



Digital  
Barriers

# TACTICAL SURVEILLANCE EDGEVIS SD-R500

## RUGGEDISED WIRELESS/CELLULAR VIDEO SURVEILLANCE UNIT

The SD-R500 is a ruggedised surveillance solution combining recording and real-time streaming of video, audio and data over a variety of networks (such as cellular and Wi-Fi) with integrated alarm and cueing functionality.

Its compact, resilient form factor (IP67/Mil Std 810F rated) and integrated features make the SD-R500 unit ideal for deployment into harsh environments.

### Not all wireless video solutions are created equal

TVI 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, TVI 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, TVI maintains a fixed frame rate and delivers lower latency video over limited bandwidths.

### Practical operational benefits

SD-R500 is an integrated, resilient and ready-to-deploy remote surveillance solution, combining video and audio streaming with an built-in DVR (with 2 x SD card media slots) 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.

TVI 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 TVI codec is more tolerant of packet loss.

The SD-R500 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 compact form factor (IP67/Mil Std 810F rated), and low-power consumption (23 watts down to 0.5 watts in deep sleep mode) and the flexibility to operate over GPRS, 3G, satellite and Wi-Fi networks, as well as tactical IP radios and Internet, SD-R500 can be rapidly deployed into a range of operational and environmental settings.

### Product codes

SD-R500 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 4Kbps to 1Mbps)
- Built-in wireless transmission modules (cellular, Wi-Fi), on board DVR (with 2 x SD media cards) and GPS input
- Ruggedised IP67/Mil Std 810F-rated enclosure with no moving parts, designed for reliable, low-power and covert operation to enhance LPI/LPD properties
- Rapidly deployable (in minutes) for operational situations where installation time is critical
- Automatic triggering of streaming transmissions to optimise battery life for extended deployments
- Capable of operating with 2 x PTZ camera inputs
- Allows connection to legacy camera systems and legacy cueing, triggering and alarm systems
- Connection to an array of comms allows a bearer of opportunity to be used for primary/secondary comms

### Operational domains and installed base

SD-R500 is specifically designed for organisations requiring an integrated remote surveillance solution – including deployments into harsh environmental conditions:

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



SD-R500 is designed around the class-leading TVI architecture

# TECHNICAL SPECIFICATIONS EDGEVIS SD-R500

V3 -080917

DS-WS-SD-R500

## Video Streaming

Streaming Performance:	One camera streaming up to CIF at 25fps, 2CIF at 12.5fps or 4CIF at 5fps
Streaming Connection:	Reliable, secure (AES-256) video transmission from 9Kbps to 1Mbps
High-resolution Image Retrieval:	Enhanced definition (up to 704 x 576) over user-definable areas via high quality JPEG

## Recording

Recording performance:	One channel at CIF at 25fps, 2CIF at 12.5fps or 4CIF at 5fps in TVI format
Security:	Recordings can be password protected
Storage Medium:	2 x SD media cards (2x128GB max)
Typical recording duration:	Approx. 24 days on 2x128GB SD card recording at 10fps at 1Mbps

## Connectivity

Cellular:	Built-in GPRS/EDGE/UMTS/HSDPA module
Wi-Fi:	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 RS232/USB GPS module

## Camera Inputs

Video Input Format:	2-channel standard-definition composite input (PAL/NTSC)
Audio Input Format:	Line-level stereo audio input
PTZ Connectivity:	Supports common protocols including Pelco P&D and Sony Visca (other protocols on request)

## Physical Connectors

LAN Input:	2 x 62GB RJ45 (one transmission, one local review)
Cellular Antenna:	1 x TNC antenna 50Ω
Wi-Fi Antenna:	2 x TNC antenna 50Ω (one transmission, one local review)
Cellular SIM:	1 x standard SIM carrier, network agnostic (accessed via front panel)
Power (DC Input):	1 x 62GB 3-pin DC socket
RS232/Trigger:	2 x 62GB serial port, including three simple contact alarms, one relay output
Video:	2 x 62GB combined composite video, RS422/485 PTZ and camera power 10-pin connector
Audio:	1 x 62GB line-level audio connector
USB Ports:	1 x USB 2.0 Type A

## Physical Characteristics

Physical Size:	L 205mm x W 234mm x D 95mm (L 8.1" x W 9.2" x H 3.74")
Operating Temp/Humidity:	-15°C to +55°C (5°F to 131°F)
Weight:	3.8kg (8.4 pounds)
Input Voltage Range:	9-36V DC (power supply included)
Power Consumption:	22.5W max (at 12V), 11W recording only, 4.5W idle operation, 0.5W in deep sleep
Enclosure:	IP67/Mil Std 810F rugged fan-less 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). Control Center and TVI Viewer 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:	EN 61000-6-3:2007, 61000-6.1:2007
FCC Compliance:	47CFR:2008 Part 15, Sub Part B
Defence Standards:	Tested in accordance with Def-Stan 00-35 (Dry Heat, Cold Operation, Damp Heat, Icing, Immersion, Drop Test, Blowing Dust) certified to Land Class C in accordance with Defence Standard 59-411 Part 3

\* The SD-R500 is also compatible with systems still utilising the legacy TVI Server architecture



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