

5000 Series

5308 Mobile Digital Video Recorder

The March Networks™ 5308 Mobile Digital Video Recorder (MDVR) combines reliable, high-quality video recording with efficient, wireless system access to improve remote surveillance, incident response, risk and liability management in bus, light-rail and other vehicle applications.

Key Features

- IP65-compliant, heated chassis provides the highest resistance to shock, vibration, dust, water and EMI
- Modular docking station enables ease of installation and servicing
- Embedded Linux® operating system for maximum processing efficiency and reliability
- Optimized H.263/MPEG-4 video compression for maximum transmission and storage efficiency
- Integrated 802.11 wireless bridge for remote, real-time video monitoring and labor-saving automated video extraction
- Secure, removable hard drive with 60, 80 or 120 GB of onboard storage
- 8 video channels with configurable capture rates up to a total of 60 fps (NTSC), 50 fps (PAL)
- Enhanced recording quality on alarms, with automated wireless retrieval of tagged events
- Video encryption using SHA¹ for secure evidence authentication
- Built-in, rechargeable back-up battery for uninterrupted recording
- Portable Investigation Station² for convenient off-board video review
- Optional² mobile-qualified accessories including cameras, GPS transmitters, wireless antennas, alarm buttons, microphones and vehicle wiring harnesses
- Support for advanced video analytics and passenger information services
- Managed Services options for cost-effective outsourcing of video network monitoring and management

Designed specifically to address the unique operational and environmental challenges of in-vehicle video recording and surveillance, the 5308 MDVR delivers unmatched performance and reliability.

Uncompromising Reliability

The 5308 MDVR meets the most demanding environmental standards for resistance to shock, vibration, dust, moisture and EMI. A modular docking station architecture makes installation and service simple. The embedded Linux® operating system, internal temperature controls, intelligent watchdog circuitry and SMART disk self-monitoring deliver exceptional reliability, while the integrated back-up battery guards against power interruption, and extends video coverage on vehicle shutdown.

Outstanding Performance

Video capture rates are configurable on a per-camera basis, up to a total of 60 fps (NTSC), 50 fps (PAL). Using advanced compression techniques, video is stored on a tamper-resistant, ruggedized 2.5" hard drive with integrated thermal control for reliable performance over a wide temperature range. Video images or clips can be exported from the system easily – locally or remotely.

Advanced H.263 or MPEG-4 compression provides extremely efficient video extraction over wireless networks: a 60-minute video clip can be transmitted in only 10 minutes over a standard 802.11 wireless network. In cases where 'pulling' hard drives is preferred, a portable Investigation Station² allows convenient review of data using a laptop or desktop PC.

Management Made Easy

With R⁵ Mobile Suite software, the 5308 MDVR leverages wireless networks to deliver time and labor-saving fleet management capabilities such as remote, real-time video monitoring, automated video extraction, GPS and vehicle data integration, automatic system, camera and peripheral diagnostics and scheduled software configuration and upgrades. R⁵ Mobile Suite also integrates management of the 5308 MDVR with all March Networks mobile and fixed DVRs, extending coverage beyond vehicle fleets to entire transit operations, including platforms, stations, storage depots and other facilities. This centralized, enterprise-wide management approach reduces deployment, labor and training costs, and maximizes return on investment.



Tamper-resistant, removable hard drive

Rugged, IP-65 compliant chassis with built-in 802.11 wireless bridge and thermal control

Compact wiring box accommodates standard transit wiring harnesses and back-up battery

Sturdy, heavy-gauge docking station eases installation and servicing



Specifications

5308 MOBILE DIGITAL VIDEO RECORDER (MDVR)

Description: A robust mobile digital video recorder with up to 8 camera inputs (including independent line power for each), 4 alarm and 2 audio I/O ports, removable video storage, and options for wireless network and GPS connectivity.

