3xLOGIC

VIGIL

HD Viewer 11.5

Public-View Monitor Software

User Guide

Revised: July 27th, 2020

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Disclaimer

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1 Introduction

This guide describes the installation and operation of 3xLOGIC 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.

This guide is current as of VIGIL HD Viewer v11.50.0000

Disclaimer: *This application has been optimized for use Windows 7, Windows 8.1, Windows 10. 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 7	Windows 7 Pro 64-bit Windows 8.1, Windows 10
CPU	2.0GHz	3.0GHz
RAM	512 MB	2 GB
Video Card Memory	512 MB	1 GB
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.

Features	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 r	Able to stream inputs from a 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 the save location 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, open the VIGIL Update Utility (*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. Please allow the system appropriate 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.

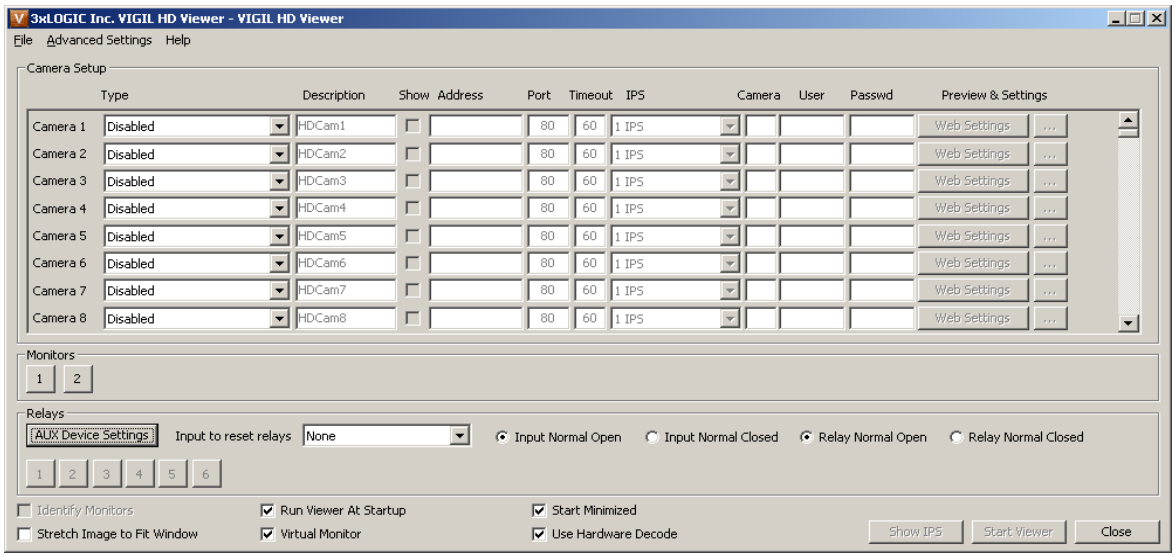


Figure 5-1:VIGIL HD Viewer Configuration Window

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. See "Preview and Settings Window" on the next page for more info.

