3xLOGIC

Intelligent Video Surveillance

VIGIL HD Viewer v7.1

User's Guide

October 2013 Revision

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1 Introduction

This guide describes the installation and operation of 3xLOGIC VIGIL HD Viewer. This version of the user's guide is current to version 7.0 of VIGIL HD Viewer.

VIGIL HD Viewer allows you to display and manage multiple (up to 16) high definition IP cameras per monitor from a single application. It is completely customizable and supports multiple monitors, manipulating relays, and a variety of types of high definition and normal resolution IP cameras.

3xLOGIC (www.3xlogic.com) produces enterprise class VIGIL Servers and state-of-the-art surveillance software.

Disclaimer: *This application has been optimized for use with Windows XP and Windows 7. 3xLOGIC does not actively support other operating systems. Installing this application on operating systems other than the those mentioned above may have undesirable consequences.

2 System Requirements

The following table outlines the minimum and recommended platforms for running VIGIL HD Viewer.

PC Feature	Minimum	Recommended
Operating System	Windows 2000	Windows 7 Pro 64-bit
CPU	2.0GHz	3.0GHz
RAM	512MB	1GB
Video Card Memory	64MB	128MB
Hard Drive Space for Installation	20MB	20MB
Network Connectivity	10/100Mbps	1Gbps

Note: When streaming high definition cameras over an Internet connection, it is best to keep the IPS (images per second) to the default setting of 1. To use a higher IPS, it is suggested that you utilize your local area network for these cameras

3 Software Features

This section describes some of the features of VIGIL HD Viewer.

Feature	Details
Multiple IP Camera Support	Supports ACTI, Arecont, AXIS, Bosch, Canon VB-C50x, IQEye, JVC, Merit Lilin, Messoa, Panasonic, Pelco, Sanyo, Sentry 360 Insight, Sony, StarDot, Toshiba, VSX-IP, VivoTek, and generic HTTP cameras. Different cameras will be added in future versions.
Multiple Monitor Support	Program automatically detects connected monitors, utilizing each one to display different layouts and cameras.
No Capture Card Required	VIGIL HD Viewer supports up to 16 IP high definition cameras without the need for an installed capture card.
Digital Input/Output	Supports digital input/output devices that allow alarm inputs, trigger external circuits, etc to be customized. *This functionality requires optional hardware.*
Live View	View up to 16 live camera feeds in full screen or arrange the layout and cameras to your specific needs. Layouts include single, 2x2, 3x3, and 4x4.
Zoom	Digitally zoom and focus in on specific areas from a camera feed.
Proxy Server Support	VIGIL HD Viewer can be used in conjunction with a proxy server.
Stream From A VIGIL Server VIGIL Server	Able to stream inputs from a VIGIL Server VIGIL Server for HD Viewer display.

4 Installation

4.1 Installing HD Viewer

If you downloaded the install kit for VIGIL HD Viewer, navigate to where the file has been saved using Windows Explorer and double-click the .EXE file that was downloaded to begin installation.

Note: To update an existing version of VIGIL HD Viewer, use the VIGIL HD Viewer update (VGL) file instead of the VIGIL HD Viewer install package (EXE).

If installing from a CD, load it into the CD-ROM drive and run the .EXE file on it.

Install Step	Details
Welcome	Loads the *InstallShield* install wizard and displays typical installation information.
Begin Installation	The last chance to cancel prior to installing the application.
Installation	The actual install process. Copies necessary files, creates shortcuts, and installs registry information.
Install Completion	Once the install is complete you will be prompted to restart your computer.

4.2 Updating HD Viewer

To upgrade VIGIL HD Viewer from previous version, go to:

Start Menu >> Vigil >> Update

This will open the *Local Update Utility* window. Browse to the downloaded or saved upgrade file (update files use a VGL file extension) and click *Open*. Click *Update* to begin the update process. The update process requires you to restart your computer. Please allow it time to perform the update completely.

