Videoswitch

VDM
Digital Multiplexer Recorder

31 day recording starts automatically on power-up (programmable)

Built-in CD writer for back-up • Just 3 key-presses for backup to CD • Simultaneous record & play

CDs replay on VDM or a PC (without software installation) • Variable image size for efficient storage

Firmware upgrades use CD drive • Built-in PSTN, ISDN or Ethernet remote access option

Dual removable hard drives (user serviceable) • 80 Gbytes to 600 Gbytes

4, 9 or 16 camera inputs • Real-Time Quad and Picture-in-Picture • Quad Sequencing

3 Monitor Outputs • Multi-screens • Coverts • Timers • Individual Quality setting per Camera

Instant recall of images by: Active date/time search • Sweep • Event log • Incident list

Built-in Power Supply • Watchdog timer protection • Manufactured in the UK

Just two steps to 31 day recording...

Step 1
Plug in the cameras and monitor(s)

Step 2
Plug into the mains

For remote access from a PC, plug VDC into a TCP/IP Ethernet network or PSTN or ISDN phone socket (optional)

600 Gbytes

48x24x48x

Built In CD Backup and CD Replay

25 blank CDs included

DVRs	4 Cameras	9 Camera	16 Cameras
80 Gbytes*	VDM-4G80	VDM-9G80	----------------
160 Gbytes*	VDM-4G160	VDM-9G160	VDM-16G160
250 Gbytes	VDM-4G250	VDM-9G250	VDM-16G250
320 Gbytes*	VDM-4G320	VDM-9G320	VDM-16G320
500 Gbytes	VDM-4G500	VDM-9G500	VDM-16G500
600 Gbytes*	----------------	VDM-9G600	VDM-16G600

Accessories	
PSTN Dial-Up	VDM/PSTN
ISDN Dial-Up	VDM/ISDN
ISDN Terminal Adaptor	VDM/ISDN/TA
Ethernet Networking	VDM/ETHER-1
Remote Keyboard	VK-1
Joystick Keyboard	VK-2
Rackmount Adaptor	RA-6

*Preferred hard drive sizes**

Videoswitch

20 years of electronics design, manufacture and customer support.

Digital Recorder Technical Data

Digital Recording/Replay

Camera Inputs (4, 9 or 16)	1V pk-pk, 75 Ohms, Composite PAL (BNC)
Colour/Monochrome	Auto Sense
Gain, Brightness, Colour Boost	Set via menus
Resolution	720 x 288 pixels x 16.8 Million colours
Image Quality	Programmable per camera and per recording mode
Image Size	6k Bytes to 40k Bytes Variable image size ensures optimum use of storage (fixed size is a menu option)
Compression Method	Wavelet
Image Retention Period	31days default, programmable up to 99 days
Normal Update Rate	Automatically calculated
Special Update Rates	Specific update rates and image quality may be set for alarm/activity periods and particular times of each day
Simultaneous Record and Play	Yes
Maximum Record Rate	25 images/second (2004 model)
Image Recall Modes	Date/Time Search, Event List, Incident List
Replay Modes	Play, Fast Play (up to x256) and Single Step (all modes forward and reverse)
Image Authentication	Each image is tagged with time, date and other image information, and is protected with a security signature. Recordable CD-Rs have the additional benefit of being indelible physical evidence.

Display Outputs

Main Monitor Outputs	1V pk-pk composite (BNC) and S-Video (Mini DIN)
Spot Monitor Output	1V pk-pk composite (BNC)
Resolution (Frame)	720 x 576 x 16.8 Million colours
Display Modes (Main)	Full screen, PIP, Quad (real-time), x9 and x16 split
Display Modes (Spot)	Full screen (analogue), fully independent of main
Auto Sequencing	Fully programmable on main and spot monitors. Quads and picture-in-picture images also sequence.
Covert Cameras	Covert cameras may be independently designated for the main monitor, spot monitor and remote access.

CD Writer & Hard Drives

Hard Drives	Dual removable hard drive drawers are fitted, for easy expansion and serviceability
Incident Recording	Up to 10 incidents may be marked for backup onto CD, and selected incidents may be written to CD.
CD Types	CD-R and CD-RW, 700Mbyte capacity
Incident Replay	The CD may be replayed in the VDM or in a PC
Configuration backup	The configuration may be stored and retrieved via CD
Firmware Upgrades	Upgrades supplied on CD for on-site update

Events & Alerts

Event Sources	Alarm Contact Inputs and Activity Detection
Contact Inputs	Normally Open/Closed, Individually set via menu
Activity Detection Zones	16 x 12 zones, Adjustable Sensitivity and pixel count
Event Response	Full screen pull-up, Increased rate and image quality
Alert Sources	Power-up, Video loss, System fault, Drives nearly full
Daily Timers	Alarm enable, Activity enable, Custom update periods
Event/Alert List	480 events and system alerts are logged

Interfaces

Mains Input	230/115 Vac Input, 90W max
Alarm	4, 9 or 16 inputs, 10k ohm pull-up to 5V.
Terminal break-out module	Included
Event and Alert Relays	24 vdc 500mA max, normally open/closed contacts
Keyboard Interface	RS485 (9600baud) and twisted-pair video output for single cable connection to VK-1 or VK-2 keyboards
PSTN/ISDN/Ethernet	Remote access module may be fitted into rear panel. Free remote access software is provided.

System Control

Built-in Keyboard	38 dedicated keys for controlling the system
Menus	User, Supervisor, Engineer
Passwords	Each Menu, Keypad, Replay, Remote Access
Watchdog Timer	Restarts system automatically
Clock Synchronisation	Time and date of multiple VDMs may be synchronised. Connect RS485 output of master VDM into slave VDMs.

Physical & Environmental

Temperature	5 to 35° C (operating), -20 to 60° C (storage)
Dimensions	360mm x 150mm x 380mm
Humidity (non-condensing)	5 to 95%
Weight (packaged)	12Kg

This UK manufactured digital multiplexer provides an integrated solution for C.C.T.V. recording, combining within a single box, a multiplexer, a digital hard disc recorder, a CD writer (for backup) and a PSTN, ISDN or Ethernet remote access option module.

Ease-of-use is a key feature of the VDM. Out of the box, it simply requires connecting to the mains supply and one or more cameras, and it will immediately start recording.

Recorded images are retained for a prescribed period, typically 31 days, and within that period, may be instantly recalled using time and date search, the sweep mode or the event log. The image retention period may be set to any number of days and the VDM will automatically calculate the update rate accordingly. Add more hard drive capacity and the update rate will increase, maintaining the specified image retention period

The built-in CD writer is used to archive incidents for permanent storage and replay on a PC. Menu configuration and event log are also backed-up.

The built-in keyboard has numerous dedicated keys, providing immediate access to all display and replay functions and menu and status screens.

Programming flexibility extends to specifying individual image quality for each camera and specific update rates during alarm and activity conditions, and during specified periods in each day.

Here is an example of the image update rate for different image retention periods using a 320Gbytes hard drive and S-VHS quality (20 Kbyte) images. Increase rates proportionally for larger drives.

320Gbytes Drive

Days	Rate	Equivalent VCR Mode
31	6½ ips	24 hour
21	8 ips	17 hour
14	12½ ips	12 hour

Divide the rate by the number of cameras to get the update rate for each individual camera. Free software called "VDM-Calculator" is available on our web site which caters for all options.

Due to a policy of continual product enhancement, specifications may change without notice.

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