

MDR-204 & MDR-216

Digital Video Recorder



Features

The compact, low-profile D3 series of enclosures is part of the most extensive offering of integrated vandal-resistant domes in the security industry. Suitable for indoor and outdoor installations, the D3 series incorporates a tough polycarbonate exterior, which provides unmatched protection against the elements in addition to superior impact and scratch resistance. Available in a compact, low-profile surface mount, the D3 series is compatible with all DB series camera modules to provide outstanding video quality with unequalled protection in demanding environments.

- Small size, low power consumption
- 4 or 16 camera models
- Proprietary MPEG format
- Up to 25 images/second
- Audio
- 4 levels of resolution
- Removable hard disk cartridges up to 120Gb
- GPS
- LAN/WLAN
- Normal, alarm, timer or stills recording
- Watermarked images
- Password protection
- Intuitive controls
- Flexible menu system with help screens
- Rapid search of recordings
- 3 year warranty



Telephone 0870 774 1500

www.brigade-electronics.co.uk

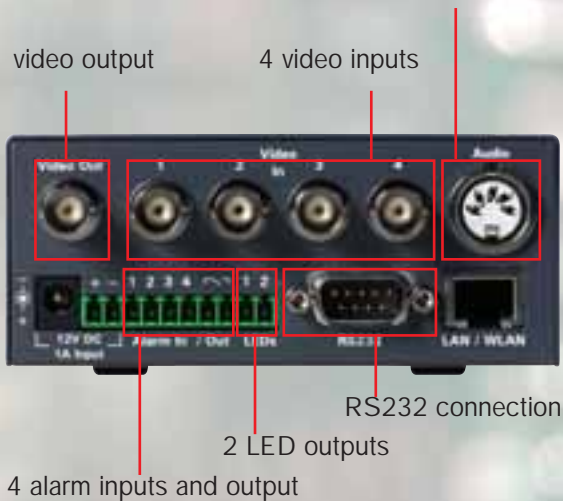


MDR-204 front panel showing LED indicators, record button and MDR-200 Reviewer connection

MDR-204 and MDR-216 camera versions showing the range of inputs and outputs

MDR-204

2 channel audio inputs/outputs



MDR-216

16 video inputs, 1 video output and 2 audio inputs/outputs



Video recording

Max rate	25ips PAL, 30ips NTSC, shared; selectable by camera
Resolution	Low, Medium, High, V.High
TVL	540
Pixels	720 x 288 PAL; 720 x 240 NTSC
Format	MPEG - full image update or optional conditional fresh
Input signal	4 or 16 inputs: composite video 1V p/p; colour/mono; PAL/NTSC autowswitching
Simultaneous Functions	Record, Playback, Live views, Ethernet
Recording medium	2.5" IDE PC-compatible hard disk in customised cartridge
Recording modes	Normal, timer, alarm, single/multi shot loop or single pass
Alarm recordings	Post-trigger recording; show alarmed cameras live on video switcher
Timer recordings	Weekly timer (7 day programmable) or interval timer, or both
Embedded text	Camera number, date and time plus 12 user characters for each camera; GPS* speed and position

Audio recording

Type	Optional 2 line inputs; 2 line outputs
Sampling rate	16kHz
Sampling resolution	16 bits
Max level	Selectable: 0.12V to 2V RMS (0.35V to 5.6V pk-pk)

Configuration

Entry	Menu system with help screens; sccessed [with password] by MDR-200 Reviewer
Password	4 user-definable levels
Language options	English
Date options	dd/mm/yy; mm/dd/yy
Summertime correction	UK; Europe; USA; off

File system

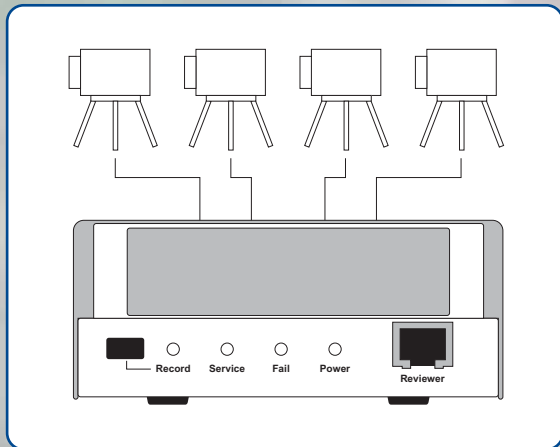
File type	Proprietary ".xba", convertible [with password] to AVI
File name	Optional file text plus date/time, for example: "Bus0034 2004 month 08 day 16 12_30_00.xba"
File size	10 min or 1 hour
File protection	Write protection via file menu; optional automatic write protection of alarm recordings

