



# WIRELESS SURVEILLANCE TRI-STAR MINI (TVI R400)

## COMPACT RUGGEDISED WIRELESS SURVEILLANCE HUB

Tri-Star Mini is a real-time wireless video streaming device for high-quality video transmission, featuring a ruggedised enclosure and connectors.

Its performance and features – including interoperability with RDC wireless ground sensors – make Tri-Star Mini a world-class tactical surveillance hub.

### Not all wireless video solutions are created equal

EdgeVis wireless encoders, powered by TVI, 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 and difference coding. In contrast, by combining a proprietary codec with an adaptive and more efficient approach to managing the underlying communications channel, EdgeVis is able to maintain a fixed frame rate and deliver lower latency video over constrained bandwidths.

### Practical operational benefits

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 codec is more tolerant of packet loss.

With secure AES 256 encryption, an ultra-compact form factor, low power consumption (including standby and sleep modes) and the flexibility to operate over tactical IP radios as well as cellular and satellite networks, the TVI R400 is ideally suited to a number of tactical surveillance applications in hostile environments. It can also be used as part of an RDC unattended ground sensor (UGS) solution, acting as a secure comms gateway for RDC sensor alerts.

The compact unit is ruggedised (IP65 rated) with a fly-wheel battery interface to enhance portability. The two camera inputs can be switched between remotely and multiple operators are able to view live streaming video simultaneously. The unit also supports retrieval of full-resolution images with concurrent streaming of live video, providing access to critical operational details with no compromising of real-time situational awareness.

### Product codes

TVI-R400 Compact and ruggedised wireless video transmission unit with battery interface (including standard cabling set)

### Key features

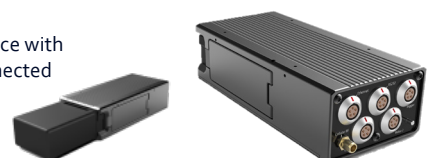
- Lightweight and ruggedised design with no moving parts for reliable, resilient and silent operation
- Secure live video transmission over very low or variable bandwidths (supports 9Kbps to 1Mbps)
- Rapidly deployable (in minutes) for operational situations where installation time is critical
- Constructed for harsh environments and operational conditions (including vehicle and man-portable use)
- Ethernet connector to support tactical IP radio, fixed network lines and GAN/BGAN satellite bearers
- Inbuilt GPRS/3G/HSDPA module (with SIM carrier) for flexible, reliable use of cellular network bearers
- Fly-wheel battery interface to connect AN/PCR-148 and AN/PCR-152 batteries for optimal portability
- Compatible with the class-leading RDC unattended ground sensor system (available from Digital Barriers)

### Operational domains and installed base

EdgeVis technology is deployed by leading organisations from across the law enforcement and military community. With its ruggedised design and advanced surveillance features, the R400 is ideal for use in a range of static and dynamic operating scenarios in the harshest environments:

- Tactical surveillance (man portable and vehicle)
- Covert-surveillance operations (secure video)
- Over-the-horizon surveillance (accessible anywhere)
- Comms gateway for RDC ground-sensor solution

Fly-wheel interface with battery unit connected



Unit measures just 171mm x 78mm x 47mm

**SAFER.  
STRONGER.  
MORE SECURE.**

# TECHNICAL SPECIFICATIONS TRI-STAR MINI (TVI R400)

V2- 08.2016  
DS-TSS-R4

## Hardware

Physical Size:	L171mm (254mm with battery) x W78mm x D47mm
Operating Temperature:	32° to +50°, non-condensing
Input Voltage:	+10.8V to +12V DC (cameras fed by the raw battery DC voltage)
Ingress Protection:	IP65
Power Consumption:	8.5W max with modem fully operational, 5W nominal (on LAN), <1.5W standby, <0.1W sleep (not including power draw from cameras)
Camera Input:	2 x composite inputs (including 1 x RS485 for PTZ)
Video Input Format:	PAL/NTSC
Alarm Inputs:	2 x triggers at 5V (24V max), plus tilt-switch alarm
LEDs:	Status LEDs for start-up and configuration (concealed behind cover)



End plate with connectors

## Software

Viewers Supported:	EdgeVis Client (Windows PC) and (Android and iOS)
Video Frame Sizes Supported:	128 x 96 up to 704 x 576 (4CIF), frame rates up to 25fps (PAL)
High Resolution Image Retrieval:	Enhanced definition (up to 704 x 576) over user-definable areas via high quality JPEG

## Connectors

USB:	Configuration of unit is via mini USB
Ethernet:	4-way LEMO connector provides an Ethernet connector for ADSL and network lines
SIM:	SIM carrier, network agnostic (concealed behind cover)
Power:	Provided via fly-wheel interface of AN/PCR-148 and AN/PCR-152 batteries
Video Input 1:	9-way LEMO connector for video (PAL/NTSC video source), camera power and RS485
Video Input 2:	4-way LEMO connector for video and camera power (PAL/NTSC video source)
Antenna:	SMA antenna for the internal GPRS/3G/HSDPA module
RS232:	4-way LEMO connector provides RS232 serial port for control of cameras or other devices (including connection to Master Node of the RDC unattended ground sensor system)
Trigger:	4-way LEMO connector provides 2 x trigger inputs to wake-up from sleep or alarm reporting plus a voltage reference output (a third trigger is provided by an internal tilt switch)

## Communications

Network Connectivity:	10/100 RJ45 Ethernet connector for ADSL, network lines and tactical IP radio
GPRS/3G/HSDPA Connectivity:	1 x built-in GPRS/3G/HSDPA module
Satellite Connectivity:	10/100 RJ45 Ethernet for connection to Inmarsat or Thuraya terminals
PTZ Connectivity:	Supports Pelco P&D, Sony Visca, etc.
Bandwidths Supported:	9Kbps to 1Mbps

## Ratings and Regulatory Approvals

EU Low Voltage Directive:	2006/95/EEC for product safety
EMC Conformity:	Directive 89/336/EEC
CE Compliance:	EN55022, EN55024
FCC Compliance:	47CFR: 2011 Part 15, Sub Part B

## Security

Encryption:	Built-in AES 256 encryption
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Powered by TVI

  
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Barriers**

Contact Digital Barriers or your local reseller for further details on our solutions

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