FLIR SYSTEMS
INDIGO OPERATIONS

ThermoVision® WideEye™

User's Guide

427-0006-00-10

Version 110

TABLE OF FIGURES

⚠ Cautions and Warnings:

- Do not disassemble any component of the system. Removal of chassis panels may contaminate delicate electronic and/or optical components. Disassembly may also invalidate the device's environmental sealing and can cause permanent damage. To prevent voiding the factory warranty, consult with FLIR Systems Client Services prior to performing any maintenance procedures.

- Operating the system outside of the specified input voltage range or the specified operating temperature range can cause permanent damage and will void the warranty.

- Do not image extremely high intensity radiation sources, such as the sun, lasers, arc welders, etc. These types of targets may temporarily or permanently damage the imaging devices.

- The cameras used in this system are precision optical instruments and should not be exposed to excessive temperature, shock, or vibration.

- Care should be taken when operating the system to prevent hands and equipment from entering any pinch points near the Pan/Tilt system's elevation payload brackets/shelves or the elevation and azimuth clearances.

- The system is not certified or designed to operate in an explosive environment.

- Do not attempt to clean the optical elements of the sensor suite without proper instruction given by FLIR Systems Client Services.

- This system contains static-sensitive electronics and should be handled appropriately.

- All system cables must be connected appropriately in order to maintain the specified environmental integrity.

- If you have questions that are not covered in this manual, or need service, contact FLIR Systems Client Services at (805) 964-9797 for additional information prior to returning a camera.

1. FLIR SECURITY AND SURVEILLANCE SOLUTIONS - WIDEEYE

1.1 System Overview

The FLIR networked sensor system is a turnkey solution to the demanding market for high-performance IR security and surveillance systems. FLIR provides a selection of different sensors with a mix of short, medium and long range, all operating with a standard connectivity providing the user the ability to connect multiple sensors and multiple user control stations on a surveillance network. The user interface provides an out-of-the-box solution to control sensors and monitor the video over the network. Multiple real-time streaming video windows can be monitored simultaneously on each user interface console. Sensor connectivity allows external cueing from detection devices such as WideEye units, radars, or perimeter intrusion devices via the network interface. Network tools such as sensor discovery, status monitoring, access privileges, and web configurations are included in the system.

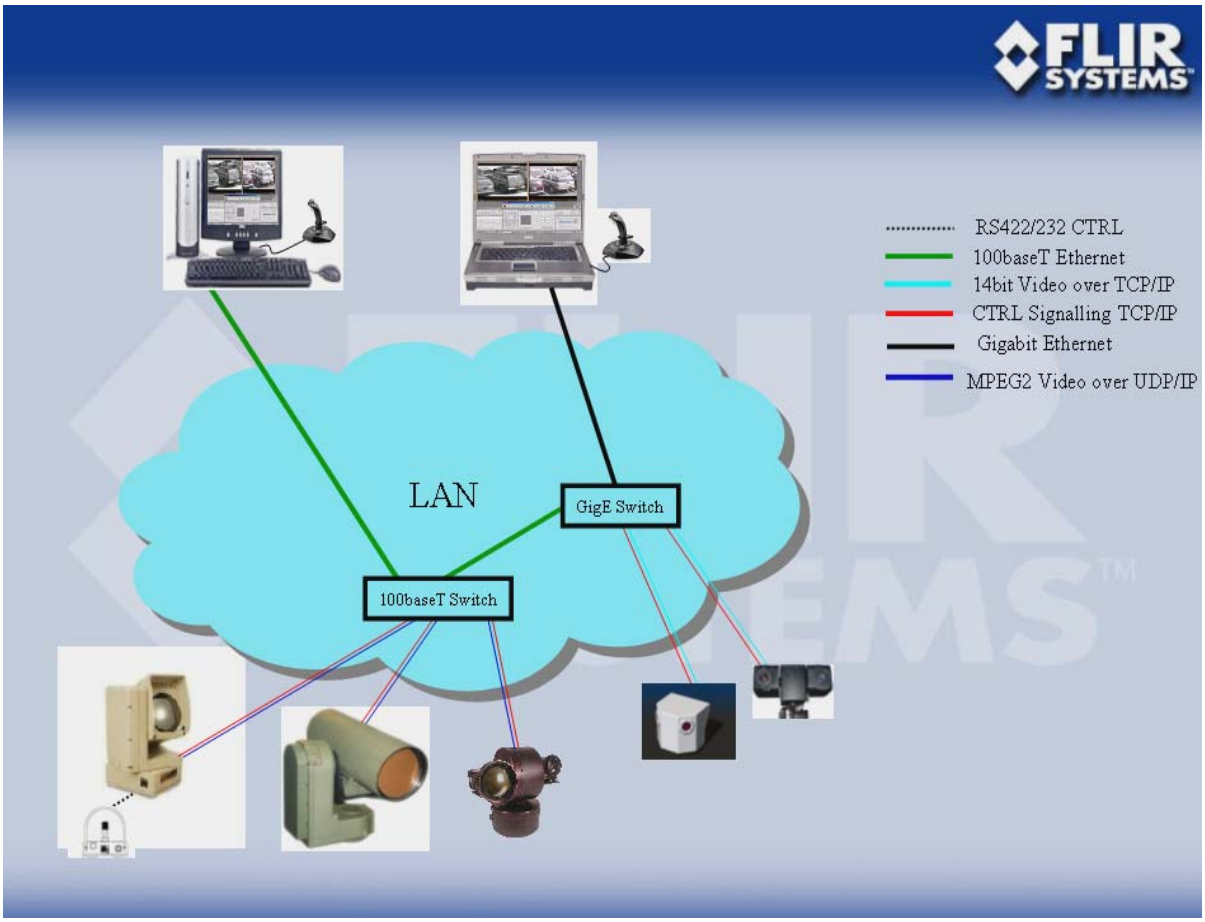

Figure 1 - System Architecture

1.2 WideEye

The ThermoVision WideEye provides a real time panoramic 180° field of view. Each WideEye unit uses two highly sensitive thermal imagers that can detect a person in complete darkness up to 150 meters away, even in certain conditions of fog and smoke. The super wide field of view is the result of stitching both of WideEye's left and right thermal sensors together making it ideal for large area monitoring where pan/tilt cameras can miss events.

The ultra wide field of view of the WideEye, and the automated target detection tools, makes it ideal for perimeter monitoring and threat detection. The Slew to Cue feature, when coupled with high resolution normal field of view FLIR sensors, allows handoff of a detected threat to the slewable sensors for target recognition and classification.

The WideEye is connected to a host PC running the user interface application (Luveo Console). Multiple WideEye units and user interface consoles can be combined on one network. WideEye units require only power in and a network interface (Ethernet) to send digital video to the user interface console running on the host PC. Each WideEye unit also has two analog camera outputs. These two analog camera outputs provide a left and right view and are not stitched together. A full 360 degree coverage can be obtained by using two WideEye units and displaying the images on the user interface.

