# Setting Up SightTrackers with PTZ Cameras

SightTrackers enable PTZ cameras to automatically aim at a target's GPS position when an alarm occurs, enabling security personnel to get an immediate, close-up view of the event triggering the alarm.

The SightTracker is a separate unit that receives target GPS information from one or more associated SightSensors and then converts the information to pan/tilt settings to control the PTZ camera.

Currently, there is support for select analog and IP domes. Refer to the SightLogix Support Portal for the most up-to-date list: http://portal.sightlogix.com/help/sighttracker-third-party-ptz-support. .

The field of view of each PTZ camera attached to a SightTracker is represented within the site map by cones that dynamically update as the camera zooms or pans, either in response to an alarm or when controlled by the site's VMS.

SightTracker icon
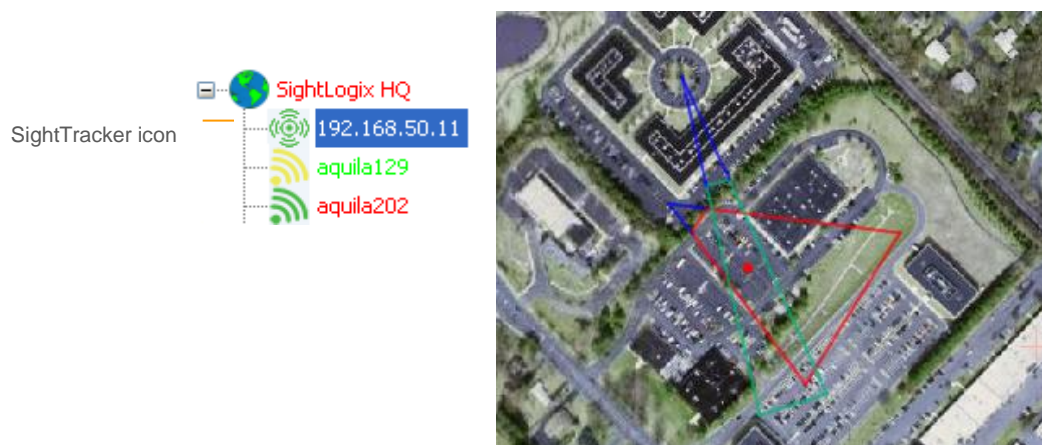
PTZ cameras will continue to track an object as long as it remains in view of an associated SightSensor or until one of the following occurs:

> Another target becomes higher priority. In case of multiple targets, the default is to assign

the highest priority to the newest target. However, you can specify a different priority (see page 53).

> The VMS operator takes control of the camera. Joystick control from the VMS is always able to immediately take control of the camera.

> The SightTracker is frozen.

Main Set Up Steps

1. Installing SightTrackers
2. Add SightTracker to Camera List in SightLogix CS software
3. Turning off Line Sync Settings in camera
4. Calibrating PTZ Camera with SightTracker in SightLogix CS software
5. Associating PTZ Camera with SightSensor in SightLogix CS software
6. Performing Pair Wise Calibration in SightLogix CS software
7. Testing Camera Tracking in SightLogix CS software
8. (Optional) Changing Track Priority in SightLogix CS software

