



[www.synology.com](http://www.synology.com)

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**Synology Inc.**

3F-3, No. 106,  
Chang An W. Rd., Taipei,  
Taiwan  
Tel: +886 2 2552 1814

**Synology America Corp.**

3535 Factoria Blvd SE, Suite #200,  
Bellevue, WA 98006, USA  
USA  
Tel: +1 425 818 1587

**Synology France**

39 rue Louis Blanc  
92400 Courbevoie  
France  
Tel: +33 147 176288

**Synology GmbH**

Grafenberger Allee 125  
40237 Düsseldorf  
Deutschland  
Tel: +49 211 9666 9666

**Synology Shanghai**

200070, Room 516,  
No. 638, Hengfeng Rd.,  
Zhabei Dist., Shanghai,  
China

**Synology UK Ltd.**

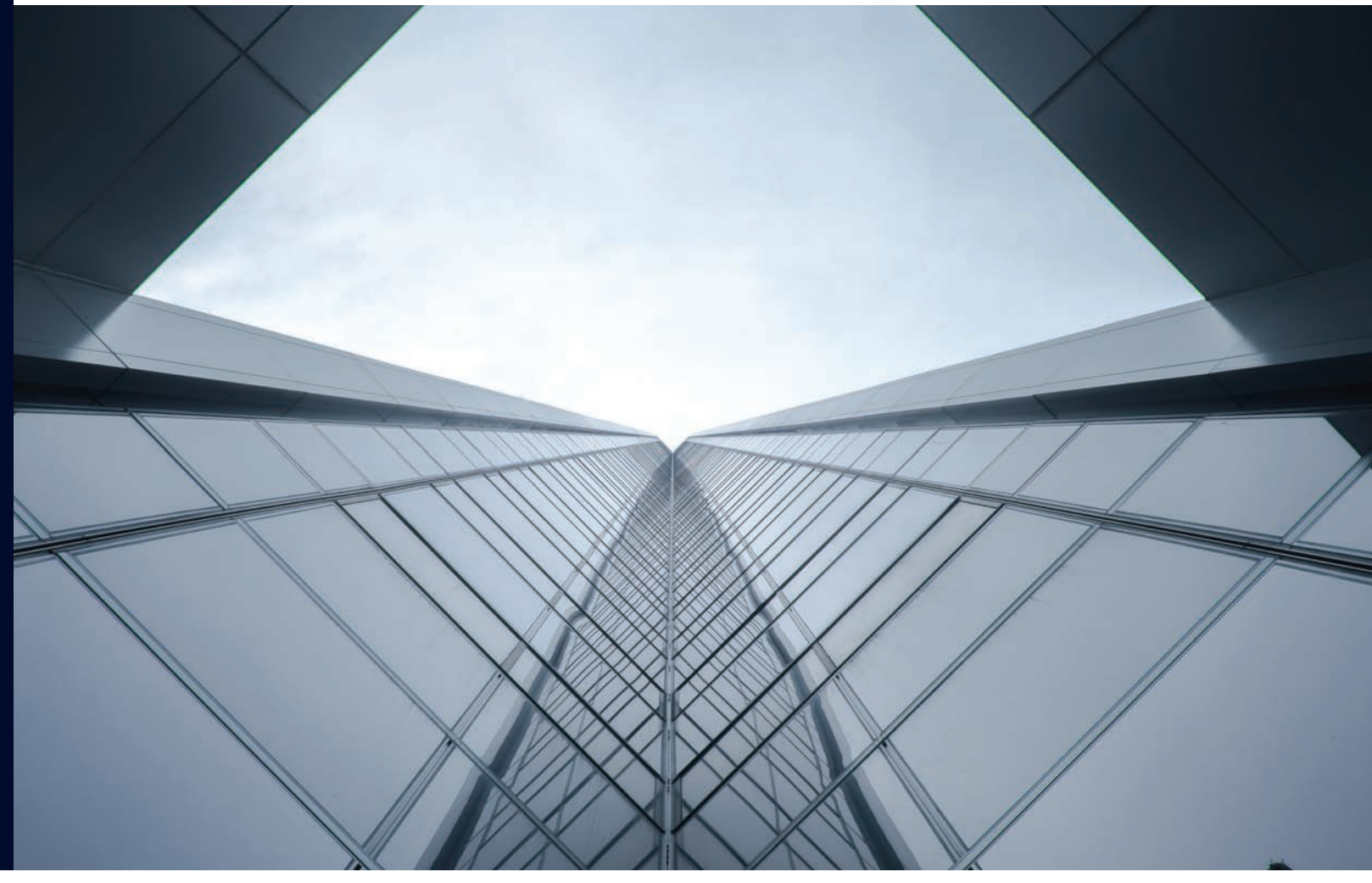
Unit C, Denbigh West Business Park,  
Third Avenue, Bletchley,  
Milton Keynes, MK1 1DH, UK  
Tel: +44 1908 274659