The system includes operator workload reduction features such as basic video motion detection, auditable alarm alerts, emailed alarm alerts with appended video snapshots, and user or alarm trigged snapshots saved to disk. When combined with other FLIR sensors, such as FLIR's Sentry system, the operator can slew high resolution sensors to alarm cues or operators pointing on the panoramic display.

Characteristics

- VOx Micro bolometer un-cooled thermal detector
- 640 x 120 panoramic image format on host application
- Video Motion Detection with alarms
- GeoReferenced "Slew to cue" commands
- Network interference to slaved pan/tilt system

Features

Communication:	100/1000 base T
Video output:	14 bit digital streaming video
Weight:	12 pounds
Power:	11 – 36 VDC, 10.5 – 28 VAC, 120 VAC
Operating temp:	-26° F to 131° F
Environmental protection rating: IP66	
Dimensions:	8.5" x 7" x 5.5"

1.3 Luveo Console

The Luveo Console software is installed on the host PC and provides remote access to all components of the security and surveillance system. The video display from the WideEye and other FLIR cameras can be simultaneously displayed. Configuration parameters and IP addressing, for all sensors, are accessible through the Luveo Console software.

Two classes of sensors may be connected and operated from the Luveo console, Luveo Sensors, and Uncompressed Devices. WideEye is an Uncompressed Sensor (meaning its video is transmitted over the full bandwidth). The Luveo Sensors include, Ranger II on a Pan/Tilt, the Thermovision Sentry and other FLIR Medium to long range sensors; these sensors transmit video over the compressed MPEG formats. The Luveo Sensors may be slewed in azimuth and elevation to point to targets of interest with high resolution. There are a number of ways to control the slewing of these sensors, including joystick, console touchpad, external cues from other devices (such as radars or fence line monitors), and cues from WideEye. This is a staring sensor, and has no pan/tilt controls applicable.

This document focuses primarily on the user of WideEye with the Luveo Console. However, the Luveo Console also provides a mechanism to control and monitor video of various types of FLIR camera systems. Combining the Luveo Console with one or two WideEyes allows the user to monitor a wide detection area (up to 360º). Adding a slewable high resolution sensor such as the Sentry for example to the system, allows the user to zoom in on areas of interest via user command or automatic target detection alarms.

For analog video operation, the WideEye unit is operational immediately upon application of power. No network connection is required. There are no settings required on the networked Luveo Console to adjust or setup the two 90 degree field of view analog outputs.

For networked connections, including use of the Operator Luveo Console to view the 180 degree field of view image with automatic target detection, image capture, and other tools, the Luveo Console software is required to be setup and connected.

2. SYSTEM SETUP AND INSTALLATION

2.1 System Equipment

The delivered WideEye includes the following components:

- WideEye Camera
- User Guide
- High Voltage (110/220VAC) Power Cord
- Low Voltage AC (10.5-28VAC) Power Cord
- Low Voltage DC (11-32VDC) Power Cord
- Analog Video Cables (to connect the analog camera outputs to a monitor)
- Ethernet Cable
- Pole mounting Bracket (to mount the WideEye camera)
- Luveo Console Software CD (to install the User Console on a user supplied PC)
- Shipping Case

2.2 System Connections

The minimum system consists of the WideEye camera and a PC with the Luveo Console installed, connected to each other via Ethernet. This connection may be made directly (using UDP cable running from the WideEye camera to the Console PC) or through switches. In either case the system assumption is that the network is closed (not connected to unrelated devices or the internet), and that the IP addresses for the connected devices are static and assigned by the system user or administrator.

Multiple WideEyes and other FLIR sensors, such as Ranger or Sentry, may be connected on the network, as well as multiple User Console PCs. The selection of the switches is important as the system requires high bandwidth and multicast support. For example, FLIR recommends the NetGear GS605 5-port (or GS608 8-port) Gigabit switch for better network performance.

Any given Console PC may actively control and display video of up to two WideEyes and multiple other FLIR sensors. Any given WideEye may be controlled / displayed by only one Console PC at any given time.

The power up sequence for the system should be first the WideEye cameras, the Console PCs, then launching of the Luveo Console software.

2.3 Camera Connections and Pinouts

Figure 2 and Figure 3 illustrate the connections to be made to the WideEye camera including power, Ethernet and analog videos. Note that the connectors are sealed, but they must be securely fastened to retain the seal attributes.

