MARCH networks
A Delta Group Company

X32, X48, X64
X-Series All IP Recorder

High-capacity, high-definition IP recording platform with RAID

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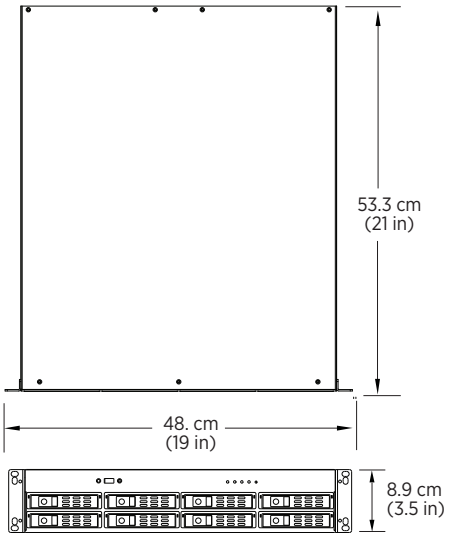
For customers who are planning an all-IP installation, and require a powerful recorder with high throughput, the 10th generation offering **X-Series All IP Recorder** from March Networks® accommodates up to 64 IP cameras and provides a total bandwidth capacity of 600 Mbps. The IPX recorder delivers high-definition video that's always there when you need it, and the advanced tools that allow you to quickly find the evidence you need. Our solutions help you get your job done faster — from installation to investigation — with these appliance-based recorders as the backbone.



Key Benefits

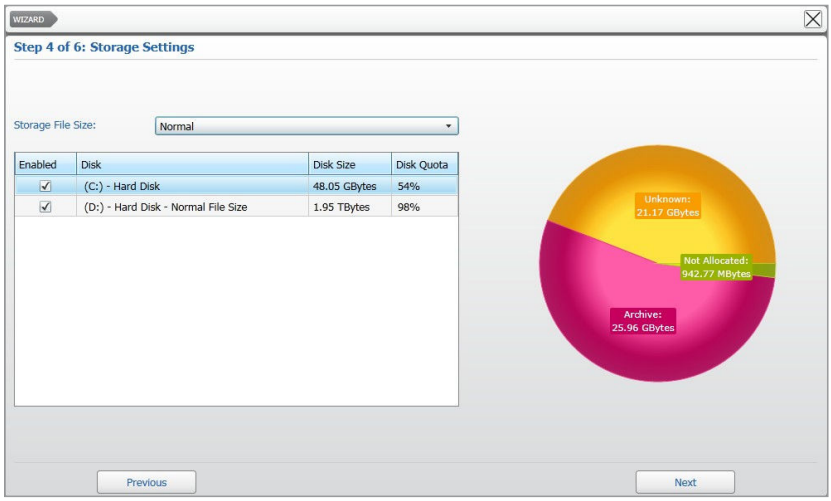
- **Powered by Nvidia System on a Chip (SoC).** SoC technology includes both the hardware and firmware, so it uses less power, has better performance, requires less space and is more reliable than multi-chip systems.
- **AI-enabled architecture.** A dedicated AI engine powering current and future analytic applications
- **AI-powered analytics.** The recorder supports object recognition (face detection, person detection).
- **End-to-end encryption.** Prevent potential cybersecurity issues with the highest level of protection for customer data (from camera to recorder to enterprise management system to client software) with cameras supporting RTP/RTSP over HTTPs.
- **All camera licenses included.** No need to pay for separate channel licenses; benefit from a full-featured recording platform right out of the box.
- **Configurable recording policies.** Record video based on user-definable variables like schedule, motion, analytics, etc.
- **Embedded, Linux-based, and purpose-built.** Customers can spend more time performing investigations and less time dealing with maintenance issues that can plague a PC-based recorder.
- **IT Grade Appliance.** The IPX is designed to be an IT server grade appliance providing both hot swap redundant power supplies and fully configurable RAID.
- **Front panel LEDs for easy diagnostics.** Dedicated LEDs indicate the status of each individual hard drive, and diagnostic LEDs convey information about the recorder in general, as well as operational, recording, and export status.
- **Real-time health monitoring.** Be alerted to camera, recorder and network issues within seconds.
- **Easy access to hard drives by authorized personnel.** All HDDs are accessible via the front panel for hassle-free replacement. Each drive is equipped with its own locking mechanism to prevent unauthorized access.
- **QR Code.** Use March Networks' free GURU Smartphone App to scan the recorder's front panel QR code for instant product information, like serial number, warranty information, etc.

Secure your facility with up to 64 HD IP cameras and recognize the power of the recorder's high-bandwidth performance.