5.1.1 Preview and Settings Window

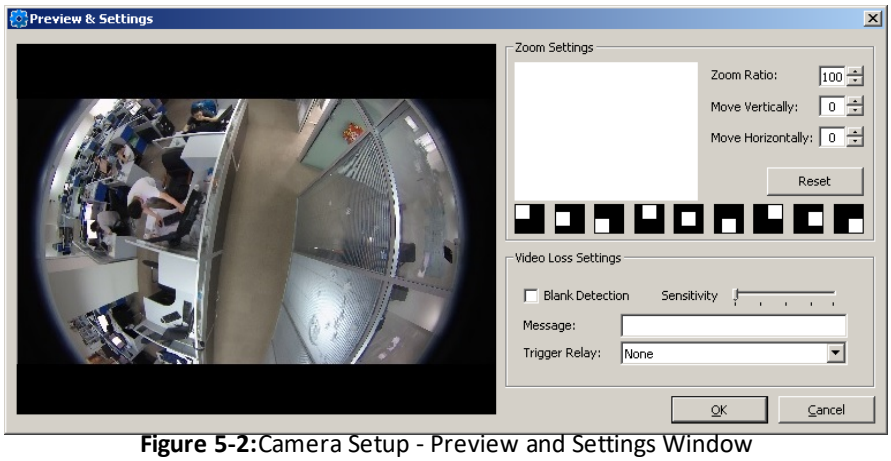


Figure 5-2: Camera Setup - Preview and Settings Window

Zoom Settings	
Zoom Ratio	Set the zoom ratio to define the zoomed area to be displayed in the viewer. Lowering the value will shrink the zoomed area.
Move Vertically	Move the zoomed portion of the image vertically.
Move Horizontally	Move the zoomed portion of the image horizontally.
Reset	Click reset to set all values to their default value.
Video Loss Settings	
Blank Detection	Enable this option to allow blank detection. When the viewer goes blank and no image is being received, blank detection will trigger.
Sensitivity	Set the sensitive for blank detection.
Message	Enter a message to display when blank detection has been triggered.
Trigger Relay	If desired, configure a relay to trigger when blank video has been detected.

5.1.2 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.

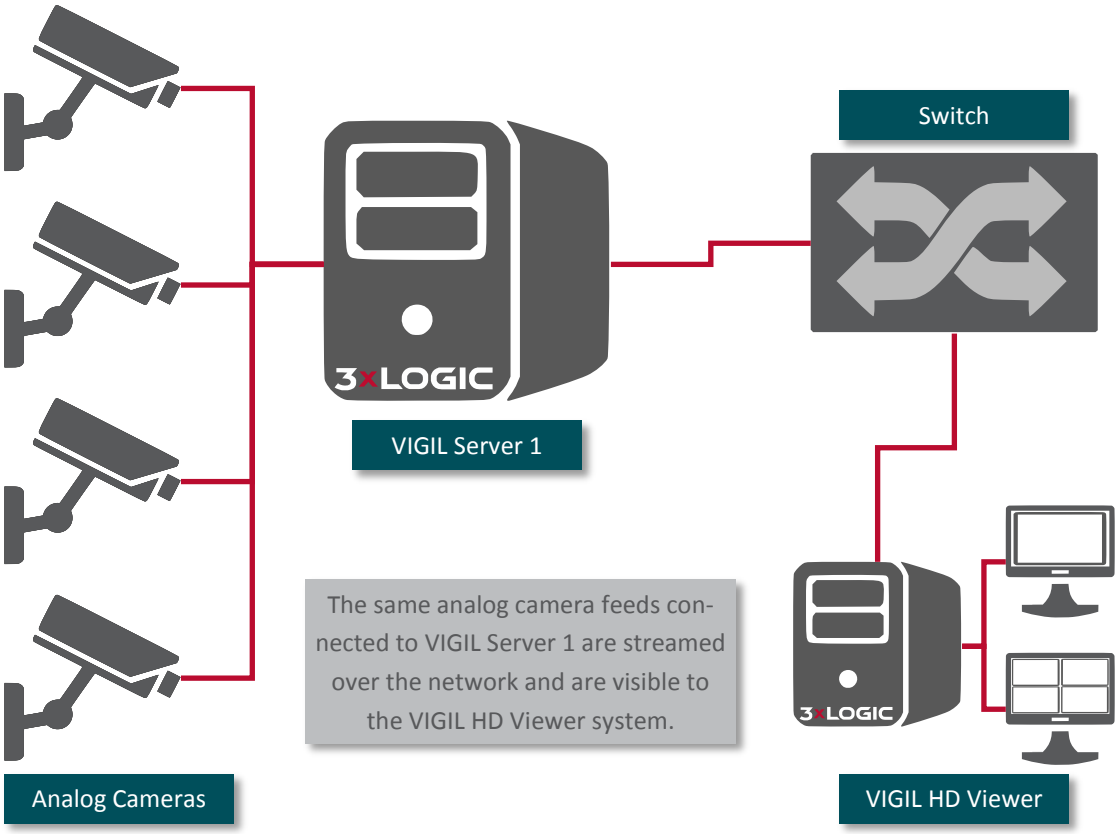


Figure 5-3: Analog Camera Relay

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. Add 100 to the number as configured in VIGIL Server to access the camera's substream (if available). Utilizing substream can be used to free up resources and reduce network bandwidth load.

