ADVANCED SURVEILLANCE FOR TRANSPORTATION

Transportation environments can often prove harsh for electronic equipment, with exposure to repetitive shocks and vibration proving too much for some electronic systems.

Specifically designed for public and commercial transport applications and encased in a ruggedised metal chassis, the TransVu unit can withstand this tough environment to provide uninterrupted in-vehicle security surveillance.

Alongside traditional DVR features such as alarm, and audio recording, the TransVu unit incorporates features specifically developed for the transportation market. Location tracking via GPS, a built-in accelerometer, intelligent power management integration with vehicle system data (such as brakes, indicators, tachometer), and a driver panic button all enhance the functionality of this mobile DVR.

TransVu Media brings a new dimension to vehicle security. Utilising additional monitor outputs from the TransVu unit, advertising or route information can be shown to commuters.

Messaging can be fed through the monitors as a result of pre-determined events and conditions triggering location specific information or a range of images that are pre-loaded on the TransVu unit itself for a controlled stream of advertising. For the customer this provides an additional benefit, by utilising the unit as a source of revenue the security solution pays for itself. New media can be automatically uploaded on a daily basis if required.

The TransVu digital recorder can provide a long, trouble free service in high vibration environments making it one of the most powerful transit surveillance tools available today.

FEATURES

- ▶ Simultaneous MPEG-4 and JPEG transmission and recording
- ▶ Ruggedised design with aerospace shock absorbers
- ▶ 8 or 16 camera inputs
- ▶ Record rate 50PPS (PAL), 60PPS (NTSC)
- ▶ Low power consumption
- ▶ Fixed and removable hard drive options available
- ▶ 2 audio inputs
- ▶ 6 configurable alarm inputs
- ▶ Media support via additional monitor output
- ▶ Accelerometer providing g-force measurements
- ▶ Spot monitor
- ▶ Ignition control power management
- ▶ Heater option available for extreme cold climates
- ▶ Video motion detection
- ▶ Location tracking via GPS*
- ▶ Image transmission on alarm
- ▶ GSM/SMS/GPRS/UMTS(3G)/HSDPA/HSCSD support*
- ▶ Solid State hard drive variants available
- ▶ Integration capabilities allow project specific solutions

* VIA SUITABLE INTERFACES

BENEFITS

- ▶ Comprehensive transport security features ensure that passengers, the driver, the vehicle and its cargo can be protected at all times
- ▶ Integrated power management facility ensures the unit can remain recording for a definable period of time even after the ignition is switched off
- ▶ Single quick release automotive connector ensures improved installation integrity in all environments
- ▶ Low power consumption and voltage monitoring ensures the TransVu does not compromise vehicle battery life
- ▶ g-force sensor combined with relevant video footage enables operators to refute false insurance claims
- ▶ Low power usage and mobile capability allows TransVu to be used in rapid deployment scenarios
- ▶ Provides additional data to aid in the analysis of vehicle systems and driver monitoring
- ▶ Advertising offers a source of revenue generation for the transport operator, allowing the CCTV solution to pay for itself (when using TransVu Media)

PLEASE NOTE THAT THIS IS A PRELIMINARY DATASHEET &
FEATURES & SPECIFICATIONS COULD BE SUBJECT TO CHANGE

TransVu

RUGGED DESIGN

Designed to conform to ETSI 5M2 (road) and EN 61373 (rail) standards with a heavy duty steel enclosure and aerospace grade suspension bushes, the TransVu can withstand prolonged exposure to the vibration and shock that is typical of road and rail transportation.

In addition, the use of a single, rugged, automotive connector provides excellent protection for the various inputs and allows quick and easy removal / installation.

LOGGING OF VEHICLE SYSTEMS

TransVu supports logging of vehicle systems such as engine speed, vehicle speed, use of indicators, brakes etc.

ACCELEROMETER

Harsh braking and turning are logged as events, the on board accelerometer constantly logs these forces and on playback displays on screen graphs accurately displaying turning, accelerating and braking forces.

PANIC BUTTON APPLICATIONS

Striking a driver's panic button instantly alerts a central control station and can transmit images of an emergency over mobile telephone networks.

