WEBCONFIG
INSTALLATION GUIDE

For SightSensor

SightSensor Firmware 15.12 and later

Set-Up Videos and Resources:
https://www.sightlogix.com/webconfig/

SightLogix, Inc.
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Princeton, NJ 08540

www.sightlogix.com
support@sightlogix.com

Warnings and Cautions

⚠️ **Warning!**

If mounting the camera on a pole, tower or any elevated location, use industry standard safe practices to avoid injuries.

⚠️ **Caution!**

Except as described in this manual for wiring the back panel, do not open the SightLogix camera for any reason. Always handle the camera with care to avoid damage to electrostatic-sensitive components.

Prior to making any connections, ensure the power supply or circuit breaker is switched off.

Be careful not to leave fingerprints on the camera's optics.
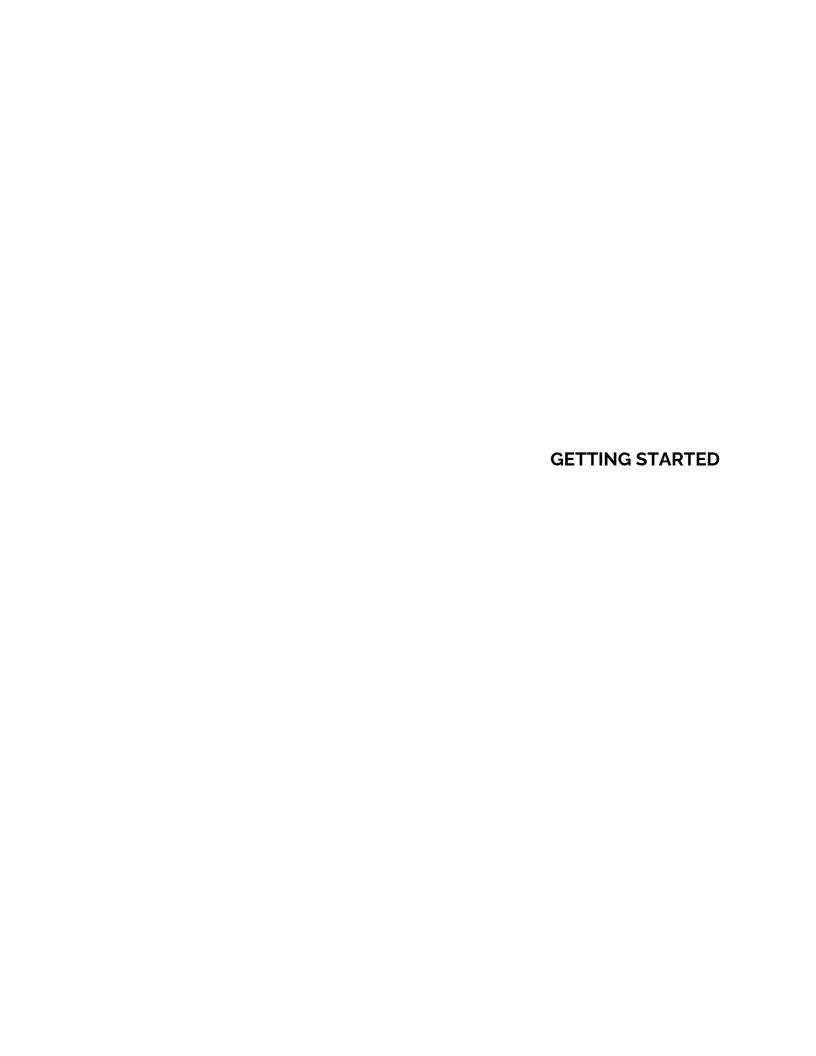
Operating the camera outside of the specified input voltage range or the specified operating temperature range can cause permanent damage.

Always ensure that your SightLogix device is properly grounded. Failure to properly ground the camera can lead to permanent damage. Typical to good grounding practices, the camera ground should be connected to the lowest resistance path possible. You can learn best practices to protect your SightLogix equipment at http://www.sightlogix.com/surge.

TABLE OF CONTENTS

GETTING STARTED

GENERAL INFORMATION

This guide describes the basic installation of SightLogix SightSensor cameras using WebConfig. If you need help during the installation process, contact SightLogix at +1 609.951.0008 option 2 or support@sightlogix.com.

All installers are encouraged to use the SightLogix Support Portal where you will find documentation videos, third-party integrations, and troubleshooting:
http://portal.sightlogix.com/help.

This installation guide includes the following topics:

- Wiring and powering the camera

- Calibrating your device

- Creating video analytic alarm policies

- Troubleshooting

For safety, and to achieve the highest levels of performance from your SightLogix system, always follow the warnings and cautions in this manual when handling and operating the camera.

SightLogix System Overview

This guide provides setup information for the SightSensor NS, TC and HD (as well as international versions GT and GTC)

- SightSensors detect intruders that violate pre-defined security rules.

  - o **SightSensor NS/GT** uses high-clarity black and white thermal images.

  - o **SightSensor TC/GTC** uses high-clarity black and white thermal and HD color video.

  - o **SightSensor HD** uses black and white thermal and HD color video.

- SightSensors use a high degree of processing to analyze video in real time, while also stabilizing the video to ensure reliable detection.

- SightSensors are automatically calibrated by entering the camera's installed height in WebConfig for accurate size, speed and direction rules that minimize false alerts and increase detection accuracy.

- SightLogix cameras are intended to be mounted on a heavy-duty mount or wall mount commonly used in the CCTV industry for outdoor cameras, and which are available from SightLogix or other suppliers. Cables will exit from the bottom rear of the camera housing.

- Each camera comes equipped with a standard ¼-20 three-hole one-inch spacing plate suitable to attaching to a standard camera bracket. Three bolts are supplied. One of the mounting bolts is used to connect the green ground wire (supplied).

- Camera connections are made through the water-tight cable gland on the bottom rear of the camera.
- The camera can be powered with a conventional power supply using 24V AC or POE.
    - Window heater for extreme conditions or LED Illumination (SightSensor HD) require 24V.
- An Ethernet connection is provided for IP video streaming.
- Configuration of the SightSensor is performed via an intuitive, web-based interface built into the camera called WebConfig.
    - SightLogix also offers Windows-based SightMonitor client/server software for more advanced use, including:
        - SightTracker for auto-steering PTZs
        - Live display of targets projected onto a sitemap
        - Site management for enterprise-level SightSensor deployments
    - Contact SightLogix to learn more about SightMonitor software.

Installation Steps

Setting up a SightLogix device includes the following basic steps:

- In a bench test environment, unpack the device, connect power, Ethernet, launch browser and connect to default IP address (192.168.0.99).
    - Log into WebConfig using default credentials: *root/push2edg*
    - Follow Quick Start Guide on right-side of WebConfig screen
- Change the IP address from the default to your network requirements
- Mount camera
- Enter height off ground to calibrate
- Set up alarm policies. By default, any object moving within the camera view generates an alarm; alarm policies allow you to be more selective.
- View video to confirm operation
- Additional Settings:
    - NETWORK page: Set NTP and time zone
    - DEVICE page: Integrate video/alarms with VMS
    - POLICY page: Adjust zones or rules

Supplied materials

Your SightLogix equipment will be shipped with the following items:

- Your SightLogix device

- Grounding wire (must be attached to mounting bolt, as shown).

- Weather-tight gland for connection cables

- Info tag containing key setup information

Required Materials

The installer will need to supply the following items:

- Power source (24V AC) and power cable for system power (2-conductor, w/shield, gauge determined by cable length and supply voltage), and/or PoE power supply or PoE switch if used for system power

- Shielded Cat5e Ethernet cable for digital video and/or PoE for system power

- Camera mount, miscellaneous electrical hardware, connectors, and tools

- A PC with a 2 GHz dual-core processor with at least 4GB of memory running one of the following: Windows 7 Professional, Windows 10 (32-bit or 64-bit), or Windows 11 Professional; Windows Server 2003, 2008, 2012 (32-bit or 64-bit), or Windows Server 2019.

- Compatible web browser:

  o Microsoft Edge Version 41 or later

  o Chrome Version 63 or later

- o Microsoft Internet Explorer - Recent 2018 versions or newer
- IP network. Cameras can connect to the network using copper wiring (CAT5e). 100MB and higher networks are required.
- Range of IP network addresses provided by the network administrator, including Port 80 open on your local network

INSTALLING YOUR DEVICE

INSTALLATION STEPS

Since the camera is to be mounted on a pole or building or other hard-to-reach location, we recommend performing initial setup on a work bench at ground level prior to mounting the camera in its final location.

1. Remove the Back Plate

To access the electrical connections and install the cables, it is necessary to remove the back plate of the device housing.

⚠ Note:

The back plate is held in place with screws which do not need to be removed entirely. Back out the screws maintaining forward pressure until you feel the threads disengage. The gasket will hold the screws in place while the back plate is removed.
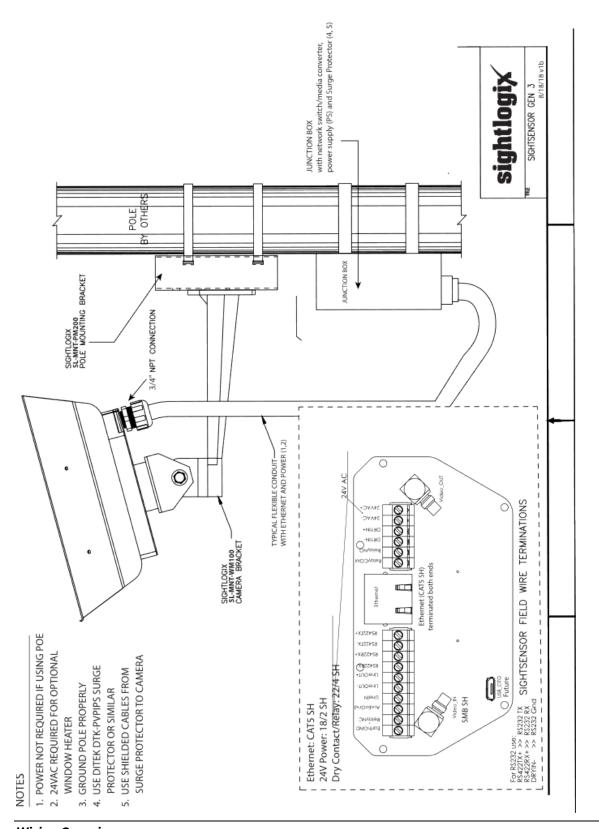
2. Connect Ethernet and Power

- Connect the RJ45 jack to the Ethernet port of a workstation.

- If using Power over Ethernet (PoE) make sure power is being supplied by the Ethernet device which the Ethernet cable has been plugged into or a PoE power injector in the cable run leading to the camera.

- If POE is not being used, connect 24VAC by removing the connector header and connecting power to the header pins. Reference the pin assignments marked for 24V, which are printed on the PCB next to the connector.

- You can separate the gray weather-tight gland from its plug and wrap it around your cables. Then push it back into the plug and tighten. It is a tight fit by design to restrict moisture.

⚠ Note:

Window heater (and IR Illumination for HD cameras) require 24V power and will not operate on POE only.