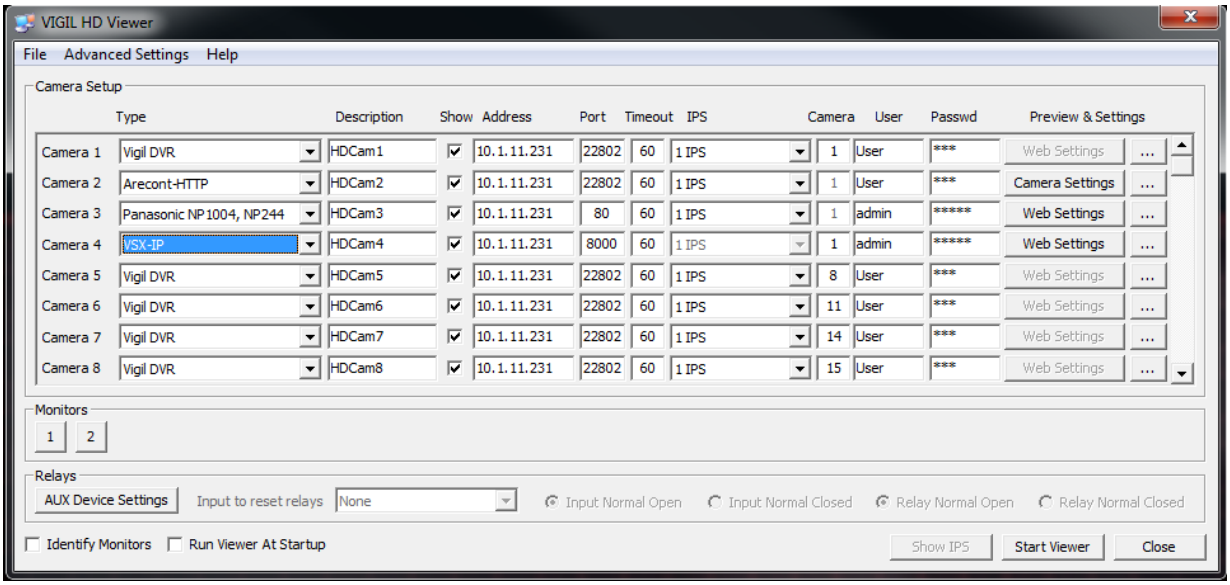
4.3 Uninstalling HD Viewer

To uninstall VIGIL HD Viewer, go to *Add/Remove Programs* located in the Windows Control Panel.

Click *Remove* by the entry *VIGIL HD Viewer*. Follow the prompts to perform the removal process.

5 Operation

This section details the general usage of VIGIL HD Viewer. When the program is opened, the main VIGIL HD Viewer window will display.



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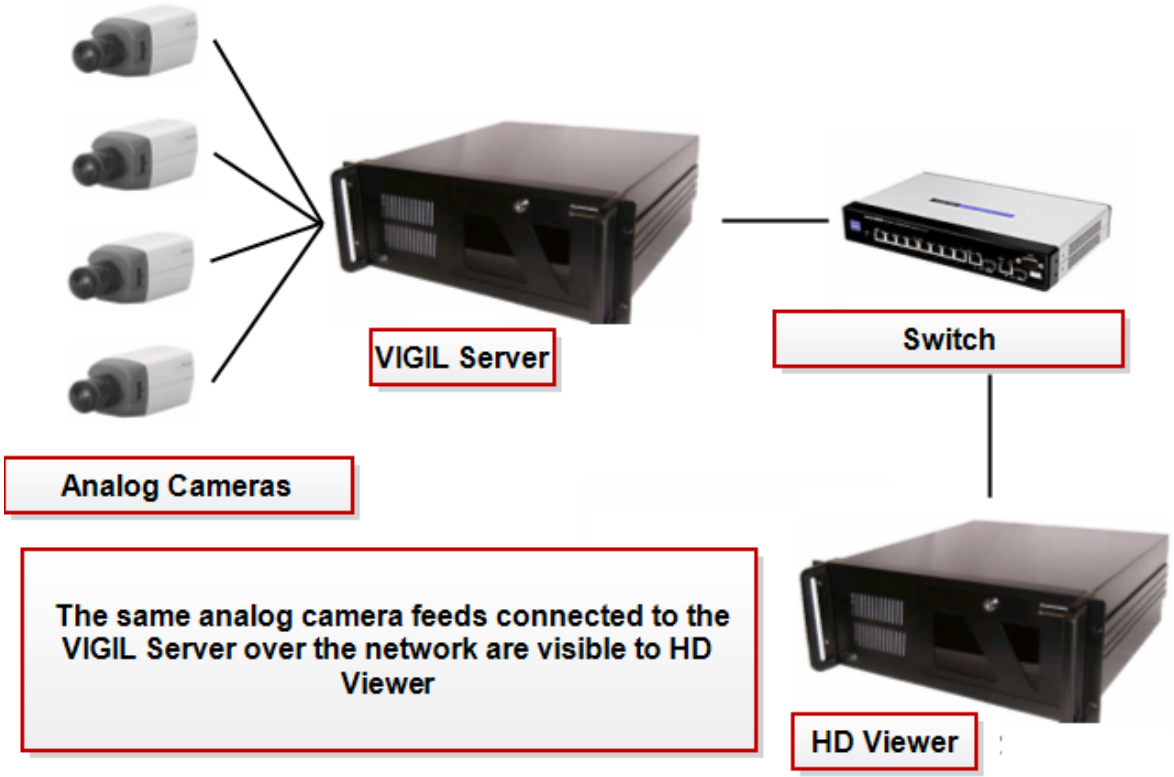
5.1 Camera Setup

The *Camera Setup* section consists of a large table with many configurable fields. Each row of the table represents a single IP camera, with its own configuration. Here is a summary of the column information:

Type	Select the type of camera to display. The *Disabled* option simply disables the camera.
Description	A short description or camera name that identifies the camera; this description is displayed above each camera in the live viewer. The length of the description is limited to 20 characters.
Show	Check this to show the camera description in the live view.
Address	This is the IP address of the camera that you are configuring.
Port	This is the port number for the camera that you are configuring.
Timeout	The number of seconds before a connection is dropped and *Signal Loss* is displayed if a connection cannot be made with the camera.
IPS	Images Per Second – The rate that the camera will update the image on the screen. This can range from one image per day up to 30 IPS, with many options in between. With certain cameras, this option cannot be changed from the default value.
User/Passwd	Some cameras require login information before a connection can be made. Enter the user name and password in these fields, if applicable.
Preview & Settings	**Web Settings:** Provides a quick shortcut to the web based configuration of the network camera. For more information on configuring the camera, please see the documentation from your camera manufacturer. **...** Opens the *Preview & Settings* window where zoom and video loss settings are configured for the camera.