SightTracker Wiring Terminations

3rd Generation SightTrackers have two different wiring termination blocks. Version 2 (PN ST3-020) supports IP PTZ cameras only. Version 1 (ST3-000) supports analog PTZs.
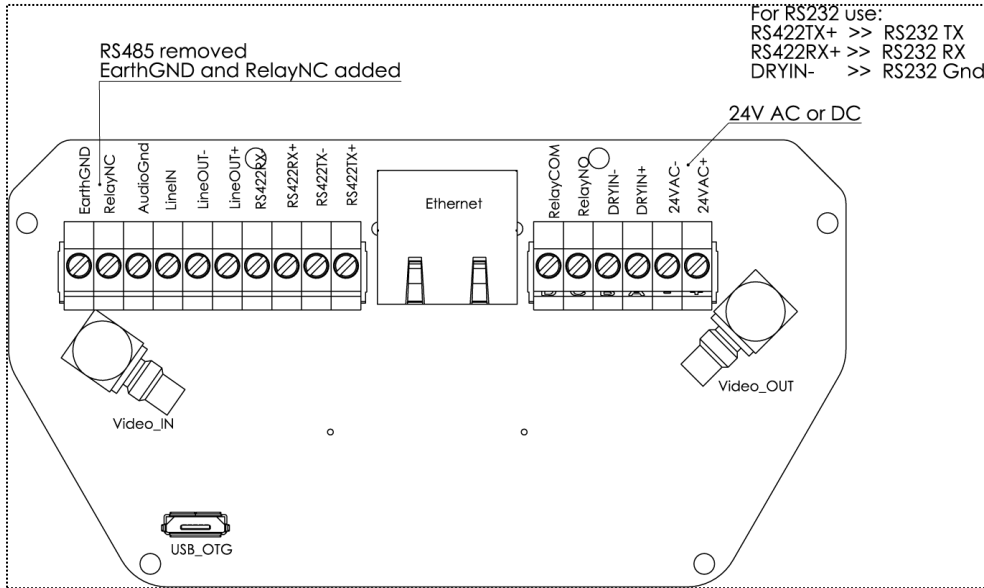
**3rd Generation SightTracker Wire Terminations (Version 2, For IP PTZ)**
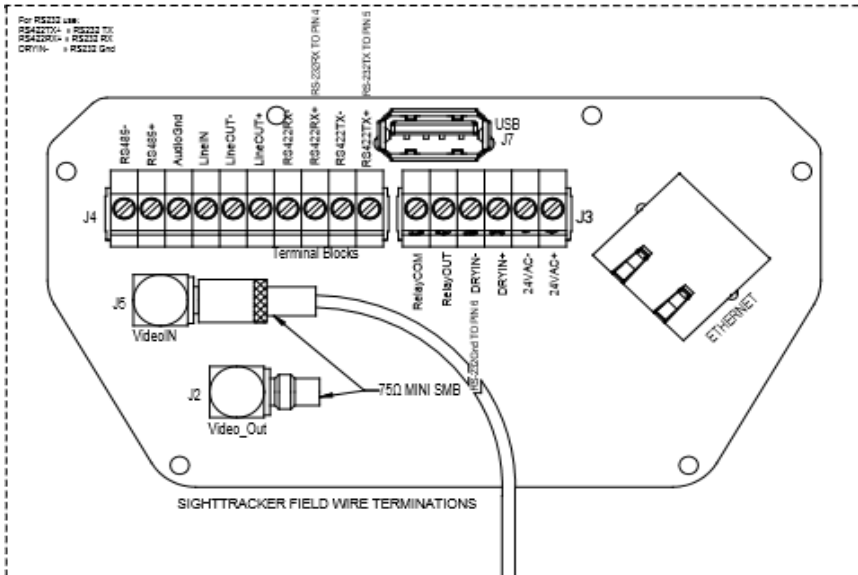
3rd Generation SightTracker Wire Terminations (Version 1, For Analog PTZs)

Adding SightTrackers to the Camera List

To add a SightTracker to a site's camera list, use the discovery procedure (refer to the SightSensor Installation Guide) as you would with SightSensors.

To individually add a SightTracker, right click the site icon and select Add Camera; enter the IP address when prompted. The IP address is the only required information.

However, it is recommended to open the SightTracker's Network dialog (right-click on the icon and select Configure→Network) to enter a descriptive camera name and verify that the serial number shown is the one expected. Click Save if you change the name or make any other change.
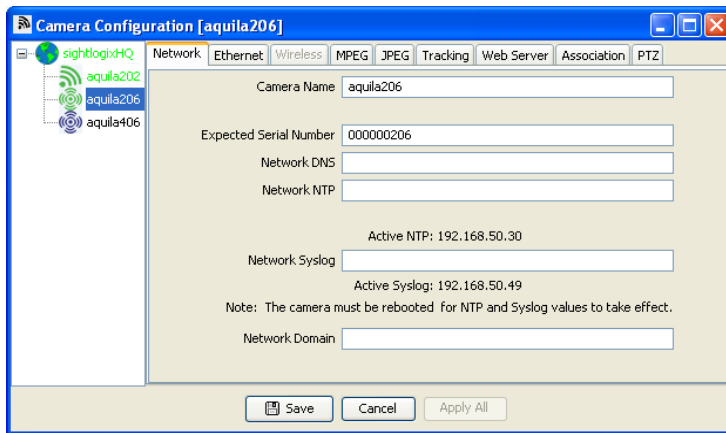
Changing time zone and line sync settings

The PTZ camera's line sync setting must be turned off from the SightTracker's PTZ dialog:

