



QNAP®

Surveillance Solutions Guide



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About QNAP

Founded in 2004, QNAP is committed to providing efficient, reliable, and innovative technology solutions to meet the diverse needs of professional users and businesses of all scales.

Global Services

QNAP provides professional and stable services worldwide and ensures localised support.

14+

subsidiaries

50+

countries served worldwide

A Brand Trusted by Professionals



Products

We deliver integrated storage, networking, and smart surveillance solutions, combining advanced software and hardware to drive business digital transformation.



Long-term Availability

Our long-term commitment to supporting models ensures consistent NAS performance and streamlined management for long-term projects.



Warranty & Services

Standard hardware repair, on-site support, configuration, and installation services are available for all QNAP products.

QNAP® | QVR Surveillance

All-in-One Surveillance Solution

QNAP's Surveillance Ecosystem combines enterprise-grade storage architecture with smart surveillance features to provide an all-in-one solution to record, store, analyse, and protect surveillance data at scale.



A one-stop surveillance solution with integrated software and hardware, ensuring the safety of premises and personnel through AI tools and event notification.

Simple Architecture

Easy Maintenance

Cost-effective

Flexible Surveillance Ecosystem

QNAP QVR System

Offers subscriptions or one-time purchase plans for building a professional video surveillance system.

- Manage surveillance through both PC and mobile devices.
- Supports backup and fault tolerance.
- Provides a CMS platform for centralised surveillance management.
- Open API allows custom development and integration.
- Compatible with 95% of the IP cameras on the market (supports the ONVIF® standard).
- Large-capacity and highly scalable storage space.



QVR Surveillance
High-performance video management system



QVR Center
Central management of multi-site environment



QVR Recording Vault
Centralised backup of multiple sites



QVR Client
Monitor & control anytime, anywhere

QVR Surveillance

Next-generation high-performance architecture that accelerates recording and access efficiency, delivering a modern, reliable surveillance deployment.

More Efficient

- Up to 1024 channels (single NAS).
- Faster file-based processing.
- Optimised for large, long recordings.

More Secure

- Protects recording integrity.
- Prevents data corruption.
- Hybrid cloud + on-premises.

More Value

- 8 free channels, built-in AI & CMS.
- Flexible licensing options.
- Broad NAS compatibility.

Configuration and Management

Excels in large-area surveillance, supporting distributed setups. With QVR Center, enterprises can deploy servers across locations and centrally manage surveillance for comprehensive coverage.

Support
8,000+
IP cameras across 200+ brands

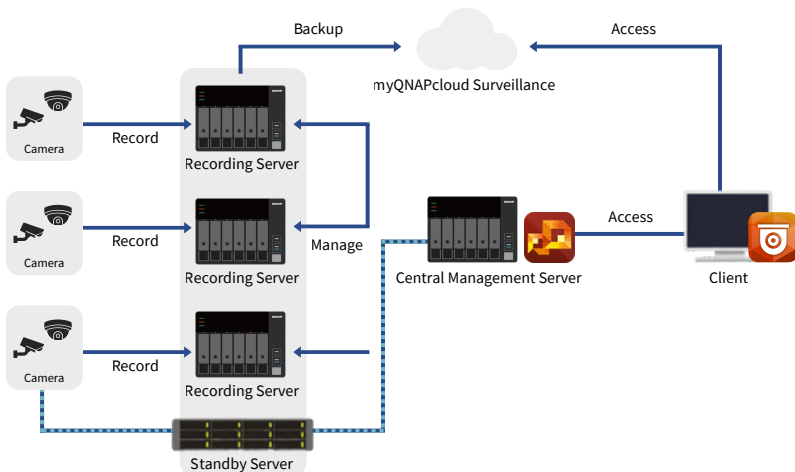
Manage up to
256
surveillance servers*

Control up to
16,000+
cameras*

Configure up to
16
failover groups

*The maximum supported server count varies based on NAS processor grade and installed memory.

- **Efficient Recording Storage:** Supports multi-channel, high-resolution recording, and flexible storage expansion solutions for long-term storage needs.
- **Instant Warning Notification:** Real-time event alerts for quick response, enhancing security.
- **Centralised Management:** Central Management System (CMS) enables centralised surveillance across multiple locations.



Active Recording Backup

Quickly deploy a dedicated backup server to proactively back up recording files from surveillance servers without using surveillance resources.