	Example: If the desired camera is configured as Camera 16 on VIGIL Server, entering 16 as the Camera Number in HD Viewer will produce a main stream image. Entering 116 into the Camera Number field will produce a substream image.
User and Password	The username and password used to log into the remote VIGIL Server.

5.1.3 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: Recommended Camera Number to 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

If the chosen stream type is not supported by the camera, HD Viewer will display a blank (black) image.

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.

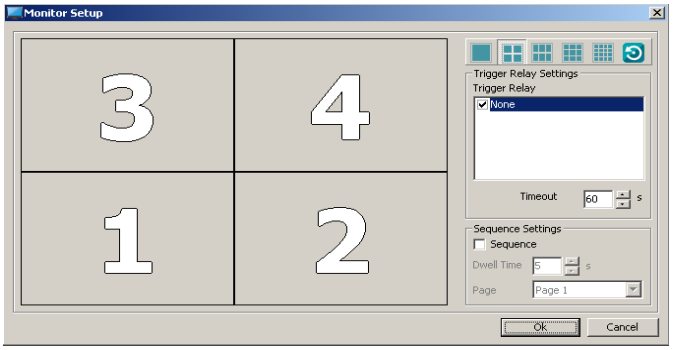


Figure 5-4: Monitor Setup Window

	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 assign a position, 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 as required to fully configure the layout.

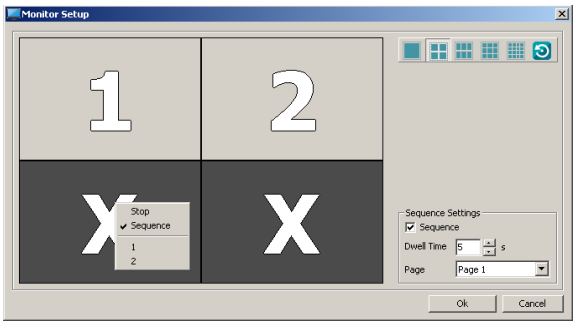


Figure 5-5: Monitor Selection - Camera Assignment

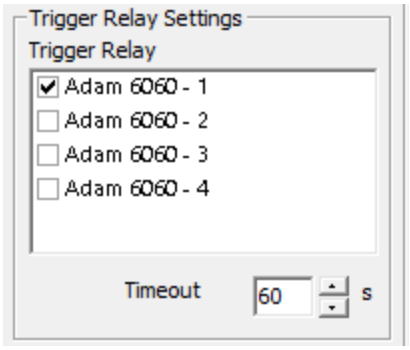
5.2.1 Trigger Relay Settings

When Relays have been properly configured within the HD Viewer settings and a separate Monitor Relay license has been registered for the host VIGIL Server, the *Trigger Relay Settings* will be available on the Monitor Setup window.

The Trigger Relay feature enables the triggering of a relay output whenever the physical connection between the HD Viewer system and the VGA monitor is severed.

Example: If a gas sation PVM's physical connection to the HD Viewer system is severed, the monitor triggers a relay which powers down the pump, preventing potential theft until the monitor connection / image has been restored.

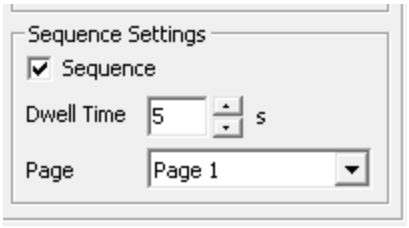
Note: Please note that nVidia VGAs do not contain the functionality to signal when the video connection has been severed. As a result, this feature has been engineered for use with ATI video adapters only.



