



a white paper

# **Peace of Mind Through Surveillance:** Affordable Solutions for Home and SMB

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## Introduction:

In today's fast-paced lifestyle, many people spend a considerable amount of time in a mobile state, going between home, office and meetings. With increasing pressure on time and mobility, the ability to secure important assets, both digitally and physically has become critical. Whether it's a home, a small business, or a warehouse, protecting valuable assets can be done easily and affordably with the help of a new breed of surveillance systems.

Small businesses and homeowners no longer have to take the risk of break-ins, drive failure, vandalism, or even natural disaster when they are away thanks to the new network attached storage features of Synology's Surveillance Station. Be it a warehouse, lobby, or home, a surveillance solution provides the peace of mind that everyone can benefit from. Many small and medium-sized businesses do not have monitoring systems because the cost has previously been difficult to budget for. Homeowners have often opted for a lower cost security system, but with no surveillance to know exactly what was going on when that alarm was tripped it's often more frustrating than beneficial.

Synology's Disk Station Surveillance Station bridges the gap of affordability and ease of use for the smallest of businesses or home owners on a budget. Every Synology Disk Station comes bundled with Disk Station Manager 2.2 with built-in Surveillance Station. By simply adding IP cameras to a local network, Surveillance Station provides a live feed for instant monitoring. The user can record events constantly or by motion detection and playback events for future use. Synology Surveillance Station runs in the background to continuously monitor your premises even while the Disk Station is being used as a file server, backup target, website host, or any other feature available with Disk Station Manager 2.2.

Aside from a team of security personnel, surveillance is the best way to provide peace of mind to employees at the office or family at home. Synology Disk Stations make implementing, maintaining, and administering a full surveillance solution easier than ever.

## What is NAS?:

Network-attached storage, or NAS, is a self-contained computer on a network which functions similarly to a server. Often used in small and medium sized businesses, NAS fills a void between direct-attached storage and enterprise-level servers. While features differ among brands, common features include a file and print server, RAID backup target, and media-hosting service.

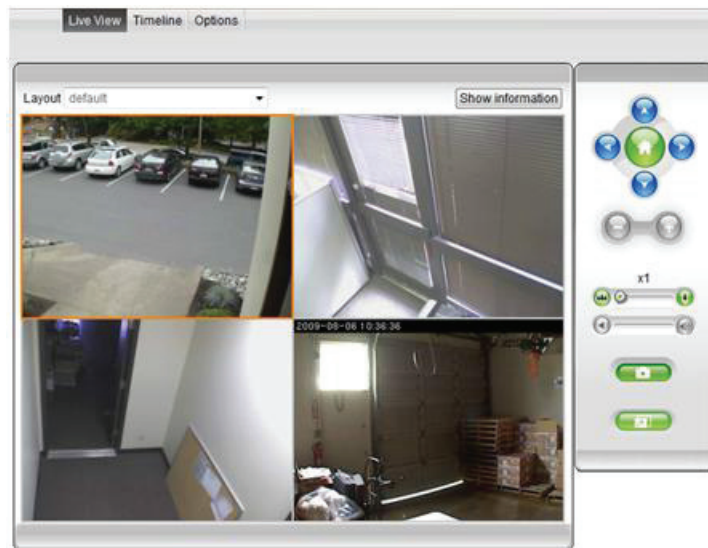
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## Surveillance Station Features

### **Live View**

Just as important as off hours recording, a clear multi-camera live view is a must for those monitoring a home or office. While most will not watch the cameras at all times, it is handy to have running in the background on a computer or separate monitor and with a quick glance have an up-to-the-second view of several locations.

From child care facilities to manufacturing plants, every manager wants to provide a safe and secure office environment, and live view can be used to actively monitor an entire office perimeter and know when people enter and leave the premises. Other applications for businesses include monitoring a waiting room, loading dock, or parking lot. There are also many valuable applications for live view functionality in the home. Seeing who is at the door before answering, keeping an eye on children, or simply checking on the house while away are just a few of the reasons the home user can benefit from a real-time surveillance solution.



Synology NAS offers several configurations for live viewing, including single camera or matrix view to monitor multiple areas at once. Once a camera is connected and configured the user must only click the Live View tab within Surveillance Station 2 to view the feed.