Ideal for Multi-Point Surveillance and Long-term Storage

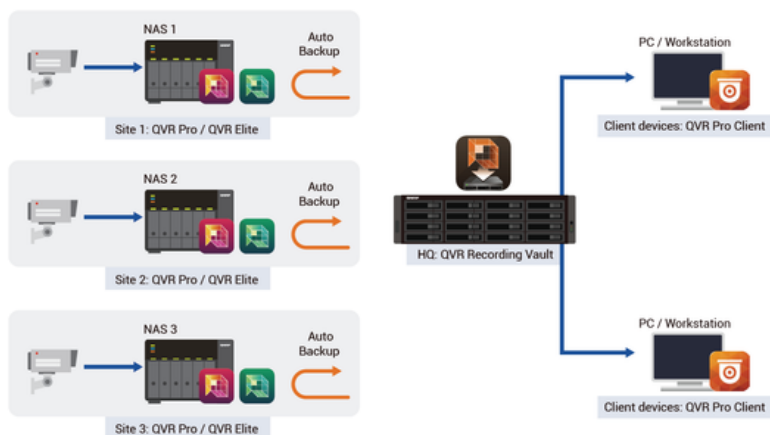
Integrates seamlessly with existing surveillance systems, prioritising backups and supporting large-scale video storage.

Flexible Configuration of Backup Rules

Set the maximum storage duration for footage and backup capacity per camera, or choose between general and event-triggered backups.

Playback and Search Anytime

Backup files include metadata, enabling users to browse, playback, and search footage via PC or mobile apps anytime.



AI Smart Surveillance

Integrated AI image analysis technologies are capable of advanced event search, face recognition, and people flow analysis.

Monitor Personnel Entry and Exit to Ensure Safety

Dynamic Facial Recognition

- **Recognises up to 5 faces at once**
Enables quick and accurate identification of multiple faces in motion.
- **Supports face mask detection**
Facial recognition identifies individuals wearing masks and maps them to personnel profiles.

Access Control Management

- **Flexible access rules**
Create access schedules to control who can enter and exit at specific times.
- **Blacklist/whitelist**
Maintain lists of key clients and unknown individuals, with automatic notifications to administrators for prompt action.



Event Search

Search large volumes of recordings in just 90 seconds per hour of video, greatly reducing review time.

Surveillance NAS



Detect any movement within specified areas.

Missing Objects



Detect any missing object within specified areas.

Foreign Object



Detect foreign objects within specified areas.

Camera Occlusion



Detect if the camera view is blocked.

Human Search



Detect by face or clothing colour within specified areas.

Vehicle Search



Search by colour or vehicle type within specified areas.

Analyse Foot Traffic for Customer Insights

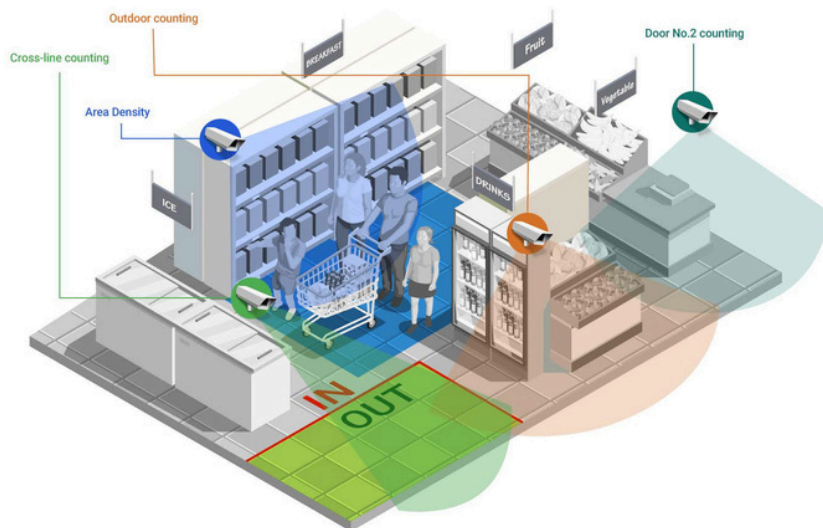
Optimise workforce, operations, and space planning by evaluating traffic patterns, peak periods, and hotspots across your premises.

Cross-line Counting

Define up to 4 boundary lines (straight or polyline) per channel to precisely track individuals crossing designated thresholds, ideal for entrances, exits, and zone boundaries.

Area Density

Set a maximum occupancy limit to calculate and monitor area density in real time. Receive automatic alerts when thresholds are exceeded to maintain safe and compliant environments.



Typical Use Cases

Retail



Track peak shopping hours, queue lengths, and aisle engagement to optimise staffing and store layout.

Office & Workspace



Monitor meeting room utilisation and floor occupancy to improve space efficiency and reduce overhead.

Public Venues



Manage crowd flow and density at transport hubs, stadiums, and public spaces for safety compliance.