NOTES
1. POWER NOT REQUIRED IF USING POE
2. 24VAC REQUIRED FOR OPTIONAL WINDOW HEATER
3. GROUND POLE PROPERLY
4. USE DITEK DTK-PVPIPS SURGE PROTECTOR OR SIMILAR
5. USE SHIELDED CABLES FROM SURGE PROTECTOR TO CAMERA

POLE BY OTHERS

SIGHTLOGIX
SL-MNT-PM200
POLE MOUNTING BRACKET

3/4" NPT CONNECTION

SIGHTLOGIX
SL-MNT-WM100
CAMERA BRACKET

TYPICAL FLEXIBLE CONDUIT WITH ETHERNET AND POWER (1,2)

JUNCTION BOX
with network switch/media converter, power supply (PS) and Surge Protector (4, 5)

JUNCTION BOX

sightlogix
TITLE SIGHTSENSOR GEN 3
8/18/18 v1b

Ethernet: CAT5 SH
24V Power: 18/2 SH
Dry Contact/Relay: 22/4 SH

For RS232 use:
RS422TX+ >> RS232 TX
RS422RX+ >> RS232 RX
DRYIN- >> RS232 Gnd

SIGHTSENSOR FIELD WIRE TERMINATIONS

24V AC

24VAC+
24VAC-
DRYIN+
DRYIN-
RelayGND
RelayCOM

Ethernet

Ethernet (CAT5 SH) terminated both ends

Video_OUT

RS422TX+
RS422TX-
RS422RX+
RS422RX-
UnRIN OUT+
UnR IN OUT-
UnRIN
AudioGnd
RelaySYNC
EarthGND

USB_OTG
Future

Video_IN

SMB SH

Total maximum power consumption with all camera options:
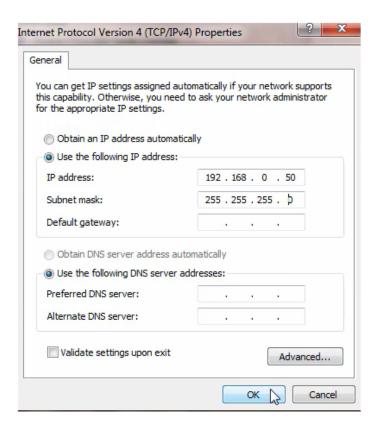
Camera	Basic Operation with Detection	Window Heater for Severe Icy Conditions	IR Lighting	Total with all Options
SightSensor HD	8W	20W	6W	34W (1.5 amps)
SightSensor NS4 (384x288)	6W	20W	NA	26W (1.5 amps)
SightSensor NS6/GT6 (640x480)	12W	20W	NA	32W (1.5 amps)
SightSensor TC4	11W	20W	NA	31W (1.5 amps)
SightSensor TC6/GTC6	15W	20W	NA	35W (1.5 amps)

- Once power is supplied to the camera, the camera's LED light blinks a sequence of red/green for about two minutes and then turn off. This indicates the camera completed its boot cycle and is communicating with the network. You can then skip the next step.
    - If the LED's continue to blink red/green then the camera has not found a network to connect to and you will need to complete steps 3.

3. Assign Your PC an IP Address in Camera's Default IP Range

When first powered, the camera will request an IP address via DHCP; if one is not assigned after thirty seconds, it will take on the default IP address: 192.168.0.99. In this case you will need to assign your PC an IP address in the camera's default address range to continue.

- On your computer, open Network and Sharing Center

- Click "Change Adapter Settings"

- Click "Local Area Connection"

- Choose "Internet Protocol Version 4" and click "Properties"

- Click "Use the following IP address" and complete the fields. The example below can be used for a camera that has the default IP address.

4. Launch a Browser and Enter Default IP Address (192.168.0.99)

- The login page shows a snapshot to help determine which camera you have accessed. Refresh the screenshot by clicking the small icon on the bottom left of the image. (SightSensor NS-series cameras will show a thermal image.)

⚠️ **Note**

If you receive a security warning, you may have entered "https" or your browser may be configured to only allow HTTPS. Retry the URL using http: or refer *to Installing the SightLogix Self-Signed Certificate* at the end of this guide.

- Enter default username/password: root/push2edg
- Set your default units (Metric or Feet) and click Sign In

<div style="border:1px solid #000; padding:20px;">

<h2 style="text-align:center;">WebConfig Overview</h2>

Quick Start Guide

When you launch WebConfig, a Quick Start Guide shows basic steps to get you up and running.

- Close the window by clicking the "X" in the upper right.
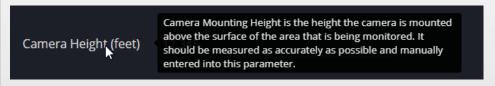- This pop-up returns each time you login until you create your first rule under POLICY.

Left-side Navigation

- Click the left arrow to collapse the Navigation menu for more configuration space

Tool Tips and Online Help

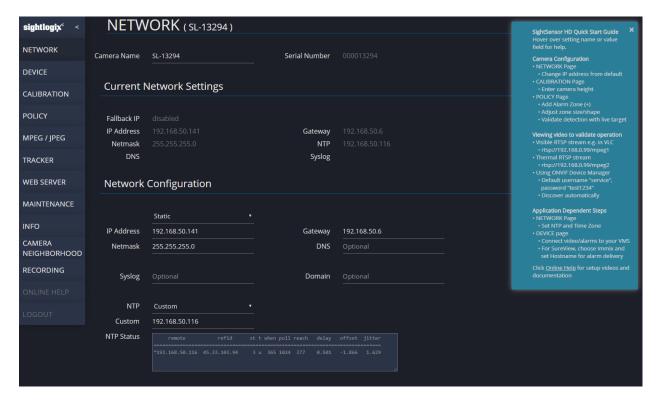- Hover over any field name **or** field entry to see helpful information.

Camera Height (feet)

Camera Mounting Height is the height the camera is mounted above the surface of the area that is being monitored. It should be measured as accurately as possible and manually entered into this parameter.

Saving Parameters SAVE REVERT

- Entering new parameter(s) brings up SAVE/REVERT icon under the Page Menu.
- Changes made on a field's page but not yet saved are indicated by yellow text.
- Once parameter(s) are complete click "SAVE" checkmark circle to load new parameters to the camera.
- To cancel new entry(s) click the "REVERT" X circle and the original entries will be restored.

- Checking either circle will cause ✔ Configuration loaded to appear in the upper right corner to acknowledge the action.

</div>

5. Click NETWORK to Change Settings

Set the IP Address

Now that your workstation can communicate with the camera, you can change the IP addressing from the default.

- If DHCP is selected and DHCP service is available on the network an IP Address, Gateway, and Netmask will be assigned by the DHCP service.

- If STATIC is selected, complete the IP Address, Netmask, Gateway and DNS fields. If the internet is reachable public DNS servers can be used such as 8.8.8.8.

Set NTP (Recommended)

NTP is used to enable features according to time of day. Secure authentication for an ONVIF VMS may also require NTP.

If set, NTP can display date and time in the upper fight-hand corner of the video.

Two NTP options are provided:

- If Internet is available, choose a preset NTP from the drop-down menu.

- If you are running a local NTP server, choose Custom and enter its dotted-decimal IP address or hostname

- Changing NTP reboots the camera
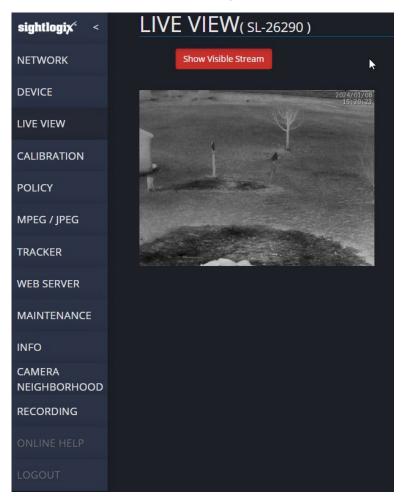
6. Mount the Camera

Each SightLogix device comes equipped with an interface plate suitable either for attaching to a wall or pole. Install SightLogix devices according to these guidelines:

- When mounting a dual-video SightSensor, always use the thermal video stream to position the camera's field of view.

- Cameras must be pointing slightly down, less than zero degrees, to ensure triangulation and aid with accuracy.

- Never point the camera directly at the sun, even if powered off

- Once in place, adjust the camera as necessary to capture the area to be monitored. SightLogix cameras are fixed and need to be physically adjusted.

- When installing multiple cameras for a perimeter application, it is recommended that camera ranges slightly overlap to ensure complete coverage of the perimeter with no gaps between blind spots under the camera.

- Ensure the camera is properly grounded. SightSensors have grounding and surge protection to provide further immunity from high current transients that can occur in installations that are subject to electrical storms and/or nearby lightning events. In order to protect against these high current events, installers are required to provide an earth connection to the grounding lug on the base of the camera, as shown.

  o You can learn best practices to protect your SightLogix equipment at http://www.sightlogix.com/surge.

7. View Video to Validate Operation

Click the Live View tab in WebConfig to view live video.

- Thermal-only SightSensors will display the thermal stream.

- Dual-sensor cameras can toggle between Thermal and Visible streams by clicking the option button.

Optional: View Live Video with Third-Party Software: SightSensor TC and SightSensor HD

SightSensor TC and HD cameras offer visible and thermal streams as MJPEG or MPEG.

MPEG streams can be viewed using a third-party media player such as ONVIF Device Manager (preferred - https://sourceforge.net/projects/onvifdm/), the open-source VLC (https://www.videolan.org/vlc/), or your Video Management System.

For ONVIF Device Manager:

- Default ONVIF credentials: service/test1234
- SightSensors can usually be discovered automatically

For VLC Media Player, click "Media" and "Open Network Stream" (use your camera's IP address if changed from the default)

- Visible: rtsp://192.168.0.99/mpeg1
- Thermal: rtsp://192.168.0.99/mpeg2

MJPEG streams can be viewed through a web browser using the following URLs (use your camera's IP address if changed from the default):

- Visible: http://root:push2edg@192.168.0.99/axis-cgi/mjpg/video.cgi
- Thermal: http://root:push2edg@192.168.0.99/axis-cgi/mjpg/video.cgi?ch=2

Optional: View Live Video with Third-Party Software: Thermal-Only SightSensors

On the Thermal SightSensor, thermal video streams are available as MJPEG or MPEG.

MPEG streams can be viewed using a third-party media player such as the open-source VLC (https://www.videolan.org/vlc/), ONVIF Device Manager (https://sourceforge.net/projects/onvifdm/), or your Video Management System.

For VLC Media Player, click "Media" and "Open Network Stream" (use your camera's IP address if changed from the default)

- rtsp://192.168.0.99/mpeg1

For ONVIF Device Manager:

- Default ONVIF credentials: service/test1234
- SightSensors can usually be discovered automatically

MJPEG streams can be viewed through a web browser using the following URLs (use your camera's IP address if changed from the default):

- http://root:push2edg@192.168.0.99/axis-cgi/mjpg/video.cgi

8. Calibrate Your Camera

Once your camera is mounted, Quick Calibration lets you set accurate video analytic detection rules based on size, speed and direction.

⚠ Note!

For advanced GPS Map Calibration (which is <u>required</u> for SightTracker, SightTracker PTZ or third-party software which needs SightSensor metadata), refer to "*Performing GPS Map Calibration*" on page 55.

- Click CALIBRATION tab
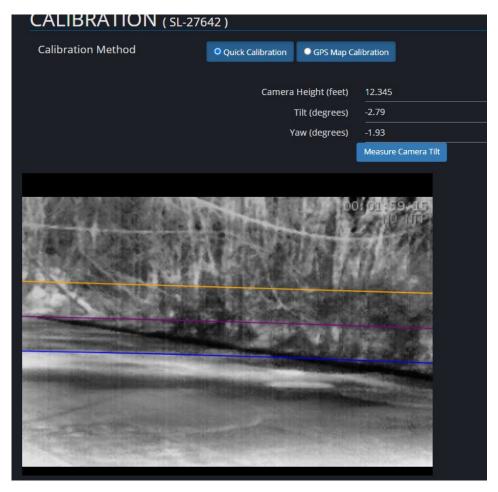- Enter your camera's height off the ground and click "Measure Camera Tilt"

  Measure Camera Tilt

- Click Save   SAVE

Guidelines for Calibration Assistance

Once saved, the preview window will refresh, showing three guide lines that are provided for ease of setup and understanding your camera's calibrated capabilities.

- Yellow is the Horizon line.

    - This is calculated by the title angle of the camera and provides an artificial horizon showing where the sky would meet the earth.

    - It should be relatively flat. Detected targets should fall below the horizon.

- Purple is the Inbound Detection distance

    - This is the distance an intruder can be reliably detected walking <u>towards</u> the camera.

- Blue is the maximum range at which the AI classifies targets.

⚠️ **Note**

A warning notice will appear in WebConfig until the camera height is changed from its default value to indicate this important parameter has been addressed.

9. Create an Auto Zone for Human Detection

Click the POLICY tab to get started.

SightSensors offer convenient Automatic Zoning to simplify the creation of a human detection policy. With one click, the camera:

- Automatically draws an Alarm Zone to the camera's Inbound or Crossfield detection range

- Leaves the area beyond the camera's detection range without a detection zone

    o This reduces nuisance alarms caused by objects that might have been detected accidentally (for example, cars on a distant road)

- Defines the most common filters for reducing nuisance alarms

    o Detects any human-sized object (> than 3 feet tall by > 1 foot wide) moving anywhere within that alarm zone area for longer than 1.5 seconds, at a minimum speed of 1 MPH

    o Enables AI Alarm Filtering for "Everything Except Person and Vehicle"

The lines displayed on the camera's snapshot offer helpful guides:

- The Purple line shows the maximum Inbound detection distance (if "Using Inbound for Auto Zone" is selected")

- The Light Blue line shows the maximum Crossfield detection distance (if "Using Crossfield for Auto Zone" is selected

- The Blue line shows the maximum distance AI is used for filtering objects

The distances of all three guidelines are also displayed numerically. The color of each entry matches the color of the corresponding line in the snapshot.
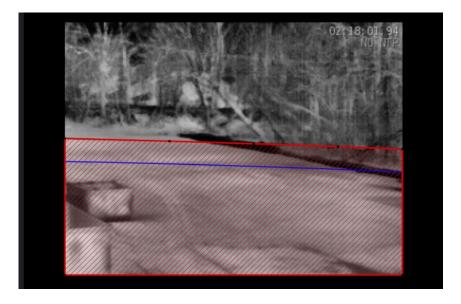
| Refresh Image | Use Visible | Using Inbound for Auto Zone | Distances (feet): | 656 | 328 | 197 |

Other options include:

- Click Refresh Image to grab an updated snapshot from the camera's field of view

- Toggle "Use Visible" or "Use Thermal" to choose the snapshot that offers the best clarity.