5.1.1 VIGIL Server Network Camera Type

A VIGIL Server can be connected in the same way you would connect to an IP camera and display any camera that it currently receives. This allows analog video to be relayed from a recording VIGIL Server to HD Viewer.



To set up this configuration, select the *VIGIL Server* Network Camera Type. The recommended settings for this setup are:

Address	The IP Address of the VIGIL Server VIGIL Server.
Port	The live Video Port, default 22802.
Timeout	The number in seconds before closing a connection.
IPS	The IPS should be set to a value equal to or greater than the recording key-frame rate on the remote VIGIL Server camera input. Use the *All Frame* setting for camera inputs with low key-frame recording (i.e. AZTech).
Camera Number	The camera input number on the remote VIGIL Server to display in the live viewer.
User and Password	The username and password used to log into the remote VIGIL Server.

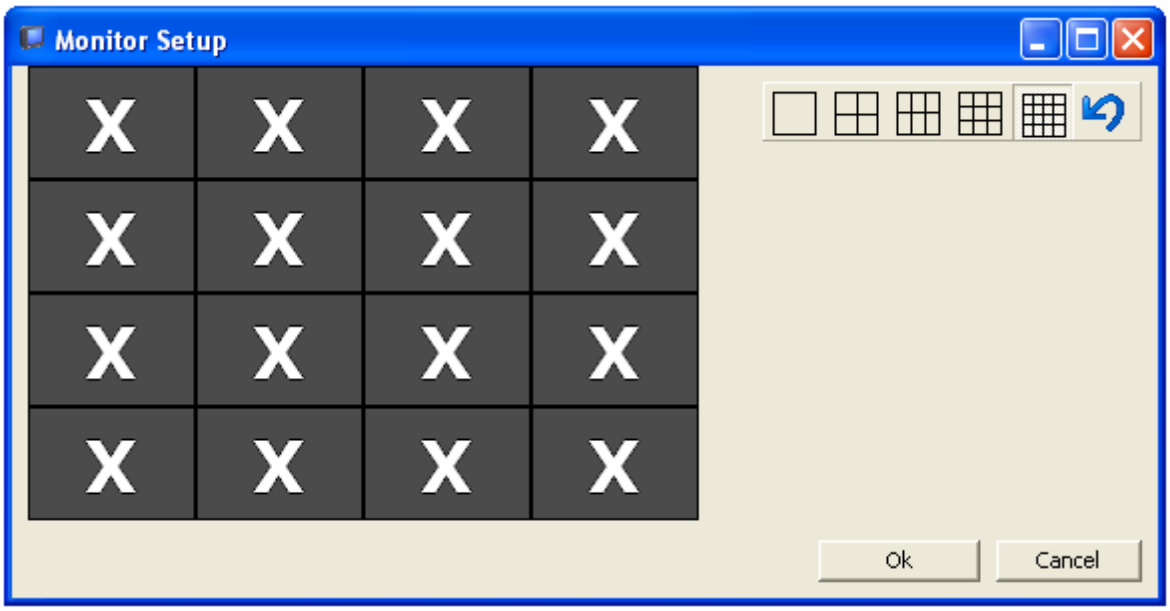
5.1.2 VSX-IP Camera Type

The VSX-IP camera type includes support for 5 stream types which are configured by adjusting the camera number:

Stream type	Camera number range	Example: the camera number that should be used for VSX-IP cameras using channel 1
H.264 Main Stream	1 – 100	1
H.264 Sub Stream	101 – 200	101
MPEG-4 Main Stream	201 – 300	201
MPEG-4 Sub Stream	301 - 400	301
JPEG Stream	501 – 600	501

5.2 Monitors

Click a number in the *Monitors* section of the *VIGIL HD Viewer* window to open the *Monitor Setup* window. This window allows you to choose which cameras and layout to display in the live viewer for the selected monitor. First, a layout for the live viewer must be chosen; select the layout by clicking on one of the layout buttons on the right side of the *Monitor Setup* window.



This is a single view layout for only one camera. The program will expand the video to fill the entire monitor.

Displays up to 4 live camera views simultaneously in a 2 by 2 grid layout.