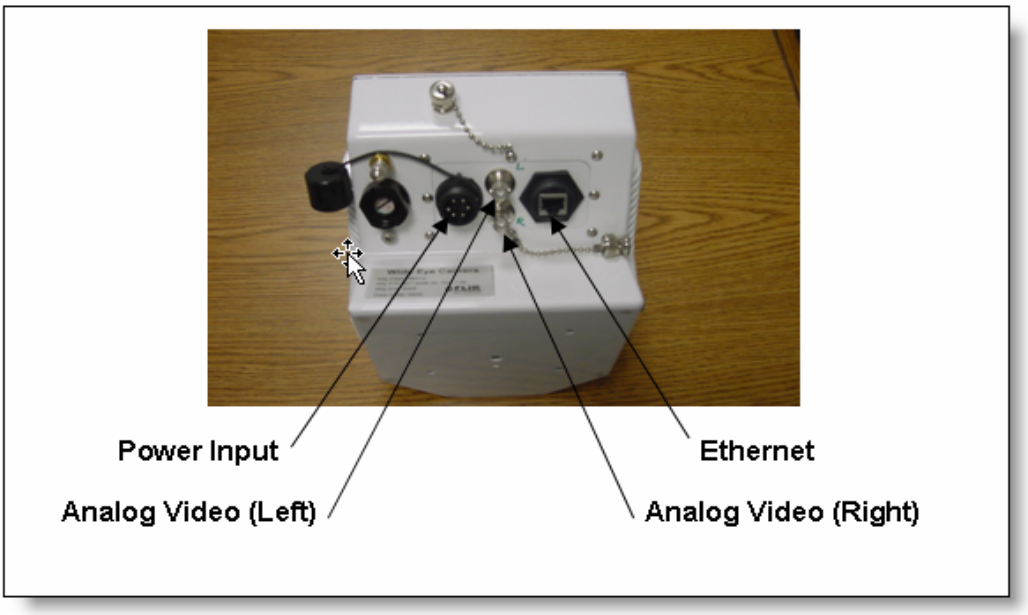

Figure 2 – WideEye Rack Connectors

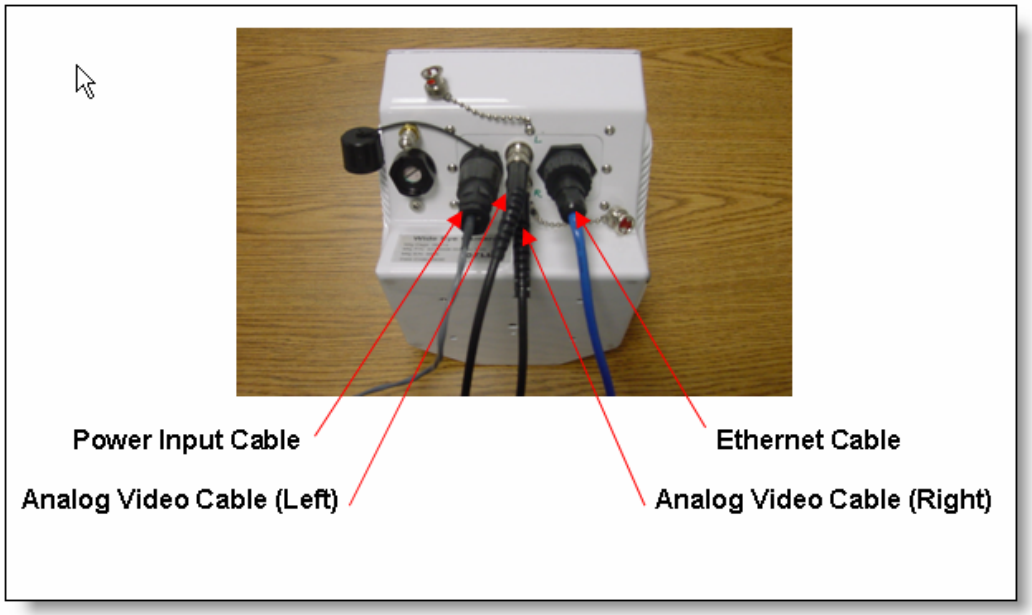

Figure 3 – WideEye Connections

2.4 Luveo Console Software Installation

The Luveo Console software runs on a commercial PC (laptop or desktop) and connects to the network over the Ethernet. Through this Console, the sensors attached to the network may be controlled and their videos monitored.

The Luveo Console software requires that the PC first be configured to process the streaming video, then the necessary interface drivers loaded, and then the User interface application (Luveo Console) be installed. All of these components are found on the Software CD delivered with the system.

2.4.1 Recommended Host Computer System Minimum Requirements

Processor: P4 Processor 3.00GHz, 512/K800MHZ FSB, Broadcom Gigabit NIC
System RAM: 1.0GB DDR
Hard Drive: 40GB EIDE 7200RPM
CD Drive: 48X/32X/48X CD-RW
Video Adapter: 128MB, NVIDIA GeForce FX5200, VGA/DVI adapter, Dual Monitor
Peripheral Devices: PS/2 Keyboard and Mouse, Microsoft Sidewinder or Logitech Wingman 3D Joystick
Monitor: Min resolution 1024 X 768

Windows 2000 Professional SP3 or XP Professional SP1
DirectX8 or DirectX9; make sure that all three: Draw Acceleration, Direct 3D Acceleration and AGP Texture Acceleration (if available) are enabled. (From WINDOWS\SYSTEM32, execute dxdiag.exe, select "display" and enable "Direct Draw Acceleration", this will enable all 3 functions).
Drivers for Microsoft Sidewinder Precision 2 or Logitech Wingman 3D

Prior to installing new Luveo Console software, uninstall any previous versions of the software elements (from Windows Control Panel – Add/Remove Programs).

2.4.2 Computer Setup (Step 1)

1. Install DX81NTeng.exe if not already done
2. Install "**UDP Stream Player 0.2 beta.exe"**
3. Say Yes to all questions, except for running the application at the end
4. Double click on the file "**lowlatency.reg"** and say YES when asked if you want this key to be added to your Registry. This will setup the Direct Show Filters to Low Latency, push only, video mode if asked
5. Windows default language is English. To change the default language option, go to **Control Panel** and choose **Regional Options**.

2.4.3 Device Driver Installation (Step 2)

1. Execute **Setup.exe (**from Pleora SDK folder) to install a new version of the Indigo Systems PT000-IDG.
2. (If a previous version exits, it will prompt you to repair or remove. Choose to "Remove Indigo Systems PT000-IDG" to uninstall any previous version. If the previous version is not automatically uninstalled, then go to Control Panel and manually remove the program using Add/Remove programs. Click Close to exit. Then Execute **Setup.exe** to install a new version of Indigo Systems PT1000-IDG).
3. Choose "Do not reboot after installation when prompted" (you will reboot after Step3 [Setup Console])
4. Close to exit

2.4.4 Luveo Console Installation (Step 3)

1. Uninstall any previous version of Luveo Console (Control Panel – Add/Remove Programs) and delete all patches if any
2. Execute the **Setup.exe**
3. Say Yes to all questions
4. Say Yes to Reboot the system
5. (Note: if prompted to install a different Windows device driver choose to install the latest version).

3. LUVEO CONSOLE OPERATION

All available toolboxes and video displays can be monitored simultaneously. Individual windows can be repositioned and resized.

3.1 Initial Configuration

Upon first powering up the WideEye camera(s), they must be configured with an appropriate IP address and system settings. If the power to the WideEye camera is lost and reestablished, the configuration needs to be performed again for the camera. The Luveo Console PCs may be powered down and the settings will be retained upon subsequent reapplication of power and launching of the application.

The following procedure can be used to initially get the WideEye camera up and running. It is assumed the hardware is properly connected, and all appropriate software has been installed.

3.1.1 Establish connection to WideEye

1. Launch the Luveo Console software by double-clicking on the Luveo Console icon on the host computer's desktop. Or right click on the icon and select **Open**. See Figure 4 – Luveo Console

Figure 4 – Luveo Console

From the Luveo top toolbar, select **Sensors, Add/Configure, Uncompressed Devices.** See Figure 5 – Uncompressed Devices.

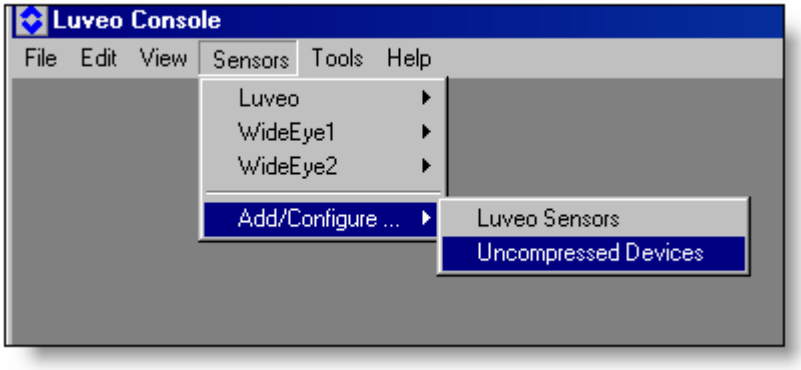

Figure 5 – Uncompressed Devices

On the Uncompressed Devices Configuration window. See Figure 6 – Uncompressed Devices Configuration Advanced.