Check-off the desired relay output in the list and configure an appropriate Timeout value (in seconds). When the monitor connection has been severed for longer than the timeout period, the relay output will be triggered.

5.2.2 Sequence Settings

Sequence mode allows the user to sequence up to eight camera layouts on the monitor, each capable of displaying up to the largest layout available (16 cameras: 4x4).



Note: Enabling *Sequence* mode will wipe the currently configured layout.

To create a sequence:

1. Check-off the *Sequence* box to enable Sequence mode. The current layout configuration will be lost. Page 1 (the first layout to be displayed in the sequence) will be selected by default.
2. Configure the desired monitor layout for Page 1 of the sequence.
3. Set the Dwell Time. The Page 1 layout will be displayed for the defined amount of time before switching to the nexpage in the sequence.

The next layout page in the sequence may now be configured:

4. Select *Page 2* from the Page drop-down.
5. Configure the desired monitor layout for Page 2 of the sequence.

Repeat the above up as necessary, to a maximum of eight pages.

6. Click *Ok* to save the new monitor settings.

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.

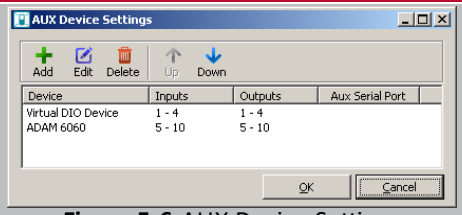
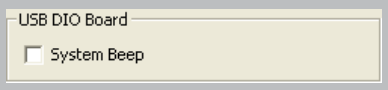


Figure 5-6:AUX Device Settings

Add

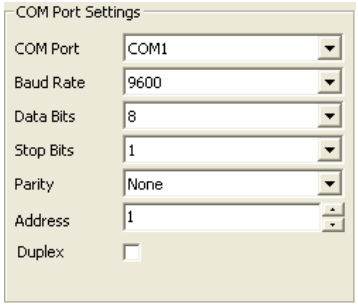
Adds a DIO device to the list of available DIO devices. Types include ACTi Encoder, ADAM 4052, ADAM 4068, ADAM 6060, Comart USB DIO (1616-A), and Loopback Device.

Comart USB 1616-A



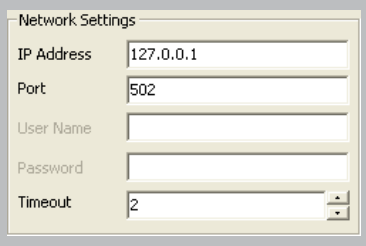
Specifies a USB attached DIO board. Enabling *System Beep* causes the speaker located on the USB DIO to chirp on events such as triggered relays and opened / closed alarm inputs.

ADAM 4052/ 4068

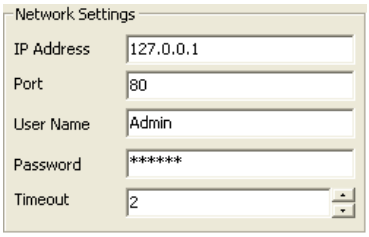
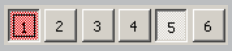


Adds an ADAM 4052/4068 COM port attached DIO device. Specify COM port settings here.

ADAM 6060



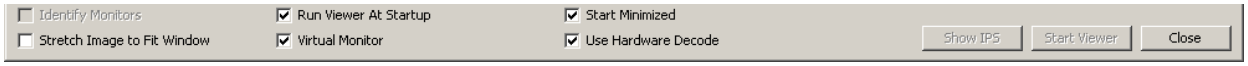
Adds an ADAM 6060 network attached DIO device. Specify TCP/IP settings here.