### **Use Existing Network Structure**

A major advantage of a NAS-based surveillance solution is using IP cameras over an ex-

isting network structure. With no need to rip up dry wall to install cabling for cameras and no new AV equipment to set up, Synology Surveillance Station is an inexpensive way to bring the peace of mind surveillance provides to any home or office. For an even faster installation, wireless IP cameras are also supported.

### ***Pan/Tilt/Zoom Control***

Although one camera may be enough to properly monitor the events in a certain area, it may be important to pan and tilt the camera to adjust to the environment. In the same fold, if an object is too far away the ability to zoom can prove invaluable to any surveillance system.

Within Synology Disk Station Manager 2.2, users with Pan/Tilt/Zoom-capable cameras are able to both locally and remotely control these functions in Live View. With simple directional controls and home button to quickly return to the default position, it is easy for anyone to control. Digital zoom is also a feature during playback regardless of whether or not a camera is zoom-capable. Managers can log in over the Internet and pan across a room to check in on a warehouse or parents can zoom in to make sure a babysitter has put their child to bed.

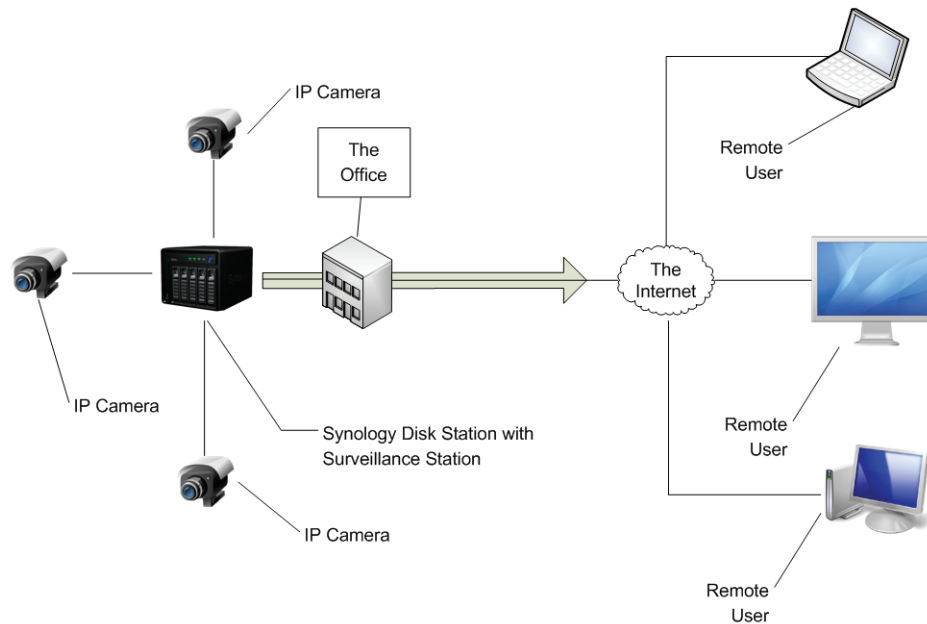
### ***Audio Recording***

As a supplement to video recording in surveillance systems, audio recording can be beneficial in providing a more complete account of an event. In low-light situations or when a camera may be blocked, audio would prove crucial to surveillance of the event. Audio support is integrated into Synology Surveillance Station, just use any compatible camera with audio recording capabilities and real-time audio will be in the MPEG4 video recording.

### ***Remote Access***

The term data security may often refer to firewalls and encrypted connections, but physical security often goes overlooked in home and small business environments. In addition to property damage and theft, the highest risk of data theft is when there is no one at the office or home. To counteract this, remote access to live view and video playback is essential to securing data. Synology Surveillance 2 provides remote access through a browser, so anywhere with an internet connection can be a mobile surveillance control center.

Just couple of steps are necessary to allow remote access to Surveillance Station 2. First, port forwarding must be enabled within the router and the WAN IP address of the building must be acquired. With this information Surveillance Station is easily accessed over the internet.



Remote access is a feature commonly associated with expensive and complicated surveillance systems but for anyone concerned with security of both their property and data, it is a feature not to be without.