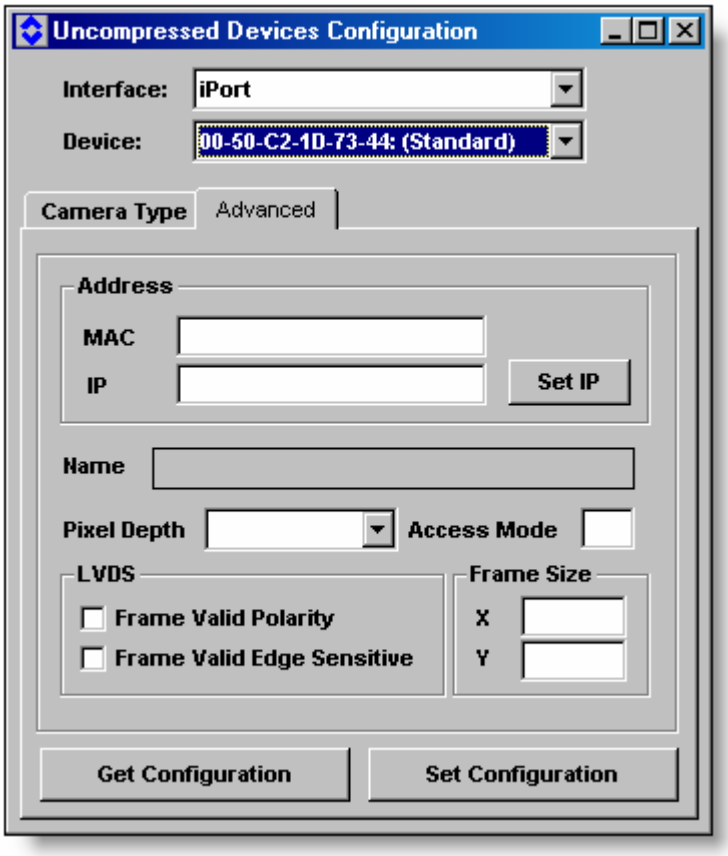

Figure 6 – Uncompressed Devices Configuration Advanced

Each time a WideEye is powered on an IP address must be set for that WideEye. Choose a unique IP address for your network and enter this into the IP Field, click **Set** IP, and

switch to **Camera Type** tab**,** which should take you to the next screen. See Figure 7 - Uncompressed Devices Configuration Camera Type.

For example, if your console IP address is 192.168.250.99 and you know that no one is using IP address 192.168.250.1 you can set the WideEye unit to 192.168.250.1. To find out the IP address of your console go to **Control Panel**, double click on **Network Connections**, right click on **Local Area Connections**, select **Properties**, select **Internet Protocol (TCP/IP)**, click on **Properties**. Note fixed IP address of your console PC (console and WideEye unit must have fixed IP addresses). Alternately, you can obtain PC IP information by executing "ipconfig" in a DOS window.

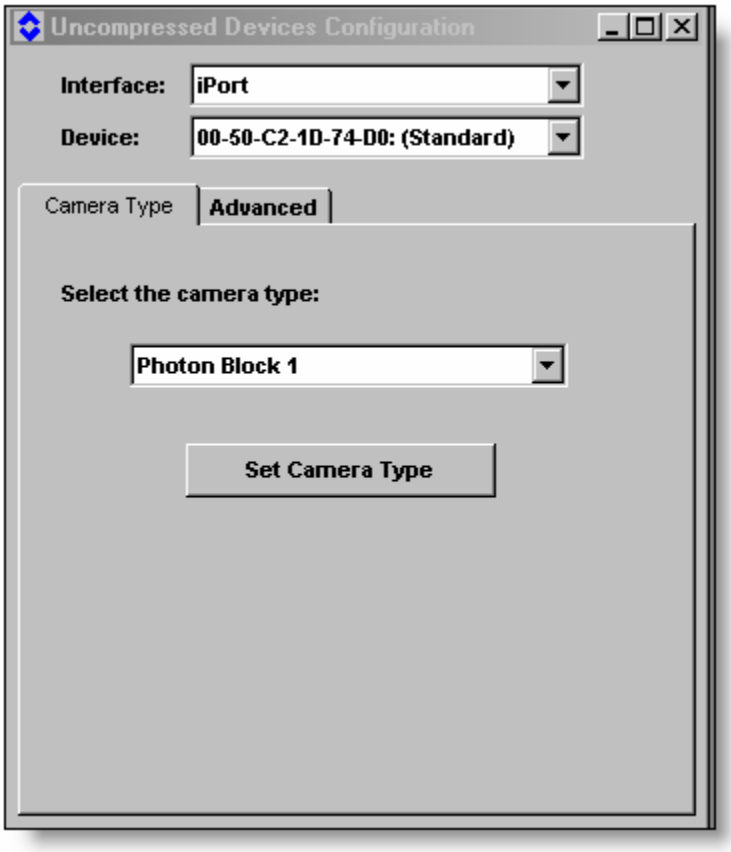

Figure 7 - Uncompressed Devices Configuration Camera Type

Select **Photon Block 1** from drop down box and click on **Set Camera Type**. Then switch back to the **Advanced** tab.