<table>
<tr><th colspan="2">Relays</th></tr>
<tr><td></td><td>
<table>
<tr><td>ACTi Encoder
 
</td><td>Adds an ACTi encoder device. Specify TCP/IP and connection settings here.</td></tr>
</table>
</td></tr>
<tr><td> 
</td><td>Allows for changes to the configuration of the selected DIO device. The Edit DIO Device window is identical to the Add DIO Device window.</td></tr>
<tr><td> 
</td><td>Removes the selected DIO device from the list.</td></tr>
<tr><td> 
</td><td>Moves the selected DIO device up / down the list and changes the numbering order of the inputs and outputs.</td></tr>
<tr><td>Input to reset relays</td><td>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).</td></tr>
<tr><td>Input Normal Open / Closed</td><td>Choose to set the normal state for inputs to open or closed.</td></tr>
<tr><td>Relay Normal Open / Closed</td><td>Choose to set the normal state for output relays to open or closed.</td></tr>
<tr><td>Relay Buttons
 
</td><td>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</td></tr>
</table>

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.

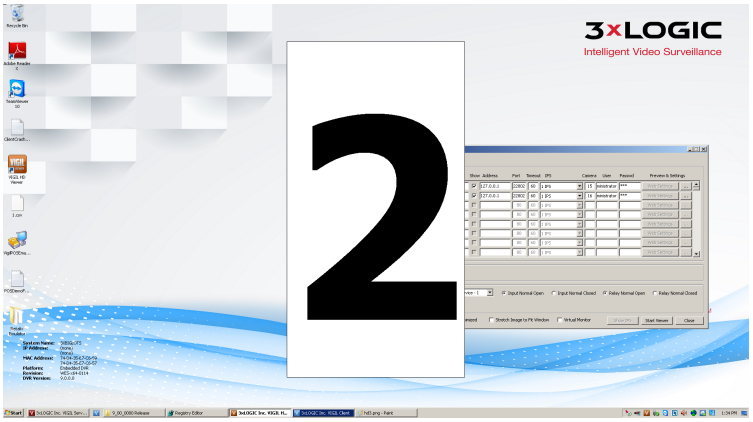


Figure 5-7: Monitor Identification

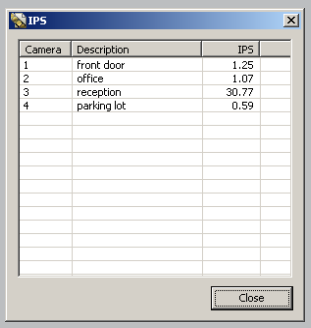
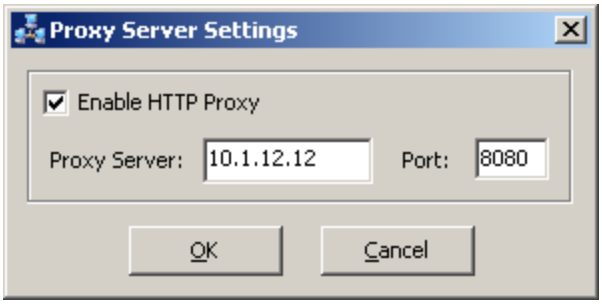
Run Viewer At Startup	Check this box to allow automatic startup of the live viewer when the program is loaded. This option only applies to the live viewer; the HD Viewer program will load at Windows normally.
Start Minimized	Check this box to have the HD Viewer UI minimized when HD Viewer launches. This option is enabled by default.
Stretch Image to Fit Window	Check this box to alter the image's native aspect ratio and stretch the image to fit the screen.
Virtual Monitor	Check this box to enable relay support for systems utilizing a hardware decoder. When this option is toggled on, HD Viewer will run, but camera images will not be displayed on configured hardware monitors. This will allow HD Viewer to trigger relay inputs accordingly when video loss is experienced on properly configured cameras.
Show IPS	Opens the *IPS* window, where the current IPS rate of all configured cameras is displayed. 

