



**RUGGED
DVR
SYSTEMS**

4, 8 & 12 ANALOGUE CAMERA INPUTS



MOBILE DIGITAL VIDEO RECORDERS

AN ANALOGUE-EMBEDDED NETWORK DVR ACCEPTING 4, 8 OR 12 INPUTS FROM ANALOGUE VIDEO CAMERAS

Our Mobile DVR range has been developed to accommodate the very latest in video recording software and hardware processing technologies. Housed within a rugged, small footprint, mobile unit, it is designed to meet the demands of operating in rugged mobile environments.

Our Mobile DVRs will accept and record 4, 8 or 12 PAL or NTSC inputs, where image rates and resolutions are set as required. Access and control is achieved via a laptop or host computer on the network. Video data can be processed using a choice of compression algorithms, including H.264 and MJPEG. Storage is maintained on internal hard drives, the capacity of which is tailored to customer requirements.

The powerful Linux based remote client performs a simple drag and drop function enabling users to create unique multi-display preferences, whilst offering an extremely fast search facility providing almost instant review of recorded images from any incident. The video can be encrypted and watermarked if required. Our DVR has also been designed to interface with many third party analytics tools using its highly developed SDK.

Specific or bespoke requirements can be accommodated upon request.

TYPICAL APPLICATIONS

- Rail, Road and Water based vehicles
- Any and all applications requiring extra ruggedness
- Extreme climate conditions
- Can be used in conjunction with other Wavestore servers to add coverage of any harsh environment areas into a Wavestore System
- Mobile observation stations/systems

VARIANTS AND OPTIONS

The DVR is available in 4, 8 and 12 input variants allowing for a range of dynamically adaptable DVRs, each with the ability to work independently or together for increased capacity.

Each variant of DVR can be configured with a range of options and accessories, including the capacity of each hard drive and any required access to the drives. Depending on the environment solid state drives may be recommended. Shock mounts are available where required. An external Alarm/Indicator module can be connected to add Input and Output functionality.

www.ruggedDVR.com

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TECHNICAL SPECIFICATION

RECORDING SYSTEM

Video Standards

PAL or NTSC

Video Resolution

QCIF, CIF, 4CIF, D1

Rate at full D1

Up to 25/30 fps per input

Video Displays

Picture adjustable size and number

Record types

Continuous, schedule, motion, alarm, event and digital input trigger

Overwrite modes

Configurable auto deletion and overwrite function, by time or drive allocation

Detection

Motion, camera moved, darkening, video loss

Areas

Configurable areas to target analytics from view/recording

Operating System

Embedded Linux platform

Time zone

Regional settings

Languages

English and over 10 other supported languages

REMOTE VIEWER CLIENT

Remote Users

Up to 5 concurrent users as default – Field upgradable

Operating Systems

Windows (7, Vista, XP), Linux (Ubuntu, Fedora, Debian).

SECURITY

Password profile

Multi protection levels

Cameras/Displays

Accessible on a per-user basis

Encryption

Up to 4096 bit encryption on all drives internal or external

Configuration Files

Save and restore capability for any server

Diagnostics

Remote, secure diagnostics and repair functionality are available

Remote Administration

Remote control via TCP/IP network including restart and reboot

Automatic System Restart

After power (when power resumes)

ALARM /INDICATOR MODULE (optional)

Up to 12x software configurable Inputs

Up to 4x software configurable Outputs

CAMERAS

Channels

4, 8 or 12 inputs with 1 output

Compression Formats

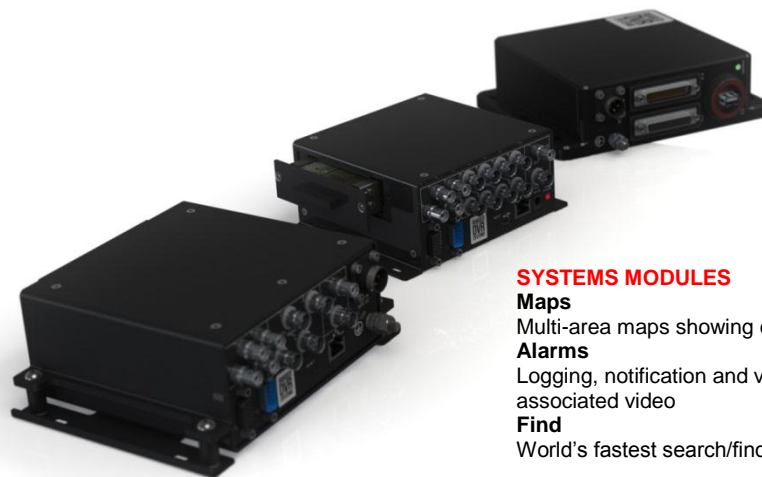
H.264, M-JPEG

PTZ Devices

Full 3-axis control, via joystick or keyboard

Cameras and Tracks

Multiple recording profiles



SYSTEMS MODULES

Maps

Multi-area maps showing camera locations

Alarms

Logging, notification and viewing associated video

Find

World's fastest search/find algorithm

STORAGE

Up to 2x Internal HDDs

2.5" Form Factor SATA II Hard Drives

Storage Size

Up to 1.5TB per disk

Supports External USB Drive (Optional)

Allowing for increased storage capacity or for duplication of recorded data

ENVIRONMENTAL

Operating Temperature

Designed for industrial environments
-10° to +50° C

Storage Temperature

-25° to +90° C

Humidity

85%RH non-condensing

Shock & Vibration

At all Vehicle Levels – shock mounting (optional)

EMI/EMC

At all Vehicle Levels

MTBF

>15,000 hours

MECHANICAL

Chassis Material

Aluminium Alloy

Surface Finish

Gloss Powder Coat

Connectivity

4/8/12 BNCs for video in +1 for video out

4 Phonos for audio in +1 for audio out

2.5mm DC Jack for Power Supply

Mini-USB for USB drive

RJ-45 for Ethernet

9 way D-type for Serial Comms

9 way D-type for configurable I/O

Dimensions – including connectors (mm)

Variant	Depth	Width	Height
4 Input	140	150	58
8 Input	140	160	63
12 Input	140	190	63

Fixing Dimensions

11mm x 4.5mm slots in 4 positions

Weight

Approx. 500g-600g

ELECTRICAL

Input Voltage

9-36V - With reverse polarity and over current protection

Typical Power

10W, 15W or 20W

PLAYBACK, FIND & COPY

Playback Functions

Linear rewind capability – variable speed slider

Playback Speed

Up to 8192lps

Playback Mode

Multi-way: play, rewind, jump, fast-forward and frame-step all cameras simultaneously

Slow Motion Playback

0.1 to x2

Zoom

Unlimited digital zoom

Search Mode

Search by any date, time, motion, alarm, notes

Intelligent Search

Highlighted activities on any recorded streams

Copy Mode

Backup multiple cameras including linked audio

Copy Devices (external client)

From software onto CD, DVD, USB, HDD/SSD (hardware allowing)

AUDIO

Channels

4, 8 or 12 inputs with 1 output

Recording Format

G.711 (8K samples per sec)

Sampling Rate

16kHz or 8kHz

Features

Lip-synchronised playback and live functionality for bi-directional video/audio.

NETWORK

1x Ethernet Port

10/100/1000Mbps

Supported Protocols

TCP/IP, DNS, SMTP, NTP, SSH, HTTP, RTSP

Config Protocol

Static IP entry

Time Sync (NTP)

Automatically synchronized to other Wavestore based servers or an external time source.

Bandwidth Control

Per user or per server

Other Comms

RS232 or 422/485