



4310 Digital Video Recorder

The March Networks™ 4310 DVR is a networked digital video recorder designed for customers whose active surveillance needs demand advanced features and functionality, and higher video capture rates. The 4310 DVR delivers a total of 120 fps across 16 cameras, and marries this performance with unmatched serviceability to be the DVR of choice for these security environments.

Key Features

The 4310 DVR provides:

- Concurrent recording speeds of 7.5 fps on all 16 inputs, with the flexibility of up to 30 fps on four cameras
- Up to 16 alarm inputs, as well as up to 12 two-way audio ports, for complete audio/video security coverage
- Programmable increase of recording rate on alarms for high quality event records
- Multiple codec support (H.263, ISO-compliant MPEG-4) for optimized video compression
- High-capacity internal and external RAID¹ video storage, with disk mirroring capability for added reliability
- Internal back-up battery for power brown-out protection
- Industry-first docking station architecture for cost-effective and reliable installation and maintenance
- Full configuration, management and video retrieval, remotely, via an IP network or dial-up line
- Flexible bandwidth control to align with network capabilities
- 'Triplex operation', for simultaneous viewing of live and stored video, while full recording continues
- Local and remote video export to removable media (USB-connected CD/DVD or memory stick), including auto-run clip Player

Complete capabilities, for advanced security needs

The March Networks 4310 DVR is ideally suited for customers with more active or complex scenes to monitor – environments that require the capture, transmission and storage of high-quality, higher frame rate security video. Medium sized banks or retail chains, corporate, government or commercial facilities – all will be impressed with the performance and value provided by this unit.

Modular design allows the 4310 DVR to be installed easily, on a desktop, an equipment-closet wall, or in a 19" rack. Proven software tools allow the unit to be accessed and managed, remotely and securely, from any authorized client on the network. Larger, multi-site customers can take advantage of the control and efficiency provided by our powerful Enterprise Management Suite software. Other options include a PDA-based Viewer for mobile staff, a free Player for video replay by third parties, an integrated ATM Transaction module for bank customers, and an integrated POS Transaction module for retail customers. All promote full user control with minimal training, and provide consistent operation across the March Networks DVR product line.

An integrated back-up battery and intelligent hardware and software watchdog circuitry keep this DVR functioning during power brown outs. The robust Linux Operating System is based in flash memory, ensuring quick reboot if the power fails completely.

This also allows for internal hard-drive flexibility – the base diskless configuration for video server applications; up to four high-capacity drives for extensive video archiving or for mirrored internal storage.

The unique docking station provides technicians with direct access to these hard drives without disrupting cables or connectors. This industry-leading innovation makes installation and maintenance of the unit far easier and faster. Two rear-panel PCI slots are also accessible in this way, and support a range of optional components to tailor the DVR to individual requirements. Audio, alarm, switch and serial data inputs and outputs, along with added storage interfaces, are ordered as required. A USB serial port also enables rapid video export or the connection of external devices such as a modem for dial-up system access.



Technical Specifications



4310 DVR

Description: The 4310 DVR is a fully featured, networked digital video recorder with inputs for 16 cameras, optional alarm and audio I/O ports, support for a number of PCI and USB compatible devices, and high-capacity internal and external storage capability. In its diskless configuration, the unit functions as a video server.

Video Recording: Total of 120 fps for NTSC inputs, 100 fps for PAL inputs; QCIF, CIF, 4CIF resolution supported; the following rates at CIF setting:

| NTSC Inputs | PAL Inputs |
|---|--|
| 120 fps across 16 inputs (7.5 fps per input, 30 fps per 4 inputs) | 100 fps across 16 inputs (6.25 fps per input, 25 fps per 4 inputs) |
| H.263 or ISO-compliant MPEG-4 video compression; up to 5 quality settings; average image size ~2 KB/frame; video signal loss detection; all configurable per camera | |

Video (Monitor) Output: BNC-terminated NTSC or PAL output; event-driven video switcher functionality, selectable 16:1 composite with dwell; controlled/overridden by time/VMD/alarm video, from any camera; all inputs also offer 75Ω/hi-Z switch for loop-through capability

Alarms/Relays: Optional module; 16 current loop inputs, supporting open/closed/cut detection; 4 relay switch outputs (30 VDC, 1 Amp); programmable event driven; programmable increase of frame rate on event, to maximum available per camera

Audio Channels: Optional PCI card; 6 line-level I/O channels; two-way half-duplex communication, synched to video; 4 quality settings per channel