WIRELESS LAN CONTROL

Connected to a wireless access point or bridge an operator can instantly access any vehicle in any network linked depot.

When the vehicle returns to a depot, full control of the TransVu can be accomplished via wireless LAN (Local Area Network). The TransVu is fully DHCP capable and can therefore log on to a network with no operator intervention.

The TransVu can be specifically named, perhaps with the same identity as the vehicle's registration plate. This means that within a large organisation, with many network linked depots, the system operator can communicate with the vehicle without having to know in which depot the vehicle is currently residing.

WIRELESS COMMUNICATION

GSM (Global System for Mobile communications), GPRS (General Packet Radio Service), UMTS (Universal Mobile Telecommunication System), HSDPA and HSCSD mobile telephone networks are all supported via a suitable interface, ensuring data and images can be remotely received.

SMS MESSAGING

With an optional SMS Terminal, SMS (Short Message Service) text messages can be sent from the TransVu to an SMS server or mobile phone.

GPS

Through the use of an optional GPS unit, positional information can be relayed to a control room which may be integrated with moving map displays. GPS routes can be created and vehicles that are "off route" can be tracked and intercepted, ideal for security applications or where vehicles need to remain on a set route. In addition through the use of an SMS Server, GPS co-ordinates can be transmitted from the vehicle at the request of a text message.

TransVu **MEDIA**

The TransVu Media variant allows advertising or customer information to be shown to commuters. The messaging can be location specific, advertising shops or attractions on the vehicles route. In addition text can be overlaid with the images to add specific messages to customers. The additional revenue benefits realised by deploying a flexible advertising solution such as this can make the TransVu unit a cost effective solution.

POWER MANAGEMENT

The TransVu power management facility stops the unit recording and closes down operation after a user defined period has elapsed from the vehicle ignition being turned off. TransVu will also carry out a controlled and timed power down sequence when the vehicle voltage has fallen below a user set level.

RAPID DEPLOYMENT

The unit's mobility and low current consumption make the TransVu range ideal for rapid deployment CCTV applications. Examples could include areas where solar panels supply the power, safety critical areas such as mines or areas requiring temporary surveillance such as building sites.

THIRD PARTY INTEGRATION

The TransVu is ideally suited for project customisation allowing bespoke solutions to be developed that suit the customers requirements. The included PowerScript feature assists in the integration between the Transvu and third party products enabling powerful unique applications to be created.

TransVu STATUS MODULE

The TransVu Status Module provides visual messages to the vehicle operator as to the status of various components of the TransVu unit. Status messages include; power status, camera fail, recording status, alarm status and camera masking. The module is available as an optional accessory.

REMOVABLE DISK DRIVE

TransVu can be supplied with a removable HDD. Located in a rugged transport specific caddy, unlocking the drive automatically powers down the TransVu. This allows easy retrieval of the HDD for maintenance/ replacement / evidential purposes, without needing to remove the entire unit.

VIDEO MOTION SEARCH FACILITY

Allows the user to search through hard-disk recordings for movement in a particular area of the image, set up on a 16x16 (PAL) cell grid (16x14 NTSC). The unit is then able to search back through the hard drive and create a list of activities for the user to view and archive as required. Searching can also be filtered to limit the search to user-defined times and dates.

Multi*Mode* RECORDING

Multi*Mode* recording gives you the ability to set different record rates, resolutions and compression algorithms across scheduled, normal and alarm modes. Up to 24 **Multi***Mode* Recording profiles can be set per unit, giving you the flexibility to adjust resolution (QCIF to 4CIF), record rates and compression settings (MPEG-4/JPEG) dynamically on individual cameras and across the whole unit.

RECORDING

Playback and record to hard disk simultaneously.
The unit provides the option to continuously archive video and audio data to a FTP server.
A choice of hard disk options are available, including a solid state variant.
Please contact customer services in your region or check the website at www.dedicatedmicros.com for further information.
Please note drive sizes may vary from time to time which may result in a larger drive capacity than stated being supplied with the unit.

Protected images:

The system can be configured to protect images from being overwritten permanently or for a fixed period of time, when an alarm is activated. The end user can also manually configure sections of recorded images to be protected from overwrite, and remove protection.