- Toggle "Using Inbound for Auto Zone" (default) and "Using Crossfield for Auto Zone."

  - o Inbound represents the distance an intruder can be reliably detected walking towards the camera (the most difficult scenario, with the least detectable movement). Inbound is commonly used for perimeter applications at critical sites.

  - o Crossfield represents the distance an intruder can be detected moving across the camera's field of view (generating more movement which is easier for a camera to detect at longer ranges). Crossfield is commonly used for SightSensor HD "area" applications, such as fenced-in yards at commercial sites. Crossfield is roughly 2X the distance of Inbound.

To create an Auto Zone:

- Click the [+] icon.

A default Alarm zone is automatically drawn to the camera's Inbound or Crossfield detection range.

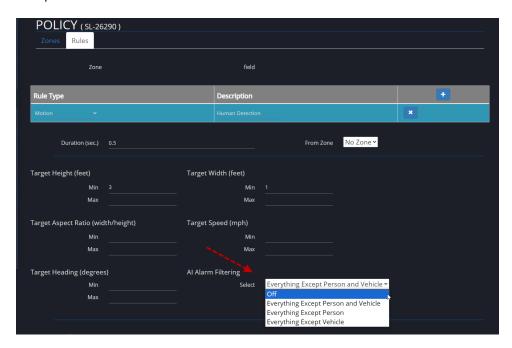Also, a default Human Detection rule is listed in the table.

Once created, you can review or refine an Auto Zone's default rules by selecting the row and clicking the List Rules symbol.

For advanced rules and policies, and to adjust the Auto Zone's default settings, refer to the <u>POLICY Page Parameters</u> section of this guide.

AI Alarm Filtering

AI Alarm Filtering is automatically enabled when you create an Auto Zone, and set to "Everything Except Person and Vehicle"

Four options are provided:

- Off (Default). The Zone will not filter alarms based on AI.

- Everything Except Person and Vehicle will send alarms for people and vehicles only.

- Everything Except Person will send alarms for people only.

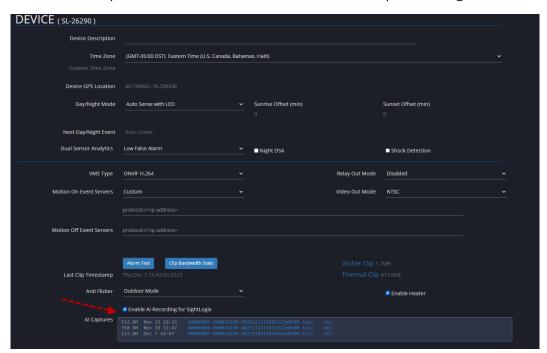- Everything Except Vehicle will send alarms for vehicles only

AI Alarm Filtering is applied on objects that are within 60% of the inbound detection range of the SightSensor. This range is indicated by the area under the blue line in the snapshot.

Enable AI Recording

It is recommended to enable AI Recording. This collects data if further refinement of the AI is needed for your site.

- Click the Device tab in the left-side navigation menu and scroll to the "AI Capture" section at the bottom of the page

- Click "Enable AI Recordings" as shown

- Once enabled, the system will begin to capture scene data to the camera's internal flash drive

A total of five captures are stored, after which the sensor stops recording data.

- Click Save to save your settings.

Learn more about SightLogix Thermal AI in the SightLogix Support Portal:
https://portal.sightlogix.com/help/using-sightlogix-thermal-ai

10. Set Camera Parameters on DEVICE Page

Device Description – Used to identify this camera from others on the site. Content here is displayed on the INFO page.

Time Zone, Custom Time Zone - If NTP service is set on the NETWORKING Page, Time Zone must be set to calculate sunrise/sunset within that time zone

SightSensor HD Only – Day/Night IR Illumination settings. Hover over each option for details. Default is "Auto Sense with LED".
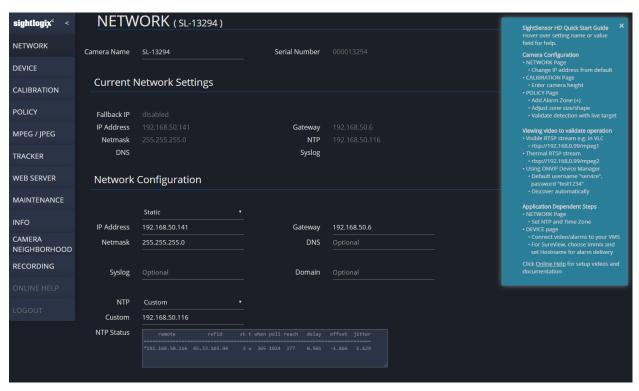
11. Connect to your video monitoring software

- Click DEVICE.

- Select VMS Type from the drop-down to connect to a VMS system. Default is ONVIF H.264.

- For instructions to connect your supported video monitoring system, visit https://portal.sightlogix.com/help/vms-and-ptz-integrations

This completes installation of the SightSensor camera for the most common settings.

- Refer to the next section, "WebConfig Reference" for a detailed overview of each WebConfig page and field option.

- Refer to the final section "Troubleshooting & Advanced Configuration" for more advanced use.

WEBCONFIG REFERENCE

NETWORK PAGE PARAMETERS

Camera Name – Default enters Camera serial number in this field. It can be changed to a name f or the camera which will be displayed at the top of each WebConfig page. This might be a location identifier like "Front Admin Building" or another convenient identifier.

Serial Number – is read directly from the camera and is unique to that camera.

Current Network Settings

Fallback IP, IP Address, Gateway, Netmask, NTP, DNS and Syslog – are all parameters acquired from the network based on the camera settings. They are listed here for convenience.

Network Configuration

Network IP address selection is specified by either **DHCP** or a **Static** IP address. If DHCP is selected and DHCP service is available on the network an IP Address, Gateway, and Netmask will be assigned by the DHCP service. If a DHCP service is not available and no static IP address has been previously assigned the device will default after 30 seconds to a static IP address of 192.168.0.99. The device can be accessed using this address at which time the address can be changed and the appropriate Gateway and Netmask values can be assigned also.

DNS – this field is optional, but if the internet is reachable public DNS servers can be used such as 8.8.8.8 This field is entered in dot-decimal notation.

NTP – (Network Time Protocol) The NTP service is used to provide the camera with accurate, synchronized, real-time clock information. While not necessary in all installations it is needed if the camera is asked to coordinate selected local events, such as changing operational modes or enabling features in conjunction with the time of day. Also, secure authentication for Onvif connections to a VMS may require it. NTP, if provided, can display date and time in the upper right-hand corner of the video.

The NTP Address field defaults to Custom where you can enter a NTP site address as a dotted-decimal IP address or hostname, or an address can be selected from the drop-down menu of the three sites listed where NTP service may be available (pool.ntp.org, time.nist.gov, or time.google.com) through Internet access if NTP service is not available on the local sub-net. Changing this parameter will cause a reboot of the camera.

Syslog – is an (Optional) IP address of the machine on which the syslog server is installed. Knowing the syslog address allows the logging information created by the camera to be accessed, which can be helpful for troubleshooting. Changing this parameter will cause a reboot of the camera.
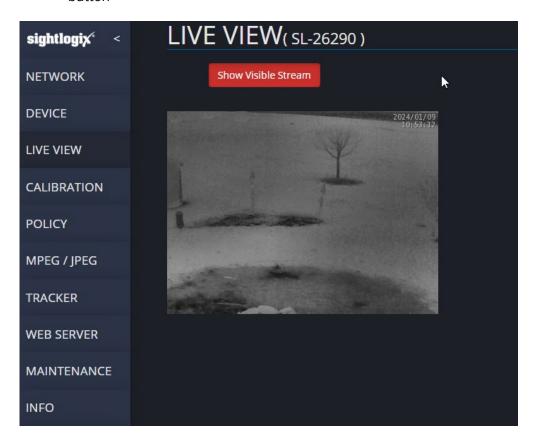
Domain – The Domain option specifies the domain in which to search to resolve names. It is only used when the camera has a Static IP Address and is used in conjunction with a DNS Server to configure the camera's DNS resolver.

NTP Status – NTP Status shows the internal state of the NTP service in the camera. This is an advanced debugging feature. More information is available by consulting ntp documentation "peers" command http://doc.ntp.org/current-stable/ntpq.html.
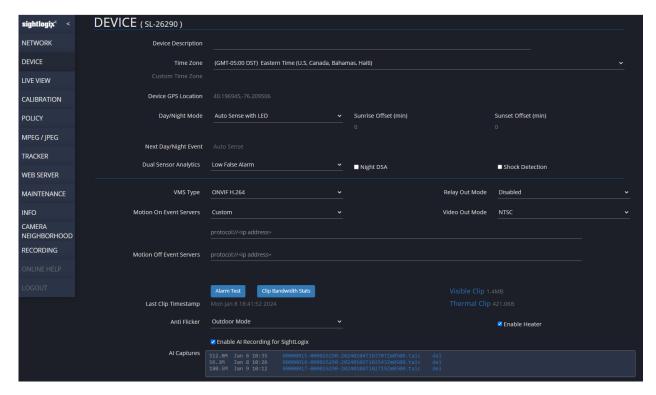
LIVE VIEW PAGE

Starting with firmware 16.2.182, you can view live video from within your browser.

- Thermal-only SightSensors will display the thermal stream.

- Dual-sensor cameras can toggle between Thermal and Visible streams by clicking the option button

DEVICE PAGE PARAMETERS

Device Description – is a description of specifics about this device which appears on the INFO page under Description. It can contain up to 1024 characters.

Time Zone, Custom Time Zone – If the NTP service is set up on the NETWORKING Page, then the Time Zone must also be setup to provide the proper local time corrections to "calculate accurate" sunrise/sunset' corrections within that time zone.

Day/Night Mode (SightSensor HD and TC Only) – menu determines if and/or when the IR LEDs (HD only) are active and the sensitivity setting of the visible imager (normal color, high sensitivity color, high sensitivity black & white).

*(**Note:** LEDs can only be active if 24v is applied to the camera, they do not work with just PoE power).*

The Day/Night Mode choices are:

Day (LED off) – imager is permanently set to normal low sensitivity full color with LEDs off

Night with LED on – imager is permanently set to high sensitivity black & white night mode with LEDs on

Night with LED off – imager is permanently set to high sensitivity color mode with LEDs off

Schedule with LED on at night – imager will automatically switch from full color day mode to high sensitivity black & white night mode with LEDs on at sunset, and back to low sensitivity full color with the LEDs off at sunrise. *(**Note:** NTP must be enabled for this mode to operate.)*

Schedule with LED off – LEDs will be permanently off, but imager will automatically switch from normal low sensitivity full color during the day, to low light full color mode at sunset, and back to normal full color at sunrise. *(Note: NTP must be enabled for this mode to operate.)*

Auto Sense with LED (SightSensor HD only) – will use the local ambient light in the area of the camera's field of view to automatically switch from low sensitivity full color, to high sensitivity black & white with LEDs on when the ambient light level is low, and back to full color with the LEDs off when the ambient light level is high. This setting is only available for HD-type sensors with internal illumination. This setting is not available for external illuminator control.

*(**Note**: The "calculated time" for sunrise/sunset switching is a combination of the NTP time service, Time Zone setting, and the Camera GPS Location within its time zone.)*

Sunrise Offset (min) – used by scheduled day/night mode to offset the "calculated" sunrise switching times. Enter a number representing the number of offset minutes desired; a positive (+) number to delay (make later), or negative (-) number to move forward (make earlier).

Sunset Offset (min) – used by scheduled day/night mode to offset the "calculated" sunset switching times. Enter a number representing the number of offset minutes desired; a positive (+) number to delay (make later), or negative (-) number to move forward (make earlier).