Figure 5-8:IPS Window

Use Hard-ware Decode	Enable hardware (GPU) decoding for displayed camera streams. This option will reduce CPU load but will require an adequate graphics processor. GPU requirements will vary depending on the amount of streams you wish to display in HD viewer. Contact support for more information.
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	
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.  **Figure 5-9:**Proxy Server Settings Window
Help	
User Manual	Opens the HD Viewer user's manual in Adobe Reader.
Check for Updates	Launches the VIGIL Remote Updater to check for updates.
About	Opens the *About* window, which displays some basic information about HD Viewer.

6 Starting the Viewer

Once the HD Viewer has been configured, click Start Viewer at the bottom of the *VIGIL HD Viewer* window to display the cameras.

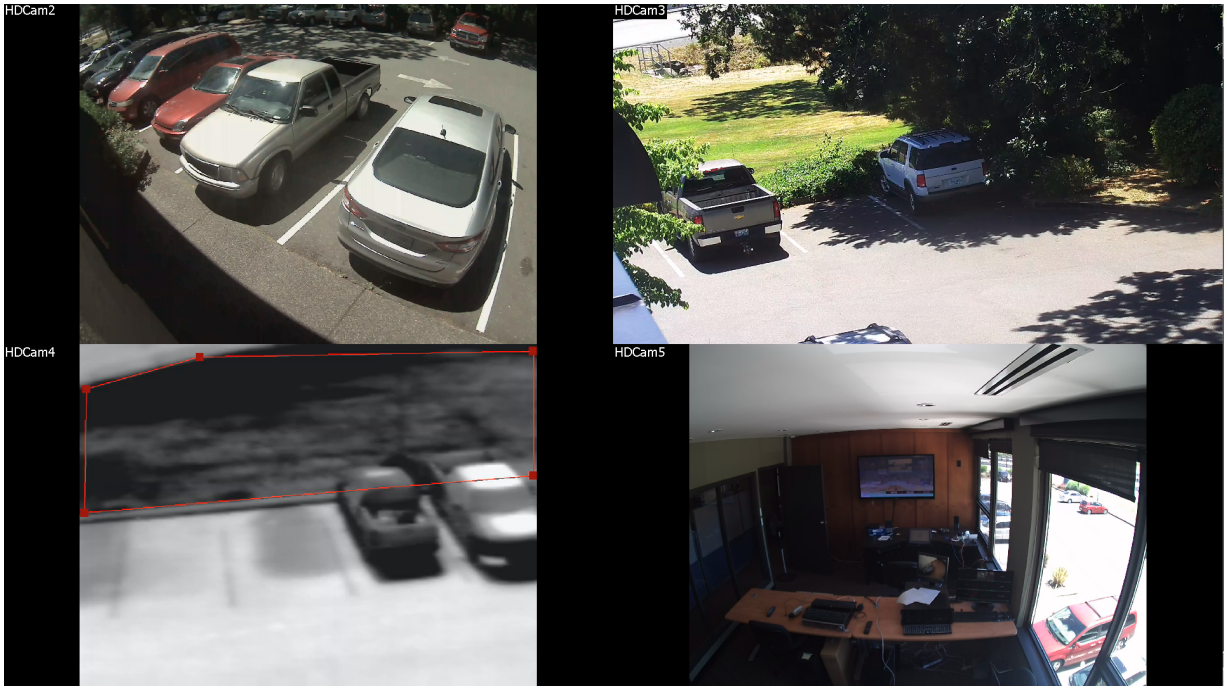


Figure 6-1: Live Viewer (2x2 Camera Layout)

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

7 Troubleshooting

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

No cameras are displayed in the live view:

- Check that each camera is assigned to a layout position. *See "VSX-IP Camera Type" on page 8*

If all cameras are assigned correctly to the layout, other factors exist that may cause this issue:

- Refer to document *160002 VIGIL HD Viewer - Failure to Recognize Monitor on Startup - Fix*for more details. Contact a 3xLOGIC representative for the latest version of this document.

If, after referencing 160002, your issue is yet to be resolved, you may be experiencing monitor display failure due to the issue outlined in See "Monitor Fails to Initialize" below

The Live Viewer will not start when *Start Viewer* is clicked

Check that each camera is assigned to a layout position. See "VSX-IP Camera Type" on page 8 for more info.