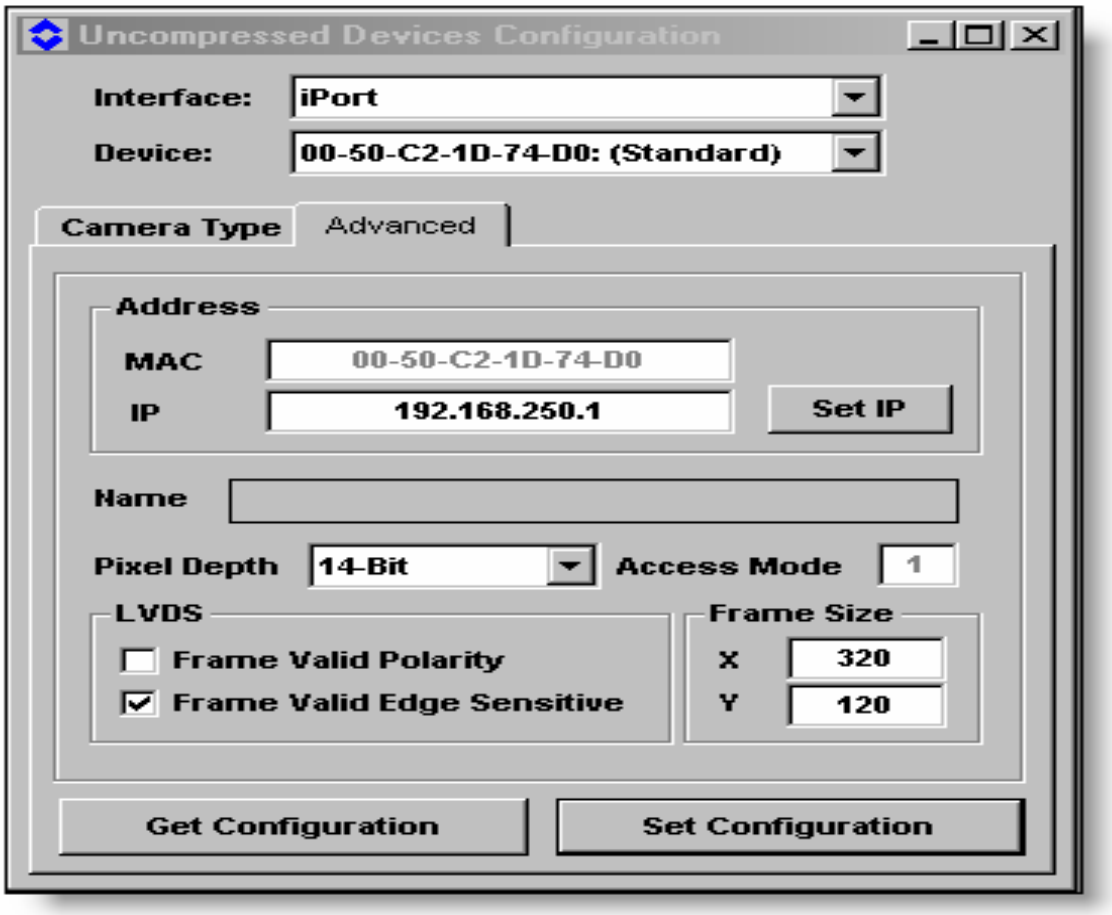

Figure 8 – Uncompressed Devices Configuration

Configuration should now be reflected in the advanced tab, if not, click on **Get Configuration**, select 14-Bit value for **Pixel Depth**, set **Frame Size: X** to 320 and **Y** to 120, make sure that **Frame Valid Edge Sensitive** is checked, and click **Set Configuration**, close window. See Figure 8 – Uncompressed Devices Configuration.

Repeat the same Uncompressed Devices Configuration for the second WideEye unit, if connected.

If the device has an IP address as needed by your network setup, then it's not necessary to set IP. On the other hand, if the Device List displays the MAC address, you will need to set an IP address using the "Advanced" tab.

Please note: that IP address change is only reflected in the Device list after a restart of the Luveo Console.

3.2 Console Operation – WideEye Unit

This document addresses the Luveo Console functions applicable to the operation of WideEye. Other controls, used for control and display of other types of sensors are mentioned here for information as they are part of the Luveo Console.

3.2.1 Open WideEye

1. From the Luveo top toolbar, select **Sensors, WideEye1, Open**. See Figure 9 – Opening WideEye.

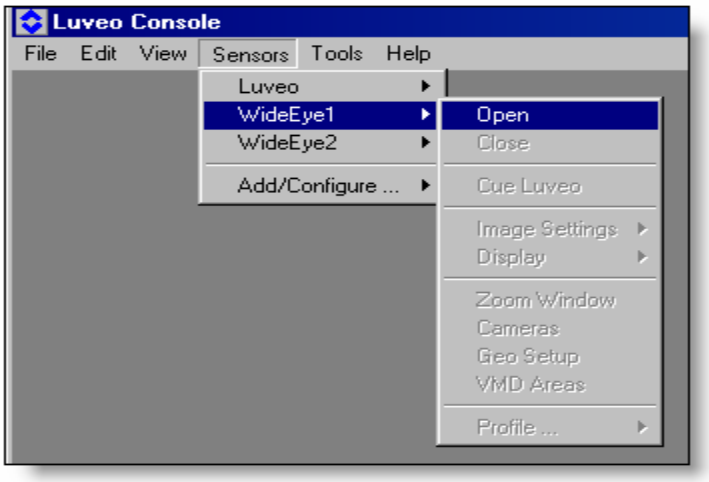

Figure 9 – Opening WideEye

2. Select **Yes** to start with the last settings or **No** for new settings. **Yes** should be selected if the WideEye has been powered up and already setup, and if you have previously saved the WideEye configuration in the Luveo Console. **No** should be selected if you do not want to use previously saved WideEye settings. See Figure 10 – Open Saved Settings. Note that for fresh configuration you will be taken directly to Figure 11 – Opening Cameras, where you need to right click on the ThermoVision WideEye window.

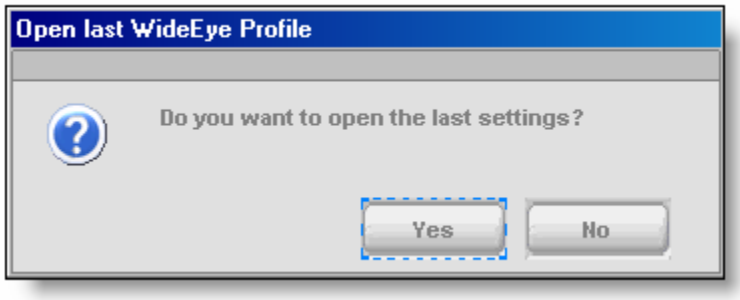

Figure 10 – Open Saved Settings

When you select **No**, for new settings, right click on the ThermoVision WideEye window. See Figure 11 – Opening Cameras.