FLASH DISK OPERATION

To ensure that surveillance and alarm reporting functions are unaffected in the unlikely event of HDD failure, the TransVu has a built-in Flash Disk containing all the essential program and configuration data.

TIMED EXPIRY
- Timed expiry option allows images to be held for a selected number of days
- Images on the disk which are older than the number of days selected are not accessible

ALARMS
6 normally open/closed alarm inputs available via external harness.
Options:
- User definable, protected pre and post alarm recording per event
- Protect Alarm images from overwrite for a configurable period of time
- Spot monitor alarm display
- Trigger telemetry preset on alarm (when used with a suitable external RS232 to RS485 interface)
- Capture additional still image at moment of alarm
- Instant messaging to remote network client on alarm
- Automatic archive of alarm video and audio to FTP server

VIDEO MOTION DETECTION
16 advanced VMD trigger zones with individual sensitivity on a 88x64 (PAL) grid (88x60 NTSC) for each camera.
This is based on standard resolution settings of 720x256 (PAL) and 720x240 (NTSC).
Options:
- User definable, protected pre and post activity recording per event
- Protect VMD images from overwrite for configurable period of time
- Instant messaging to remote network client on VMD
- Automatic archive of VMD to FTP server or DVD-R/CD-R

PRE-ALARM
Each camera input can continuously capture a configurable number of images at a user defined pre-alarm capture rate. When an event occurs, the images captured before the alarm event are recorded to disk, allowing the viewer to see enhanced evidence leading up to the event.

FALSE ALARM SUPRESSION
Advanced alarm zones allow you to combine multiple detection sources to minimise false triggers. E.g. you can set an alarm to be triggered by a combination of a PIR and Camera VMD to remove miss-triggers from either source. Added to this, each alarm input can be temporarily disabled by a remote administrator to ensure that faulty detectors do not mask real alarm incidents.

TEXT SUPPORT
Through the inclusion of text support, TransVu can search captured data, for example from a ticket machine, and jump straight to the video sequence associated with a particular transaction. Additional functionality allows alarms to be raised on the use of keywords from the external device. Search and playback of these events is also supported through the NetVu Observer.

INSTANT ALARM REPORTING
The system can dial-out on alarm to a remote site to provide instant alarm notification.
- Instant alarm reporting
- Dial-out on alarm
- Alternative signalling path

WEB BASED CONFIGURATION
Web based configuration enables system adjustments to be made remotely to a networked unit, such as adjusting the record rate, setting the advanced VMD grids, programming presets and more – without the need for a site visit.

E-MAIL & SMS NOTIFICATION
Emails can be sent on alarm or other critical events.
Notifies the following events on a camera by camera basis:
- Alarm
- Activity
- Camera fail
- Power up

Access to mail server via Ethernet or dial-up is required for this feature. Short Message Service texts (SMS) can also be sent to a specified mobile phone number, via an SMS capable modem.

NetVu Connected
TransVu includes NetVu Connected technology to ensure maximum compatibility with future developments in networked security. NetVu Connected technology enables the TransVu to fully interoperate with other NetVu Connected products from AD Group including the DV-IP Decoder, NetVu ObserVer and DS2. Providing interoperability between the worlds leading security companies, NetVu Connected technology uses industry standard networking protocols supported by a wide range of third-party integration products and SDKs to ensure on-going compatibility for the future.

NETVU OBSERVER
Live and recorded images from the unit can be viewed on NetVu ObserVer, shipped with all NetVu Connected products and available as a free download from **www.dedicatedmicros.com**

NetVu ObserVer include:
- Live full, quad, 6, 9, 16, 25, 36 way screens
- GOTO time and date
- File export of digitally signed images over the network to the user's PC using NetVu software
- Remote manual control of relay output
- Telemetry control, including PTZ and telemetry presets
- Multiple user access
- Event log
- Network viewing is also available for Mac OSX and Linux
- RVRC features supported (such as event manager and incident characterisation).

See the latest NetVu ObserVer datasheet for more information.