# THE SMART SURVEILLANCE SOLUTION

Discover intuitive and reliable solutions for safeguarding  
your businesses and homes



**SURVEILLANCE GUIDE**  
**2016**





# Synology®

Synology creates network attached storage, IP surveillance solutions, and network equipment that transform the way users manage data, conduct surveillance, and manage network in the cloud era. By taking full advantage of the latest technologies, Synology aims to help users centralize data storage and backup, share files on-the-go, implement professional surveillance solutions, and manage network in reliable and affordable ways. Synology is committed to delivering products with forward-thinking features and the best in class customer services.



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# WHAT IS SURVEILLANCE STATION?

The safety and security of physical environments, people, and assets are essential. Synology's Surveillance Station delivers a comprehensive video monitoring and management solution that helps protect against physical threats and break-ins. Whether it is residential, commercial, or industrial environments, Surveillance Station lets you monitor video surveillance feeds anytime using a web browser or mobile device.

Unlike traditional analog CCTV solutions, Surveillance Station works with modern IP camera infrastructure. Thanks to their increasing availability, IP camera solutions are becoming more and more flexible, convenient, and cost-effective — which makes it easy to scale up as your needs and budget grow. With extensive support for more than 4,000 cameras and ONVIF 2.4 Profile S and Profile G, Surveillance Station ensures the freedom to choose the equipment that best suits your needs and get the most out of your investment.

Surveillance Station runs on all Synology NAS servers and comes with two free camera licenses. Take advantage of versatile NAS features, such as VPN, DHCP, syslog, and NTP services, in addition to the advanced surveillance and monitoring tools.



# Live View

## KEEP AN EYE ON ALL YOUR CAMERAS IN REAL TIME

Simply log in with a web browser to see live camera feeds, or monitor on the go with the free DS cam app for iOS or Android devices. With support for RTSP, you can enjoy a smooth experience when viewing surveillance feeds. No matter where you are — on a bus, at the office, or on the other side of the world — you will always stay on top of everything.

### Customizable live view experience

Surveillance Station satisfies all your monitoring needs, whether it's your front yard or a large-scale deployment across multiple locations. Watch up to 64 HD camera channels on a single screen or customize your own surveillance wall with flexible layout tools.

### Handy on-screen operation

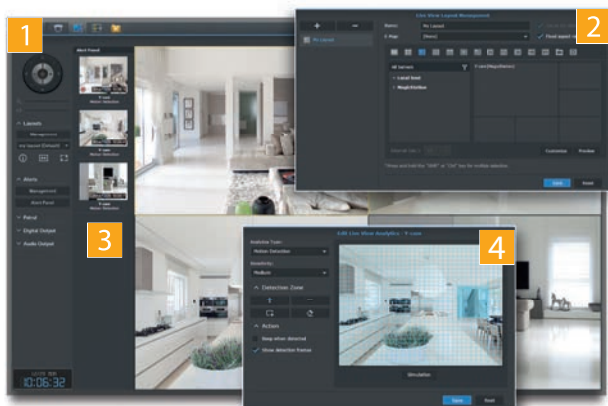
With on-screen tools, security personnel can quickly adjust PTZ cameras, drag and zoom, activate connected devices with digital output, or capture snapshots. Joystick support brings easy navigation and precise camera control. With a connected door controller, personnel can even lock or unlock connected doors.