Data Connectivity: Optional PCI card; 4 RS-232 ports or 2 RS-485 ports per card, for ATM/POS/PTZ support

Network Interface: Ethernet: RJ-45 10/100 BaseT main connection; PSTN via optional USB modem/terminal adapter; DHCP enabled; optional SNMP configuration; NTP time synchronization

Recording Modes: Continuous, scheduled or driven by external event – alarm, motion detection (full view or masked, with sensitivity control), ATM transaction, POS transaction; configurable pre- and post-alarm recording

Display Modes: 1-16 simultaneous windows; any combination of real-time, replay, on alarm, time/date, transaction

Ordering Information

| Part No. | Description |
|----------|--|
| 14171 | 4310 DVR with Software ³ |
| 14549 | 4310 DVR with Software ³ plus two hard-drives ³ |
| 14551 | 4310 DVR with Software ³ plus four hard-drives ³ |

Additional Video Storage

| | |
|-------|--|
| 13750 | 250 GB hard-drive (up to 4 drives supported) ⁴ |
| 13751 | 300 GB hard-drive (up to 4 drives supported) ⁴ |
| 13979 | 6-Bay RAID-5 ¹ Storage Unit – (hard-drives not included) ³ |

Video Streaming: Unlimited streams; bandwidth limiting at global or camera-specific bit or frame rates; unique adaptive stream for low-bandwidth networks

Video Storage: Up to 4 high-capacity, easily removed, internal IDE hard-drives; RAID-1¹ internal mirroring option

Video Archive: Extensive, fault-tolerant, external RAID¹ storage through optional SCSI adaptor

Video Search: Simultaneous across multiple cameras, using time/date (with time zone reference) or any other captured event – alarm, motion detection (full view or masked), activity scan, ATM transaction with card number and amount, POS transaction with transaction number and amount

Video Export: Local and remote video export to removable media (USB-connected CD/DVD or memory stick), including auto-run Player; export JPEG or BMP images and security-sealed² .AVI clips with time/date stamp and alarm details; DVR Player software also freely downloadable from website

Audit Trail: Configuration, database searches, communications activity, live and recorded video requests, problem acknowledgement; 6 month capacity with circular logging

Dimensions: 3.5 in. (h) x 17.5 in. (w) x 20 in. (d) / 8.9 cm (h) x 44.5 cm (w) x 50.8 cm (d); Rack (2U high), wall or desk mount

Weight: 27 lbs / 12.2 kg shipping weight (unit plus docking station); 1.25 lbs / 0.6 kg each hard-drive

Operating Temperature: 50-105 °F / 10-40 °C; conduction cooling system; optional cooling kit for high density rack mounting; maximum 255 BTU generated per hour (system plus 4 hard-drives)

Electromagnetic: FCC Part 15 Class A; EN55022 Class A Emissions; EN55024, EN50130-4, EN61000 Immunity compatibility

Power Supply: Internal 115/230 V AC (auto-sensing); consumption 75 W maximum (system plus 4 hard-drives)

Safety: CSA C22.2 No.950; UL 1950; EN60950 LVD

Minimum Viewing Station Requirements: Pentium II/450 MHz or better; Windows[®]95/98/NT[®]/ME/2000/XP; 128 MB RAM; 24X IDE CD-ROM drive; 50 MB free disk space

Other Optional Components

| Part No. | Description |
|----------|---|
| 13522 | SCSI Option Kit ⁵ – supports external storage |
| 13523 | Audio Option Kit ⁵ – 6 two-way line-level ports |
| 13524 | RS-232 Dataport Option Kit ⁵ – 4 ports, supporting ATM Transaction capture or PTZ camera controllers (on-screen GUI) |
| 13525 | Alarm Option Kit ⁶ – 16 alarm inputs / 4 switch outputs |
| 13630 | Cooling Option Kit – dual-fan module to support high density DVR rack mounting |
| 14421 | RS-485 Dataport Option Kit ⁵ – 2 ports, supporting PTZ camera controllers (on-screen GUI) |

Notes: ¹ Random Array of Independent Disks.

² SHA (Secure Hash Algorithm) of Digital Signature Standard [U.S. FIPS PUB 180-1, 1995].

³ See Price List for more details, including added software and storage options.

⁴ Also see Hard Drives On-line link on our Partner Extranet for more details.

⁵ Total of 2 PCI slots available.

⁶ One module per DVR.

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