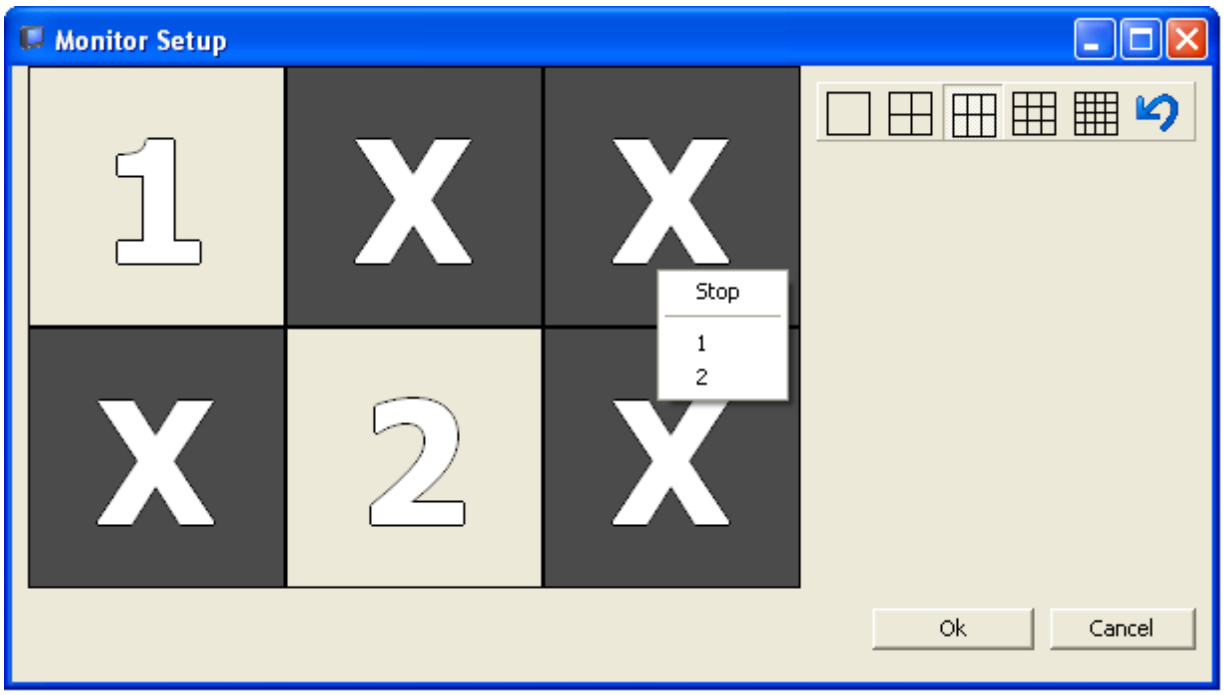
Displays up to 6 live camera views simultaneously in a 2 by 2 grid layout.

Displays up to 9 live camera views simultaneously in a 3 by 3 grid layout.

Displays up to 16 live camera views simultaneously in a 4 by 4 grid layout.

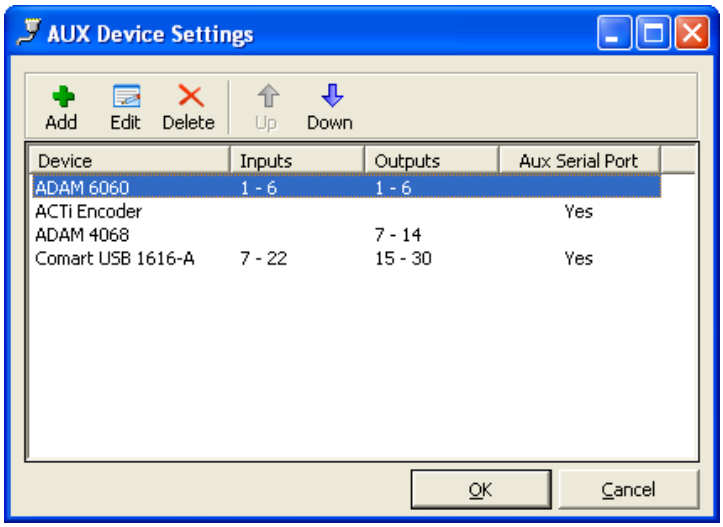
Reverts to the previously configured layout, acting as a cancel button that will remove any changes made since the window was first opened.

Once a layout is selected, cameras must be assigned to a position within the layout; to do this, right-click on a position and select a camera number. The layout position will change from an X (i.e. no camera) to the camera number. Repeat this step multiple times to fully configure the layout.

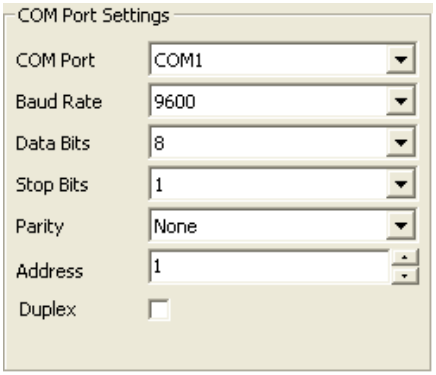
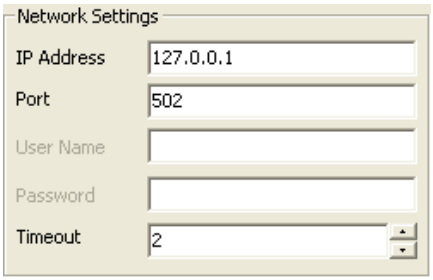
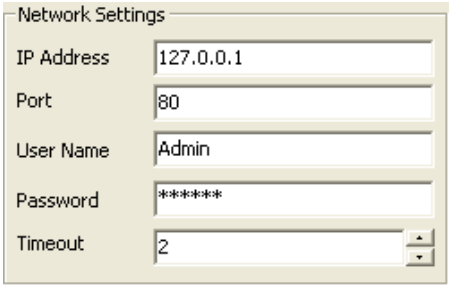

Monitor Setup
1
X
X
X
2
X
Stop
1
2
Ok
Cancel

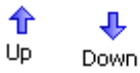
5.3 Relays

This section allows a digital input/output (DIO) device to be configured. This optional piece of hardware provides the functionality to trigger a given relay (digital output) upon detection of a signal loss. It also allows the user to reset triggered relays by monitoring a given digital input. To use the Relays feature, you must first install the DIO device by following the documentation provided by your manufacturer. The installation is generally a simple process consisting of plugging the DIO board into an available USB port or COM port and installing the driver CD when prompted.