### Live View Analytics and Alerts

When monitoring a large amount of camera feeds, it's easy to miss some events. Live View Analytics identifies and alerts you of suspicious events by analyzing feeds with six options, such as motion detection, missing object, or camera occlusion. That means you'll never miss a thing.

### Reduce network consumption

The workload on your Synology NVR and network bandwidth can be reduced with multicast technology, as video feeds will be streamed to multiple clients via a single transmission .



1

Adjust a camera viewing angle on-screen.

2

Customize the layout of live camera feeds just the way you like.

3

Review suspicious events with Live View Analytics.

4

Track objects that move in a pre-defined area.



## Cameras that best suit your needs

Surveillance Station is compatible with over 4,000 IP cameras and ONVIF 2.4 Profile S and Profile G, giving you the freedom to choose the cameras that suit your individual needs and fine-tune them according to each environment.

Native support for specialized cameras provides flexibility and reduces operating costs. Fisheye dewarping eliminates blind spots and adds more viewing angles. Digital input/output and two-way audio let you interact with connected devices such as magnetic locks, alarms, or speakers. Integration with multi-lens cameras lets you take in several video streams and create a wide panoramic view.

## Surveillance anytime, anywhere

The DS cam mobile app is designed for surveillance on the go. Watch up to six concurrent live view channels on your mobile device, play back recorded events, take snapshots, adjust PTZ cameras, and send audio to cameras with two-way audio support.

When network bandwidth is limited, frame rate and resolution settings let you guarantee live views are streamed smoothly. Customizable notifications — including SMS, emails, and push notifications — keep you updated when specific incidents occur, so you can react in a timely fashion.



# Smart Management

## POWERFUL TOOLS TO VIEW RECORDINGS AND MANAGE DEVICES

Surveillance should be smart and automatic. When the amount of footage starts to grow or your surveillance system expands, a diverse set of tools makes it easy to find recordings or manage cameras and other equipment.

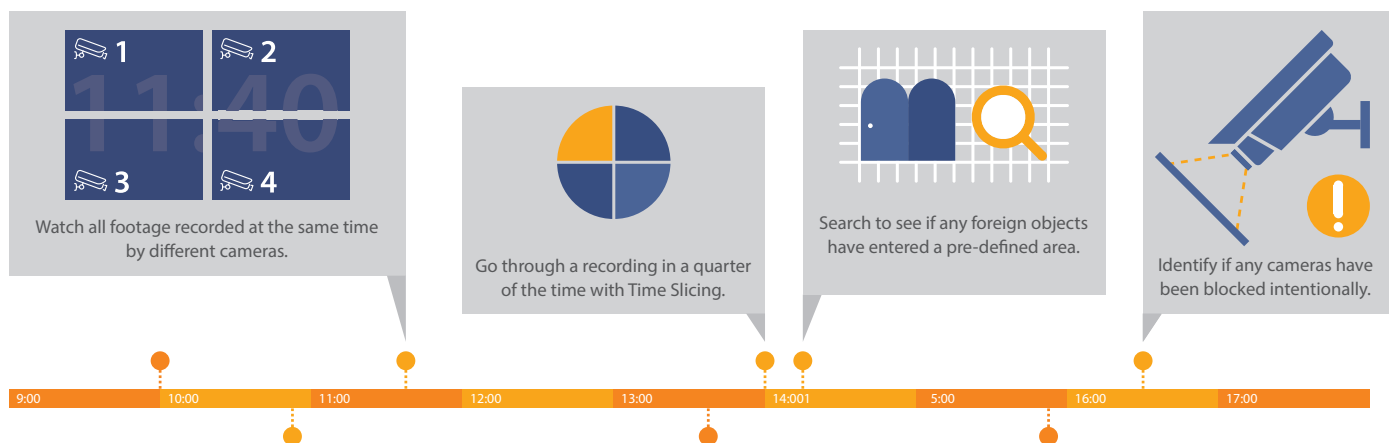
### Playback the way you like it

Security personnel can watch recordings many ways. Play back up to 64 channels with different options, such as Sync mode for locating concurrent events, non-sync mode for watching recordings from different times, or frame-by-frame to scrutinize every detail. You can divide a single recording into four, and play them simultaneously with Time Slicing to save time. Make images clearer by adjusting brightness, contrast, saturation, and sharpness.