### **Real World Scenario**

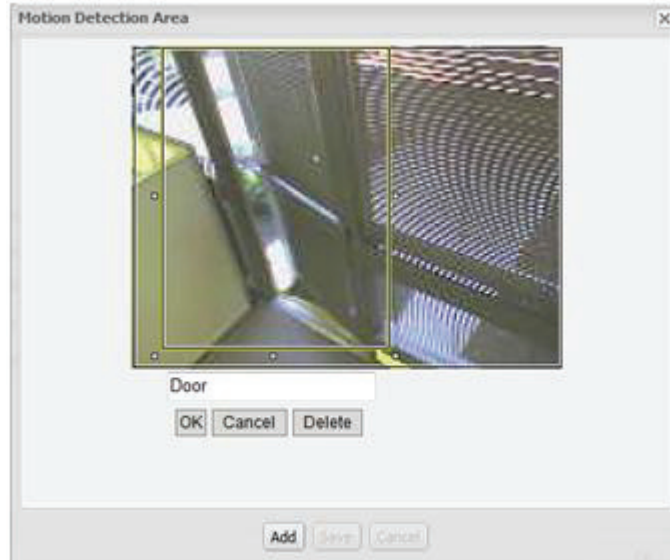
For working parents, one of the biggest concerns is the safety and well being of their children during the day. A Synology Disk Station with Surveillance Station is a great, economical solution for parents to use as a “nanny cam.” With the ability to log in from anywhere and remotely view their children and home, parents can rest assured all is well and react quickly should a serious event occur.

### ***Motion Detection***

For most people’s needs, constantly recording surveillance video wastes a massive amount of space while scheduled recording may miss an important event. Ideally, a surveillance solution would only record when an event occurs to both capture important occur-

rences and maximize hard drive space. Motion detection technology fulfills this need.

Synology's Surveillance Station 2 gives the user control over motion detection, allows for schedules to toggle it on or off, and provides an easy-to-use interface to define an area to detect motion within. Within the recording properties in Synology Surveillance Station it is as simple as drawing a rectangle and adjusting the shape to fit your needs. The user is even able to name the motion detection window and save it for future reference. In the image on the right



we have defined the motion detection area as the door, preventing passersby or cars on the street from being recorded as an event, while still documenting every time the door is opened or closed.

### **Real World Scenario**

For small and medium-sized businesses, in the same way it is imperative to secure data, it is important to monitor the physical plant to prevent loss of product or worse. Beyond the basic security surveillance provides a business, having a record of who enters and leaves the building for example, theft from just one warehouse or office may wipe out a business' entire inventory. While the mere presence of cameras would be enough to deter most thieves, the comfort of knowing all events are recorded is invaluable. Should the video should ever need to be used as evidence in a legal matter the solution will more than prove its worth.

### ***Storage Management - Auto Archive and Reuse***

Even with technology such as motion detection, eventually drives run out of space, meaning time and money need to be spent replacing and configuring replacements. To protect against a lapse in security due to hard drives filled to capacity, Synology Surveillance Station provides the administrator with options to auto archive or reuse space. Event

recordings can either be deleted after a specified number of days or when the storage folder exceeds a certain number of gigabytes. The amount of storage needed may be dictated by the camera(s) used and how long recordings need to be kept for future viewing, but with options to adjust picture quality and the ability to cap space, the administrator and users can be confident the cameras are functional.