Configure basic functions in six easy steps

Command Config is an intuitive tool that allows you to quickly configure the basic functionalities of your recorder's firmware in just six steps. No training or user manual required...the wizard guides you through the process so you're able to record, stream live video, and play back archived video evidence in minutes.

- Specify the system name and change the administrator password
- Add IP video channels
- Enable/disable the cameras, and specify video settings
- Add storage disks and configure archive settings
- Configure recording settings (continuous and programmed recording)
- Create and customize local user profiles



Use Command Config to add the system disks (including external USB drives) for video storage

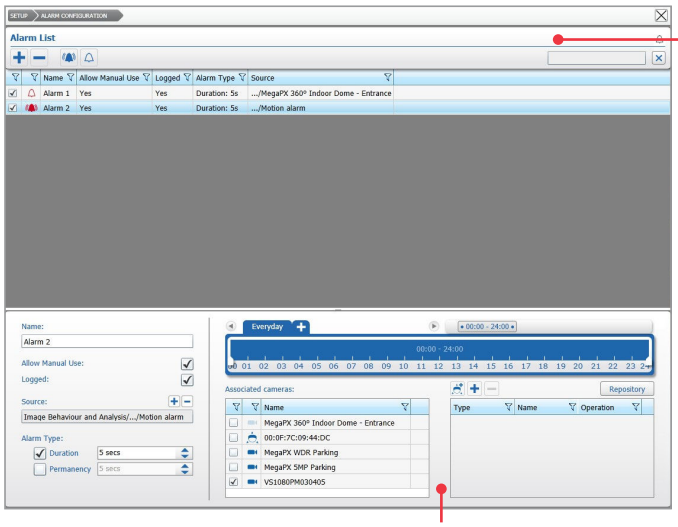
Infrastructure-friendly storage and management

The X-Series firmware is equipped with a myriad of built-in features to help maximize overall system performance, including the ability to manually select parameters that significantly save on storage space, use less bandwidth, and cut CPU usage.

- **Maximum retention settings.** You can specify policies for how long a drive will store video before that video is overwritten, for example 30 days. By putting limits on the maximum retention time, you can ensure you are compliant with your recording and retention policies.
- **Multi-sector archiving.** Save storage space and preserve video quality where it's needed most. Accommodate different recording conditions on different sectors, and select the parameters required for specific scenarios. For example, sector one could have a group of cameras recording 24/7 at low resolution with 90 days' worth of retention, while sector two could have a group of cameras recording for 30 days at high-res, but only when motion is detected.
- **Selective video recording.** Instead of continuously recording video from all cameras 24 hours a day, seven days a week, you can restrict the amount of video being recorded and stored. For example, you can indicate the specific dates and times you want to record. Or you can record only when an event happens. Additionally, you can specify pre- and post-recording parameters.
- **Video removal.** If you no longer need a specific part of the archived video evidence, or need to purge it for legal reasons, you can delete all video evidence recorded in the specified time interval and free up storage space.

Sophisticated alarm and event configuration

You can create and customize alarms using a variety of parameters, e.g., motion, schedule, analytics, or combinations of multiple parameters. You can also select which cameras are triggered after an alarm/event, launch PTZ actions, and automatically send email notifications. These powerful and customizable alarm policies, which include pre- and post-alarm recording, can be programmed even in an unmanaged environment (no Command Enterprise Software required).



Alarm List Panel

- *Create, filter, select and turn on/off the available alarms*
- *Create alarms based on any condition in the condition tree*

The Alarm Configuration page allows you to create and customize alarms.

Settings Panel — *Manage and configure the available alarms and their schedules*

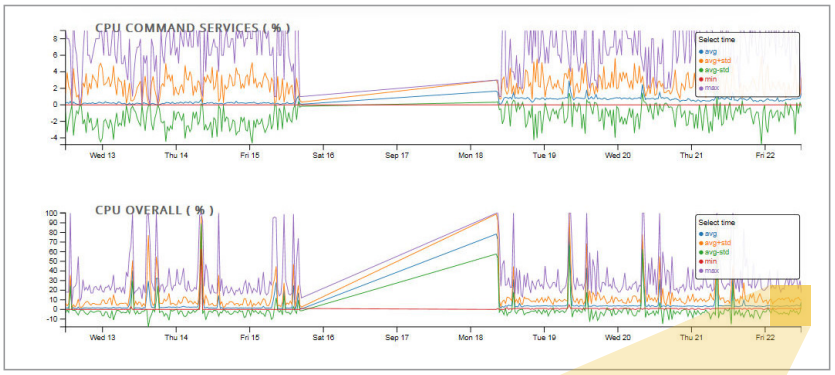
Assess your system's performance at-a-glance

You've configured your cameras to stream at .5 Mbps, but the bitrate is now mysteriously at 2 Mbps. Is this because there's more activity in the scene? Is the bitrate spiking during the day, then going back down at night? Or is the bitrate slowly creeping up, which can sometimes happen with older cameras, and perhaps you need to automatically initiate a camera reboot once a month?