### Search and archive

With the calendar and Timeline panels, navigating through recordings and locating a specific event have never been easier. The customizable Smart Search allows for searching through recordings with six analytic attributes and further reduces the time required to find recordings.

If you are not sure what to do with outdated footage, simply archive them in a shared folder on your DiskStation and download them whenever the need arises. Recording authenticity can even be guaranteed with the Evidence Integrity Authenticator, making them legally admissible in court.

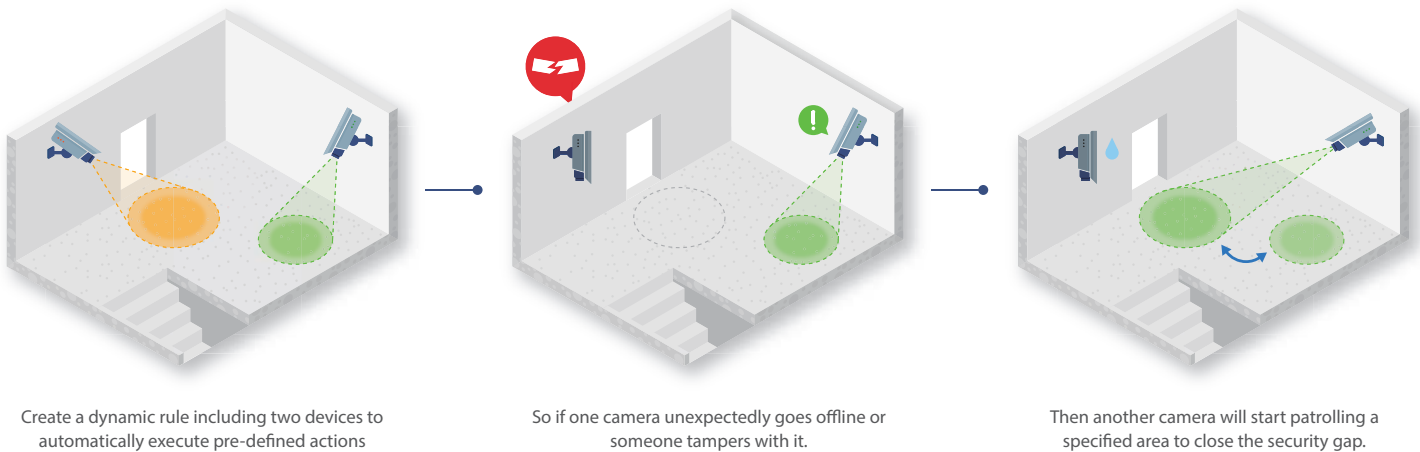






## Automated surveillance with action rules

Security personnel cannot always be present to monitor video feeds, so Surveillance Station makes it possible to automate certain tasks, such as scheduled recordings, having IP cameras patrol a preset route, or triggering a recording when cameras detect motion, alarms, or audio cues. This kind of task automation reduces the chance of human error and closes potential security gaps.



## Recording at the edge

By storing videos in a camera's on-board SD card, edge recording continues to capture videos uninterrupted even when the network connection is temporarily unavailable, or when the recording server is down. This ensures the physical environment is always monitored and reduces the risk of video loss due to network or hardware failure.

# Central Management System

## MULTIPLE SITES AND SERVERS, ONE DASHBOARD

A large-scale surveillance system might include thousands of cameras and hundreds of servers spread over several locations, requiring significant resources to maintain. Central Management System (CMS) conveniently centralizes everything into a single interface, reducing manpower and maintenance costs.