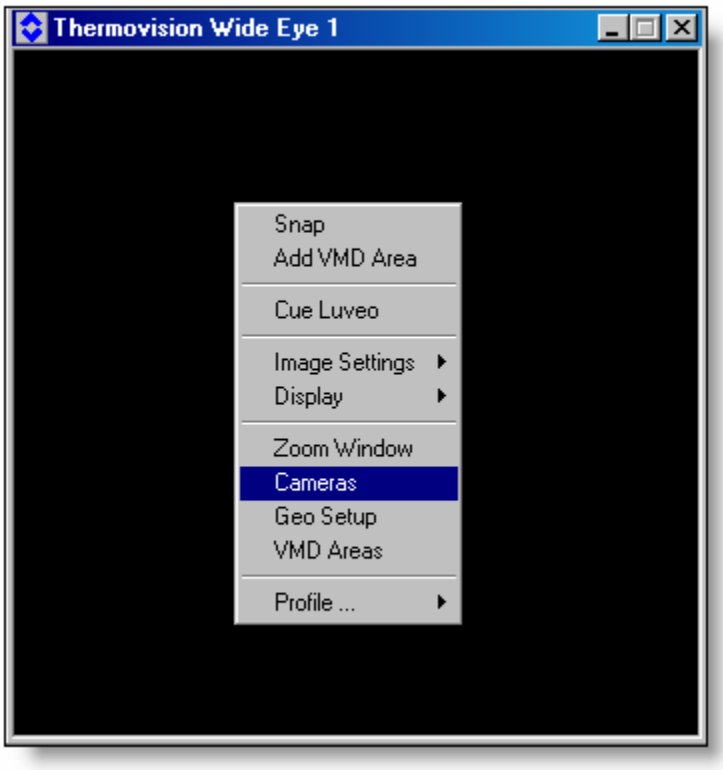

Figure 11 – Opening Cameras

3. Select **Cameras**, click on **Open Camera Selection**. See Figure 12 – Cameras Configuration.

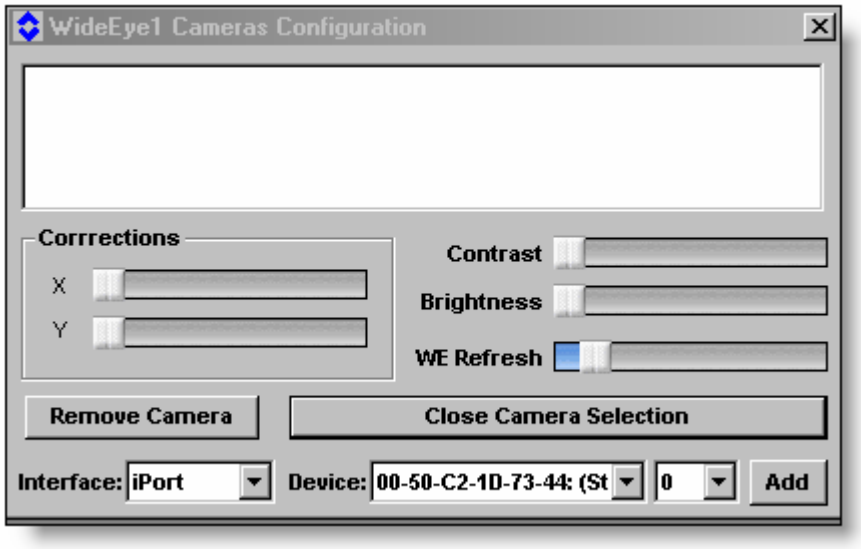

Figure 12 – Cameras Configuration

4. Select the Device Mac address for WideEye 1, select channel 0, click **Add**. For the same Device. Select channel 1 this time and click **Add.** See Figure 13 – Open/Close Camera Selection.

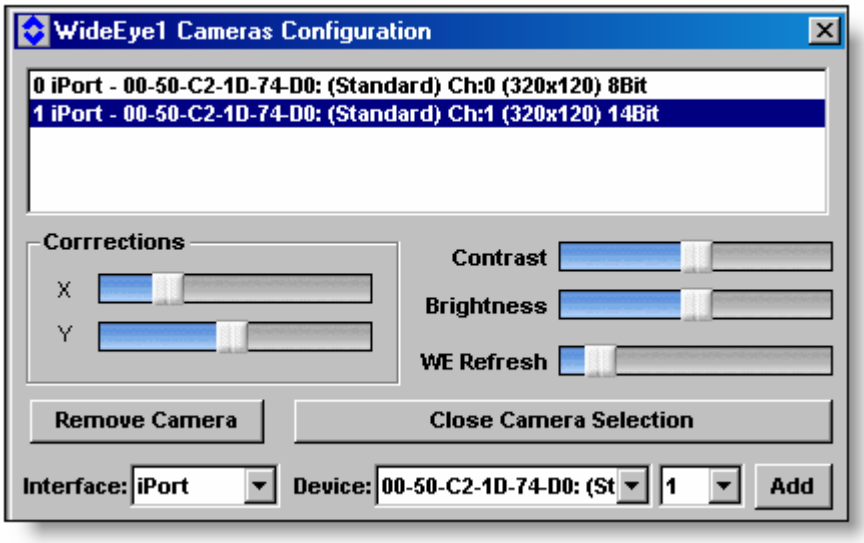

Figure 13 – Open/Close Camera Selection

5. Now the **ThermoVision WideEye** window is open, right click on it and select **Image Settings, AGC** (**A**utomatic **G**ain **C**ontrol) **On** to sharpen the image. See Figure 14 – ThermoVision WideEye.

6. With **1 iPort** selected, use the **Corrections X and Y** bars to optimize the field of view and the overlap. “Use a high contrast target, at about 150 meters”.
7. **Contrast, Brightness** can also be used to adjust the camera. But note that these fields reflect only the selected camera in the upper part of the window.
8. **WE Refresh** is used to define the frame rate for that video camera. (Frames are a continuous sequence of pictures). A higher frame rate will offer a softer and more continuous video, but higher CPU usage and graphic card process.

Figure 14 – ThermoVision WideEye

9. Once achieved, right click on the **ThermoVision WideEye** window, select **Image Settings, Blending**. This option enables an algorithm to get a smoother junction between both videos.
10. Repeat step “9” by selecting **Image Settings, AutoCrop**. This option hides the spare black regions on the video, caused by video “Correction Y” offset. See Figure 15 – Blending

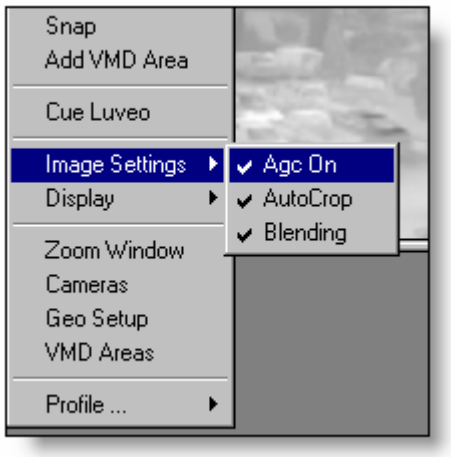

Figure 15 – Blending Images

11. Save settings by right clicking on the **ThermoVision WideEye** window, select **Profile**, **Save.** See section 3.2.6
12. Close Cameras Configuration window.

Repeat step 1 to 12 for the second WideEye unit, if connected.

3.2.2 Image setting

From the Luveo top toolbar, select **Sensors, WideEye**. Or right click on ThermoVision WideEye window. See Figure 16 – Image Settings. Select **Image Settings**. See steps 5-8 in previous section 3.2.1.

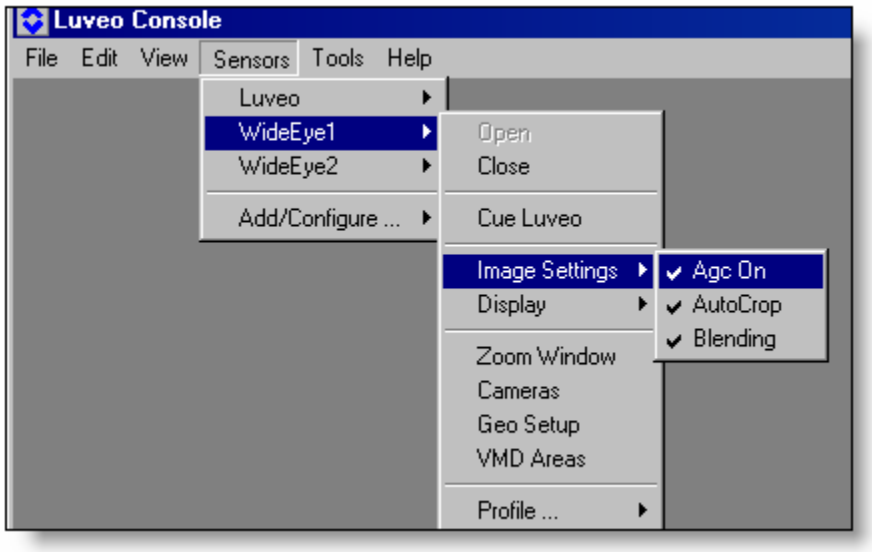

Figure 16 – Image Settings

3.2.3 Display

3.2.3.1 Palette

From the Luveo top toolbar, select **Sensors**, or right click on ThermoVision WideEye window, select **Display, Palette,** choose desired color. See Figure 17 – Display Palette.