Next Day/Night Event (SightSensor HD and TC Only) – indicates the day, time, and type of the next scheduled event the camera will take action on based on the camera's settings and function.

VMS Type – selection drop-down lists options for the connection criteria that will be used to connect to a VMS system. Default is ONVIF H.264.

Dual Sensor Analytics (**SightSensor TC, HD only**) - combines visible and thermal data to improve detection performance. Enabled by default. If set, this feature is automatically disabled when the camera is in night mode. Two options are provided:

High Sensitivity Mode - Both thermal and visible detect and confirm the other.

Low False Alarm Mode (default) - Only thermal detects and the visible confirms. Use this setting if you are experiencing a high false alarm rate with High Sensitivity mode.

Shock Detection - Monitors the camera's position and sends a Shock Alarm when the camera is impacted, tilted or moved from its current position by more than 3% of the total field of view.

Night DSA - This setting keeps Dual Sensor Analytics enabled at night to assist with detection performance.

Important: This mode requires adequate lighting or it can cause the camera to miss targets. Dual Sensor Analytics is normally disabled when the SightSensor switches itself into Night Mode.

Relay Out Mode – defines the event that will activate the relay output contacts on the camera interface terminals. The options are "Disable" or no action, "Alarm" activated when a detection

alarm is generated, or "Day/Night" activated when camera automatically switches between day and night modes.

Video Out Mode – analog video may be configured for NTSC or PAL. The default is NTSC. The camera reboots if Video Out Mode is changed.

Motion On Event Servers – custom selection from drop-down menu allows HTTP or TCP URL's that can be user configured to send specific messages to a Video Management System (VMS) or other platforms when an alarm is initially generated (refer to VMS configuration instructions), or Immix selection sets up for the proper event message to be sent to a Sureview Immix server.

Motion Off Event Servers – field for entering HTTP or TCP URL's that can be user configured to send specific messages to a Video Management System (VMS) or other platforms when an alarm is initially generated. Refer to VMS configuration instructions.

Alarm Test – clicking on the "Alarm Test" box causes the camera to simulate an alarm event**.** If a custom URL is entered in the Motion On or Off Event Servers field this alert is generated when pressing by the Alarm Test. This is useful to verify the communications of alarm events to Video Management Systems.

If Immix is selected and Pre- and Post- triggers are defined, clicking "Alarm Test" will generate a test clip. Click "Visible Clip" (SightSensor TC, HD only) or "Thermal Clip" will display the test clip in the browser (wait a few seconds for the clip to be created). Refer to *Troubleshooting Clip Delivery* for more information.

Clip Bandwidth Stats – shows statistics about the most recent clip upload events. The following statistics are provided:

> **complete** – shows if clip was successfully uploaded

> **alarmtime** -timestamp of video frame triggering alarm

> **uploadtime** - timestamp when alarm upload has completed or timed out

> **uploadsize** - size in bytes of raw video files

> **uploadedsize** - size in bytes of encoded video file, this is generally 33% larger than uploadsize plus header information

> **uploadsec**- time taken for video upload upload times out at 180 seconds

> **mbps** - observed upload speed for transmission to server

Last Clip Timestamp – shows the time the last clip was generated, if defined by the SightSensor. Useful for debugging clip delivery.

Anti Flicker – prevents flickering effects to lighting visible within in the camera's visible field of view when using the camera inside under artificial light. The drop-down menu provides three choices; Outdoor, or selection of the frequency of the lighting use in the local area of the camera indoors, 60Hz or 50Hz.

Enable Heater - This option enables/disables heater (enabled by default). Heater operation requires 24V power.

AI Captures - Collects data if further refinement of the AI is needed for your site (firmware 16.2.182 and later).

- Click "Enable AI Recordings" to activate

- Once enabled, the system will begin to capture scene data to the camera's internal flash drive

A total of five captures are stored, after which the sensor stops recording data.

QUICK CALIBRATION PAGE PARAMETERS

Calibration Method – Quick Calibration Uses an internal sensor and defined height of your mounted camera to calculate target size and can be used for most applications.

GPS Map Calibration is for advanced use, e.g., SightTracker used to control a PTZ. Refer to the _Performing GPS Map Calibration_ section of this guide.

Camera Mounting Height – this is the height the camera is mounted above the surface of the area that is being monitored. It should be measured as accurately as possible and manually entered into this parameter. The default is set at 12.345 feet.

(Note: _Entering the correct camera mounting height, having a good camera tilt angle, and low yaw number is very important to the accuracy of the detection analytics for discriminating the size of objects in the detection area. A warning notice will appear until the camera height is changed from its default value to indicate this important parameter has been addressed.)_

Tilt (degrees) – is measured at the center line of the camera's field of view between horizontal (level) and the down tilt angle of the camera. This is typically between -10 and -17 degrees when camera is mounted to cover about 2 meters height above ground level at its maximum rated cross field detection range. This value is calculated by the camera when the **Measure Camera Tilt** button is selected. In general, the greater the tilt angle the better target size discrimination the analytics will have. So shallow tilt angles, i.e. -5 degrees, is not desirable.

Yaw (degrees) – is the number of degrees out of side to side level the camera is mounted. This should be held to less than a few degrees to maintain detection accuracy over the entire field of view.
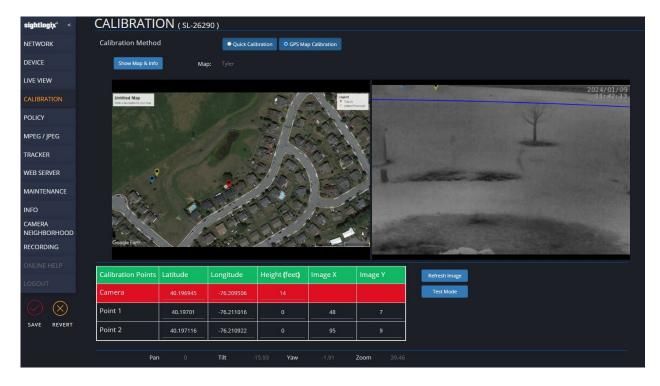
Measure Camera Tilt – this button Measure Camera Tilt will cause an immediate update of the Tilt and Yaw information from the Inertial Measurement Unit internal to the camera.

Calibration Field of View takes a snapshot of the live camera's field of view.

The dotted yellow line indicates the horizon.

The solid blue line indicates the AI classification range (if AI is enabled on your camera). Objects under the blue line will be classified by the AO filter.

Tilt Sensor Maintenance - should be used with guidance from SightLogix Support. If you see a red warning message that the sensor needs tuning, click the Tilt Sensor Maintenance link to reveal the Actual Tilt Angle and Actual Yaw Angle fields to perform this operation.

GPS MAP PAGE PARAMETERS

Calibration Method – Quick Calibration Uses an internal tilt sensor and defined height of your mounted camera to calculate target size and can be used for most applications. GPS Map Calibration is for advanced use, e.g., SightTracker used to control a PTZ.

Show Map & Info – Opens the map details. Allows a site map jpeg to be loaded along with associated GPS info.
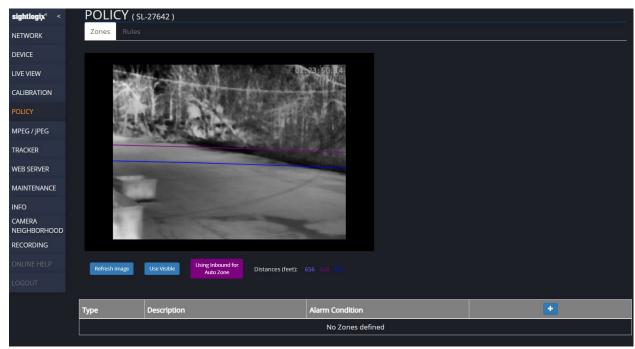
Calibration Points Table – Clicking each row activates the ability to set pins for camera location and associated points,

Refresh Image - Updates the calibration image by taking a snapshot from the camera's live scene.

Test Mode - Allows a calibration to be verified. While button is pressed, clicking on the calibration image will place green pins on the image and the corresponding position in the map.

GPS Map Calibration is for advanced use, e.g., SightTracker used to control a PTZ. Refer to the *Performing GPS Map Calibration* section of this guide.

POLICY PAGE PARAMETERS

Note: The **CALIBRATION** *page parameters must be set prior to setting any* **POLICY** *Page parameters. If you try to set a Zone or Rule without first Calibrating the following warning flag will be displayed and any zones or rule set may not be accurate.*
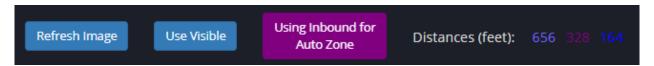

Zones Configuration Tab

- Click Refresh Image to grab an updated snapshot from the camera's field of view

- Toggle "Use Visible" or "Use Thermal" to choose the snapshot that offers the best clarity.

- Toggle "Using Inbound for Auto Zone" (default) and "Using Crossfield for Auto Zone."

The lines displayed on the camera's snapshot offer helpful guides:

- The Purple line shows the maximum Inbound detection distance (if "Using Inbound for Auto Zone" is selected")

- The Light Blue line shows the maximum Crossfield detection distance (if "Using Crossfield for Auto Zone" is selected

- The Blue line shows the maximum distance AI is used for filtering objects

The distances of all three guidelines are also displayed numerically. The color of each entry matches the color of the corresponding line in the snapshot.

Understanding Policies

You control alarms through **zones** and **alarm policies**.

A **zone** is an area of the camera view that you draw to specify whether or not it can generate alarms or track objects.

The following zone types are supported:

- An **alarm** zone is an area that can generate an alarm. Any sensitive areas that you wish to secure should be included in an alarm zone.

- A **mask** zone is an area in which no motion detection or tracking occurs. This zone type is useful for excluding areas prone to nuisance alarms, such as the sky, background roadways with traffic, or areas where birds congregate.

- An **ignore** zone also does not generate alarms, nor does it track objects that originate in the zone; however, unlike a mask zone, an ignore zone continues to track objects that are already being tracked, such as those that move from alarm zones or undefined areas into the ignore zone.

- A **privacy** zone will blank out sections of the visible image (dual imager SightSensors only)

Adjust the zone as necessary using the drag points in the corners of the zone overlay. Additional points can be added by left clicking anywhere along the perimeter of the Zone box, and a drag point can be deleted by right clicking on it.

A zone can be made into any shape polygon. Any number of Zones can be created, each with their individual shape, size, Type and Alarm Rules.

An alarm **policy** is an alarm zone together with a set of rules that dictate the conditions under which alarms within that zone occur, or do not occur.

When defining alarm zones, always draw alarm zones on the ground; alarms are generated only when an object's ground position is within an alarm zone.

Description – is a field to name this zone for reference purposes. As a default a unique name will be assigned which may be changed.

Setting up zone actions

If a **Mask** or **Ignore** zone **Type** is selected, then that zone is setup is complete. If an **Alarm Type** zone is selected, then the **Alarm** action must be defined further. The alarm action to be taken is selected under the **Alarm** heading. The following options are available:

> **Human detection** – (default) This setting automatically sets up a **Rule** to detect any human size object > than 3 feet tall by > 1 foot wide, moving anywhere within that alarm zone area for longer than 1.5 seconds, at a minimum speed of 1 MPH This automatically generated
>
> rule is for convenience but you can still change it by selecting the List Rules symbol where you can modify or add additional conditions. Beyond this simple setup it is recommended to use the **Rule-Based** option from the **Alarm** drop-down menu (see below)
>
> **Never Alarms** – Useful for defining "From" zones where you want a target to be identified but only alarmed if it moves from this zone to an active **Alarm** zone. This technique is used to make target detection extremely resistant to false positive alarms.
>
> **Rule-Based** – Alarms only under conditions set by rules. Recommended for reducing nuisance alarms or discriminating between various objects like a person and a vehicle or detecting on various differentiating parameters. After selecting this option, mouse over the List Rules symbol, select it and you will be taken to the Rules tab for <u>this</u> Zone.
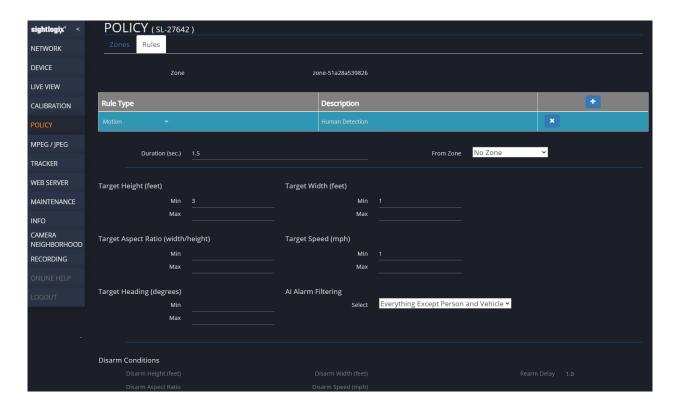>
> This will open the Rules Configuration Tab.
>
> (**Note:** *Rule-based alarms specify more precisely the conditions under which alarms are generated. These rules restrict alarms by time, by the duration of time spent in the zone, by tripwire, by previous path, or by target attributes such as the target's size, speed, direction, and shape or aspect ratio.)*

Rules Configuration Tab

By default, clicking the blue plus icon in the gray area creates an Auto Zone, which automatically draws a zone to the cameras Inbound or Crossfield detection range, an entry line will be listed in the table, and the most common parameters for human detection will be automatically entered in the Rules page.