1. Open the PTZ tab.

Navigation controls for accessing the dome camera's internal menu.
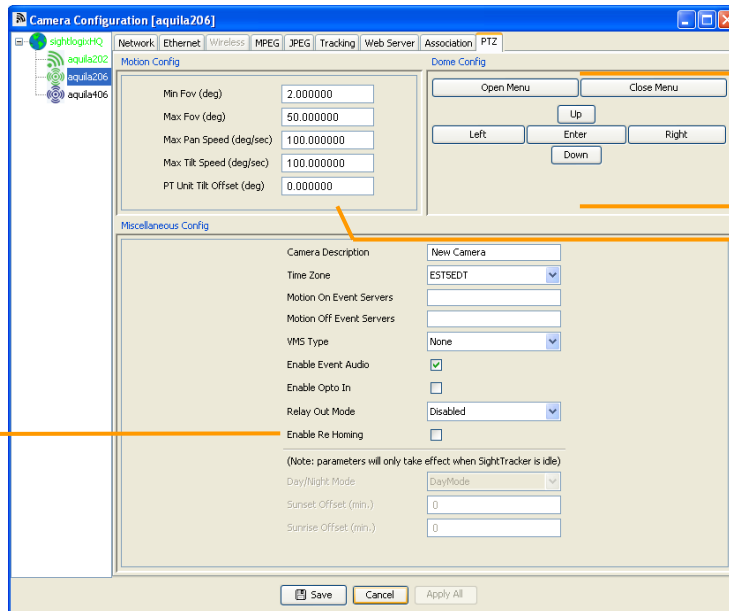
Disables re-homing, which is performed once every 24-hours and takes up to 1 minute to perform; during this time, the camera cannot detect targets or respond to commands.

Range of values for camera's field of view (in degrees) and the maximum speed allowed for panning and tilting (in degrees per second).

This information is entered automatically for some camera types (for field of view, changes must be within the supported range). If values are not entered, refer to your camera manual and enter the information here.

Enter an offset if a perfectly horizontal camera is reporting a tilt (this may occur due to some factory adjustments). When a camera is looking at the horizon, the tilt offset reported in the camera tab of the site map should be 0. Enter a value equal to the offset. This will be subtracted from the offset commands sent to the camera (e.g., if the tilt offset reported for the horizon is +1.4, insert +1.4 as the offset).

2. Click Open Menu to open the camera menu within the VMS.

3. Use the dialog's navigation buttons to move through the camera's menu until you get to the line sync setting. Menu systems differ according to the camera, but look for a Camera or Settings menu.


4. Turn off line sync. Then use the Exit option on the VMS menu.

5. From the PTZ tab, click Close Menu.

6. Set the time zone by choosing the appropriate zone from the dropdown menu.

7. If your PTZ camera supports day/night mode and you want to turn this feature on, select Day/Night from the Relay Out Mode dropdown menu.

8. Click OK.

Calibrating PTZ Cameras

This procedure describes how to use the SightTracker to calibrate the PTZ camera image with GPS coordinates. The procedure is similar to calibrating a SightSensor, except that only a single calibration point is needed (not two).

If you haven't yet added the PTZ camera to your VMS, do it now. For more information, see the *SightLogix VMS Integration Guide*).

To calibrate a PTZ camera, view the PTZ camera's video from the VMS. Then in the SightMonitor, open the Calibrate dialog for the SightTracker (right-click its icon, select Configure→Calibrate) and do the following:
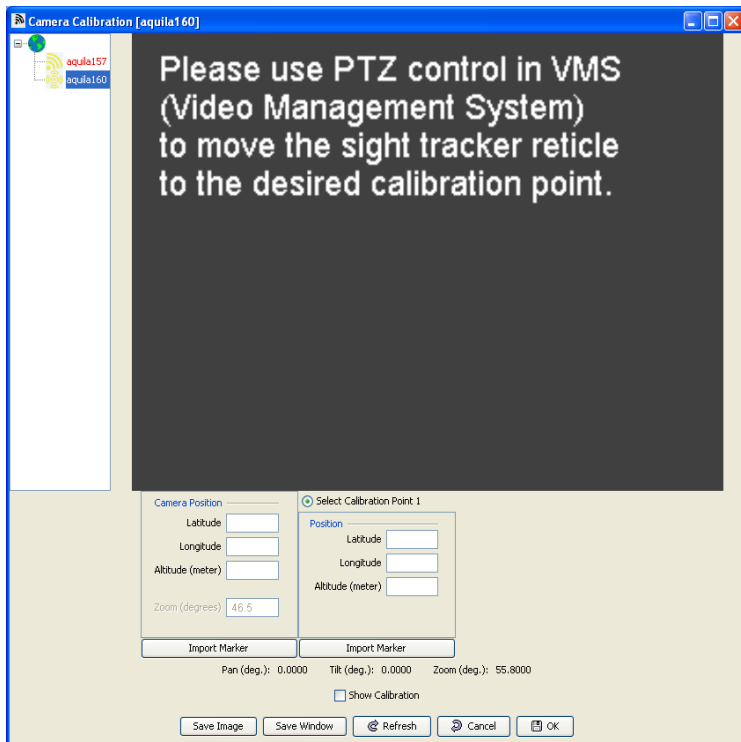
1. Enter the SightTracker's position as follows: Double-click in the site map at the location of the camera to place the marker. Enter the height of the camera. Then click Import Marker under Camera Position in the Calibrate dialog.