## ***Storage Management - RAID***



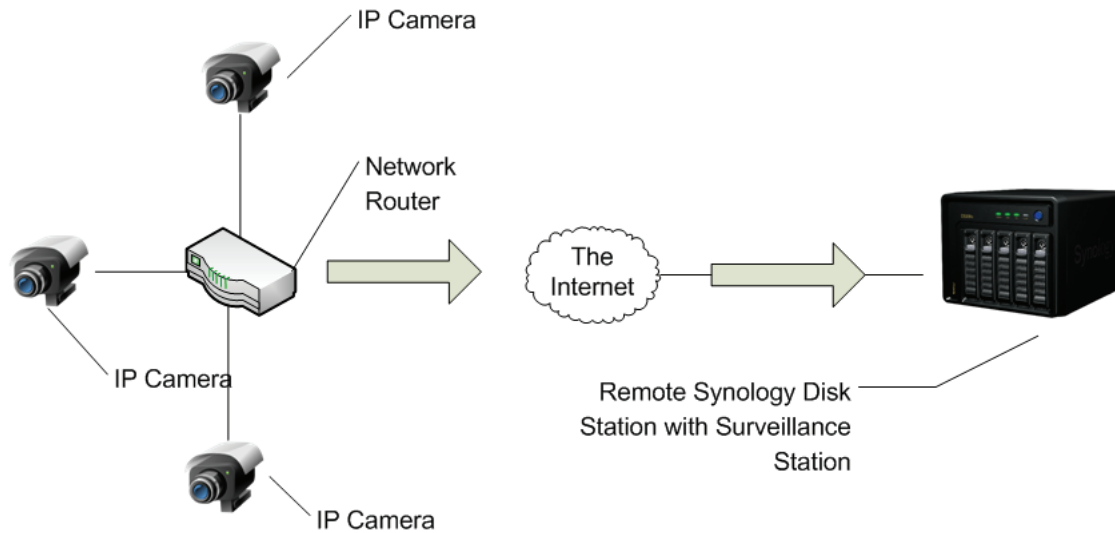
Possibly the most crucial piece of surveillance happens not while an event occurs, but after, when the event needs to be replayed and used to prosecute or protect against future incidents. Redundancy is vital to surveillance as it safeguards data against hard drive failure. The easiest way to ensure data is protected from disk failure is to configure drives in a Redundant Array of Independent Disks (RAID).

Synology Disk Stations, with the exception of 1-bay models, include an integrated RAID Volume manager within Disk Station Manager 2.2. Keeping costs low as there is no need to purchase a RAID card, the Volume manager is easy-to-use, with a wizard to automate volume creation and administration tasks. Within Disk Station Manager 2.2, by simply choosing Storage -> Volume in the management interface, the user is presented with a wizard that makes RAID creation and administration straightforward and fast. Several RAID configurations are supported, including Basic, JBOD, RAID-0/1/5/5+HotSpare/6.

Synology Disk Stations also allow the RAID to grow over time as needs change. As additional cameras are added or cameras with greater resolution are deployed, administrators can expand the hard drive capacity without interrupting Surveillance Station service. Recording events as a method of security only provides peace of mind if the events can be viewed at a later date, and RAID configurations ensure recorded data remains relevant and useful.

## ***Remote Recording***

If surveillance is being used primarily to protect against property loss or damage, the best way to ensure captured video will be available for future use is to store the data offsite. Remote recording, made easier through the use of IP cameras already on the network, means even if the camera is tampered with or destroyed the video evidence will be protected. This



means only the cameras must be on site to monitor a space, the video feed can be sent over the Internet and recorded to a remote Synology Disk Station.

With a little configuration it is simple to set up remote recording. First, each camera should have port forwarding enabled with different ports assigned to each camera. Then, direct the offsite Surveillance Station to target the WAN address and ports of the cameras. The cameras will appear in the Surveillance Station and are just as configurable as locally connected cameras. As the Disk Station and cameras do not have to be in the same location, data is always protected – away from vandalism, fire, flood, theft, and other potentially disastrous events.

### Real World Scenario

Viewing cameras from anywhere is important to both home and business users. For businesses such as construction companies, watching a project develop without having to actually be in the field constantly is essential to management back at the office. Home users may check weather conditions at a vacation home before traveling or simply ensure all is well with their property. Only the camera is required to be on site and can record to a disk station at a secure location, so there is no risk of losing video to destruction or theft.

## Summary:

As technology advances, solutions historically available only to enterprise-level companies are increasingly accessible to small and medium-sized businesses and even home users. Surveillance is one of these technologies; what used to be a matrix of cables, expensive cameras and equipment is now as simple as attaching a camera to a network and pressing record. Every Synology NAS is bundled with Surveillance Station software, providing a high-performance, intuitively-designed solution for almost any environment.

Whether protecting inventory, monitoring traffic flow at a reception desk, or simply keeping an eye on the house while on vacation, everyone has a use for surveillance that would make their lives better. While it is only one of many features of Disk Station Manager 2.2, the effortless installation, straightforward configuration, and very little maintenance make Surveillance Station an important asset to anyone who owns a Synology NAS. The additional security benefits and peace of mind a full-time surveillance solution brings to the home or office is invaluable.

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