You can modify the Auto Zone with the options described below.

Specifying Target Attributes

You can control a target's ability to generate an alarm in relationship to a zone by setting the Rule Type. You can also restrict a target's ability to generate an alarm based on its size, shape (aspect ratio), speed, direction, or AI Alarm Filtering (firmware version 16.2.182 and later), thus qualifying the object as a "valid" target.

Rule Type - Alarm zones can be associated with a set of rules that specify more precisely the conditions under which the zone alarms are generated. These rules restrict alarms by tripwire (enter and/or exit the zone), or by previous path.

> **Motion Zone** – by default this option is set. Any valid target that appears in this zone generates an alarm
>
> **Tripwire Enter Zone** – any valid target generates an alarm only when entering the perimeter of this zone
>
> **Tripwire Exit Zone** – any valid target generates an alarm only when exiting the perimeter of this zone
>
> **Tripwire Enter and Exit Zone** – any valid target generates an alarm only when entering or when exiting the perimeter of this zone
>
> **Disarm Zone** – enables Disarm functions *(Reserved for advance analytic functions)*
>
> **Disarm All Zone** – enables Disarm functions *(Reserved for advance analytic functions)*

Description – is a field to name this rule for reference purposes. As a default a unique name will be assigned which may be changed.

Duration (sec.) – provides a time delay between the time a valid target is detected to when it alarms. The target must remain valid for the time specified.

From Zone – this limits the ability of this Zone to generate alarms to only valid targets that enter this Zone only from a Zone selected from the **From Zone** drop-down menu.

Target Height (feet), Target Width (feet), Target Aspect Ratio (width/height), Target Speed (mph), Target Heading (degrees - straight out from camera center is zero degrees) – provides **Min** and/or **Max** limits on these parameters to qualify a moving object as a "valid" target.

When blank, the condition is not enforced. Note that "0.0" is treated as a value, not a blank field. Older versions incorrectly showed "0.0" as a placeholder for a blank field.

AI Alarm Filtering

Starting with firmware 16.2.182, SightSensors can filter alarm based on AI target classification.

To enable AI, choose an option from the AI Alarm Filtering drop-down. Four options are provided:

- Off (Default). The Zone will not filter alarms based on AI.
- Everything Except Person and Vehicle will send alarms for people and vehicles only.
- Everything Except Person will send alarms for people only.
- Everything Except Vehicle will send alarms for vehicles only

Click Save to save your settings and enable AI on your device.

Rules Configuration Tab (continued)

Disarm Height, Disarm Width, Disarm Aspect Ratio, Disarm Speed, and Rearm delay – these parameters are used with **Disarm Rule Types** when selected *(Reserved for advance analytic functions)*

Setting time ranges

A time range specifies the hours when alarms can be generated for an alarm zone. By default, an alarm zone is in effect for all 24 hours. Using time ranges require an NTP server to be defined on the NETWORK page.
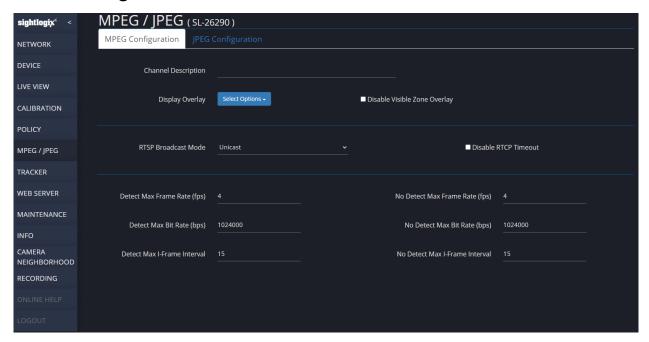
Disabled Times – click on the + to schedule times when the rule should be disabled.

Enabled Times – click on the + to schedule times when the rule should be disabled.

Depending on how you want to define a time range, enter both a start and end pattern for the appropriate field or fields. (Asterisks denote no constraints for a field.) Hours are entered using a 24-hour clock. Day(s) of Week (Sunday is 1, Monday is 2... Saturday is 7) are entered in a consecutive range separated by hyphen (-) or individual days separated by (,) comma. For example, for alarms to be generated only during work hours, enter 0700 for the start pattern (in hour field) and 1800 for end pattern; in day of week, 2-6 are all week days. An entry of 1,4 is Sunday and Thursday only. In Additional Pattern are days of the month individually, contiguous range of dates separated by hyphen (-), or individual dates separated by commas (,).

MPEG / JPEG PAGE PARAMETERS

MPEG Configuration Tab

Channel Description – text overlay shown at top center of the thermal video

Display Overlay Options – these are visual overlays that are shown on a target in both the visible and thermal video streams. You can select as many options as desired by checking the boxes. The options are:

> **Timestamp** – (default on) this puts a timestamp in the upper right-hand corner of the video stream. If an NTP server is specified then the time will track the real local time, otherwise it will run a timer incrementing from the initiation of the video stream.

> **Camera Identity** – this displays the serial number and mac address of the camera on the bottom of the video image

> **Zones** – shades the zone area on the video stream as they are specified in the POLICY Page.

> **Bounding Box** – (default on) this puts a red box around a detected target.

> **Corners Bounding Box** – red box around target has only corner marks.

> **Object ID** – adds a unique ID to the target above the bounding box

> **Object Size** – (default on) indicates the height and width of a target at the bottom of the bounding box as it is being tracked.

> **Track Duration** – adds a timer which indicates how long a target has been tracked

Object Speed – this indicates the speed at which the target being tracked is traveling.

Motion Track – this causes a trail of the target that indicates its past position on the thermal video image

Nonalarmed Objects – (default on) draws a yellow box around all objects all objects detected by the analytics, regardless of where they are in the image, which do not meet the alarm criteria specified in POLICY page (alarmed objects are boxed in red). This feature is used to validate analytics settings and not recommended for normal operation

Disable Visible Zone Overlay (SightSensor HD and TC only) – When checked, you will not see any zones on the visible video regardless of the zone setting.

RSTP Broadcast Mode – is selectable for: Unicast, where RTSP server broadcast node is Unicast; or Multicast, where RTSP server broadcast mode is Multicast.

Disable RTCP Timeout – Controls whether an RTCP server closes the stream when there is no client. This field is turned off by default.

Detect Max Frame Rate (fps) – is the maximum frame rate allowable when a target is being detected.

No Detect Max Frame Rate (fps) – is the maximum frame rate allowable when a target is not being detected.
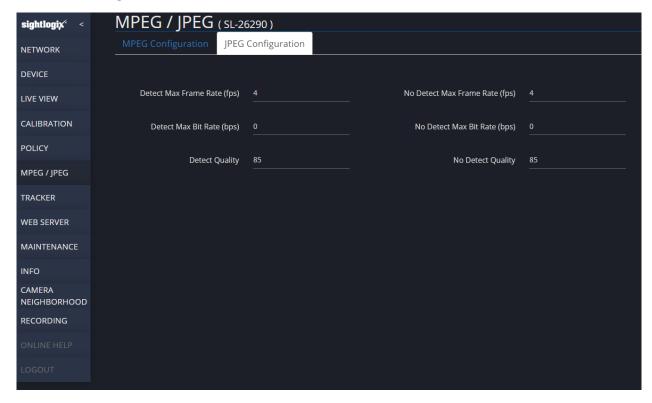
Detect Max Bit Rate (bps) – is the maximum bit rate allowable when a target is being detected.

No Detect Max Bit Rate (bps) – is the maximum bit rate allowable when a target is not being detected.

Detect Max I-Frame Interval – is the maximum I-frame rate allowable when a target is being detected.

**No Detect Max I-Frame Rate** – is the maximum i-frame rate allowable when a target is not being detected.

JPEG Configuration Tab

Note: SightSensor HD cameras do not provide options for setting Channel Description and Display Overlay for JPEG. In this case, the settings defined for these fields on the MPEG Configuration tab will be applied to the JPEG Configuration.

Channel Description – text overlay shown at top center of the thermal video

Display Overlay Options – these are visual overlays that are shown on a target in both the visible and thermal video streams. You can select as many options as desired by checking the boxes. The options are:

> **Timestamp** – (default on) this puts a timestamp in the upper right-hand corner of the video stream. If an NTP server is specified then the time will track the real local time, otherwise it will run a timer incrementing from the initiation of the video stream.

> **Camera Identity** – this displays the serial number and mac address of the camera on the bottom of the video image

> **Zones** – shades the zone area on the video stream as they are specified in the POLICY Page.

> **Bounding Box** – (default on) this puts a red box around a detected target.

> **Corners Bounding Box** – red box around target has only corner marks.

> **Object ID** – adds a unique ID to the target above the bounding box

Object Size – (default on) indicates the height and width of a target at the bottom of the bounding box as it is being tracked.

Track Duration – adds a timer which indicates how long a target has been tracked

Object Speed – this indicates the speed at which the target being tracked is traveling.

Motion Track – this causes a trail of the target that indicates its past position on the thermal video image

Nonalarmed Objects – (default on) draws a yellow box around all objects all objects detected by the analytics, regardless of where they are in the image, which do not meet the alarm criteria specified in POLICY page (alarmed objects are boxed in red). This feature is used to validate analytics settings and not recommended for normal operation

Detect Max Frame Rate (fps) – is the maximum frame rate allowable when a target is being detected.

No Detect Max Frame Rate (fps) – is the maximum frame rate allowable when a target is not being detected.

Detect Max Bit Rate (bps) – is the maximum bit rate allowable when a target is being detected.
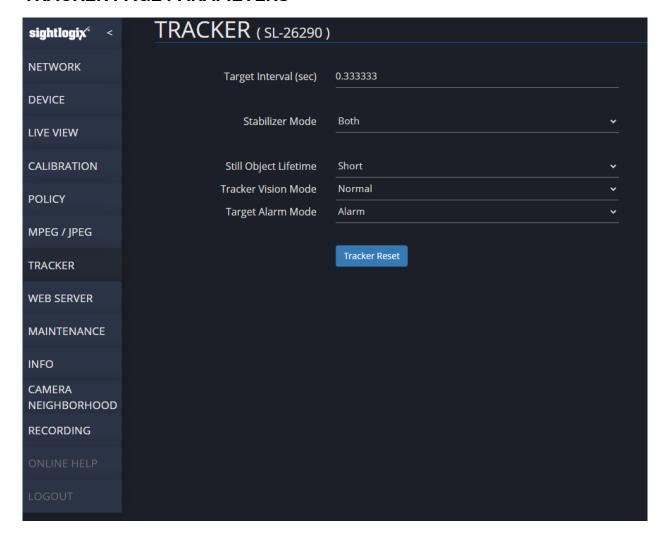
No Detect Max Bit Rate (bps) – is the maximum bit rate allowable when a target is not being detected.

Detect Quality – is the compression quality when a target is being detected.

No Detect Quality – is the compression quality when a target is not being detected.

TRACKER PAGE PARAMETERS

Target interval (sec) – Interval between object status updates. Metadata reported from the camera will update Target position at this interval. The default of one third of a second is usually ideal.

