



## Low cost, low maintenance, easy to use, four-camera DVR

The Eco4 is a low cost compact digital video multiplex recorder designed to replace the traditional VCR/multiplexer combination bringing all the benefits of digital security monitoring to the money conscious small retailer.

Designed to have the user friendly "look and feel" of a traditional CCTV system, the Eco4 offers over one month's on board hard disk recording. The elimination of tape management issues and VCR maintenance costs means that Eco4 literally provides a fit and forget solution, with a quick and easy search facility when video needs to be reviewed.

The user need never worry about re-winding or replacing tapes as they wear out. When the available hard disk space is full, Eco4 automatically begins recording over the oldest video. Any periods of recorded video can be manually protected to prevent them from being overwritten.

Small retailers and law enforcement agencies can benefit from crystal clear picture quality and images

that never degrade no matter how many times they are copied. All hard disk recordings and images copied to external CD-R\* provide tamper proof mechanisms approved for evidence. Playback of images from the CD is via a standard CD-ROM drive. The CD playback software will simply "auto-run" and does not require the installation of software on the users PC.

The option to have a second live spot monitor acts as a visible deterrent to the opportunist shoplifter, whilst reassuring staff and customers, and any suspected staff pilfering may be addressed via the Eco4's covert camera option.

Among the many features also included as standard on Eco4 are live quad display, picture in picture viewing, password protected access, out of hours remote monitoring using free network viewing software, and Dedicated Micros trade mark plug and play set-up with user-friendly interface to keep installation and operator training to a minimum.

For further information, please visit the website: [www.dedicatedmicros.com](http://www.dedicatedmicros.com) or contact customer services in your region

## benefits

- LOW COST ENTRY LEVEL DIGITAL SOLUTION FOR SMALL BUSINESS APPLICATIONS
- QUICK AND EASY TO INSTALL
- NO VCR TAPES OR MAINTENANCE
- SPACE SAVING DESIGN FOR POSITIONING UNDER A 9"-10" COMPOSITE MONITOR
- SECOND LIVE DETERRENT SPOT MONITOR OUTPUT
- SIMULTANEOUS RECORD, PLAYBACK, BACKGROUND IMAGE ARCHIVING, REMOTE VIEWING AND PLAY BACK WITH NO LOSS OF RECORD PERFORMANCE
- FAST ACCESS OF UP TO ONE MONTH'S RECORDINGS IN ONE BOX
- HIGH SPEED RECORDING OF UP TO 30PPS (NTSC), 25PPS (PAL)
- FULL REMOTE CONTROL AND OBSERVATION OVER LOCAL ETHERNET, BROADBAND INTERNET OR DIAL UP MODEM CONNECTION
- LIVE QUAD DISPLAY AND PICTURE IN PICTURE VIEWING
- BUILT IN VIDEO MOTION DETECTION
- ALL RECORDINGS HAVE TAMPER PROOF MECHANISMS APPROVED FOR EVIDENCE



# Specification

# data sheet

## LANGUAGES

English, French, German, Spanish, Italian, Chinese, Russian, Czech, Polish, Dutch, Hungarian and Swedish

## CAMERAS

4 camera inputs available.  
Loop through BNC connectors provided for each of the camera inputs, with software configured termination.  
Cameras auto detected on power up.  
Relay trigger option on camera fail.

## HIDDEN CAMERAS

Option to view all or selected cameras, without affecting cameras recording.

## MONITOR VIEWING

**Main monitor:**  
Full screen, programmable sequence.  
Programmable picture-in-picture, quad  
x2 electronic zoom on live images, freeze frame.  
Mon A: Composite video BNC connector.

**Spot monitor:**  
Full screen, programmable sequence.  
Mon B: Composite video BNC connector.

## SCHEDULING

Choice of day, night or weekend offers the ability to automatically:

- Switch alarms and activity on/off
- Alter the record rate for standard, alarm and activity recording
- Activation is via timer.

## ACTIVITY DETECTION

Programmable 16 x 8 masking grid for each camera view.  
5 levels of sensitivity.

**Options:**

- Main monitor display of last activity, 2 second dwell per alarmed camera, return to pre-activity display
- Trigger light duty relay output 500mA @ 20V max

## ALARMS

4 normally open/closed alarm contacts available via back panel.