Featured Surveillance Apps



QVR Surveillance

AI-powered, high-performance surveillance platform

Supports up to 1024 Channels for a High-Performance Cloud and AI Surveillance Experience

- Up to 1,024 channels per NAS with 8 free built-in channels
- Perpetual or subscription licensing, transferable to another NAS
- Built-in AI analytics & centralised management, no extra licence needed
- 8,000+ compatible IP cameras from 200+ brands, including ONVIF
- Open API for third-party integration and custom development

QVR Center

Surveillance Management Centre



- Monitor camera feeds from multiple servers concurrently
- Receive event notifications from multiple locations
- View server connection statuses
- Manage granular permissions
- Seamlessly switch between failover recording servers

QVR Recording Vault

Active recording backup



- Manage space, settings, and permissions from a single interface
- Automatic backup of multi-point video files
- Retain complete backup metadata
- User-defined backup rules
- Supports file replication

QVR Pro Client

Client Monitoring



- View real-time footage from multiple devices/channels
- Supports desktop, mobile, and web
- Multi-monitor compatible
- Configure event detection and alerts

QVR Smart Search

Smart Event Search



- Quickly search recordings for specific events
- Supports various search types, including people, vehicles, and movement
- Maintains video recording performance with background analysis

QVR Face

Facial Recognition



- Supports multi-person, dynamic, and mask recognition
- Supports third-party API integration
- Customise profiles and group lists
- Configure event rules with instant notifications

QVR Human

People Flow Analysis



- Supports cross-line counting and area density analysis
- Simultaneous analysis of multiple channels
- Historical data visualisation

QVR DoorAccess

Access Control Management



- Flexible access rules
- Configure access lists
- Compatible with third-party access systems
- Trigger event recordings with notifications

Features

Feature	Details	Feature	Details
Supported Formats	H.264, H.264+, H.265, H265+, MJPEG	Playback	- Multi-window synchronous/separate playback, Playback speed control. - Includes event playback, smart event search, and face search.
Multi-stream	Supported	Export function	Segment export, export to NAS or computer
Recording mode	Full, Event	Event alert triggers	- Built-in: face recognition, people detection, density detection, and by API trigger. - Camera: includes licence plate recognition, dynamic detection, and line crossing detection. Refer to the compatibility list for camera IVA features/ Multiple triggers and time rules can be supported.
Camera support	More than 9,000 & ONVIF profile S/T/M devices. RTSP & RTMP input support	Event alert actions	Includes push notifications, SMS, camera PTZ, event recording, email, and HTTP API.
Viewing clients	NAS HDMI, PC, macOS, and Android & iOS	Recording backup	Recording Vault, myQNAPcloud Surveillance, and normal backup by file.
Layouts	Real-time, playback, e-map, fisheye and 360 camera de-warping Preset layout switching	Central management	Centrally managed by QVR Center (up to 256 servers).
Camera control	PTZ controls, 2-way calls, streaming resolution setting	AI capabilities	Smart Search events - QVR Face: Face recognition, image finding, mask detection, and gender detection. - QVR Human: Cross-border detection, area density detection, and statistics. By head or by body. External AI Events integration

QNAP UK Local Support & Services



QNAP
Configure-To-Order Service

QNAP UK
Our Local Support & Services

 Solution Configuration
  Installation
  RAID Configuration

 Product Training
  On-site Support
  UK Next Day Dispatch



AI-Powered Smart Surveillance for a New Era

TVR-AI200

Real-Time Analysis × Complete Protection,
Smarter Surveillance Every Moment

The TVR-AI200 delivers AI-powered surveillance with real-time display and playback up to 16MP resolution and H.265+ compression. Equipped with AI video analytics and remote backup, it provides an efficient and reliable solution for smart retail and SMBs. From smart cities to enterprises, the TVR-AI200 ensures uninterrupted protection and smarter security management.

Key Advantages



AI Real-Time Recognition × Complete Protection:

Facial and object detection



High-Performance Video Management:

16MP real-time display
/ H.265+ compression



Security & Flexibility:

RAID protection + backup
and centralized management
of surveillance footage

Surveillance Storage for VMS

How QNAP NAS integrates with third-party Video Management Systems, as certified storage, as a virtual server, and as an AI-powered hub.



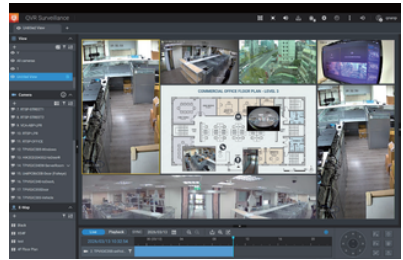
The Advantages of QNAP over Traditional NVR Solutions

- **Superior Scalability:** Scale from a few cameras to hundreds, without replacing the entire system.
- **Lower Total Cost of Ownership:** No forced forklift upgrades when camera count or retention increases.
- **Enterprise-Grade Reliability:** RAID Protection, Snapshots, Replication & Failover.
- **Advanced Performance Options:** 10GbE/25GbE networking for high-bitrate cameras, GPU-assisted workloads.
- **Better Cyber Security Posture:** Regular firmware updates and security hardening. Network segmentation and role-based access control.