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.

DIO Device Warning Box

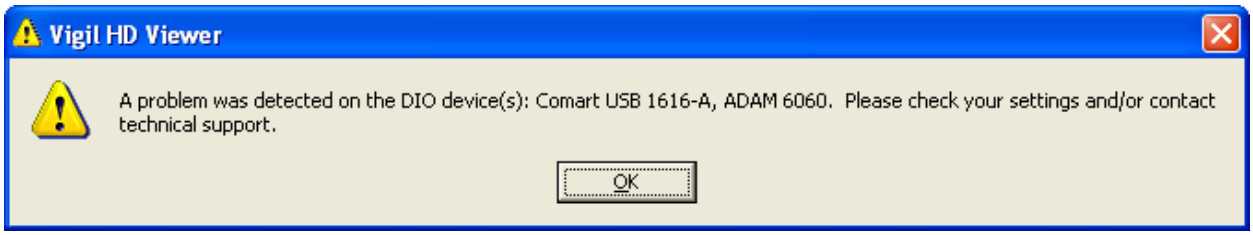


Figure 7-1:DIO Device Warning

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

Monitor Fails to Initialize

In HD Viewer 8.5.1 and older versions, if a monitor does not contain at least one unique camera in its layout, it will fail to initialize.

Example: If a user configures three monitors on VIGIL HD Viewer and assigns Camera 1 to Monitor 1, assigns Cameras 1, 2 and 3 and 4 to Monitor 2 and assigns Cameras 2 and 3 to Monitor 3, Monitor 3 will fail to initialize as it contains no unique camera in its layout.

e.g.

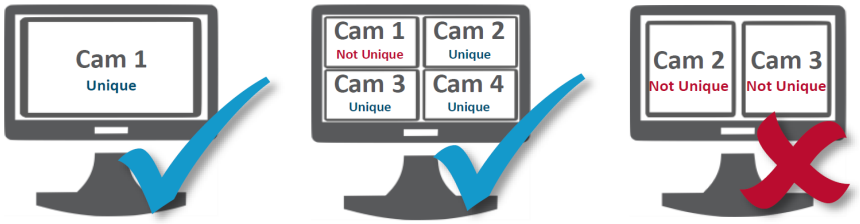


Figure 7-2: One Unique Camera per Monitor Is Required on v8.5.1 and older.

Configuring a new instance of one of the non-unique cameras within HD Viewer and adding it to the monitor layout in place of the non-unique instance will fix the initialization error. Please reference document*SB 160015 VIGIL HD Viewer - One Unique Camera Per Monitor Required Bug - Fix* for more details on a workaround. Alternatively, updating to the latest release of VIGIL HD Viewer will resolve this issue.

Key Associated with Element of Collection Error

In rare circumstances, VIGIL HD Viewer 8-8.51 users have reported a Runtime Error 457: Key Associated with Element of Collection notice preventing VIGIL HD Viewer from successfully launching. This issue arises when cameras are configured non-sequentially in VIGIL HD Viewer.

If possible, simply reconfiguring the HD Viewer's cameras to be numerically sequential will fix the issue.

e.g. **Example:** If cameras are configured in the following sequence: Camera 1, Camera 2, and **Camera 4**, HD Viewer will experience the error and fail to launch. Reconfigure the cameras in a numerically sequential order: Camera 1, Camera 2, **Camera 3.**

If reconfiguration of the camera order is not viable, please reference document *SB 150010 VIGIL HD Viewer – Key Associated with Element of Collection Error Fix* for details on an alternative fix. Contact a 3xLOGIC representative for the latest available version of this document.

8 Supported Network Cameras

The following tables list supported network cameras and their respective features and are organized alphabetically by their make / model name. Also listed is typical connection information such as login credentials and TCP Port settings.

