

# Wireless Surveillance

## TVI S400

Small form real-time wireless surveillance streaming



Digital Barriers

The TVI S400 real-time wireless video streaming encoder provides high-quality video/audio in a low-power, secure, discreet and easy to deploy unit.

With an ultra small form factor and two built-in GPRS/3G/HSDPA modules, the S400 represents the next generation in tactical video intelligence.

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

### Practical operational benefits

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.

With secure AES 256 encryption, an ultra compact form factor, low power consumption (5.5 watts nominal to 1.5 watts in standby mode and 0.1 in sleep mode) and the flexibility to operate over GPRS, 3G and satellite networks, as well as tactical IP radios and the internet, TVI can be rapidly deployed into a range of environments and situations. The S400 includes two built-in GPRS/3G/HSDPA modules for reliable networking and is network agnostic.

Multiple operators are able to view live streaming video and the unit also supports retrieval of high resolution images with simultaneous streaming of video, providing access to frames of particular interest.

### Key features

- Ultra lightweight, compact enclosure with no moving parts for reliable, resilient and silent operation
- Secure live video and audio (two way) transmission over very low bandwidth (supports 9Kbps to 1Mbps)
- Rapidly deployable (in minutes) for operational situations where installation time is critical
- Constructed to accommodate the high level of vibration associated with vehicle deployment
- Features two integrated GPRS/3G/HSDPA modules (with SIM carriers) for reliable networking
- Changes to codec settings or software upgrades can be delivered remotely over the air
- 10/100 RJ45 Ethernet connector for ADSL and network lines and satellite connectivity

### Operational domains and installed base

TVI codecs are deployed by organisations in the law enforcement, military and transportation domains, as well as by those responsible for securing public spaces. Its ultra compact form factor and simple installation make it ideal for a range of static and dynamic operating scenarios:

- Covert surveillance operations (video and/or audio)
- Body-worn surveillance
- Rapid deployment tactical surveillance



### Product codes

TVI-S400 Ultra small form factor wireless video encoder

## Hardware

Physical Size:	L120mm x W72mm x D33mm (including connectors)
Operating Temperature:	-32° to +60°, non-condensing
Input Voltage:	9V-36V DC
Power Consumption:	7W max (8.5W with 1 x modem fully operational, 10W max with 2 x modems fully operational), 6W nominal, <1.5W standby, <0.1W sleep
Audio:	Stereo audio in/stereo audio out
Camera Input:	2 x MMCX composite input
Video Input Format:	PAL/NTSC
Alarm Inputs:	3 x triggers at 5V (24V max)
LEDs:	Status LEDs provide information on start-up and configuration

## Software

Viewers Supported:	Software available for Windows PC, Windows Mobile 6, iPhone and Android
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 (connector also allows connection to serial based devices)
RJ45:	Ethernet connector for ADSL and network lines
SIM:	2 x SIM carriers (network agnostic)
Power:	Provided to support vehicle or battery operation
Video Input:	2 x MMCX connectors (PAL/NTSC video sources)
Audio/Power:	2 way audio (one way supported with current release software), power out provides 2 x independent 12V supplies for external cameras
RF Antennae:	2 x antennae for the internal GPRS/3G/HSDPA modules
Serial Ports/Alarms:	Provides RS232/RS485/RS422/RS232S serial ports for control of cameras or other devices 3 x trigger inputs provide wake-up from sleep or alarm reporting



## Communications

Internet Connectivity:	10/100 RJ45 Ethernet connector for ADSL and network lines
GPRS/3G/HSDPA Connectivity:	2 x built-in GPRS/3G/HSDPA modules
Satellite Connectivity:	10/100 RJ45 Ethernet for connection to Inmarsat GAN/BGAN Fleet Routers
PTZ Connectivity:	Supports Pelco P&D, Canon VC-C4/5, Sony Visca, etc. (other protocols on request)
Bandwidths Supported:	9Kbps to 1Mbps
Minimum Server Specification:	2GHz Processor, Windows Server 2003 or Linux preferred, 1Gb RAM, Oracle Java JRE 1.6.0 or later

## Security

Encryption:	Built-in AES 256 encryption in addition to support for IP Sec VPN connections
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## Ratings and Regulatory Approvals

EU Low Voltage Directive:	2006/95/EEC for product safety
EMC Conformity:	Directive 89/336/EEC
FCC Compliance:	Class B Digital Device Part 15