- Capable of operating with 3 x PTZ camera inputs, including one HD-SDI input
- Allows connection to legacy camera systems and legacy cueing, triggering and alarm systems
- Allows a secondary bearer to be selected for automatic switchover should the primary fail

Operational domains

HD-R700 is specifically designed for organisations requiring an integrated remote surveillance solution – including deployments into harsh environmental conditions:

- Covert and tactical surveillance (video/audio/data)
- Border/maritime monitoring and force protection



HD-R700 is designed around the class-leading EdgeVis architecture

Video Streaming

Streaming Performance:	One camera streaming up to 1080p at 10fps, 720p at 20fps or 4CIF at 25/30fps
Streaming Connection:	Reliable, secure (AES-256) video transmission from 9Kbps to 2Mbps
High-resolution Image Retrieval:	Enhanced definition (up to 1080p) over user-definable areas via high quality JPEG

Recording

Recording performance:	Two channels (one 1080p, one SD) at 15fps in H.264 format
Security:	Recordings are secured with AES-128 encryption and Fragile Digital Watermarking
Storage Medium:	Either internal mSATA (up to 1TB) or external IP68 rated USB SSD
Typical recording duration:	Approx. 16 days on 512GB recording at 1080p, 10fps at 3Mbps

Connectivity

Cellular:	Built-in LTE/4G cellular module
Wi-Fi:	2x Built-in 2.4GHz 802.11 b/g/n module
LAN:	Supports transmission over LAN, ADSL, SatCom, IP Radio or Mesh Network
GPS:	Support for USB GPS module

Camera Inputs

Video Input Format:	1 channel HD-SDI, 2 channel standard-definition composite input (PAL/NTSC)
Audio Input Format:	Stereo line-level audio input, mono mic-level input
PTZ Connectivity:	Supports common protocols including Pelco P&D and Sony Visca (other protocols on request)

Physical Connectors

LAN Port:	1 x 62GB (including tamper and power) for remote transmission, 1 x 62GB (local review)
Cellular Antenna:	2 x 50Ω TNC antenna (3G/4G and MiMo)
Wi-Fi Antenna:	2 x 50Ω TNC antenna (remote transmission, local review)
Cellular SIM:	1 x standard SIM carrier, network agnostic (accessed via 62GB connector)
Power (DC Input):	1 x 62GB 3 pin DC socket
Status :	1 x 62GB status connector (for status/confidence-check adapter)
Alarms:	1 x 62GB combined relay output, 3 alarm inputs, and serial-pass thru (with 12V power)
SD Video Input:	2 x 62GB combined composite video, RS422/485 PTZ, tamper and camera power (2A max)
HD-SDI Video Input:	1 x 62GB combined RS422/485 PTZ, tamper and camera power (2A max) 1 x 75Ω TNC HD-SDI video input connector
Audio:	1 x 62GB line-level and mic input and power (1A max)
USB Ports:	2 x USB 2.0 Type A (mil-spec connector) (external USB storage, configuration/external GPS)

Physical Characteristics

Physical Size:	L 195mm x W 230mm x D 90mm (L 7.67" x W 9.05" x H 3.54")
Operating Temp/Humidity:	-40°C to +70°C (-40°F to 158°F) - supplied DC power adapter limited to 60°C
Weight:	3.5kg (7.7 pounds)
Input Voltage Range:	9-36V DC (power supply included)
Power Consumption:	18W max (at 12V, excluding camera draw), 10W recording only, 49mW in sleep
Enclosure:	IP68/Mil Std 810F rugged design

Software Architecture

Video Distribution:	EdgeVis Server provides multi-viewer video distribution, using a granular user-permission system
EdgeVis Viewers Supported:	EdgeVis Client (iOS, Android, Windows), older TVI viewing clients operate in compatibility mode
Third-party VMS Integration:	Integration into VMS provided via VMS Gateway or native integration (e.g. Milestone, Airship)

Regulatory Approvals

EU Low Voltage Directive:	IEC 60950-1
EMC Conformity:	EN55022:2010, EN55024:2010
FCC Compliance:	47CFR:2011 Part 15



Digital
Barriers