Note: The cameras listed below are supported directly by HD Viewer. Cameras networked via VIGIL Server, including those configured via ONVIF, can also be used in conjunction with VIGIL HD Viewer though they may not be listed below.

Table 1 (A-L)

Make/ Model	Media Format	Resolution	Protocol	Default Port	Default User / Pass-word	PTZ	Audio	Misc.
Acti	MPEG4/JPEG	720x480(576), 352x240(288)	TCP / UDP Mult-icast	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 (depend-ing 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
Canon VB-C50x	JPEG	320x240, 640x480	HTTP	80	N/A	Yes	N/A	N/A
HTTP	JPEG/MPEG4	Any	HTTP	80	N/A	N/A	N/A	Any JPEG camera using HTTP pro-tocol can record with this setting. Specify URL.
IQEye	JPEG	Any	HTTP	80	N/A	No	N/A	N/A
JVC	JPEG	Any	HTTP	80	N/A	No	N/A	N/A

Table 2 (M-P)

Make/ Model	Media Format	Resolution	Protocol	Default Port	Default User-/Password	PTZ	Audio	Misc.
Merit Lilin / Pix-ord	JPEG	Merit Lilin: Any Pixord: 704x576, 352x288	HTTP	80	N/A	Yes	N/A	Save preset not supported, See web settings.
Messoa	JPEG	160x120, 320x240, 640x480	HTTP	80	N/A	No	Yes (PCM, ADPCM)	N/A
Panasonic NM100	JPEG or MPEG4 (not sim-ultaneously)	640x480, 320x240, 160x120	HTTP (JPEG), RTP Unicast (MPEG4)	80	admin:password	Yes	N/A	N/A
Panasonic NP1004, NP244	JPEG / MPEG4 (simultaneously)	1280x960 (JPEG only), 960x720 (JPEG only), 640x480, 320 x	HTTP (JPEG), RTP Unicast (MPEG4)	80(JPEG)	admin:12345	Yes	Yes	Set "Refresh inter-val (MPEG-4)" to 1 second if using MPEG-4 Max 8

Make/ Model	Media Format	Resolution	Protocol	Default Port	Default User-/Password	PTZ	Audio	Misc.
		240						simultaneous connections. Max 15FPS in JPEG FSM.
Panasonic NW47xS, NS32X, NP472	JPEG	640x480, 640x320, 320x240, 160x120	HTTP	80	admin:<empty>	Yes	N/A	Max 15 simultaneous connections. PTZ is digital .
Pelco Video Server	JPEG	640x480, 640x320, 320x240, 160x120	HTTP	80	N/A	No	N/A	Non-standard JPEG image, not supported by "fast decompress" and "AZTech"
Pelco IP11x	JPEG / MPEG4	704x470, 352x240	HTP/UDP Multicast	80, 49152	Admin:admin	Yes	No	N/A

Table 3(Q-Z)

Make/ Model	Media Format	Resolution	Protocol	Default Port	Default User-/Password	PTZ	Audio	Misc.
Sanyo HD	JPEG	3 Mega Pixel	HTTP	80	guest:guest (Viewing) admin:admin (Administrator)	No	N/A	H.264 is not supported
Sony	JPEG or MPEG4 (not simultaneously)	640x480, 384x288, 320x240, 256x192, 160x120	HTTP	80	admin:admin	Yes	Yes	N/A
StarDot	JPEG	Mega Pixel	HTTP	80	admin:admin	No	No	N/A
Sentry 360	JPEG	Any	HTTP	80	admin:admin	No	N/A	N/A
Toshiba	JPEG	Any	HTTP	80	root:ikwb	Yes	Yes	N/A
VISIX-IP (VISIX Gen II and previous, S-Series) VISIX-IP-A (V-Series,) VISIX-IP-B (VISIX Gen III)	H.264, JPEG	Any	TCP (Through SDK), MPEG4, JPEG	8000	Refer to camera documentation. Newer generation 3xLOGIC VISIX cameras require a default password change before they become operational.	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

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