Playback

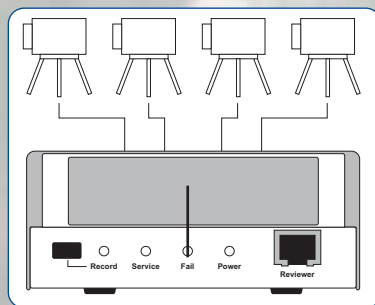
Functions	Rewind, replay, stop, play, fast forward, jog mode
Image search	Time/date of by file
Remote operation	
Systems	Ethernet [LAN/WLAN]
Functions	File transfer to PC
GPS*	
Embedded text	Position (coordinates) and speed (kph or mph)
GPS data	File contain GPS position/speed/time for mapping
Clock lock	Locks MDR-204 clock to world GPS clock

*Additional hardware required

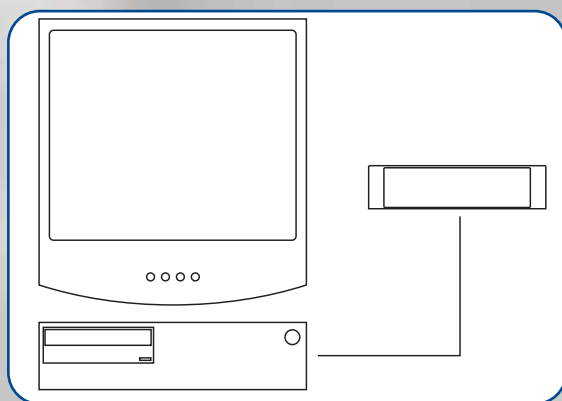
Using the MDR-204 & MDR-216 Systems



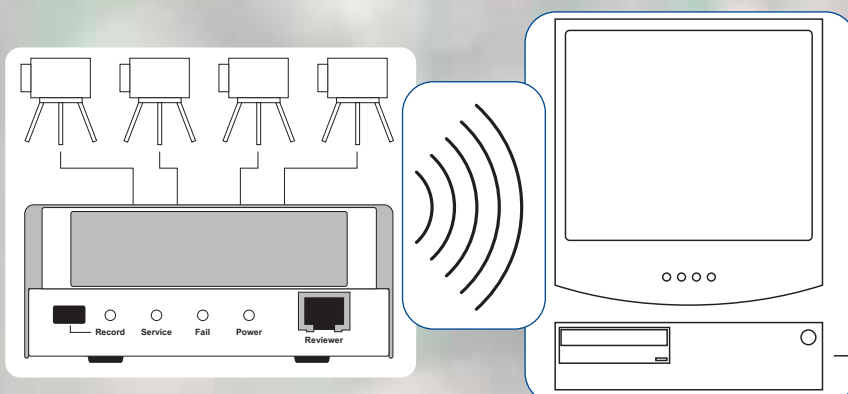
The MDR-204 Digital Video Recorder is used with a removable hard disk cartridge to record from multiple video and audio sources.



The MDR-200 Reviewer is used for on-site reviewing of video/audio recordings and to configure the optional menu settings of the MDR-204 digital video recorder.



The removable hard disk cartridge is connected to a PC (via USB kit) to analyse, copy or archive video/audio recordings and to download new operating software.



A Wireless Local Area Network (WLAN) system can be used to download recordings from the MDR-204 in a vehicle to a PC.

Connections/controls

Connector type	Cable harness (MDR-216) individual connectors (MDR-204)
Video inputs	16 on 25-way "D" connectors (MDR-216) 4 x BNC (MDR-204)
Video out	1 on 25-way "D" connector (MDR-216) 1 x BNC (MDR-204)
Switcher out	1 on 25-way "D" connector (MDR-216)
Audio in	2 line on 25-way "D" connector (MDR-216) 2 line on DIN 5 way audio socket
Audio out	2 line on 25-way "D" connector (MDR-216) 2 line on DIN 5 way audio socket (MDR-204)
Alarm inputs	4 on screw terminals
Alarm output	1 on screw terminals
Power inputs	2.4mm DC socket for PSU 1 x pair screw terminals, 12V
Modem and/or GPS	9-way "D" connector [RS232 serial]
LAN/WLAN	RJ45
Reviewer [MDR-200]	RJ45
Record on/off	Push button [menu disable]
Indicators LED	Power, recording, service, fail
LED out	2 x screw terminals for recording LED and service/fail combined LED