### Set up cameras efficiently and flexibly

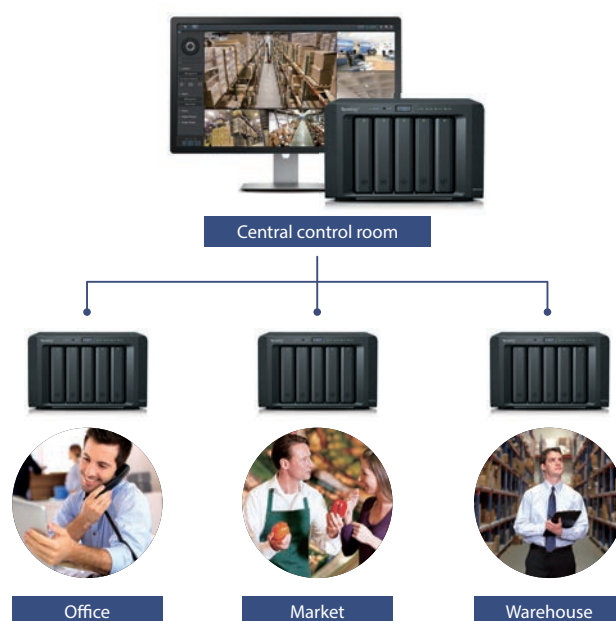
In the past, deploying hundreds of IP cameras was a tedious task. With CMS, cameras of the same model can be installed and configured in one step. Whether they are placed in an office, market, or a warehouse, your security personnel can optimize their performance according to the actual environment.

### Fine-tune user accounts and privileges

With CMS, creating and managing user accounts is a simple process. Assign the role of "manager" or "spectator" to different security personnel. Then specify their access to individual servers or IP cameras and decide who may watch a camera's live feed or recording. Better yet, immediately integrate your whole surveillance infrastructure with an existing account system with Windows AD, LDAP, or Trust Domain support.

### Manage cameras in bulk

Surveillance Station comes with a versatile tool set that facilitates large-scale camera management. Organize cameras into groups to always watch them together, or use an interactive e-map to pinpoint the locations of all recording servers and IP cameras. A single interface displays each camera's information with categories and thumbnails. All system alerts are aggregated by the host server, so administrators stay completely up-to-date.



# Physical Access Controller

## MONITOR AND SAFEGUARD DOOR ACCESS IN ONE PLACE

Surveillance Station offers more than just video surveillance. When paired with Axis Network Door Controller solutions, you can monitor physical access points, lock and unlock doors, and view access logs — all from one place.



### Monitor, lock, or unlock

Security personnel can lock and unlock connected doors right from the Surveillance Station interface. If a door is forced or remains open too long, an alert will notify personnel of the potential threat. These integrated tools simplify your surveillance system and reduce the amount of software that personnel must learn.

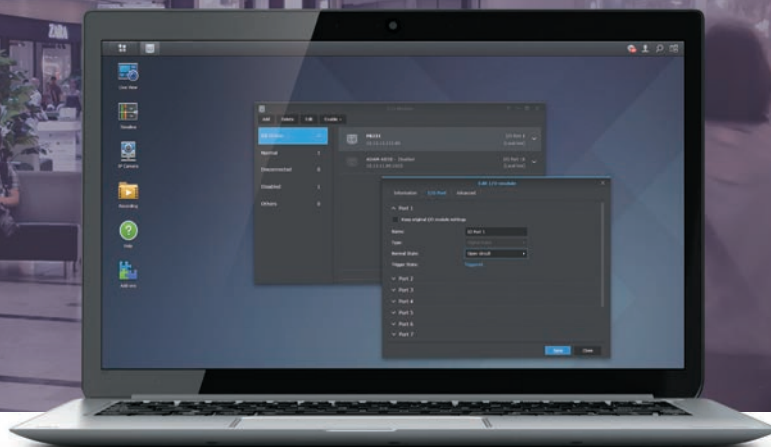
### Inspect physical access logs

With video recordings and physical access logs in one place, you can conveniently see which employees opened a door, when it was opened, as well as play back recordings from the time. That means security personnel won't need to switch between multiple applications when checking access logs and monitoring camera feeds.