Relays	
AUX Device Settings	Opens the *AUX Device Settings* window where DIO devices can be added, configured and removed. Note that an AUX device must be installed before this feature is available. 
Add	Adds a DIO device to the list of available DIO devices. Types include ACTi Encoder, ADAM 4052, ADAM 4068, ADAM 6060, Comart USB DIO (1616-A), and Loopback Device.

Comart USB 1616-A	
	Specifies a USB attached DIO board. Enabling *System Beep* causes the speaker located on the USB DIO to chirp on events such as triggered

		relays and opened/closed alarm inputs.
	ADAM 4052/ 4068 	Adds an ADAM 4052/4068 COM port attached DIO device. Specify COM port settings here.
	ADAM 6060 	Adds an ADAM 6060 network attached DIO device. Specify TCP/IP settings here.
	ACTi Encoder 	Adds an ACTi encoder device. Specify TCP/IP and connection settings here.
 Edit	Allows for changes to the configuration of the selected DIO device. The *Edit DIO Device* window is identical to the *Add DIO Device* window.	

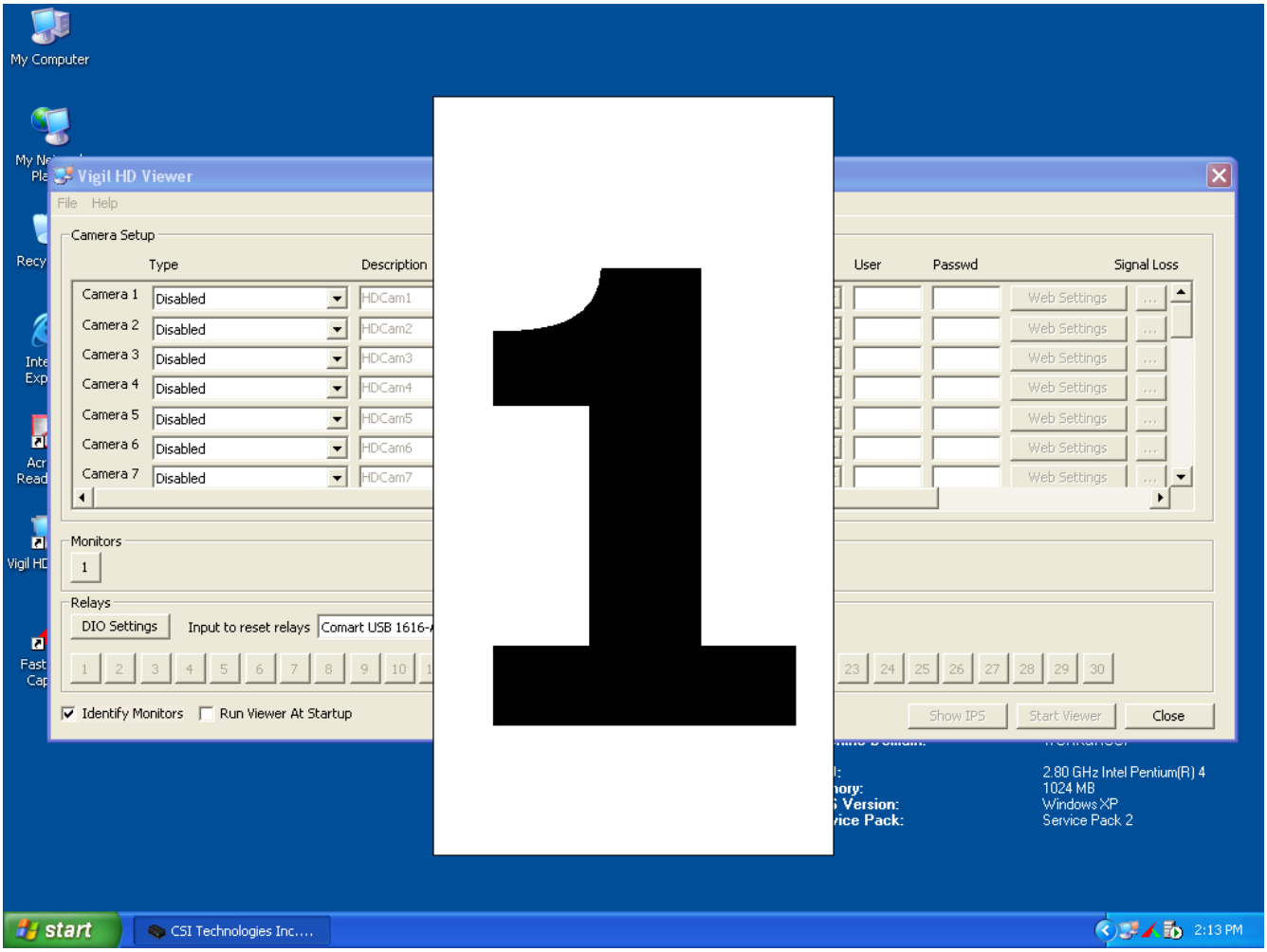
	Removes the selected DIO device from the list.
	Moves the selected DIO device up/down the list and changes the numbering order of the inputs and outputs.