Still Object Lifetime – selects hold time for the object to be tracked once the object has stopped moving. Short – 30 seconds, Medium – 1 minute, or Long – 2 minutes

Tracker Vision Mode – optimizes analytics for specific detection applications such as:

> **Normal** – universal detection over normal surfaces
>
> **Water** – detection over large areas of water
>
> **Falling Objects** – detecting objects that are falling through the field of view from higher places
>
> **Grassy** – detecting over fields of taller grass

Long Object Detection – detecting objects that occupy most of the image area

Water Mode (Large Object Detection) – detecting objects over water that occupy most of the image area

Water Mode (Large Slow Object Detection) – detecting objects over water that occupy most of the image area that are moving slowly
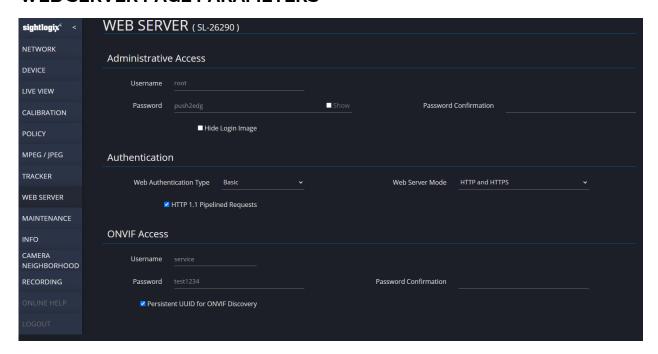
Normal No Stabilizer – normal detection but turns off the stabilizer

Grassy No Stabilizer – detecting over fields of taller grass without using the stabilizer

Target Alarm Mode – changes the style of alarms reported. Alarm reports alarm while and motion is tracked, regardless of number of targets detected in scene; Target sends and alarm for briefly for each target detected in the scene

Tracker Reset – The video analytics are reset. Any targets currently being tracked are re-evaluated.

WEB SERVER PAGE PARAMETERS

Administrative Access

Username – enter a unique user name to sign in to this camera (default is "root")

Password – enter a unique password to sign into this camera (default is "push2edg")

Password Confirmation – enter a unique confirmation password to sign into this camera (default is no confirmation password assigned)

Hide Login Image – Check this box if you want to hide the snapshot showing the camera's view from the login page.

Authentication (Camera will Reboot)

Web Authentication Type – Drop-down menu: Basic or Digest (default setting is "Basic").

Basic – HTTP Basic Authentication (BA) implementation is the simplest technique for enforcing access controls to web resources because it does not require cookies, session identifiers, or login pages

Digest- digest access authentication is intended as a security trade-off, being stronger than Basic, but weaker than HTTPS

HTTP 1.1 Pipelined Requests – Enable HTTP 1.1 Requests check box (default is checked)

Web Server Mode – Choose "HTTP and HTTPS" (default) or "HTTPS Only" (encrypts all data between the SightSensor and your browser, **recommended**).

⚠ **Note!**

If you select "HTTPS Only" **or** if you enter "https://" in your web browser, you must also accept the SightLogix self-signed certificate. Refer to *Installing the SightLogix Self-Signed Certificate* at the end of this guide.
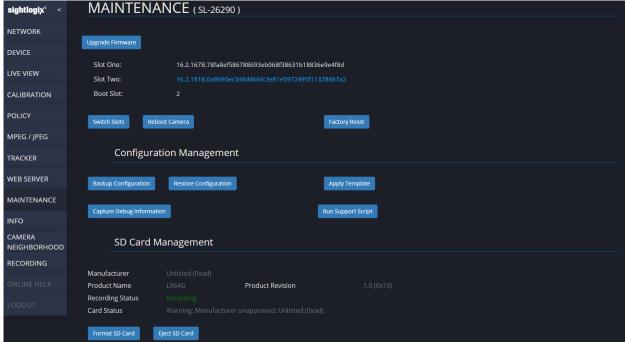
ONVIF Access

ONVIF Username – enter a unique user name for Onvif security (default is "service")

ONVIF Password – enter a unique password for Onvif security (default is "test1234")

ONVIF Password Confirmation – enter a unique confirmation password for Onvif security (default is no confirmation password assigned)

MAINTENANCE PAGE PARAMETERS

Upgrade Firmware Box – clicking on this box will bring up a window to select the location and file name of the new firmware to be loaded. Once selected click open and firmware will upgrade the standby slot (slot that is in white print), and immediately when finished loading will reboot the camera to the newly loaded software (which will then be the blue text). To upgrade the other slot, repeat the process again.

*(**Note:** the camera will reboot after the firmware update process and the video will be interrupted during that time.)*

Slot one: and Slot two: – contain separate copies of the firmware and the **Boot Slot:** indicates which slot's firmware is active (blue text) with the other slot being standby (white text)

Switch Slots Box – when selected will cause the camera to reboot and run the firmware from the other slot.

Reboot Camera Box – when selected will cause the camera to do a reboot but will not change the active firmware slot.

Factory Reset – causes all configuration, calibration and alarm policies to reset to factory default condition. IP Address, Gateway and Netmask data will not get reset.

Backup Configuration Box – clicking on this box will download the current camera configuration to the download area of the browser. It will be downloaded with file name "sightlogix_[Serial Number]_[date-time]_json", it can then be re-labeled and archived in case there is a need to restore the original configuration.

Restore Configuration Box – Clicking on this box will bring up a window to select the configuration file to be loaded to the camera. The serial number in the backup file must match the camera you are restoring to. If you are restoring a backup file to a different camera, i.e. a replacement camera with a different serial number, edit the file's second term using a text editor (like WordPad) so the serial number in the backup file matches the serial number of the camera being restored. Any serial number information in the file's title is not relevant.

Apply Template – clicking on this box will bring up a window to select the configuration file template to be loaded to the camera. This aids in setting up multiple cameras with the same basic configuration. A template is made by setting up one camera to the desired configuration then using that configuration file as the template. Unlike the normal Restore Configuration function the Apply Template function does not load camera specific data like name, IP configuration, camera description or GPS location, calibration data, policy information, and MPEG/JPEG channel description.

Capture Debug Information – downloads an archive with relevant information to aid SightLogix technical support to diagnose issues. This archive contains network specific information which may be privileged.

SD Card Management – will be shown if you have an SD card in the camera's slot and Recording activated.

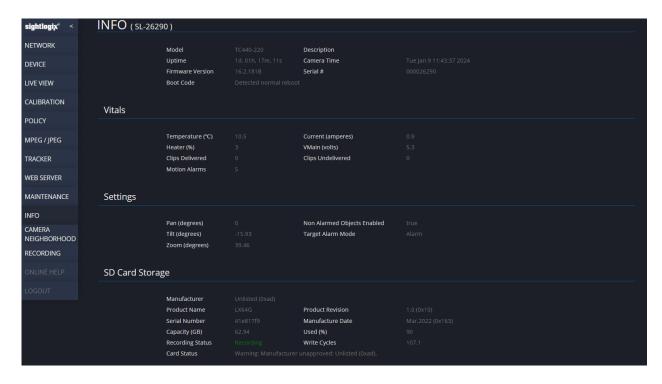> **Manufacturer** – The manufacturer ID assigned to the card.
>
> **Product Name** - The product name reported by the card
>
> **Recording Status** - After inserting an approved SD Card, formatting and enabling Edge Recording, the status will be Recording or Scheduled. When Ejected, the SD Card may be safely removed. Otherwise, the check the Card Status for an error.
>
> **Card Status** - SD card related errors and warnings

INFO PAGE PARAMETERS

The INFO page is reporting information and status about this camera and as such there is no input of information on this page. The information is divided into three areas: INFO – general camera information, VITALS – key operating information, and SETTINGS – status of camera setting.

INFO

Model – lists the model number of the camera

Description – lists the **Camera Description** entry from the DEVICE Page

Uptime – indicates the uptime since the last boot

Camera Time – lists the date and time as provided by the NTP service as per the time zone setting of the camera. (This information is only valid if NTP is provided)

Firmware Version – lists the firmware version that is currently operating the camera

Serial # - list the serial number of this camera

Boot Code – lists the status of the last boot of the camera (useful for trouble shooting)

VITALS

Temperature (Celsius) – lists the current <u>internal</u> temperature of the camera (this is typically about 10 to 12 degrees higher than the external temperature)

Current (amperes) – indicates the current draw in amperes of the internal 5 vdc supply voltage

Pressure (kiloPascals) – indicates internal pressure of the camera (only relevant to camera models that are pressurized)

VMain (volts) – measures the voltage of the main internal 5-volt power source

Heater (%) – the level that the internal heater is working (Heater requires 24v power to camera to function) and is controlled automatically by monitoring the internal camera temperature

Motion Alarms – the total number of alarms generated since the last reboot.

Clips Delivered - the total number of video clips delivered to the Motion On Event Server defined on the DEVICE page. May be less than total Motion Alarms due to Post-Reset requirement.

Clips Undelivered - the total number of video clips undelivered to the Motion On Event Server defined on the DEVICE page.

SETTINGS

Pan (degrees) – camera using this setup process is assumed to have a zero-degree heading looking straight out from camera center. This parameter is only meaningful Geospatially when camera is setup using full geo-calibration.

Non Alarmed Objects Enabled – indicates the status of check box on TRACKER page to report Nonalarmed Objects (true = box checked)

Tilt (degrees) – lists the degrees of forward camera tilt (same as value listed on the CALIBRATION page)

Target Alarm Mode – states the status of the Target Alarm Mode as specified on the TRACKER page

Zoom (degrees) – the effective detection horizontal field of view of the thermal image

SD Card Storage – If storage is enabled, the following information is provided.

> **Manufacturer** – The manufacturer ID assigned to the card.

> **Product Name** - The product name reported by the card

> **Serial Number** – The serial number reported by the card

> **Capacity** - The total capacity of the filesystem created on the card during formatting. 1GB=1,000,000,000 bytes.

> **Recording Status** – Status of Edge Recording

> **Card Status** - SD card related errors and warnings

> **Product Revision -** The manufacture product revision number reported by the card
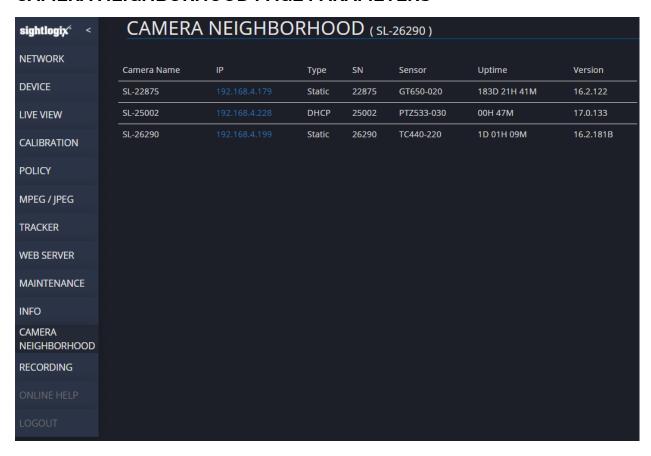
> **Manufacture Date** - The manufacture date reported by the card

> **Used (%)** - The amount of the card capacity in use. After filling the card, the usage is maintained at approximately 90%

Write Cycles - For a high endurance card, a number greater than 1,000 should be changed, although the precise number varies by manufacturer. Beware that formatting the card will reset this number
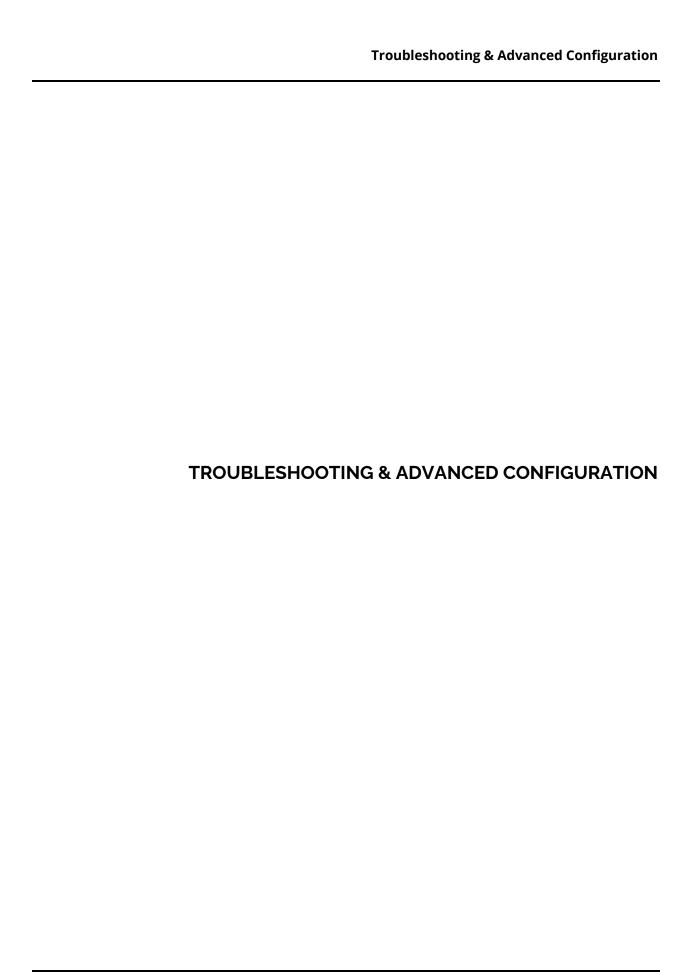
Refer to the Edge Storage Setup Guide for using the Recording page: https://portal.sightlogix.com/help/webconfig-docs.