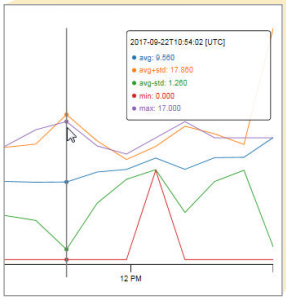
The statistics dashboards provide comprehensive data on things like system performance, recording performance, and ingress/egress bitrate, presented in easy-to-read, color-coded charts and graphs.

The ability to evaluate this data over the last 30 days allows you to uncover trends and potentially pinpoint root causes before technical support needs to intervene.

- Scroll through, and zoom in on, a chart to get a more granular look
- Modify a chart's scale
- Export the data to an excel file
- Download the charts for offline reviewing
- Send data to technical support for quicker resolution



Sample dashboard showing statistics about CPU usage



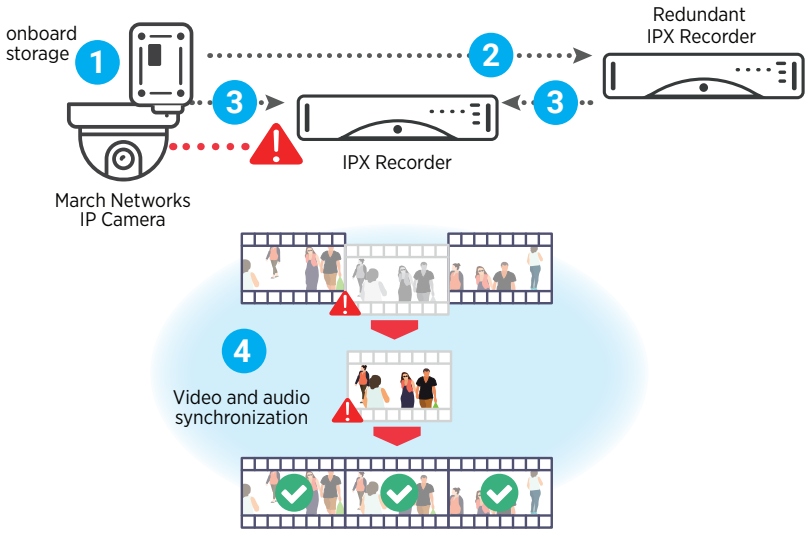
Move the mouse on the chart to display the values corresponding to the cursor position

Complete fault tolerance minimizes risk of losing video

Your video will always be available, even when your network and/or your recorder aren't. The innovative Shadow Archive feature allows for seamless access to recorded video for total fail-safe management. Here's how it works.

If the primary recorder goes down, backup recording immediately kicks in, in one of two ways:

1. The camera can automatically record to its internal storage. ***OR***
2. The redundant recorder can start recording in place of the offline recorder.
3. When the primary recorder comes back online, the video is transferred back to it, from either the camera or the redundant recorder.
4. That "missing" video and audio are reintegrated into the recorded video in the exact appropriate spot.



X-Series All IP Recorder

VIDEO

Video Support	H.265, H.264
Max IP Camera Inputs	32, 48, 64 (dual stream support)
Camera Licensing	32, 48, 64 channel licenses included
IP Camera Performance	Standalone: 600 Mbps RAID5/RAID6: 500 Mbps
Video Output	HDMI
Analog Support	Via encoder

AUDIO

Audio Support	Facilitated via audio-enabled cameras

NETWORK

Network 1	GigE port for connection to corporate network
Network 2	GigE port for connection to camera network
Network 3	GigE port for connection to redundant network, metadata capture
Security	Industry standard TLS 1.2 with strong AES encryption, HTTPS encryption, strong hashing algorithms SHA256, continuous security vulnerability assessment
Interface	10/100/1000Base-T Ethernet (3 x RJ-45)

SYSTEMS / NETWORK MANAGEMENT

Operating System	Linux
Bandwidth Throttle	On a per-recorder basis, control which clients receive full bandwidth and which get controlled bandwidth
Bandwidth Scheduling	Yes
Remote Connection	TCP/IP (IPv4)
Concurrent Remote Connections	No set limit