Input to reset relays	This selects a single input to reset all triggered relays. This input can be configured for *Normal Open* or *Normal Closed* operation. This refers to whether the input circuit is normally complete (closed) or broken (open).
Input Normal Open/Closed	Choose to set the normal state for inputs to open or closed.
Relay Normal Open/Closed	Choose to set the normal state for output relays to open or closed.
Relay Buttons	The numbered buttons in the *Relays* section allow you to manually enable and disable relays. To do this, click on the button of the corresponding relay. When a relay is enabled, the corresponding button will latch on and flash red. This is also what you will see when a signal loss triggers a relay. **Note:** These buttons are only available when an AUX device has been added in the AUX Device Settings, and when the live viewer is running

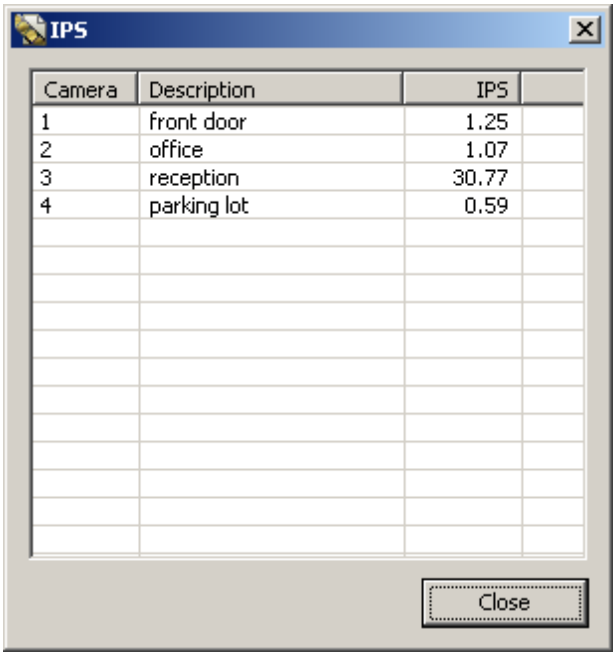
5.4 Additional Options

This section provides some detail on the options found at the bottom of the *VIGIL HD Viewer* window.

Identify Monitors	Checking this box will display a large number on each of your detected monitors, allowing you to easily determine which number corresponds to which monitor. Uncheck the box to remove the numbers.



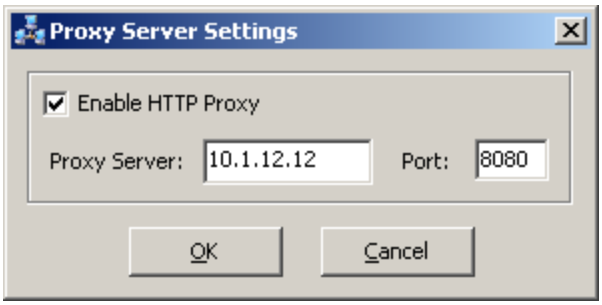
Run Viewer At Startup	Check this box to allow automatic startup of the live viewer when the program is loaded. This option only applies to the live viewer; the HD Viewer program will load at Windows normally.

Show IPS	Opens the *IPS* window, where the current IPS rate of all configured cameras is displayed. 
Start Viewer	Starts the live viewer based on your current configuration settings.
Close	Minimizes the HD Viewer program to the system tray. To exit the program, use the *File* menu and select *Exit*.

5.5 Menu Bar

These menu items can be found at the top of the *VIGIL HD Viewer* window:

File	
Log Off	Logs out and enables password protection that prevents any settings from being changed.
Change Login...	Allows you to enable/disable/edit the password protection. See Section 5.6 Password Protection: 5.6 Password Protection for more information.
Exit	Closes the HD Viewer application.

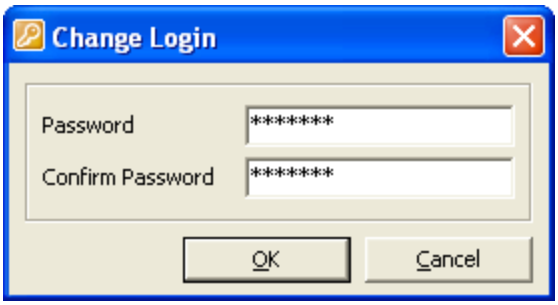
Advanced Settings	
Proxy Server	Opens the *Proxy Server Settings* window where an HTTP proxy server connection can be enabled and configured. To enable this feature, check the *Enable HTTP Proxy* box, then enter an IP address and port number for the proxy server. 

Help	
User Manual	Opens the HD Viewer user's manual in Adobe Reader.
About	Opens the *About* window, which displays some basic information about HD Viewer.

5.6 Password Protection

To enable user login, go to *File* | *Change Login*…, enter the desired password, and click *OK.* This will ensure that the user inputs a password before any settings can be changed.

Note: When *Run Viewer At Startup* is enabled, the live viewer will start without having to input a password.