2. Select a landmark to use for calibration. Then in the site map, double-click at the location of the landmark.

    As with SightSensors, choose a point at ground level next to a landmark or other permanent object and always select a point that can be easily identified in both the site map and the camera view.

3. Using the VMS, orient the camera so the selected landmark is at the center of the image, which is denoted by the cross overlay.

4. In the Calibrate window under Calibration Point 1, click Import Marker to transfer the GPS location information and populate the pan, tilt, and zoom settings.

⚠️ **Important:**

Always complete step 1 (entering the SightTracker's position) before continuing to step 4.
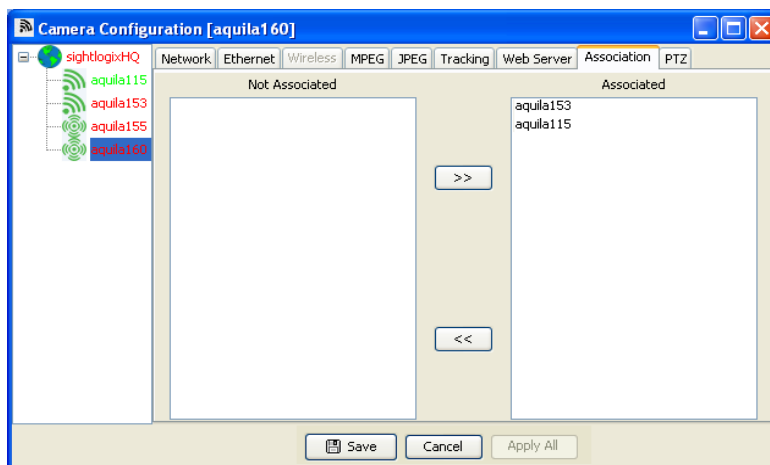
5. Click OK.

Associating a SightTracker with a device

Associating a SightTracker with a SightSensor enables GPS target data to be relayed to the SightTracker so it can properly aim the PTZ camera. Each SightTracker can be associated with up to 20 SightSensors, allowing PTZ cameras to provide close-up views of targets detected by all neighboring devices. SightSensors can provide target data for up to 20 SightTrackers, allowing multiple PTZs to provide coverage of an area.

You associate a SightTracker with a SightSensor as follows:

1. Open the Association dialog. (Right-click SightTracker icon → Configure → Association.)

2. Move a SightSensors from the Not Associated to the Associated. Up to 20 SightSensors can be associated with each SightTracker.

3. Click OK.

Performing a Pairwise Calibration

The pairwise calibration more precisely aligns the GPS coordinates within the view of a dome camera with the GPS coordinates used to calibrate an associated SightSensor. This is an optional procedure but it is highly recommended since it improves tracking accuracy.

Good Pairwise Calibrations are achieved by choosing widely spaced points that cover a large percentage of the SightSensor field of view.