ANALYTICS

Included	Motion detection, face detection, person detection
Optional	Camera obstruction

HARDWARE

SOC	Nvidia Jetson Platform
CPU	4 ARM core 64 bit processors
GPU	Up to 256 GPU cores

STORAGE

Internal Hard Dives	Up to eight 3.5" HDDs
Individual Drive Capacity	Up to 20 TB
Total Storage Capacity	
With / Without RAID	Up to 160 TB
With RAID	RAID 5 140 TB usable; RAID6 120TB usable
With RAID and hot spare	RAID 5 120 TB usable; RAID6 100TB usable
Drive Type	Serial ATA (SATA)
Storage Redundancy	
With RAID	RAID1, RAID5, RAID6 (reduces throughput during rebuild)
Without RAID	Mirroring (reduces throughput)

PHYSICAL

Dimensions (H x W x D)	8.9 x 48 x 53.3 cm (3.5 x 19 x 21 in)
Mounting	2U high, 19", 4 post server rack mount. Recorder ships with rails.
Weight: Recorder	11.63 kg (25.64 lb)
Hard Drive	Add 0.8 kg (1.7 lb) per HDD

ENVIRONMENTAL

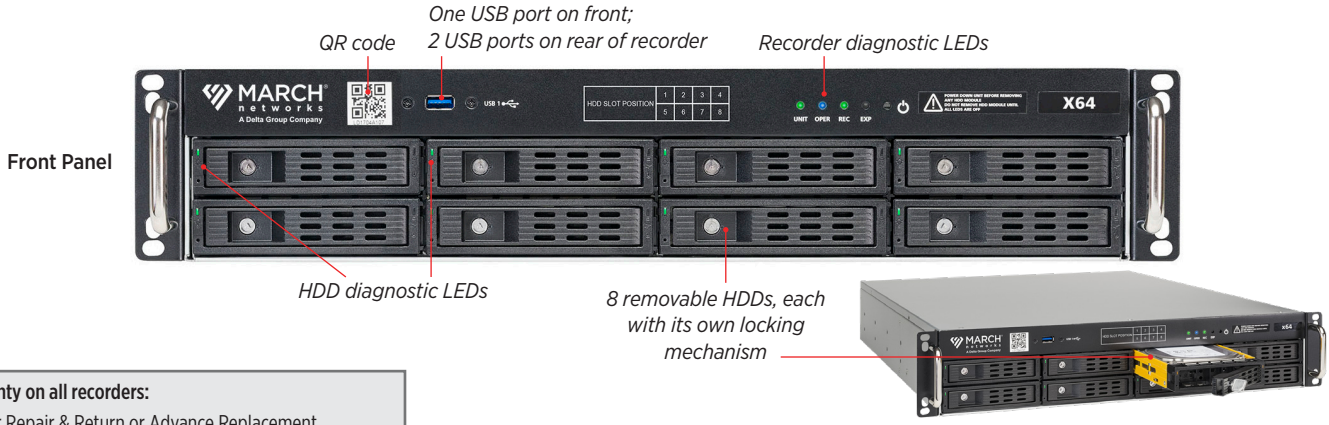
Operating Temperature	0 °C to +40 °C (+32 °F to +104 °F)
Heat Dissipation	Maximum 188 BTU per hour (system plus 4 hard drives)
Humidity	5-95% RH, non-condensing
Storage Conditions	-40 °C to +70 °C (-40 °F to +158 °F)

ELECTRICAL

Internal Power Supply	Dual redundant hot swap 100-240 Vac (auto-sensing), 50/60 Hz 2.5 A
Power Consumption	max. 150 W
Systematic Shutdown	Via internal battery; no external UPS required

REGULATORY

Regulatory Model	NDVR HP
Safety	IEC/EN62368-1, UL/CSA62368-1
EMC	FCC 47 CFR Part 15, Subpart 15, ICES-003, EN55032, CISPR32, AS/NZS CISPR32, EN61000-3-2, EN 61000- 3-3, EN50130-4, EN55035, EN55032, EN61000-3-2, EN 61000- 3-3, EN50130-4, EN55035
Compliance Marking	CE, cULus, UKCA, RCM, WEEE , NOM, BIS



3-year warranty on all recorders:

- Options for Repair & Return or Advance Replacement
- March Networks incurs all shipping costs—both ways—for AR's
- All recorder components are covered, including HDDs

North America 1 800 563 5564
Latin America . . . . . +5255 5259 9511
Europe . . . . . +39 0362 17935
Asia . . . . . +65 6818 0963
Australia and New Zealand . . . . . +61 1300 089 419
Middle East and Africa . . . . . +971 4 399 5525

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