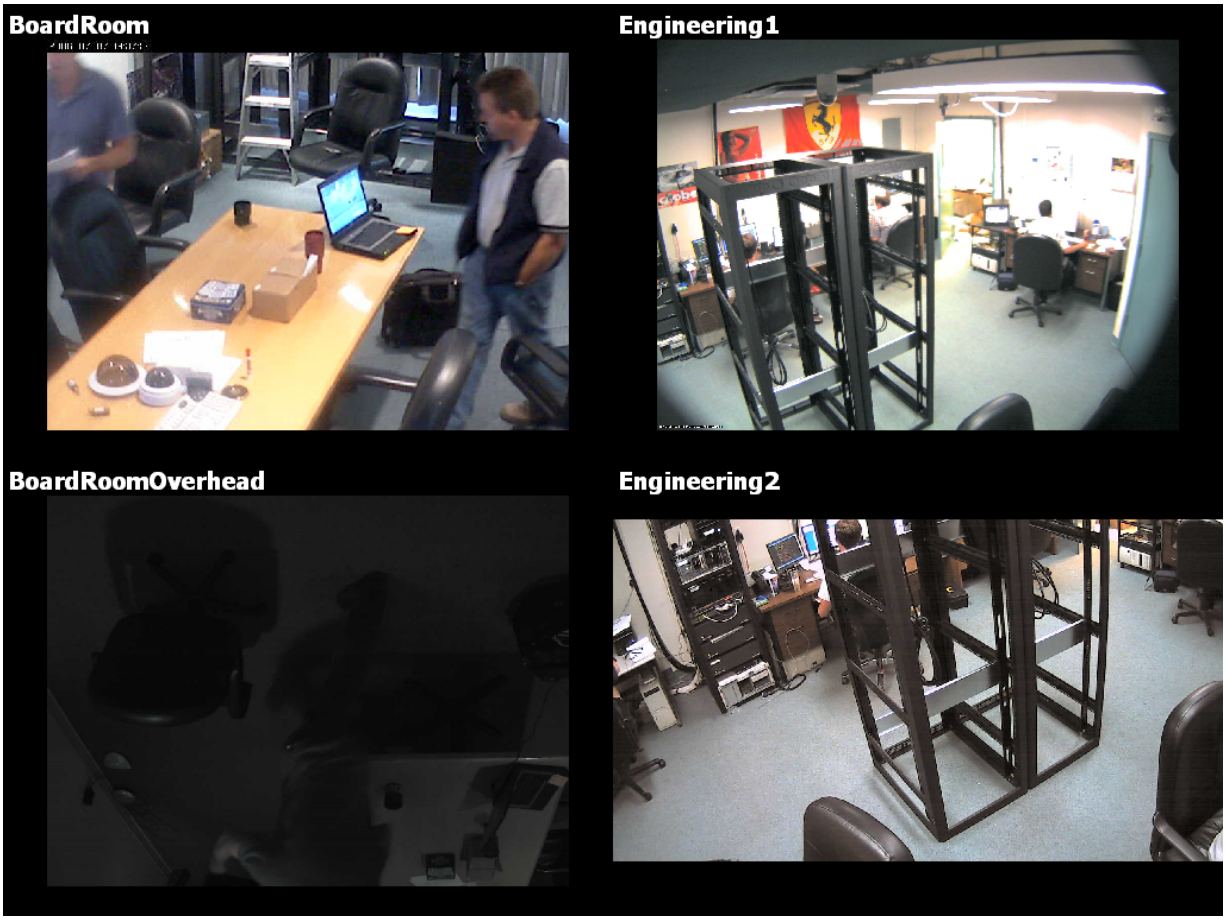


To disable password protection, go to the *Change Login* window and input a blank password. A message box will prompt you to confirm that you would like to have a blank password; click *Yes* to keep the blank password.

6 Starting the Viewer

Once the HD Viewer has been configured, click

at the bottom of the *VIGIL HD Viewer* window to display the cameras.



This is a screenshot of a 2 by 2 layout, using 3 normal IP cameras and 1 high resolution IP camera.

To **exit** the live viewer, press the Escape (Esc) key.

7 Troubleshooting

This section reviews common problems and error messages of VIGIL HD Viewer.

7.1 No cameras are displayed in the live view:

Check that each camera is assigned to a layout position. See Section 5.1.2 VSX-IP Camera Type: VSX-IP Camera Type

The VSX-IP camera type includes support for 5 stream types which are configured by adjusting the camera number:

Stream type	Camera number range	Example: the camera number that should be used for VSX-IP cameras using channel 1
H.264 Main Stream	1 – 100	1
H.264 Sub Stream	101 – 200	101
MPEG-4 Main Stream	201 – 300	201
MPEG-4 Sub Stream	301 - 400	301
JPEG Stream	501 – 600	501

7.2 The live viewer will not start when *Start Viewer* is clicked

Check that each camera is assigned to a layout position. See Section 5.1.2 VSX-IP Camera Type: VSX-IP Camera Type

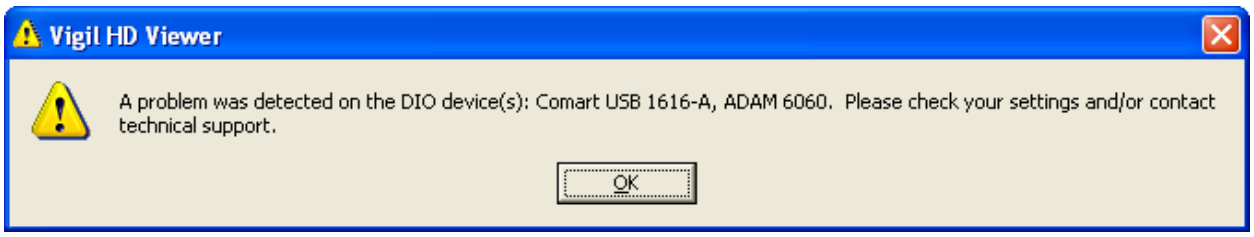
The VSX-IP camera type includes support for 5 stream types which are configured by adjusting the camera number:

Stream type	Camera number range	Example: the camera number that should be used for VSX-IP cameras using channel 1
H.264 Main Stream	1 – 100	1
H.264 Sub Stream	101 – 200	101
MPEG-4 Main Stream	201 – 300	201
MPEG-4 Sub Stream	301 - 400	301
JPEG Stream	501 – 600	501

7.3 "Signal Loss" is displayed in the live view

- Check the camera settings for the camera that is displaying "Signal Loss".
- Ensure that the camera is online and operating correctly.

