

# VYKON Video

## General Overview

The VYKON Video solution is part of the Niagara<sup>AX</sup>® portfolio of hardware, software and tools designed for remote monitoring and control applications enabling end-to-end automation and device-to-enterprise integration. VYKON Video is an open video framework solution designed to integrate diverse manufacturer video devices and protocols into a unified system that can be used in standalone security applications. VYKON Video can also be combined with other Niagara applications to create a powerful, unified, intelligent facility management system. Built on Tridium's Niagara<sup>AX</sup> Framework®, VYKON Video integrates with IP and analog based systems to create complete interoperability between video, security, lighting, energy management, and building automation.

The VYKON Video solution is designed to work with most digital video recorders, IP cameras, network video recorders, and video management solutions. The video model supports bi-directional alarms which allow event driven communication between video and other Niagara based applications. The user interface provides an integrated alarm monitoring and video recall console which allow system administrators to immediately review and assess video associated with alarm conditions. Additionally, users can direct video cameras to a particular area and using camera control features (pan, tilt, zoom, iris, and focus) lock in, view and begin recording if desired. Once video information is captured and stored in the system, it can be interrogated based upon time, date, or event.

Key Features	Benefits
<ul style="list-style-type: none"> <li>Real time, automatic live video feed upon critical event</li> </ul>	<ul style="list-style-type: none"> <li>Immediate event verification</li> <li>Facilitates quick response, fast issue resolution</li> </ul>
<ul style="list-style-type: none"> <li>Niagara centric, consistent presentation</li> </ul>	<ul style="list-style-type: none"> <li>Reduces training requirements and costs</li> <li>Eliminates need for multiple operators</li> <li>Industry standard/accepted presentation – provides quick learn features</li> <li>No system knowledge required</li> </ul>
<ul style="list-style-type: none"> <li>Comprehensive Video Alarming               <ul style="list-style-type: none"> <li>Event initiated video recording and display</li> <li>Actionable Video alarms</li> <li>Video device alarms</li> <li>Integrated video alarm management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Presents live view verification of critical events</li> <li>Automatically captures critical security breaches and immediately directs operators attention on event</li> <li>Records critical events for post review</li> <li>Provides consistent mode of operations</li> <li>Assures system availability</li> <li>Initiates control logic sequences such as lighting control, building lockdown, etc.</li> </ul>
<ul style="list-style-type: none"> <li>User directed real time camera control (pan, tilt, zoom, iris, focus)</li> </ul>	<ul style="list-style-type: none"> <li>Allows verification of event quickly from central station</li> <li>Reduces nuisance dispatches</li> </ul>
<ul style="list-style-type: none"> <li>Ability to query recorded video by time and date</li> </ul>	<ul style="list-style-type: none"> <li>Provides for an “after the fact” event verification</li> <li>Provides historical records for future needs</li> </ul>
<ul style="list-style-type: none"> <li>Customizable user experience</li> </ul>	<ul style="list-style-type: none"> <li>Flexible to adapt to specific needs/desires</li> <li>Reduce training costs</li> </ul>

<ul style="list-style-type: none"><li>• Optional video routing through Niagara driver</li></ul>	<ul style="list-style-type: none"><li>• The video driver provides the option to either stream video through the fox protocol or directly to the browser from the video system. In the case of streaming through Fox, this allows the user to expose a single system IP address to remotely view video from many different DVRs / NVRs / or IP cameras. This option helps when facility IT does not want to expose all system IP addresses. The Fox option reduces IP exposure but creates additional resource load on Niagara platform.</li></ul>
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## System Functionality

### Bi-directional alarm interface

VYKON Video provides comprehensive two-way alarming features from video devices to Niagara<sup>AX</sup> station and from Niagara<sup>AX</sup> station to video devices. The following functionality is supported:

1. Alarms from Niagara system can initiate events in the video system – when a designated alarm is generated in the Niagara<sup>AX</sup> station from any mechanism, video devices can be configured to react to these alarms immediately. For example, you can automatically position a camera using the built-in Pan-Tilt-Zoom features and begin recording the critical event. The recording speeds and resolution can be pre-programmed individually and based on a variety of event scenarios. Additionally, the designated alarm can create a Niagara DVR event record, recording it in a protected video alarm database for future reference.
2. Alarms from video devices can be configured as an initiator within Niagara to trigger other system wide actions. For example you want to initiate a control logic sequence based upon what a video camera “sees”. These alarms would be acted upon and processed as standard Niagara alarms.
3. Alarms from Video devices (pixel motion detection, loss of video, camera failure, etc) can be assigned as standard Niagara alarms and processed in the Niagara station just as any other Niagara alarm class.

### Available Niagara widgets for video support make configuration easy

Simple, easy to understand configuration tools are important to the success of any Niagara application. For VYKON Video, the following Niagara widgets have been developed to streamline the commissioning process:

1. View live video
2. Pan / tilt / zoom control
3. Query and playback stored video
4. DVR video display management

These widgets are used with standard Niagara<sup>AX</sup> Workbench tools and can be combined with the entire pallet of Niagara objects and widgets to fully customize the user experience.