# Input/Output module support

More possibilities, better integration, and lower cost



## More user scenario in a lower cost

Support for I/O module allows your Surveillance Station to integrate with more devices with specialized features such as LED lights, electromagnetic locks, smoke and infrared detectors, letting you implement more detection methods according to your needs, without having to worry about investing in expensive cameras with specialized features.

## Centralized event management

In addition, event logs triggered by I/O module will be recorded and centralized on Surveillance Station, allowing security personnel to easily search and analyze all detected events.

## Scenario 1 – Electromagnetic door lock opened

Cameras' recording rules can be combined to a specific I/O module. For example, when someone opens up an electromagnetic door, you can trigger a camera nearby the door to record, or receive notification on your mobile devices.

## Scenario 2 - Smoke detected

When a digital event is triggered, like smoke is detected, the event will be highlighted within the Surveillance Station's E-Map, so security personnel can notice the location of the event straightaway. Moreover, by setting up an action rule, you can trigger another I/O module like a sprinkler to react immediately.



# Network Video Recorder NVR216

Up to 9 channels of HD monitoring with expandable storage. Mobile apps ready for anywhere access.



## 1080p HDMI output for local display

Equipped with a dedicated HDMI output to display at 1080p resolution on a monitor, Synology NVR216 lets users watch up to 9 channels at 720p/30FPS of surveillance feeds without using a computer. With a USB mouse attached, you can directly manage cameras and recordings through the Surveillance Station interface on the same monitor.

## Easy surveillance system expansion with robust Surveillance Station features

NVR216 comes with preinstalled device licenses, letting you scale up a surveillance system to 4 or 9 cameras easily, without having to purchase extra licenses. With Surveillance Station, it delivers robust features, such as the Live View panel with on-screen operations for monitoring video streams from multiple IP cameras, Timeline panel letting you select a date and time and then play back recordings from multiple channels at once, and an instant alert system to keep you always notified.

## On-the-go surveillance with DS cam mobile app

Available on iOS and Android devices, DS cam is the mobile extension of Surveillance Station — allowing you to access Live View, playback, adjust PTZ, and receive push notifications. You can browse through recorded events and use a timeline bar to move backward or fast forward. With DS cam, it's easy to monitor multiple IP cameras anywhere in the world. Never worry about missing any suspicious events!



# VisualStation VS360HD

PC-less live view companion – rich features in a compact and durable design

Synology VisualStation is energy-efficient, cost-effective, and incredibly flexible, allowing businesses to effortlessly deploy a surveillance system in harsh environments. Just plug it into your network via Ethernet cable, pair with a Synology NAS running Surveillance Station, connect to an LCD-monitor or TV — and you have a video surveillance monitoring station.



## Intuitive management interface with rich features

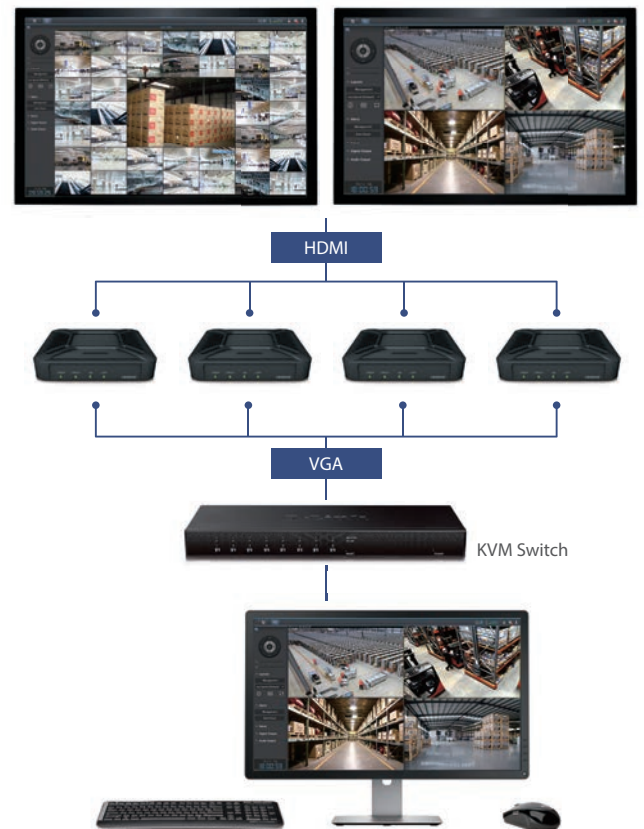
With VS360HD, anyone can easily watch recordings on Timeline or up to 36 live view channels in 720p, perform PTZ actions, take snapshots and export them to an external storage device — all by using an USB mouse.