General

Security	Proprietary files; password protection; fragile watermark every image [MD5+DES]; embedded camera text
Power [DC]	12V DC nominal (8V-13V DC max range)
External mains PSU	Input: 100V-240V AC 50-60Hz Output: 12V DC regulated, 2A
Power recording	0.95A, 12V (11.4W) (MDR-200 connected)
Power not recording	0.83A, 12V (10W) (MDR-200 connected)
Peak current	2.8A peak startup current @ 12V (MDR-200 connected)
Power on until recording	<5 seconds
Clock	TCXO [+/- 1 min/year]; optional GPS locked clock*
Case	Mild steel, grey painted
Dimensions [mm]	210 x 112 x 47 (case)
Dimensions [mm]	220 x 116 x 52 (overall)
Weight	965g (without cartridge)
Environment	Indoor use
Operating temp range	+5°C to +40°C, 20% to 80% RHStorage
Temp range	-40°C to +65°C
Mounting	Free-standing or screw mounted
Supplied accessory	Instruction manual; PSU
Warranty	36 months

Approvals

The MDR-204-04 and MDR-204-16 will be submitted for the following approvals:	
EMC	89/336/EEC Generic 95/54/EC Commercial vehicles Specification 5 UK Home Office EN 50121-3-2, Rail 72/23/EEC
Electrical safety	EN60068-2-6 Automobile
Shock vibration	IEC6173: 1999 Rail

Future updates

There will be a continuous programme of improvements to MDR-204 and PCLink200 software, including:
Motion detection, Input of ASCII data, Modem access, Pre-trigger alarm recording, LAN/WLAN multiscreen playback with audio, live views, menu access and editing, software upload, file auto download

REMOVABLE HARD DISK CARTRIDGE

Access	MDR-200 Reviewer/LAN/WLAN while in MDR-204, PC using interface kit (see below)
Hard disk	2.5" IDE
Power requirement	5V 1A (PSU supplied with USB interface kit)
Dimensions [mm max.]	143 x 84 x 23
Weight	~200g depending on type
Warranty	30 months

MDR-200 REVIEWER

Functions	Program menus, check camera views, review live or recorded images
Operation	22 tactile keys with LED indicators
Power	Powered by MDR-204
Display	3" LCD monitor, TFT, 960[H] x 234[V] pixels
Format	PAL/NTSC
Audio	Single channel via built in speaker
Connectors	MDR-204 interface: 8-way RJ45 [serial data; video; audio; DC supply]; headphone jack
Case	Aluminium, grey painted
Dimensions [mm]	218 x 148 x 52
Supplied accessory	Data link cable (MDR-204 to MDR-200)
Warranty	36 months (monitor 12 months)

PCLINK200 REVIEWING/ARCHIVING SOFTWARE

Availability	Supplied in Interface Kits; software freely available to law enforcement agencies
Compatibility	Recordings made on MDR-204 cartridges
Access	Cartridge or recordings on CD/DVD, PC hard disk (copied or LAN/WLAN uploaded files)
Operating systems	Windows 98, ME, 2000, XP
Hardware requirements	2Ghz Pentium, 256MByte RAM, USB2 for optimum playback speed
Security	Optional password on PCLink software and on export video to AVI function
Language options	English
Playback controls	Rewind, jog back, stop, play and fast forward, jump to time, rapid shuttle via timeline.
Playback speed	Varispeed x0.1, x0.2, x0.5, x1, x2, x3, 4, x6, x8, x10 realtime for rapid playback
Functions	Realtime playback with audio. Review archive files on single of multi screen display. Copy 10 min or 1 hour files from cartridge to PC. Copy images into Microsoft Word or other package. Activate and verify watermarks. Export video to AVI file.

OTHER ACCESSORIES

USB Interface Kit	For access to MDR-204 recordings via USB1 or USB2 socket of PC; includes software, cables, instructions, PCLink200 reading software.
Anti vibration kit	Shock and vibration protection in mobile and portable applications.