CAMERA NEIGHBORHOOD PAGE PARAMETERS

Provides a list with selected details of all the SightLogix camera types connected directly to this local network. This can be handy to discover other cameras.

RECORDING PAGE

Refer to the Edge Storage Setup Guide for using the Recording page with newer cameras: https://portal.sightlogix.com/help/webconfig-docs.

ONLINE HELP

Selecting this page will take the web browser directly to the SightLogix web site help page if the internet is accessible from the local network.

LOGOUT

Selecting the logout page will terminate the browser session and log the user out of the camera. Note that WebConfig will auto-logout a user after one hour of inactivity.

TROUBLESHOOTING & ADVANCED CONFIGURATION

PERFORMING GPS MAP CALIBRATION

Quick Calibration can be used for most situations. GPS Map Calibration is for more advanced applications, and is required for three scenarios:

- You will be using SightTracker to automatically control a PTZ camera

- You will be using SightMonitor II to display target information as it moves throughout a SightLogix device field of view.

- You are using a PSIM or other third-party software which requires SightSensor metadata to provide target details such as longitude and latitude

GPS Map Calibration Requirements

- You will need a georeferenced site map and .info file. This is often provided by SightLogix and shipped with your product.
    - o If your product shipment did not include a site map, you can obtain aerial images from Google® Earth, SightLogix other providers. Instructions for using Google Earth to install a custom site map are here: http://portal.sightlogix.com/help/google-earth.

GPS Map Calibration Steps
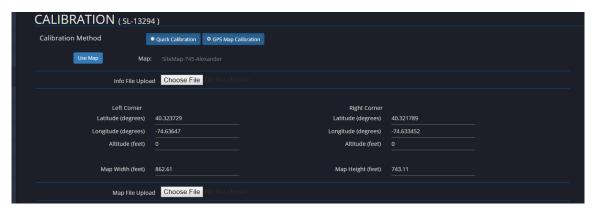
- Click the CALIBRATION Tab in the SightSensor left-side navigation menu
- Click the GPS Map Calibration button, as shown.

The window at right shows a single frame capture from the thermal imager. Click "Refresh Image" to update.

The black area at left is where the site map will reside once it has been uploaded, along with the .info file.
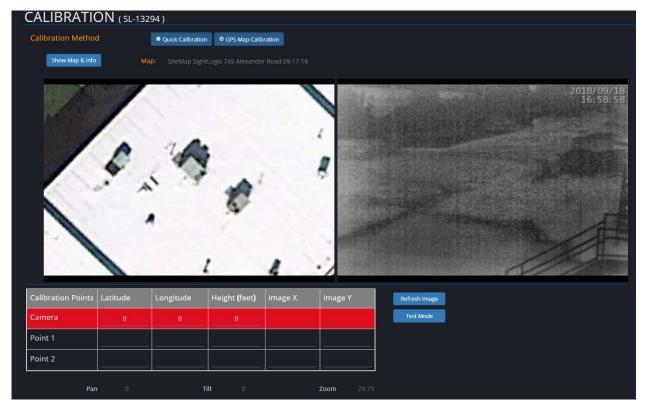
- Click the Show Map & Info button to reveal the Map upload options, as shown.

- Upload your .Info file and JPEG using the Info File Upload and Map File Upload buttons.
- Once uploaded, click Use Map to store the information.
- Click Save.

The window at left now displays your uploaded site map.

- Click/drag the map to reposition as needed and use your mouse scroll wheel to zoom in/out.

- Click the Camera row from the Calibration Points table to turn the row RED.

- Enter your camera's height above the ground in the Height field.

⚠️
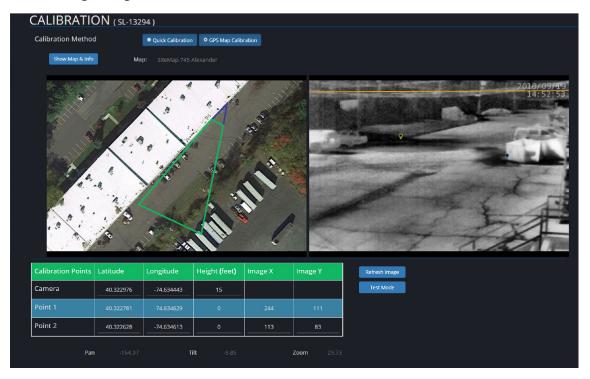
You MUST enter the camera's height to have an accurate calibration.

- Click the sitemap at the location of your SightLogix device to place a RED camera pin and set its GPS location.

- A camera pin is displayed at that location and its current GPS coordinates are displayed in the Latitude and Longitude windows. Click at different locations in the site map to relocate the pin.

Next, you will choose two calibration points in the site map at left with the same location in the camera's image, at right.

- Click the Point 1 row in the Calibration Points table to activate it and turn it BLUE.

- Click the site map to set Point 1. A BLUE pin is placed on the site map. Choose a fixed object such as a utility pole, the corner of a building, etc.

- Then click the same location in the camera's image at right.

- Click the Point 2 row to activate it and turn the row YELLOW. Choose a second calibration point using a different fixed point on the site map. A YELLOW pin is placed at the location.

- Click Save.

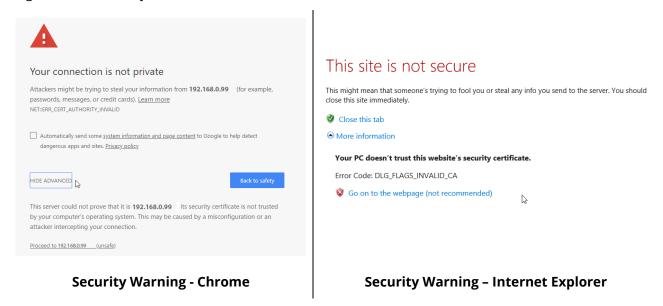- A camera cone is overlaid on the site map, and yellow horizon line is placed on the camera's image at right

- If the horizon line is not level, or if the camera cone is misshaped, reposition your calibration points for accuracy (click the row in the Calibration Points table to activate). Click Save and check your horizon line.

- Verify your calibration using the Test Mode button. When pressed, clicking on the calibration image will place green pins on the image and the corresponding position in the map.

Troubleshooting GPS Map Calibration

- If you do not see a camera cone on the site map after setting your camera and calibration points and saving, or if the cone is misshaped, confirm that you have entered the correct height in the Camera row of the Calibration Points table. Click save.

- When selecting points, select a ground location next to a landmark or other permanent object and always select locations that can be easily identified in both the site map and the camera view. The points should be close to areas you're interested in monitoring. Points should be some distance away from one another.

- If the area is hilly with wide variations in elevation, select points that are roughly midway between the highest and lowest elevations.

INSTALLING THE SIGHTLOGIX SELF-SIGNED CERTIFICATE

SightSensors are shipped with a self-signed certificate that SightLogix has secured. If you access WebConfig using HTTPS, you may receive a security warning until you install the SightLogix self-signed certificate in your browser, as shown below.
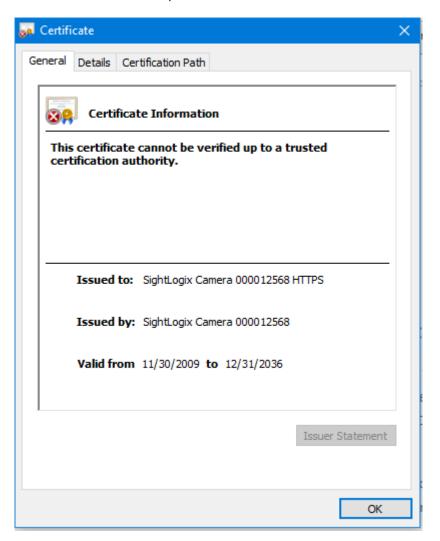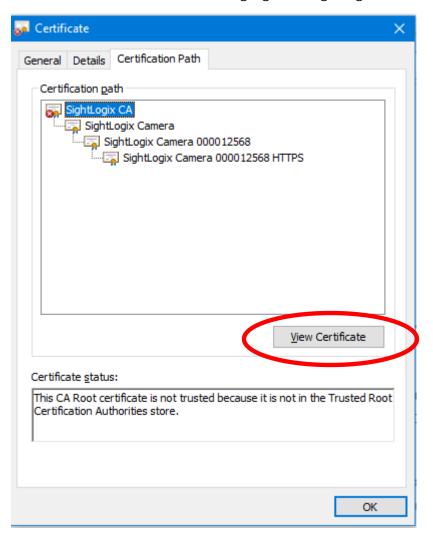

| **Security Warning - Chrome** | **Security Warning – Internet Explorer** |

 Note

Microsoft Edge does not allow you to add a self-signed certificate. If you are using Edge to access WebConfig and receive a warning like the one above, click the three-dot menu on the upper right of the browser, select "Open with Internet Explorer" and follow the instructions below.
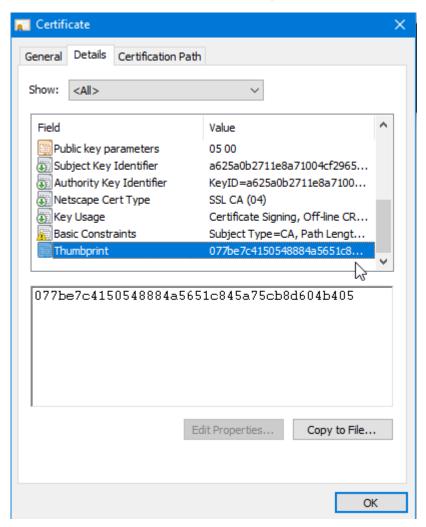
- Browse to WebConfig using HTTPS (e.g., https://192.168.0.99)
- If you receive the security warning shown above, proceed to WebConfig:
    - In Chrome, click "Advanced" and "Proceed to https://<ip address> (unsafe)"
    - In Explorer, click "Go on to the webpage (not recommended)."
- Web Config opens
    - In Chrome: Right-click" Not Secure" in the upper left
    - In Explorer, right-click "Certificate Error" on the upper right.
- View the certificate:
    - In Chrome, Click "Invalid"
    - In Explorer, click "View Certificates"

The Certificate window opens.

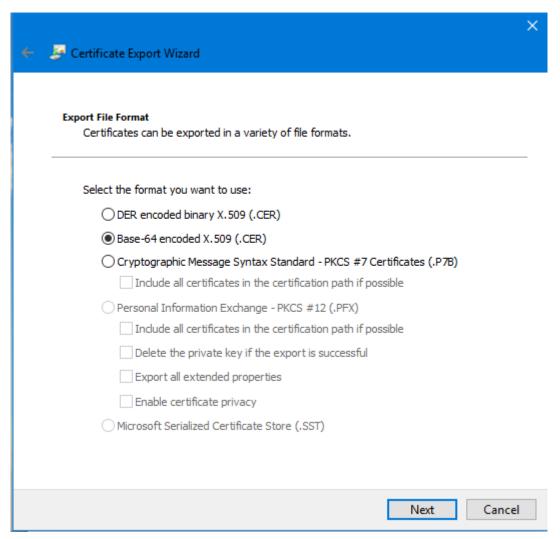- Click Certification Path tab, highlight the SightLogix CA, and click "View Certificate."

- Click "Details" and scroll to Thumbprint, as shown.

- Confirm that the thumbprint matches the SightLogix thumbprint:

07 7B E7 C4 15 05 48 88 4A 56 51 C8 45 A7 5C B8 D6 04 B4 05

- Click "Copy to File…"
- The Certificate Export Wizard opens. Click "Next"

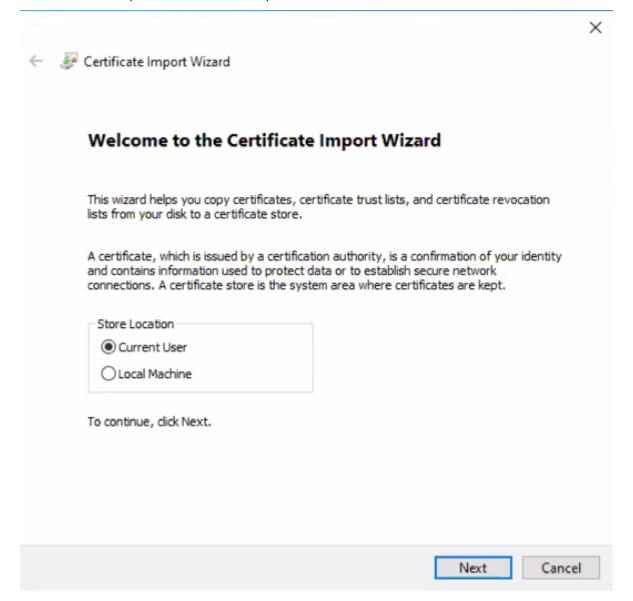- Choose Base-64 encoded x.509 (.CER) and click "Next"

- Name the file (for example, SightLogix CA) and save to a location on our computer, such as your Downloads directory.