7.4 DIO device warning box appears



- Ensure that your DIO device is connected and installed properly.

8 Supported Network Cameras

The following tables list supported network cameras and their respective features. Also listed is typical connection information such as login credentials and TCP Port settings.

Table 1

Make/ Model	Media Format	Resolution	Protocol	Default Port	Default User/Password	PTZ	Audio	Misc.
HTTP	JPEG/MPEG4	Any	HTTP	80	N/A	N/A	N/A	Any JPEG camera using HTTP protocol can record with this setting. Specify URL.
Acti	MPEG4/JPEG	720x480 (576), 352x240 (288)	TCP / UDP Multicast	6000, 6001, 6002	Admin : 123456	N/A	No (under development)	N/A
Arecont-HTTP	JPEG	Any	TFTP/UDP/ HTTP	69/80	N/A	N/A	N/A	N/A
Arecont - SDK	JPEG	Any	TFTP/UDP/ HTTP	80	N/A	N/A	N/A	N/A
Axis	JPEG / MPEG4	Any	HTTP (JPEG), RTP Unicast/Multicast (MPEG4)	Varies	N/A	Yes (depending upon model)	Yes (depending upon model)	N/A
Bosch	JPEG	Any	HTTP	80	N/A	No	N/A	Non-standard JPEG image, no support for "fast decompress" and AZTech CODEC

Table 2

Make/ Model	Media Format	Res-olution	Protocol	Default Port	Default User/Pass-word	PTZ	Audio	Misc.
Canon VB-C50x	JPEG	320x240, 640x480	HTTP	80	N/A	Yes	N/A	N/A
IQEye	JPEG	Any	HTTP	80	N/A	No	N/A	
JVC	JPEG	Any	HTTP	80	N/A	No	N/A	
Merit Lilin / Pixord	JPEG	Merit Lilin: Any Pixord: 704x576, 352x288	HTTP	80	N/A	Yes	N/A	Save preset not sup-ported, See web set-tings.
Messoa	JPEG	160x120, 320x240, 640x480	HTTP	80	N/A	No	Yes (PCM, ADPCM)	N/A
Pana-sonic NM100	JPEG or MPEG4 (not simul-taneously)	640x480, 320x240, 160x120	HTTP (JPEG), RTP Uni-cast (MPEG4)	80	admin:pas-sword	Yes	N/A	
Pana-sonic NP1004, NP244	JPEG / MPEG4 (simul-taneously)	1280x960 (JPEG only), 960x720 (JPEG only), 640x480, 320 x 240	HTTP (JPEG), RTP Uni-cast (MPEG4)	80(JPEG)	admin:12345	Yes	Yes	Set "Refresh interval (MPEG-4)" to 1 second if using MPEG-4 Max 8 simul-taneous con-nections. Max 15FPS in JPEG FSM.

Table 3

Make/ Model	Media Format	Res-olution	Protocol	Default Port	Default User / Pass-word	PTZ	Audio	Misc.
Pana-sonic NW47xS, NS32X, NP472	JPEG	640x480, 640x320, 320x240, 160x120	HTTP	80	admin: *<empty>*	Yes	N/A	Max 15 simul-taneous con-nections. PTZ is digital .
Pelco Video Server	JPEG	640x480, 640x320, 320x240, 160x120	HTTP	80	N/A	No	N/A	Non-stand-ard JPEG image, not supported by "fast decom-press" and "AZTech"
Pelco IP11x	JPEG / MPEG4	704x470, 352x240	HTP/UDP Multicast	80, 49152	Admin:admi-n	Yes	No	
Sanyo HD	JPEG	3 Mega Pixel	HTTP	80	guest:guest (*Viewing*) admin:admi-n (*Admin-istrator*)	No	N/A	H.264 is not supported
Sony	JPEG or MPEG4 (not simul-taneously)	640x480, 384x288, 320x240, 256x192, 160x120	HTTP	80	admin:admi-n	Yes	Yes	
StarDot	JPEG	Mega Pixel	HTTP	80	admin:admi-n	No	No	
Sentry 360	JPEG	Any	HTTP	80	admin:admi-n	No	N/A	
Toshiba	JPEG	Any	HTTP	80	root:ikwb	Yes	Yes	

Table 4

Make/ Model	Media Format	Resolution	Protocol	Default Port	Default User / Password	PTZ	Audio	Misc.
VSX-IP	H.264, JPEG	Any	TCP (Through SDK), MPEG4, JPEG	8000	Admin:12345	Yes	Yes	Multiple channel is supported. Both major streams and sub streams are supported. To use sub stream, use camera number + 100 as channel number
VivoTek	MPEG-4 / JPEG	Up to 640x480	RTSP/HTTP	554 (RTSP), 80(HTTP)	N/A	Yes (depending upon model)	No (Under development)	For streaming JPEG, use HTTP camera type with /cgi-bin/video.jpg as URL

9 Contact Information

3xLOGIC has offices in Victoria BC, Canada and in Westminster Colorado, USA. Please visit our 3xLOGIC web site at www.3xlogic.com. Please contact us by e-mail at support@3xlogic.com (technical support), or using the following contact information:

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