## Flexible deployment and cost-efficient TV wall solution

VS360HD is ideal to set up scalable, compact, and cost-efficient TV wall. By adding more VisualStations, it's possible to monitor as many channels as needed. High-end PC and redundant mice and keyboard are no longer necessary, making VS360HD ideal for limited space deployments. Energy consumption is less than 5W when fully used.

## Robust and certified hardware for harsh environments

Free from mechanical moving parts, VS360HD is resistant against vibrations, perfect for deployment in moving vehicles and in the railway industry. Its solid outer case and optimized cooling design allow VS360HD to run within industrial temperature ranges, from -20°C to 50°C.



# Embedded DataStation EDS14

Maximizing deployability – made for the toughest environments



Even in the most difficult environments — extremely hot or cold atmospheres, remote locations with no Ethernet available, or vehicles constantly on the move - you might still want to deploy video surveillance to protect your assets. In traditional NVR solutions, however, the deployability of recording servers is often constrained by thermal conditions, source of power supply, network connection, and the storage's limitations. Now we have an answer.

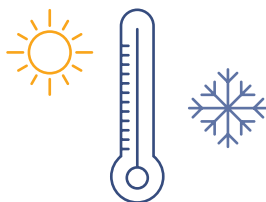
Synology Embedded DataStation EDS14 is a compact NAS server designed to overcome all such challenges. Not only does it offer unparalleled versatility from all perspectives, but, despite its small size, also deliver exceptional performance and reliability. Together with the built-in operation system optimized for Surveillance Station, it is ideal for monitoring your property right out of the box.

## Exploring the deployment possibilities



### Video surveillance in transportation

- Dynamic DC input (7 ~ 24V)
  - 3G/LTE modem support
  - Anti-vibration
- (diskless with SD card & USB 3.0 storage)



### Deployment over a wide geographical range

- Industrial operating temperature: -20°C-50°C (with DC input) or 0°C-50°C (with included AC adapter)
- PoE & dynamic DC input support



### Self-sufficient internet connection, even in remote locations

- Schedulable DC output for network devices
- 3G/LTE modem support

# SOFTWARE SPECIFICATIONS

## Live View

- Up to 49 channels in 1080p on single live view display
- Up to 64 channels in 720p on single live view display
- Real-time streaming protocol (RTSP) support
- Multicast communication support
- Pan Tilt Zoom (PTZ) and digital zoom support with configurable PTZ speed
- On-screen controls to activate audio/digital outputs of external devices
- On-screen camera controls including camera zoom, focus, iris adjustment, auto pan, and auto object tracking
- E-Map & Snapshot support
- Alert panel to quickly display the most recent triggered event
- Snapshot editor support for instant editing after taking a snapshot
- Video quality settings including bitrate control, image quality, resolution, and FPS
- Camera patrol can be triggered by schedule, event detections, or I/O alarm
- Intelligence video analysis including no-idle zone, motion detection, missing object, foreign object, camera occlusion, and focus lost
- Web plugin for Internet Explorer, Firefox on Windows, and Safari on Mac OS X
- Desktop design allows for easier multitasking
- Joystick support

## Recording

- Recording modes include manual, continuous, motion detection, I/O alarm, customized, and action rule
- The customized recording mode can be configured as a combination of conditional events, including motion detection, audio detection, tampering detection, and alarm input
- Edge recording on the SD card of certain camera is supported (please refer to the compatibility list)
- Export/mount recordings support
- Configurable pre-recording & post-recording time
- Recording formats: MP4