1. Right-click the SightTracker icon and select Pairwise Calibration.

2. In the dialog, select a SightTracker and an associated SightSensor. You'll see video from the selected device.
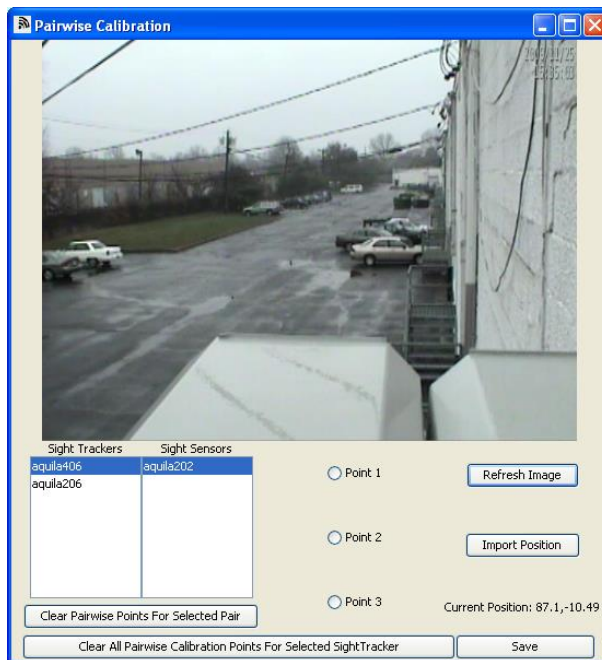
All pairwise calibrations are stored until you click Clear All Pairwise Calibration even if the association no longer exists.

Thus if you change a SightTracker's associations to different SightLogix devices, the calibrations will be saved in case you change the associations back to the original devices.

3. In the video image, double-click a reference point. This should be a point easily identified in both camera's views—that of the PTZ and that of the associated SightSensor

4. In the PTZ camera video image in the VMS, use the PTZ controller to align the cross overlay to the same reference point selected in the camera's image

5. Click Import Position.

6. Repeat for two additional points, selecting the appropriate radio button. Pairwise calibration works best when using reference points represent the entire field of view.

7. Click Save. Then repeat the procedure for each of the SightTracker's associations.

Testing that PTZ cameras track

The Follow Test option on the Calibrate dialog (right-click a SightSensor icon→Calibrate) enables you to test whether a PTZ camera will track a target.

When you select the Follow Test checkbox and then double-anywhere within the video image, verify from the VMS that the PTZ camera aims at the location selected.

Prioritizing targets to track

In case of multiple targets, a SightTracker will track the newest one by default. Thus if it's currently tracking a target and a new target appears, the PTZ camera will aim at the new target. Note that if two SightTrackers are associated with the same SightSensor and are set to the same priority, they will track the same target even in the case of multiple targets.

Set the priority from the SightTracker's Tracking tab (right-click icon→ Configure→Tracking):

> Change the default priority of targets to be one of the following: Track Newer Priority (default), Track Closer Priority (closer to the PTZ camera), Track Faster Priority, Track Bigger Priority, Track Older Priority, Track Farther Priority, Track Slower Priority, Track Smaller Priority.

> Specify the minimum time the PTZ camera tracks (or dwells on) the target currently being tracked before switching to a higher priority target if one exists. The default is 2 seconds. Use a longer time if you want to follow a target for more time before tracking a higher priority target.

> Select a zoom setting: Normal, to view a 12-meter scene around the target (default), Enlarged (8-meter scene), and Reduced (20-meter scene).

> Specify how long after the last VMS command, the Coordination System must wait before taking control of the camera to track a target (Reactivation Time). The default is 2 seconds.
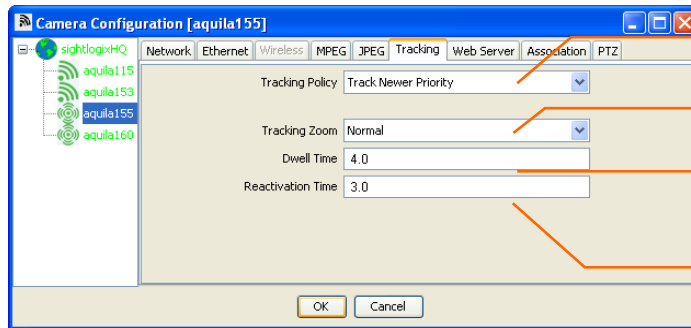
Prioritize targets according to age, distance from dome, size, or speed.

Choose Normal, Enlarged (zoomed in), or Reduced.

Minimum time the camera tracks a target before switching to another.

How long after the last VMS command the SightTracker can direct the camera.

Freezing SightTrackers

To stop SightTrackers from automatically directing PTZ cameras to aim at targets, right-click the site icon and click Freeze SightTrackers. Note that this suspends the functionality of *all* SightTrackers. The status bar updates to indicate that SightTrackers are frozen.

To re-activate SightTrackers, right-click the site icon and select Unfreeze SightTrackers.

Installing SightTrackers with Certified PTZs

SightTrackers work with IP-based and analog PTZ cameras which have been certified by SightLogix. Instructions for each type are provided in the sections that follow.