89/336/EEC, ELECTROMAGNETIC COMPATIBILITY DIRECTIVE (EMC)
BS EN 61000-6-1:2001
DD ENV 50204:1996
BS EN 50081-1:1992
BS EN 50121-3-2:2000 (referring to EN 55011)
BS EN 50155:200
IEC 60571 Ed. 2.0b:1998

SHOCK AND VIBRATION RESILIENCE
IEC 61373:1999
BS EN 50155:2001
IEC 60571 Ed. 2.0b:1998
ETSI EN 300 019-2-5 V2.1.2 (2001-09) Environmental

TEMPERATURE RESILIENCE
IEC 60068-2-1
IEC 60068-2-2
BS EN 50155:2001
IEC 60571:1998

CAMERAS
8/16 Cameras, 75 Ohm impedence, individual termination

RECORDING
A choice of hard disk sizes are available.
Solid State Storage options are also available
Please contact customer services in your region or check the
website at www.dedicatedmicros.com

RECORD RATE
The TransVu can record at 50 PPS (PAL), 60 PPS (NTSC).
The TransVu Media can record at 25PPS (PAL) 30PPS (NTSC)
with an optional upgrade to 50pps (NTSC)

POWER
Voltage: 10 to 30 volts DC
Current consumption: 15w approx 1.4 AMPS @ 12V DC

SYSTEM RESOLUTION
Sampling Rate: 13.5MHz to CCIR 601
Number of pixels: PAL 768h x 576v MJPEG
704h x 576v MPEG-4

COMPRESSION
MJPEG & MPEG-4 formats at 4CIF, 2CIF, CIF & QCIF resolution.
User definable file compression size.
Maximum recorded resolution 720x576 (JPEG), 704x576
(MPEG-4)

AUDIO
Audio Inputs: 2 inputs with AGC
Input level: 50 to 4000mv
Frequency response: 50Hz to 3500Hz

ALARMS
6 flexible alarm inputs can be configured for digital, tamper,
analogue or pulse inputs.

TELEMETRY PROTOCOL SUPPORT
TransVu supports a range of standard telemtry protocols through
the use of a suitable external RS232 to RS 485 converter.
Supported protocols include:
- Dennard
- Pelco
- GE/Kalatel
- Panasonic
- Philips
- Sensormatic
- VCL
- American Dynamics
- BBV

SUPPORT APPLICATIONS
NetVu ObserVer, NetVu Media Manager (TransVu Media), EDP
Alarm Management, Media Update Utilities, Auto Download
Manager, Status Server

CONNECTIONS
Serial Ports – 4x 9 way (Male) D Type RS 232 ports
Ethernet – 10/100Base T connection
FTP and Telnet access

TEMPERATURE RANGE
TransVu Unit (Diskless): -5 to 70 °C / 23 to 158°F
Disk Drive: 5 to 55 °C / 41 to 131°F
Solid State Disk Drive: 0°C to 60°C

DIMENSIONS
Case overall: 256mm x 248mm x 90mm
(excludes plug & flange mount)
Base Plate area: 296mm x 260mm
Required mounting space: 350mm x 380mm x 140mm
(excluding cable space or removable HDD access)

WEIGHT
4.75 Kg / 10lbs 8oz (includes base plate and suspension)

WARRANTY
Unit (excluding HDD): 3 year warranty subject to standard terms
and conditions
HDDs: As HDD manufacturer warranty

PRODUCT VARIANT
8 / 16 VIDEO INPUT - 2.5" DRIVE OPTIONS
8 / 16 VIDEO INPUT - 2.5" REMOVABLE DRIVE OPTIONS
8 / 16 VIDEO INPUT - REMOVABLE SOLID STATE STORAGE

ACCESSORIES	
40GB HDD AND 2.5" DRIVE CADDY	DM/CDY/040/TRV
80GB HDD AND 2.5" DRIVE CADDY	DM/CDY/080/TRV
120GB HDD AND 2.5" DRIVE CADDY	DM/CDY/120/TRV
USB REPLAY CADDY	DM/PS/TRV
2 METRE (6 FEET) WIRING HARNESS	DM/HARN2/TRV
TRANSVU STATUS MODULE	DM/LEDSB/TRV/E

FOR FURTHER INFORMATION PLEASE CONTACT

MKTAD-TVU-D-001E