## Playback Recordings

- Up to 64 channels synchronous and non-synchronous playback
- Customizable layouts for playback in Timeline
- Playback controls include pause, stop, previous recording, next recording, fast forward, slow motion, and digital zoom in/out
- Frame by frame playback support
- Snapshot support
- Divide a recording into four equal-length sessions and playback them concurrently
- Intelligence video analysis including no-idle zone, motion detection, missing object, foreign object, camera occlusion, and focus lost
- Image enhancements including brightness, contrast, saturation, and sharpness
- Embedded watermark for evidence integrity

## Management

- Support up to 90 cameras on a single NVR, please refer to NVR selector on the Synology website
- Create and manage admin/manager/spectator user privileges
- Rotate recorded videos by archived days or storage size
- Event notification supports SMS, E-mail, and mobile phones
- Notifications can be filtered by camera, event type, and schedule
- Notifications can be batch edited
- Notifications can be triggered by external devices
- Recordings can be backed up to an external storage or remote server
- Action Rule correlates triggered events and actions to automate Surveillance Station
- HTTPS secured connection
- System log
- Built-in NTP server
- Tunnel supports MPEG-4, H264 via RTSP over TCP, UDP and HTTP
- Support for 20 different languages: Czech, Danish, Dutch, English, French, German, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese Brazil, Portuguese European, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, Turkish



## CMS (Central Management System)

- View the live view/recordings from multiple Synology NVR on a single portal
- Logs from recording servers are centralized on the CMS host
- Camera licenses on all recording servers are centralized on the CMS host
- Camera licenses are installed and managed on recording servers

## Mobile Support

- Stream Live view and replay events recorded in MJPEG, H.264, MPEG4 formats (MxPEG is only supported for Live view)
- Customize Live View layouts (up to 6 concurrent channels)
- Control the camera with PTZ (pan, tilt, zoom)
- Broadcast audio via camera speakers with 2-way audio
- Activate preset positions and patrols
- Take snapshots of Live View feeds (snapshots are saved on the DiskStation)
- Search events by camera group, server, event type and time range (enabling CMS is required)
- Delete and lock/unlock recordings
- Delete and lock/unlock snapshots
- Enable/disable individual cameras
- Push notifications support
- Available on iPhone, iPad and iPod touch running iOS 7.0+ for complete set of features
- Available on devices running Android 4.0+, with touch-screen and Wi-Fi capabilities for complete set of features

## Cameras Support

- Video codec: MJPEG, MPEG-4, MxPEG, and H.264 (MxPEG is only supported on Surveillance Station through web browser)
- Support Field of View (FOV) to adjust different field of view if the camera supports multiple types
- Support constant and variable bitrate control to fine tune the camera's bitrate
- Multiple streams are supported with different camera codec engine
- Different TV standards are applicable if the camera supports NTSC or PAL standard
- Audio codec: PCM, AAC, AMR, G.711, G.726
- Supports camera dewarping via camera or Surveillance Station for certain fisheye cameras mounted via ceiling, wall, or floor
- ONVIF™ 2.4, Profile S, Profile G certified
- Support over 89 brands, see here for the complete camera support list

## External Device Support

- Axis Door Controller A1001 is supported in Surveillance Station, cameras can be paired to monitor physical access through doors. Please refer to the Surveillance Station Access Control White Paper for more details.

## Minimum Recommended PC Client Requirements

- CPU: Core i5
- RAM: 2GB
- Operating System: Windows 7 and onward, Mac OS X
- Windows Browsers: Firefox (32-bit), IE 11 onwards (exclude Microsoft Edge)
- Mac Browsers: Safari 7.0
- Recommended monitor resolution: 1280x800
- Network interface: Gigabit x1
- See here for more information about how to choose the right PC for a better Surveillance Station Live View experience

Features introduced in this guide may depend on camera specifications and Surveillance Station version.



## SYSTEM REQUIREMENTS

To learn more about system requirements and limitation for each feature, please visit [www.synology.com](http://www.synology.com)

## FOR MORE INFORMATION

To learn more about Synology Surveillance Station and how it can help support your data storage efforts, please visit [www.synology.com](http://www.synology.com)

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