

# 4000 Series

## 4410 Digital Video Recorder



The March Networks™ 4410 DVR is for customers who need the maximum performance, versatility and reliability in an IP-networked digital video recorder with a capture rate of 240 fps (NTSC), 200 fps (PAL) across 16 cameras.

### Key Features

The 4410 DVR provides:

- Concurrent recording speeds of 15 fps (NTSC), 12.5 fps (PAL) on all 16 inputs, with the flexibility of up to 30 fps (NTSC), 25 fps (PAL) on eight cameras
- Up to 16 alarm inputs, as well as up to 12 two-way audio ports<sup>1</sup>, for complete audio/video security coverage
- Programmable increase of recording rate on alarms for high quality event archives
- High-capacity internal and external 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
- Local and remote video export to removable media (USB-connected CD/DVD or memory stick), including auto-run Video Player

### Designed to excel in virtually any environment

The March Networks 4410 DVR is in a class of its own. With 240 fps (NTSC), 200 fps (PAL) of flexible recording capability, it offers reliable capture and storage of clear, detailed video under virtually any circumstances. For banks, retailers, corporate or government facilities – customers with very active or complex surveillance requirements – the 4410 DVR meets the highest security and IT standards.

Modular design allows the 4410 DVR to be installed easily, on a desktop, on 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 integrated ATM/POS Transaction modules for banking and retail customers. All promote full user control with minimal training, and provide consistent operation across the March Networks DVR product line.

A built-in back-up battery and intelligent hardware and software watchdog circuitry keep this DVR functioning during power brown outs. The robust Linux Operating System is stored in flash memory, ensuring quick reboot if the power fails completely. This also allows internal hard drives to be provisioned as needed – either no drives for video server applications, or up to four

high-capacity drives for extensive video archiving, or for mirrored internal storage.

The unique docking station design provides technicians with direct access to the hard drives without undoing cables or connectors, making installation and maintenance of the unit much easier and faster. Two rear-panel PCI slots support a range of optional components for tailoring the DVR to individual requirements. Audio, alarm, switch and serial data inputs and outputs, along with added storage interfaces, can be 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.



# Specifications



## 4410 DVR

**Description:** The 4410 DVR is a high performance, 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. In its diskless configuration, the unit functions as a video server.

**Video Recording:** Total of 240 fps for NTSC inputs, 200 fps for PAL inputs; CIF, 4CIF resolution supported; the following rates at CIF setting:

NTSC Inputs	PAL Inputs
240 fps across 16 inputs (15 fps per input, 30 fps on 8 inputs)	200 fps across 16 inputs (12.5 fps per input, 25 fps on 8 inputs)

H.263 (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<sup>2</sup>; 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<sup>1</sup>; 6 line-level I/O channels; two-way half-duplex communication, synched to video; 4 quality settings per channel

**Data Connectivity:** Optional PCI card<sup>1</sup>; 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/POS transaction; configurable pre- and post-alarm recording

**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-1<sup>3</sup> internal mirroring option

**Video Archive:** Extensive, fault-tolerant, external RAID<sup>3</sup> storage through optional SCSI adaptor

**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); plus 1.25 lbs / 0.6 kg each hard-drive

**Operating Temperature:** 50-105 °F / 10-40 °C; thermally controlled cooling; 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 VAC (auto-sensing); consumption 75 W maximum (system plus 4 hard-drives)

**Safety:** UL 60950; CSA C22.2; UL 1950; EN60950 LVD

Notes: <sup>1</sup> Total of 2 PCI slots available.  
<sup>2</sup> One module per DVR.  
<sup>3</sup> Random Array of Independent Disks.

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