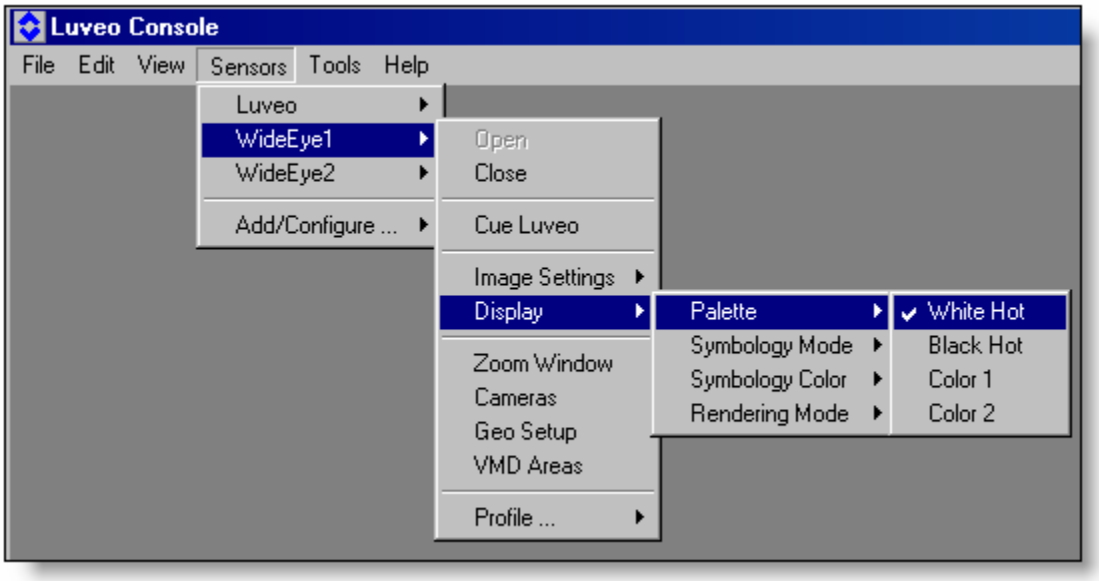

Figure 17 – Display Palette

3.2.3.2 Symbology Mode

From the Luveo top toolbar, select **Sensors**, or right click on the ThermoVision WideEye window, select **Display, Symbology Mode**, and select desired Mode. See Figure 18 – Display Symbology Mode.

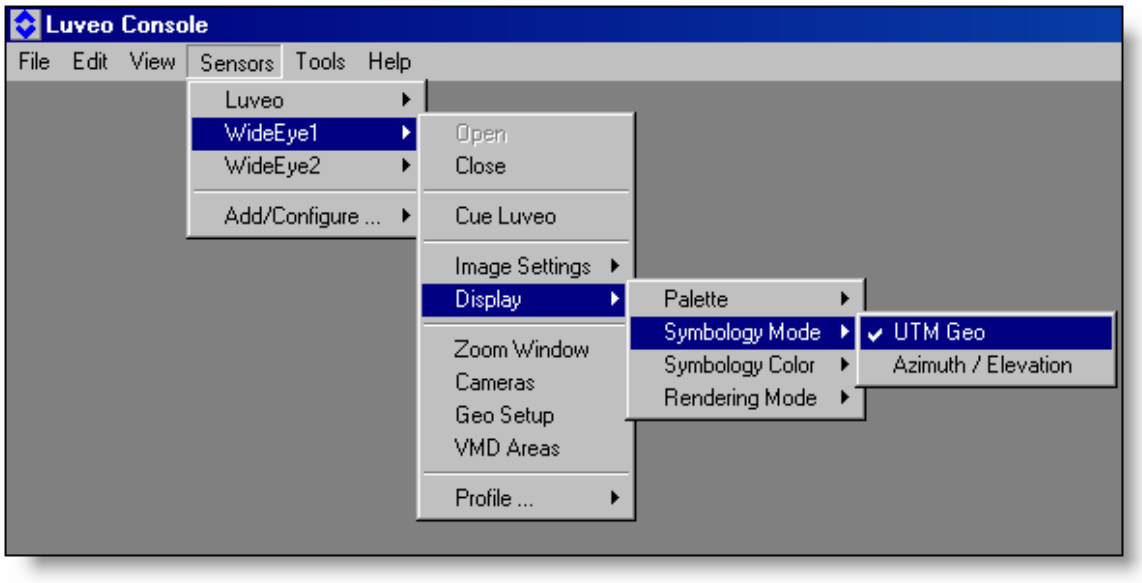

Figure 18 – Display Symbology Mode

3.2.3.3 Symbology Color

From the Luveo top toolbar, select **Sensors**, or right click on ThermoVision WideEye window, select **Display, Symbology Color**, and select desired color. See Figure 19 – Display Symbology Color.

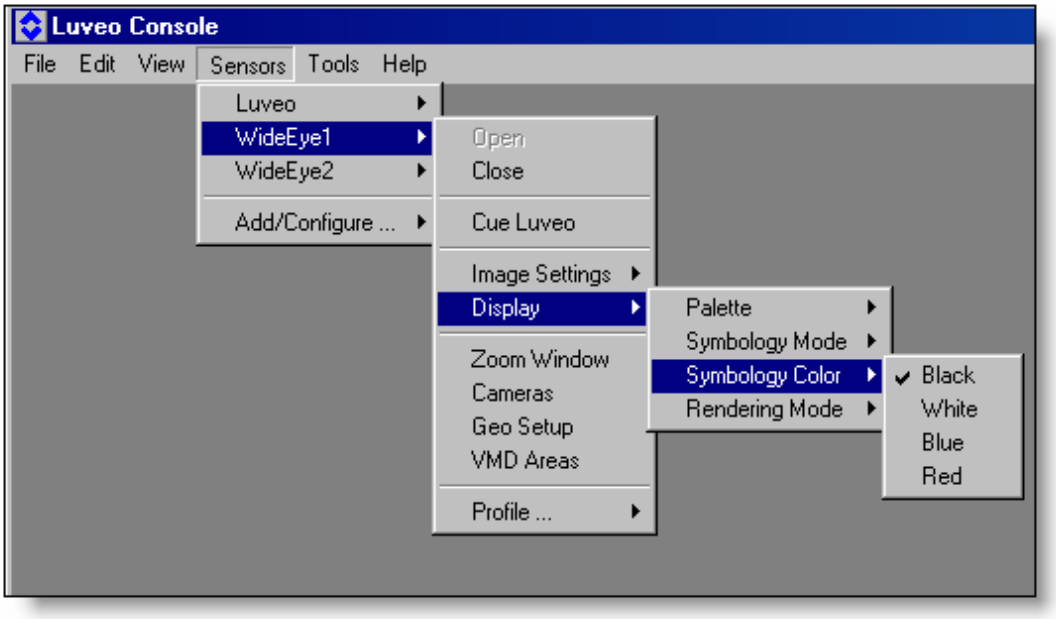

Figure 19 – Display Symbology Color

3.2.3.4 Rendering Mode

From the Luveo top toolbar, select **Sensors**, or right click on ThermoVision WideEye window, select **Display, Rendering Mode**, select the default as set to Windows GDI. See Figure 20 Display Rendering Mode.

