

5000 Series

5412 Mobile Digital Video Recorder

The March Networks™ 5412 Mobile Digital Video Recorder offers high frame rates and extensive storage capacity, and is optimized for use with mobile cameras. Reliable, high-quality video recording is combined with efficient, wireless system access to extend enterprise-class surveillance to bus, light-rail and other vehicle applications.



Key Features

- IP65-compliant, temperature-controlled chassis provides the highest resistance to shock, vibration, dust, water and EMI
- Optimized video compression for maximum transmission and storage efficiency
- Integrated 802.11g wireless option for labor-saving automated system health monitoring and video extraction
- Dual-drive configuration with up to 1.5 TB of secure storage
- 12 video channels with configurable capture rates up to a total of 240 fps (NTSC), 200 fps (PAL)
- Optimized for use with mobile cameras for high-quality video recording
- Embedded Linux® operating system for maximum processing efficiency and reliability
- Enhanced recording quality on alarm, with automated wireless retrieval of tagged events
- Standards-based, anti-tamper security seal¹ for video evidence authentication
- Built-in, rechargeable back-up battery for uninterrupted recording
- Portable Hard Drive Investigation Station² for convenient off-board video review
- Support for advanced video analytics and passenger information services
- Managed Services option for cost-effective outsourcing of video system monitoring and management

Unparalleled Performance and Flexibility

The 5412 MDVR brings enterprise-class video surveillance to the most demanding transit environments, setting new standards for performance, flexibility and management in mobile applications.

Twelve video channels provide capture rates up to a total of 240 fps (NTSC), 200 fps (PAL). March Networks' range of robust, mobile cameras ensure high-quality video recording.

Advanced video compression enables extremely efficient data extraction over wireless networks: 10-minute incident recordings can be automatically transferred in under a minute over a standard 802.11g wireless network. In cases where removing hard drives is preferred, a portable Investigation Station allows convenient review of data using a laptop or desktop PC via a USB interface.

To meet the ever-increasing need for storage capacity in transit applications, the 5412 MDVR is equipped with one or two ruggedized 3.5" hard drives with a total capacity of up to 1.5 TB. This dual-drive capability provides up to 90 days of on-vehicle storage. The drives are mounted in a shock-proof, wireframe suspension harness for exceptionally reliable, long-term operation. For added data protection the disks may be configured for mirroring.

Uncompromising Reliability

Designed to stringent SAE J1455 specifications, the 5412 MDVR meets tough environmental standards for resistance to shock, vibration, dust, moisture and EMI. The embedded Linux® operating system, internal temperature controls, intelligent watchdog circuitry and SMART disk monitoring deliver exceptional reliability, while the integrated back-up battery guards against power interruptions, and extends video coverage on vehicle shutdown.

Remote Management Keeps Vehicles In Service

With R5 Mobile Suite software, the 5412 MDVR leverages wireless networks to simplify fleet management with capabilities such as remote, real-time video monitoring and automated video extraction. GPS and vehicle data integration, automatic MDVR, camera and peripheral diagnostics, and scheduled software upgrades are all carried out via wireless data links. This remote capability keeps transit fleets in service around the clock.

R5 Mobile Suite software also integrates management of the 5412 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.



Specifications



Rear panel with wiring hood removed

5412 MOBILE DIGITAL VIDEO RECORDER (MDVR)

Description: A robust mobile digital video recorder with up to 12 camera inputs (including independent, conditioned power for each), 6 alarm and 2 audio ports, removable video storage, and options for wireless network connectivity and GPS integration

Video Interface: 12 video inputs (NTSC or PAL) on BNC connectors; 1 software-selectable output for in-vehicle NTSC/PAL display (fixed or event driven)

Video Recording: 240 fps total (NTSC), 200 fps (PAL); CIF, 4CIF resolution; flexible frame rate allocation per camera
H.263 video compression; 5 quality settings; average image size ~2 KB/frame; video signal sync-loss detection

Alarms/Relays: 6 transient/surge protected two-state, dry contact, current loop inputs; open/closed detection; 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 audio quality settings; 12 VDC/150 mA microphone power provided

Peripheral Ports: RS-232 port; 2 USB 1.1 ports (500 mA); LED port (12 VDC/20 mA) for in-vehicle system status display; GPS

Network Interface: Ethernet 10/100-BaseT main connection; DHCP enabled; optional SNMP configuration; NTP time synchronization; integrated 802.11g option

Recording Modes: Automatic, continuous recording on vehicle start; configurable post-vehicle shutdown recording; archival capabilities on event with programmable pre, post and automatic wireless retrieval options

Video Streaming: Unique adaptive stream for low-bandwidth (wireless) networks

Video Storage: Removable hard disk caddy with IP65-grade sealing gasket; one or two 3.5" hard drives (up to 750 GB each); J1455 shock and vibration drive mounting; thermal control; auto shutdown on removal

Video Export: Secured .AVI clips with time/date stamp, alarm details and auto-run review software

Dimensions: 5.5 in. (h) x 17.0 in. (w) x 14.2 in. (d) / 14.0 cm (h) x 43.2 cm (w) x 36.1 cm (d) [with wiring hood]

Weight: 35.0 lbs / 15.9 kg

Temperature - Operating: -15 to 122 °F / -25 to 50 °C standard; monitored with software/LED indication; **Storage:** -40 to 160 °F / -40 to 70 °C

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

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

Environmental Protection: IEC 60529 IP65 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; back-up battery provides stand-by power for 60 seconds full system operation; unit consumption of 200 W maximum, including cameras. Programmable system shutdown on ignition off from 0-30 minutes.

Safety: EN60950, CSA 60950

Options: Video Investigation Station; GPS receiver; CDMA 1XRTT and GSM/GPRS wireless modem support; 802.11g wireless LAN support; spare hard drive caddy; mobile cameras; vehicle cables and harnesses; impact sensors; status and tag buttons



R⁵ Mobile Software and 5412 MDVR Investigation Station with hard drive caddy

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

² Optional devices and features sold separately

© 2007. March Networks Corporation. All rights reserved. Information in this document is subject to change without notice. MARCH NETWORKS, R⁵, and the MARCH NETWORKS and R⁵ logos, are trademarks of March Networks Corporation. All other trademarks are the property of their respective owners.
Printed in Canada 2961 PN 060-2961-00-D

North America:	1 800 563 5564
Latin America:	613 591 8181
Europe, Middle East and Africa:	+44 1 291 436027
Asia Pacific:	+852 2508 9780

www.marchnetworks.com

March Networks
Corporate Headquarters
Tower B, 555 Leggett Drive
Ottawa, Ontario Canada
K2K 2X3 613 591 8181