**Options:**

- Main monitor display of last alarm, 2 second dwell per alarmed camera, return to pre-alarm display
- Trigger light duty relay output 500mA @ 20V max

## SEARCH AND PLAYBACK

VCR style keys offer:

- One touch playback.
- Frame advance/rewind, fast picture search and pause keys
- Event list, including event list filter with unique quadrant preview facility
- GOTO time and date
- Playback in quad, picture in picture and full screen

## RECORDING

Playback and record to hard disk simultaneously.

**Internal hard disk options:**  
Standard model offers a single 40GB hard disk at time of press. At time of press the maximum internal storage is 160GB.

Hard disk sizes are rapidly increasing in capacity. Please contact customer services or DM web site, for latest available disk size configurations for the Eco4.

**Protected images:**  
The end user can manually configure sections of recorded images to be permanently protected from overwrite. The system can also be configured to protect images automatically when the global alarm is activated.

The table below shows the disk size required for low, medium and high image qualities at the equivalent of 48 hour record speeds - 3 pictures per second across all cameras.

RECORD DURATION	IMAGE QUALITY*		
	LOW 14K	MEDIUM 18K	HIGH 25K
1 day	5GB	6GB	8GB
7 days	27GB	35GB	48GB
31 days	116GB	149GB	208GB

\*Please refer to our record calculator on the DM website for other possible calculations.

## RECORD RATE

Maximum record rate up to 30pps (NTSC), 25pps (PAL)

## 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 accessed.

## EVENT COPYING

Individual images and event sequences can be saved to external CD-R\* devices connected to the SCSI port. The CD containing the video sequences and the images themselves are digitally signed for authentication purposes. Playback of images from the CD is via a standard CD ROM drive.

\* Please check the website for compatible CD-R products.

## DIGITAL SIGNATURE

Images have a digital signature applied as they are recorded to hard disk with no loss of record performance. The application of the digital signature makes it possible to detect whether a single image or a sequence of images have been tampered with and also provides the ID of the unit recorded on.

## Eco4 NETWORKING CAPABILITIES

Standard ethernet connection provides live and recorded viewing on a networked PC using DM's Network Viewer software or via web pages using a standard internet browser. Network viewing is independent and does not affect the recording or local operation. The Eco4 includes a network bandwidth limitation option which can be configured on the unit itself.

**Network Viewer software features include:**

- Live full and quad screens
- VCR style fast forward and rewind, playback and frame advance/rewind

- GOTO time and date and unique quadrant event review
- File export of digitally signed images over the network using Network Viewer software.
- Copy single images as JPEG and sequences of images as AVI to save to PC
- Configurable password protection

**Web pages features include:**

- Viewing of live images in full screen and quad format
- Playback (full screen only) including GOTO function
- Password authentication.
- Web pages are also compatible with Mac and Linux Netscape browsers version 4.7x

## NETWORK REMOTE SUPPORT

Enables system adjustments to be made remotely over the network. One user may connect to the unit in a password protected admin mode that allows access to menus, as they appear on the unit themselves. System adjustments can then be made remotely over the network, such as changing the record rate, set-up of the activity grid and more - without the need for a site visit.

## COLOUR RESOLUTION

Sampling rate: 13.5 MHz to CCIR 601

Number of pixels:

PAL	720h x 512v
NTSC	720h x 448v

16.8 million colours 256 levels of grey, 8-bit luma.

## COMPRESSION

JPEG format files.  
User definable levels of compression.

## Eco4 DATA

RS-232 serial port  
SCSI 2 narrow 50 pin high density connector.  
1x Ethernet RJ-45 10 base-T connection.

## TEMPERATURE RANGE

Operating temperature 5 - 45°C (41-113°F)

## RELATIVE HUMIDITY

5% - 85% Non-condensing.

## DIMENSIONS

65.3mm mm (H) x 254mm (W) x 260mm (D).  
2 1/2" (H) x 10" (W) x 10 1/4" (D).

## WEIGHT

3.25kg (7.15 lbs) without PSU  
4.05kg (8.91 lbs) with PSU

## POWER SUPPLY

Input Voltage: 100 - 230 Va.c. 50/60 Hz.  
Output Voltage: 5, +12, -12 Vd.c.

## Ordering Information

Description	Short code
4 camera colour duplex,	Eco4

PLEASE CHECK THE WEBSITE FOR DETAILS OF COMPATIBLE SCSI CD-R PRODUCTS AND OTHER LATEST DEVELOPMENTS

FOR FURTHER INFORMATION PLEASE CONTACT

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REF: V2 DM10/03