Video Interface: Integrated electronic balun technology offering 8 balanced inputs (NTSC or PAL) over RG-179 coax or CAT-5 twisted pair wiring; 1 software-selectable output for in-vehicle NTSC/PAL display (fixed or event driven)

Video Recording: 60 fps total (NTSC), 50 fps (PAL); CIF, 4CIF resolution; flexible frame rate allocation per camera. The following at CIF resolution:

4 cameras or less: NTSC - 60 fps across 4 inputs (15 fps per input, 30 fps on 2 inputs); PAL - 50 fps across 4 inputs (12.5 fps per input, 25 fps on 2 inputs)

5 to 8 cameras: NTSC - 4 fps nominal per parallel input; PAL - 3 fps nominal per parallel input

H.263 video compression; 5 quality settings; average image size ~2 KB/frame; video signal loss detection

Alarms/Relays: 4 transient/surge protected two-state, dry contact, current loop inputs; open/closed detection; 1 relay switch output (12 VDC/1 Amp); programmable event driven (e.g., driver 'event' button); programmable increase of frame rate on event, to maximum available per camera

Audio Channels: 2 line-level I/O ports (2 in, 1 out); two-way half-duplex communication, synchronized with video; 4 quality settings; 12 VDC/250 mA provided

Peripheral Ports: 2 RS-232 ports (12 VDC/250 mA provided), for wireless modem and GPS receiver (see Options); 1 RS-485 port, for PTZ cameras; 1 LED port (12 VDC/20 mA) for in-vehicle system status display

Network Interface: Ethernet 10/100-BaseT main connection; DHCP enabled; optional SNMP configuration; NTP time synchronization

Recording Modes: Continuous, scheduled or event/alarm-driven, motion detection (full view or masked, with sensitivity); configurable pre- and post-alarm recording; configurable post-vehicle-shutdown recording

Video Streaming: Scheduled or on demand, with unlimited streams; bandwidth limiting at global or camera-specific bit or frame rates; unique adaptive stream for low-bandwidth (wireless) networks

Video Storage: Removable hard disk caddy (60, 80, 120 GB) with IP65-grade sealing gasket; J1455 shock and vibration drive mounting; temperature control; enclosed for protection during handling; system shuts down when removed

Video Export: JPEG or BMP images and security-sealed¹ .AVI clips with time/date stamp, alarm details and auto-run review software

Dimensions (in docking station): 3.4 in. (h) x 18.4 in. (w) x 17.8 in. (d) / 8.7 cm (h) x 46.8 cm (w) x 45.3 cm (d)

Weight: 30.0 lbs / 13.6 kg

Temperature - Operating: -5 to 115 °F / -20 to 45 °C; monitored with software/LED indication; maximum 205 BTU generated per hour (system plus hard drive; excluding cameras);
Storage: -40 to 150 °F / -40 to 65 °C

Shock/Vibration³: SAE J1455/MIL-202F/MIL-STD-810

Electromagnetic³: EN55022, CISPR22, FCC Part 15, SAE J1113, J1455, EN61000-3-2/3, EN50130-4

Environmental Protection³: Designed to IEC 60529 IP65 test level for ingress protection (dust and water)

Power Supply: J1455-compliant; protects against load dump transients, reverse battery, electrolyte boil-off, brown-out; auto-switches between + 12 VDC and +24 VDC environments; provides +12 VDC (250 mA, current limited) for each camera; field replaceable SLA back-up battery provides stand-by power for 10 minutes full system operation; unit consumption of 100 W maximum, including cameras

Safety³: EN60950, CSA 60950

Secure Connections: All wiring routed through conduit on power/wiring box; strain-relieved, insulation displacement terminal block connectors for signal I/O; electronics conformally coated; gas-tight connections can be supplemented with silicon grease (included); automotive-grade battery and power connectors; IP65-grade connectors and gaskets on main unit

Options^{2, 3}: Investigation Station; GPS receiver; CDMA 1XRTT and GSM/GPRS wireless modems support 802.11g wireless LAN support; 250 mA power provided for each modem

Notes: ¹ SHA (Secure Hash Algorithm) of Digital Signature Standard [A.S. FIPS PUB 180-1, 1995].

² Optional devices sold separately

³ Contact March Networks for more details.

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