### Drivers can be used in Security only, BAS only, Integrated BAS/Security or standalone (Video) applications

VYKON Video drivers have been developed as standalone applications from other Niagara applications and are sold independently from Niagara Security products (or any other Niagara app). They only require a Niagara<sup>AX</sup> station or suitable Niagara<sup>AX</sup> JACE<sup>®</sup> to run. VYKON Video Drivers can be used in Security only, BAS only, Integrated BAS/Security, or standalone (Video) applications.

## Drivers are licensed by quantity of Cameras supported

Consistent with other Niagara applications, VYKON Video is packaged and licensed based upon utility. Packaging also varies depending upon platform in which the driver runs. In general, supervisor products support larger numbers of video devices than do JACEs because they have greater resource availability. The packaging is as follows:

### AX Supervisor Applications

- AX Supervisor Base Driver - supports up to 16 cameras
- AX Supervisor Additional Camera License - supports an additional 4 cameras

### JACE Applications

- AX JACE Driver - supports up to 4 cameras\*

\* If additional camera support is required, an additional Driver must be purchased (up to the 16 camera per JACE limit). Remember also that only JACE 6 or Security JACE 6 platforms are supported (as of December, 2008) and expanded memory is required

Count is based upon physical cameras addressed and includes those that connect direct to a DVR or via IP.

## System Requirements

VYKON Video Drivers require Niagara<sup>AX</sup> 3.2 and higher software and can run in an AX Supervisor, SoftJACE or select JACE controller depending upon the application. Please note there are different drivers for the Web Supervisor and JACEs, each providing varying capabilities. They are not interchangeable.

JACE Video drivers will only run in JACE- 6 controllers – either in the Security JACE-6 or the standard JACE-6. Future JACE controllers may also run the VYKON Video application – please refer to these announcements as the devices become available.

SoftJACE products utilize the JACE Driver.

Please refer to the Application Guidelines section below for specific product details.

## Application Guidelines

Application guidelines for the various platforms are as follows:

<u>Platform</u>	<u>Camera Restrictions</u>
AX Supervisor (S-AX)	No predetermined restrictions
SoftJACE (SJ-1M-AX)	No predetermined restrictions
Security JACE 6 (SEC-J-601)	Maximum of 16 cameras
JACE 6 (J-600)	Maximum of 16 cameras, requires NPM-256 memory option

Currently, no other platforms are supported at this point in time (December, 2008).

## Available Video Drivers

For the initial launch of VYKON Video, we have teamed with two companies that provide a comprehensive array of video devices. The two companies are Dedicated Micros Inc. and Axis Communications, Inc.

### **Dedicated Micros**

Dedicated Micros offers a broad variety of Digital Video Recorders (DVRs) that the Niagara Dedicated Micros Drivers are designed to communicate with. The recommended DVRs are from their SD product line and are available in 8, 12, 16 or 32 camera input models. In addition, there are other models available ranging from 4 to 32 camera inputs. Please note: VYKON Video Drivers only work with Dedicated Micros **NetVu** protocol. As a result you must specify NetVu Connected when ordering regardless of the model. Each of the Dedicated Micros DVRs supports a variety of camera types (fixed/stationary or pan-tilt-zoom). Camera connectivity can be direct into the DVR or via IP across a LAN/WAN or via the Internet (IP Cameras must be specified for this feature). These cameras are also available from Dedicated Micros.

“Where to buy” and technical information on the Dedicated Micros products can be found at:

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

### **Axis Communications, Inc.**

Axis Communications offers a comprehensive portfolio of network cameras in stationery and pan/tilt/zoom formats as well as a number of other video devices. Please note that the Niagara Axis Video Driver will only work with Axis Communications network cameras supported by the Axis VAPIX API and not with any of their other products. As there are no video recording products available from Axis that work with the Niagara Axis Driver, the Axis network camera products should only be used in applications where only surveillance is required OR where they can be integrated into a Dedicated Micros DVR.

“Where to buy” and technical information on the Axis Communications network cameras can be found at:

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

## Catalog Numbers

Available configurations of the VYKON Video Drivers are as follows:

### AX Supervisor Applications:

DR-S-DED-AX	Base Dedicated Micros NetVu Driver for AX Supervisor – supports up to 16 cameras
DR-S-DED-4	Additional 4 camera license for AX Supervisor NetVu Driver
DR-S-AXS-AX	Base Axis Communications Network Camera Driver for AX Supervisor – supports up to 16 cameras
DR-S-AXS-4	Additional 4 camera license for AX Supervisor Axis Driver

### JACE Applications:

DR-DED-AX-4	NetVu Driver for JACE Controllers – supports up to 4 cameras
DR-AXS-AX-4	Axis Driver for JACE Controllers – supports up to 4 cameras

We have a number of other manufacturers DVR Drivers in queue for development so stay tuned for future announcements as these drivers become available.

## Additional Resources

VYKON Video Data Sheet  
VYKON Video Driver Guide