Refer to the SightLogix Support Portal for the most up-to-date list of supported IP cameras: http://portal.sightlogix.com/help/sighttracker-third-party-ptz-support.

Installing SightTrackers with Certified IP PTZs

This section describes the steps for installing a SightTracker with supported IP-based PTZs. For instructions on installing supported analog PTZs, refer to the SightLogix Support Portal: http://portal.sightlogix.com.

⚠️ **Note:**

If your SightTracker has been configured to work with a particular IP PTZ, and you want to change to a different PTZ, you must factory reset the SightTracker before adding the new PTZ camera. Follow instructions here: http://portal.sightlogix.com/help/factory-reset

General Information

One SightTracker is required for each PTZ camera, and each SightTracker has two required functional external connections on the terminal block:

> 24V power or PoE

> Ethernet

The following is a complete list of what's required to attach a SightTracker to an IP PTZ camera:

> SightTracker unit

> NTP server available on the network (Required to allow auto-tracking function and configured in SightLogix CS)

> Compatible third-party IP PTZ camera

> Ethernet network (RJ45)

> Power source for camera and SightTracker unit

Select the SightTracker, right-click and select Configure.
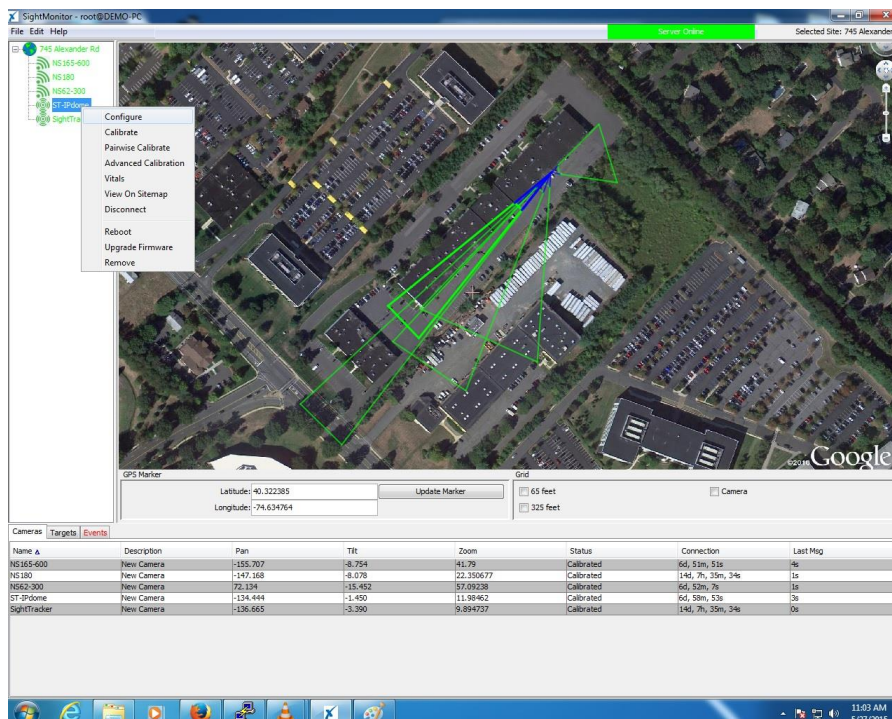
Under the PTZ tab, look for the Selected PT Unit Type field and select ONVIF.

An example follows:

> On the right-hand side, enter the information for ONVIF:

  o ONVIF Username field: Enter the IP dome username

  o ONVIF Password: Enter the IP dome password

  o ONVIF Address: The IP address of the IP Dome.