Infrastructure & Platform

Enterprise-Level Infrastructure

- Built-in CPU, NPU, or GPU for event detections.
- Supports high-speed connectivity to handle large volumes of cameras efficiently.
- Quick disaster recovery by disk replacement.
- Storage designed for compliance, enabling long-term retention.



Unified & Open VMS

- Support ONVIF, no camera vendor lock-in.
- Deep API integration for AI events with smart cameras and external AI boxes.
- AD/LDAP integration & central management.
- Detailed permission control for every account & group.

Typical Deployment Path

From initial assessment to full operation. QNAP NAS integrates into existing infrastructure without disruption, supporting gradual expansion as your surveillance needs grow.

Assess & Plan 1

Evaluate camera count, retention needs, and existing VMS platform to select the right NAS model.

Engage 2

Engage with QNAP Sales and Technical professionals to fine-tune the BOM to meet your exact needs.

Deploy 3

Connect via SMB or iSCSI to your VMS. No additional software required, up and running in minutes.

Scale 4

Add cameras, JBOD expansion, or additional NAS units as your surveillance requirements grow.



Built for Compliance & Long-term Retention

QNAP NAS supports immutable storage, encrypted connections, and granular access control, helping organisations meet video retention and data protection obligations. Storage designed for compliance with audit logs and tamper-proof recording.

Third-Party VMS Integration

QNAP NAS as Surveillance Storage for Leading VMS Platforms

Seamlessly integrates with industry-standard VMS, with no additional software required: quick deployment, certified compatibility, and petabyte-scale capacity.

QNAP NAS connects through standard SMB / iSCSI / NFS protocols to any professional VMS storage platform, and has certified compatibility with Milestone XProtect® and Nx Witness™ providing an intuitive management UI for quick deployment into existing infrastructure.

Certified Third-Party VMS Platforms



Milestone® XProtect

Certified QNAP NAS devices ensure that Milestone XProtect® surveillance systems can record and archive video consistent with Milestone Server and Storage Calculator recommendations.

- Certified storage compatibility with XProtect® Corporate
- SMB / iSCSI / NFS protocols supported
- Scalable from 100 to 100,000 cameras with JBOD expansion
- Supports long-term video retention and compliance requirements



Nx Witness™ VMS platforms

QNAP NAS can serve as both a storage platform and a VMS server for Nx Witness™, running the VMS directly on the NAS via Virtualisation Station for a consolidated, cost-efficient deployment.

- Use NAS as dedicated Nx Witness™ storage via SMB / iSCSI
- Run Nx Witness™ as a VM directly on QNAP NAS
- SSDs handle smooth VMS operation; HDDs store recorded footage
- Recommended: NAS with 4+ cores and 8 GB RAM for VM workloads

Deployment Scenarios

SCENARIO 1

As a Storage Platform for VMS

QNAP NAS connects to almost any Third-Party VMS server as a certified network storage target. No additional software is needed - deploy via SMB, NFS, FTP, or iSCSI.

SCENARIO 2

As a Combined VMS Server + Storage

Run Nx Witness™ as a virtual machine on QNAP NAS using Virtualisation Station. Consolidates VMS server and storage into a single device - ideal for reducing hardware footprint.

Operating temperature

-40°C - 70°C



TS-i410X

Built Rugged. Powered for Precision.

Industrial, all-SSD, dual-10GbE edge surveillance NAS designed for harsh environments where traditional NVRs fail.



-40°C ~ 70°C

Heat Resistant

Operates in -40°C ~ 70°C (-40°F ~ 158°F) environments and includes a heat-resistant Intel® Atom® x6425E processor.

DC
9-36V

9-36v DC Power Input

Suitable for vehicles, solar sites or remote environments - exactly where surveillance storage is often required.



Fanless

Fanless, Solid Metal Chassis

No moving parts, silent operation and higher reliability for 24/7 surveillance recording.



Flexible Surveillance Platform

Supports QNAP's QVR Ecosystem, or Third-Party VMS solutions, and virtualised/containerised surveillance services.



4-bay SATA



Dual Ports



Contact Us for More Information

David Martin, Enterprise Sales Manager
QNAP UK Limited

✉ davidmartin@qnap.com

☎ +44 07725 041312

📍 2 Drakes Meadow, Swindon SN3 3LL



QNAP UK Limited

www.qnap.com

QNAP Systems Inc. (HQ)
New Taipei City, Taiwan
Email: sales@qnap.com
Tel: +886 2 2641 2000

QNAP UK Limited
Swindon, United Kingdom
Email: uksales@qnap.com
Tel: +44-(0)333-344-2522

QNAP UK eStore
ukstore.qnap.com



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