Importing the Certificate into your Computer

Next, import the certificate into your computer's Trusted Root Certificates.
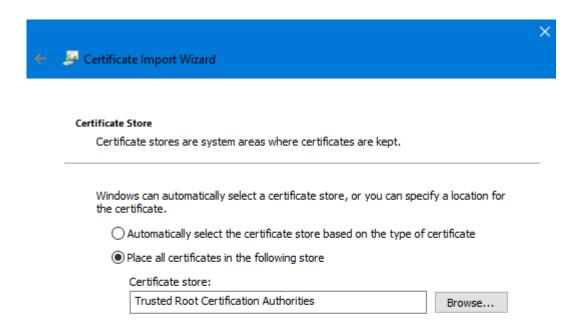
- Right click the Certificate file you downloaded in the previous step and choose the menu option "Install Certificate"

The Certificate Import Wizard window opens.

- Chose the current user and click Next.
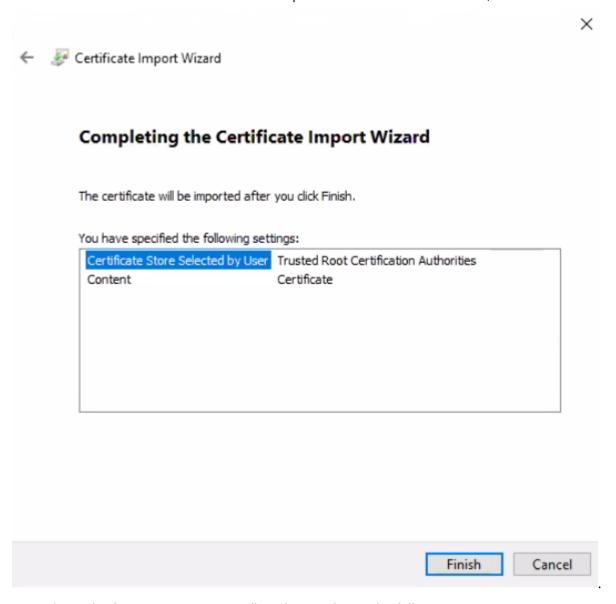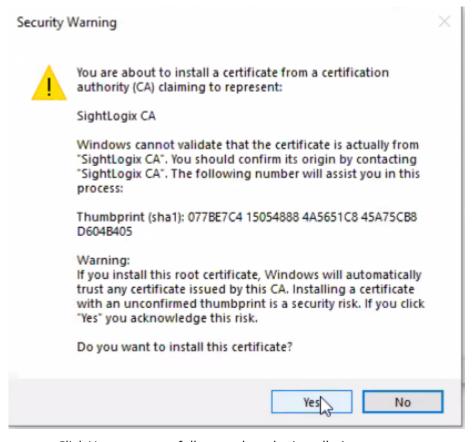
The Certificate Import Wizard opens.

- Click Browse to locate the certificate, and click OK, as shown.
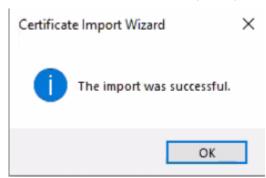
- You are returned to the Certificate Import Wizard Window. Click Next, and the click Finish.

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Since this is the first time you are installing the certificate, the following Security Warning screen opens.
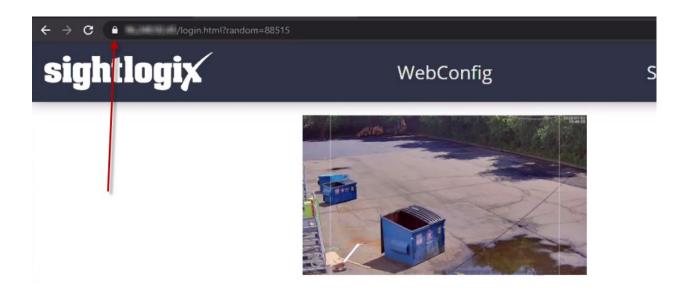
- Click Yes to successfully complete the installation.

- Next, restart Chrome by entering chrome://restart into the browser address window or close the browser manually and open Chrome again.
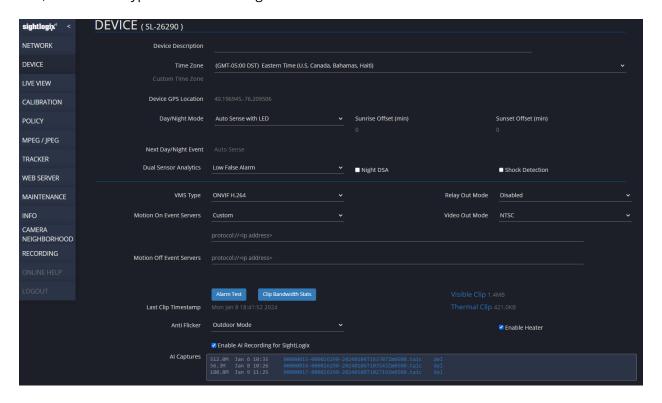

- Enter the IP address of the SightSensor, using https (for example, https://192.168.0.99).
- You will see a lock icon indicating a secure connection.

ADDING YOUR SIGHTSENSOR TO A VIDEO MANAGEMENT SYSTEM

First, set the VMS type in the Device Page:

- ONVIF H.264 is selected by default. The system uses the default username *service* and the password *test1234.*

- If connecting to Sureview System's Immix software, choose "Immix," enter your host's IP address, and configure your Pre-Trigger, Post-Trigger and Post-Reset settings for clip delivery.

- Additional steps are required depending on the VMS. Refer to the SightLogix Support Portal for your specific VMS: http://portal.sightlogix.com/help/vms-and-ptz-integrations.

TROUBLESHOOTING CLIP DELIVERY

SightSensors support sending a short pre- and post- video clip to monitoring software, such as SureView Immix, giving operators a view of the conditions before, during and after an alarm occurs. These settings are configured using Motion on Event Servers on the Device page by choosing either Immix or Custom. WebConfig provides a number of features to help troubleshoot this functionality.

To confirm if your SightSensor is generating clips, and/or if your monitoring software is having trouble receiving them, click the INFO page and check the Vitals section.

- Motion Alarms, Clips Delivered and Clips Undelivered can help determine where the issue resides, either in the SightSensor or your Monitoring software. For example, if Clips Delivered is 0, check your Motion On Event Server's settings on the Device page.

Vitals			
Temperature (°C)	35.5	Current (amperes)	1.4
Pressure (kiloPascals)	100.6	VMain (volts)	5.3
Heater (%)	0	Motion Alarms	54
Clips Delivered	0	Clips Undelivered	7

To review clip settings, click the Device page and scroll to the clip section at the bottom.

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- Test your camera's clip generation by clicking Alarm Test. This feature allows you to simulate an alarm without the need for someone to physical cross the camera's field of view.
  - o Wait several seconds, and then refresh your browser.
  - o The Last Clip Timestamp should reflect the time of the test.
  - o Review the generated clip directly by right-clicking Visible Clip (SightSensor HD) and/or Thermal Clip to view the video in a new tab.

For more SureView clip delivery troubleshooting, visit the SightLogix support portal:
https://portal.sightlogix.com/help/configuring-immix-direct

DECODING THE FLASHING LEDS

Normal LED Progression

After applying power to a camera, the normal LED sequence is:

Solid Red

The camera has power and is trying to load the firmware - approximately 8 seconds

Flashing Red (1/4 Sec on, 1/4 Sec off)

The camera has loaded the firmware and is starting to boot - approximately 4 seconds

Alternating Red/Green (1/4 Sec Green, 1/4 Sec Red)

Camera is attempting to find a network - approximately 4 seconds

Flashing Green (1/4 Sec on, 1/4 Sec off)

Camera has found a network (Ethernet has link); for DHCP, the IP address has not yet been found. Camera will check all hardware and establish all services at this stage - approximately 18 seconds

Solid Green

Camera has finished booting and after 3 seconds will show the last octet of the IP address approximately 3 seconds

Flashing IP

See be**low** - approximately 8 seconds flashing followed by 3 seconds of solid green

Off

 After 2 minutes, the LED turns off no matter what it was indicating

Factory Reset Case

Fast Alternating Red/Green (1/8 Sec Green, 1/8 Sec Red)

LED only shows this when camera has detected reset jumper shorting relay to Dry Input pins - 20 seconds

IP

Interpreting the Flashing IP

If the camera successfully boots, after showing solid green for three seconds, the camera will flash out the last octet of the IP address in binary, e.g.

- If the IP address is 192.168.50.148 then the camera reports 148

- 148 decimals is 0xA4 in hexadecimal

- 0xA4 is binary 1 0 0 1 0 1 0 0, indicated as Red Green Green Red Green Red Green Green

Failure cases

If the camera does not show solid green for 3 seconds, the camera will show one of these states for approximately 8 seconds before showing solid red again (indicating the start of a new boot cycle)

Off

If the LED never turns on at all, check the power connections to the camera. When it receives power, the LED will show solid red

Solid Red

Camera failed to boot firmware. You will see a brief blink of the Red LED every 15 seconds when the camera attempts to boot again.

Alternating Red/Green

Camera did not find a network, the Ethernet has no link

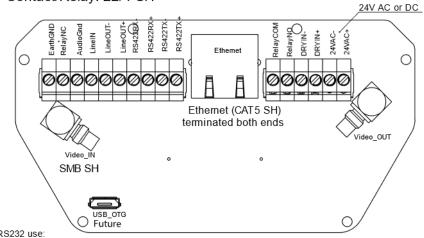## Flashing Green

Camera did not establish IP address via DHCP or otherwise failed to complete the boot process

WIRE TERMINATIONS OVERVIEW

Ethernet: CAT5 SH
24V Power: 18/2 SH
Dry Contact/Relay: 22/4 SH

SIGHTSENSOR FIELD WIRE TERMINATIONS

Wire Termination Descriptions	
EarthGND	Earth Ground connects to chassis ground
RelayNC	Relay Normally Closed
LineIN/AudioGnd	Microphone input
LineOUT–/ LineOut+	Audio output to an external amplifier
RS422RX–	Connect to RS422TX- signal from external device such as analog PTZ
RS422RX+	Connect to RS422TX+ or RS232RX signal from external device such as analog PTZ (DryIN- is ground for RS232)
RS422TX–	Connect to RS422RX- signal to external device such as analog PTZ
RS422TX+	Connect to RS422RX+ or RS232TX signal to external device such as analog PTZ (DryIN- is ground for RS232)
USB	(Future) USB connection to an external slave
RelayCOM/ RelayNO	Dry contact relay output. Normally open; close when activated.
DryIN–/ DryIN+	Input signal: Open is OFF state; shorting DryIN- to DryIN+ is ON state.
24VAC-/24VAC+	Nominal 24V AC power input
Video_IN	Video input from an analog PTZ/dome for SightTrackers. NTSC or PAL.
Video_Out:	Analog video output from SightSensor (NTSC)
Ethernet (RJ45)	Network connection; supports PoE IEEE 802.3af

USING SIGHTMONITOR II TO MANAGE THE SITE

SightMonitor II is an optional, Windows-based tool for SightLogix sites, and provides two key functions:

- Site management: A single interface to apply site-wide tasks to multiple devices, including firmware upgrades, assigning/moving devices from one site to another, performing backups, and more

- Live target display: Targets detected by SightSensors are overlaid on an aerial image of the site to visually show their location as they move within SightSensor detection zones

- Refer to the SightMonitor II Installation Guide for more details: https://portal.sightlogix.com/help/sightmonitor-ll-user-documentation.

Contact SightLogix to learn how you can obtain SightMonitor II: https://www.sightlogix.com/contact/

FINDING MORE INFORMATION

- Visit the SightLogix Support Portal for additional resources including technical documentation, third-party VMS instructions, drawings, diagrams, and videos: http://portal.sightlogix.com/help

Contact SightLogix Support

Visit: http://portal.sightlogix.com/help
Call: +1 609.951.0008, option 2
Email: support@sightlogix.com