> Click Save. The SightTracker will reboot.
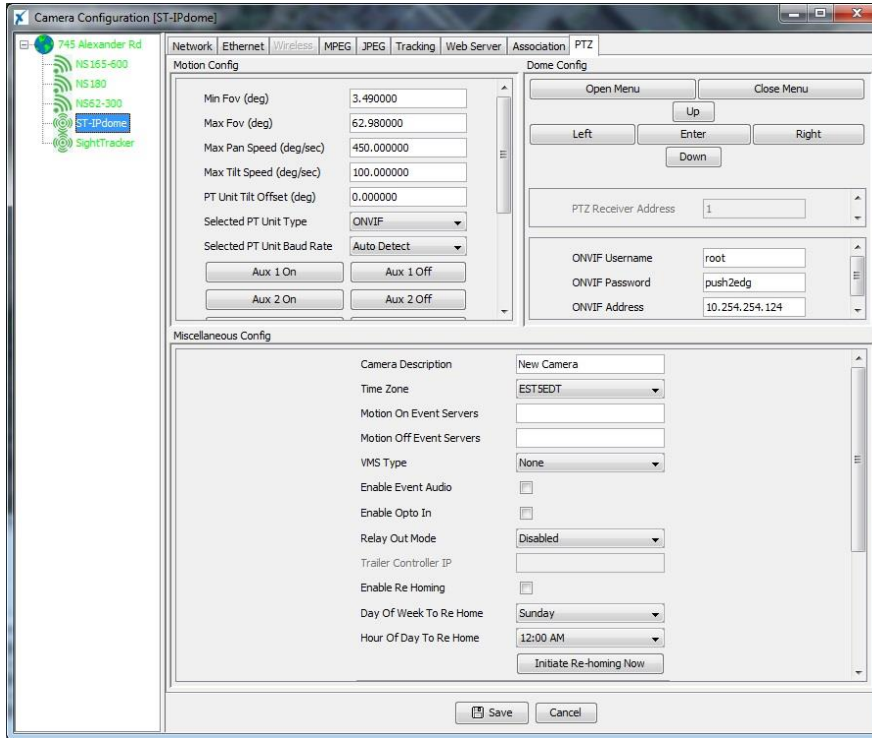
Adding an NTP Server

An NTP server is required for the SightTracker and the IP Dome to work properly.

Adding an NTP Server on an Axis IP PTZ

Use a browser and type in the IP Address of the IP Dome and login with the password.
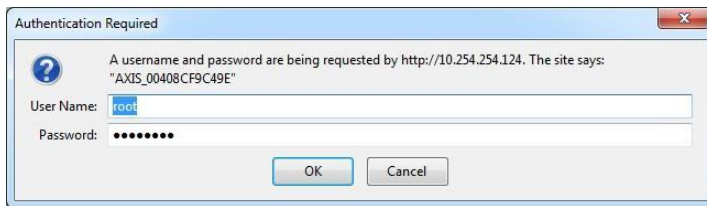
Select Setup.
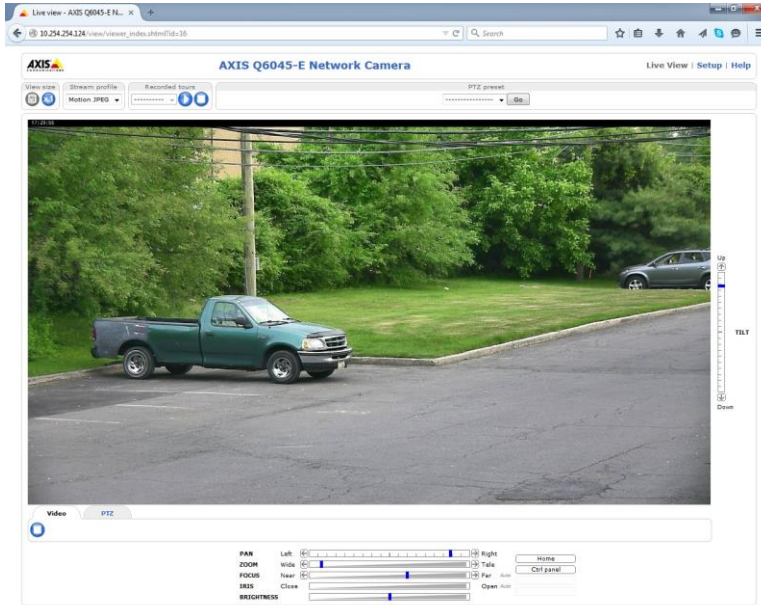
Select Date & Time.
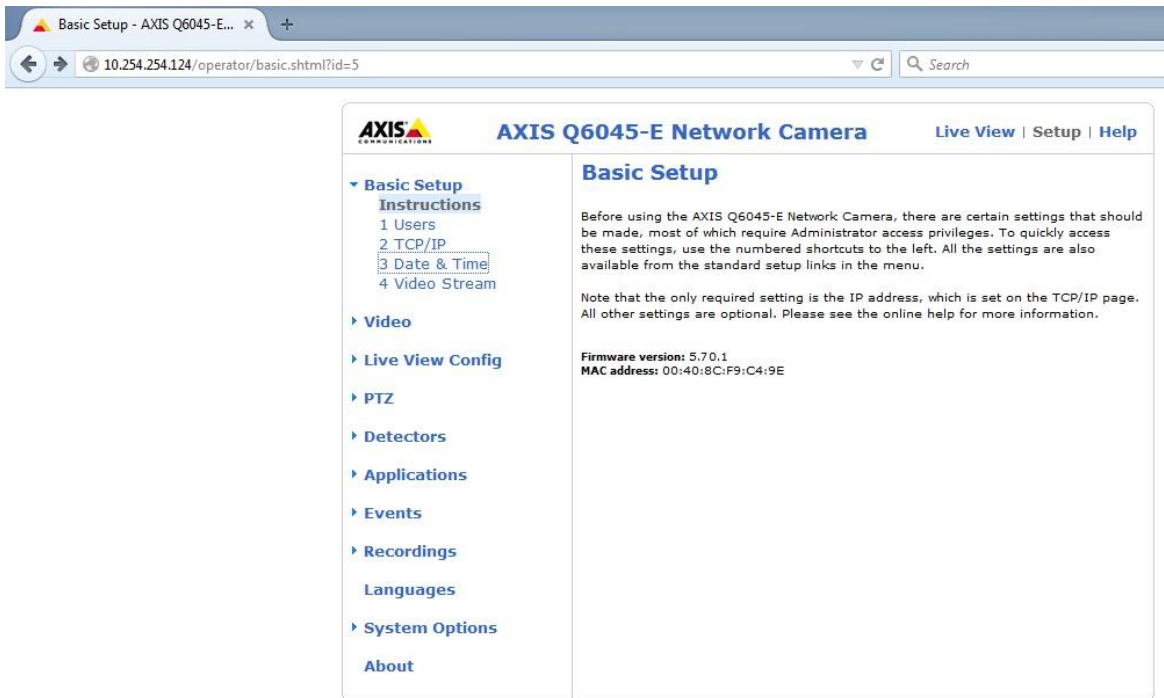
Enter the IP address of the NTP server under NTP Configuration section.

Adding an NTP Server on an Infinova IP PTZ

The following image shows where to configure the NTP server for Infinova. Please refer to your Infinova documentation for more detailed help.
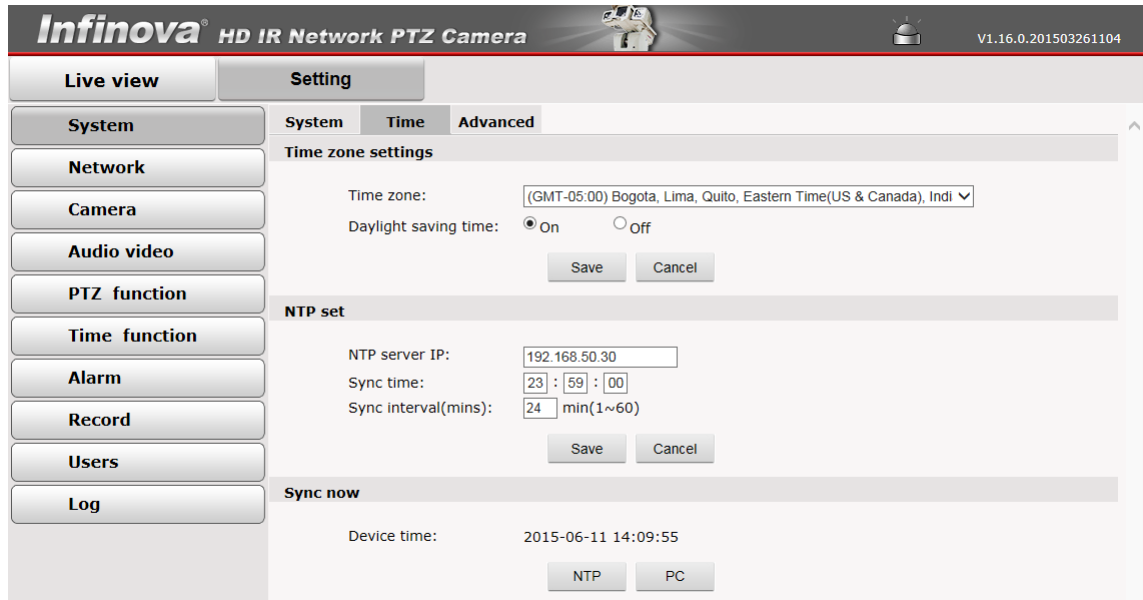
Adding an NTP Server on Samsung IP PTZ

The following screenshot shows where to configure the NTP server for Samsung. Please refer to your Samsung documentation for more detailed help.