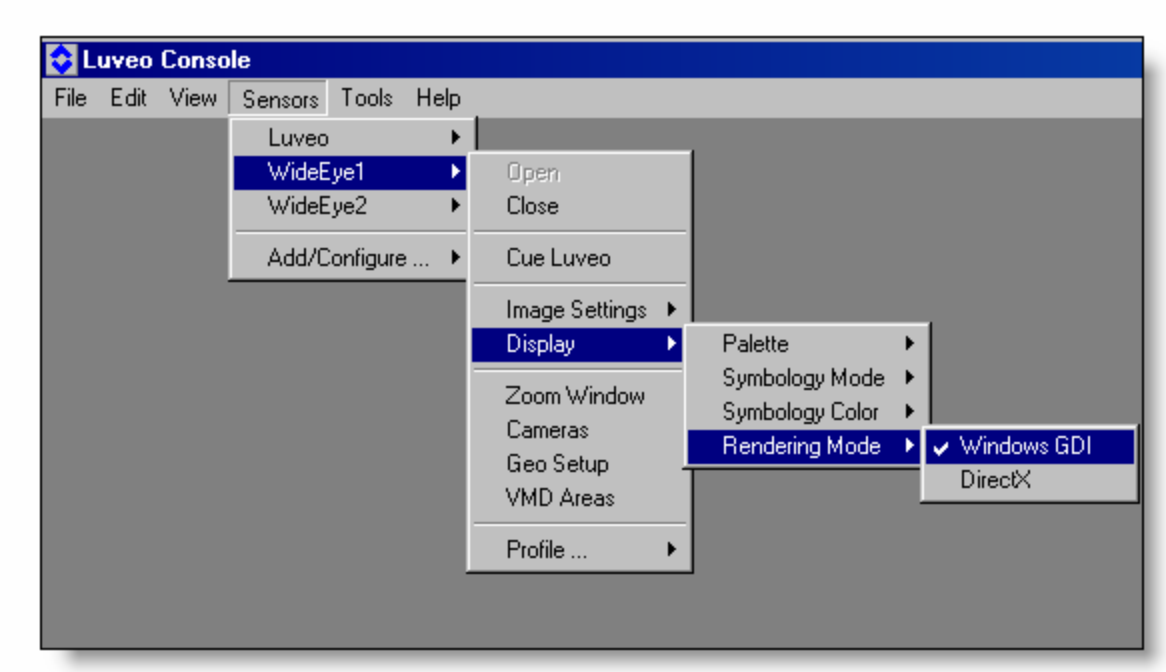

Figure 20 Display Rendering Mode

3.2.4 VMD (Video Motion Detection)

Right click on ThermoVision WideEye window. See Figure 21 – Adding VMD.

Step1. Select **Add VMD Area**. You can add up to 9 VMD areas.

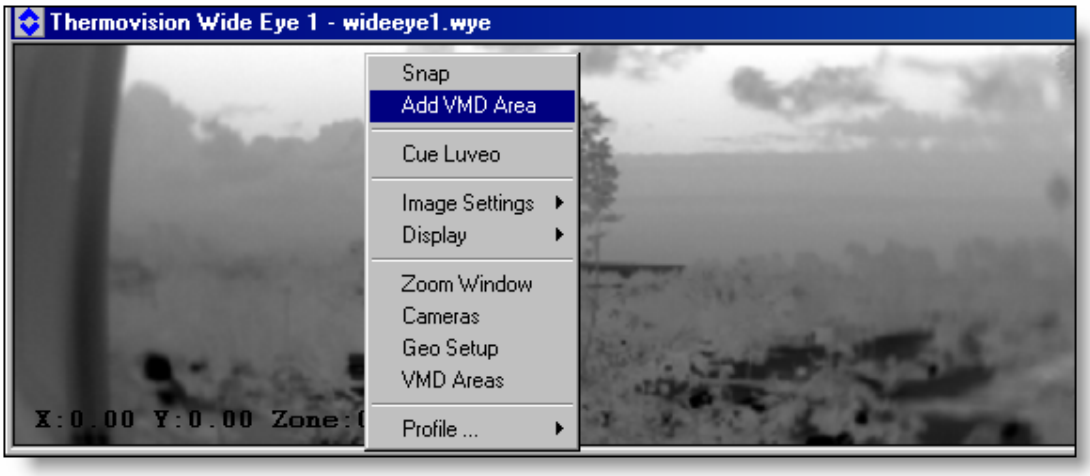

Figure 21 – Adding VMD

The cursor will turn into a pen to draw VMD polygon on the screen, double click last point to close area. See Figure 22 – VMD Area. Press ESC to cancel a VMD area and

start over. If the polygon is already closed, you need to remove that area from the VMD area window.

Figure 22 – VMD Area

Step2. From the Luveo Console, select **Sensors**, **WideEye, VMD Areas,** or right click on ThermoVision WideEye window, select **VMD Areas**. See Figure 23 – VMD Areas

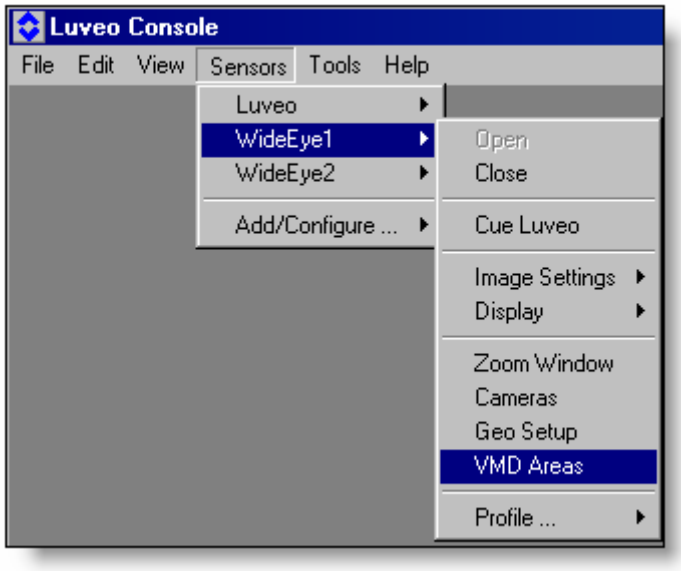

Figure 23 – VMD Areas

The WideEye Video Motion Detection Areas is now open for configuration. See Figure 24 – VMD Configuration.

3.2.4.1 Sensitivity

This value indicates the minimum difference in pixel level value between the reference frame and the current frame. The larger the slider value (more to the right side), the more sensitive the VMD algorithm will be, thus creating more alarms.

3.2.4.2 Size

The larger the expected target is, the higher this value should be set. Settings more to the left will trigger more alarms.

3.2.4.3 Global Noise Filter

This value is intended to filter the noise of the background, in order to avoid false alarms. It has an effect on the construction of the reference frame. The filter value determines the weight of the last frame when added to the reference frame. Higher settings to the right will increase detection ability; consequently this setting will increase false alarms. Set the indicator bar more toward the left to reduce false alarms.

Note: To remove a VMD area, select the area from the list and select **Remove Area**. To get to VMD configuration window, see previous Step2.

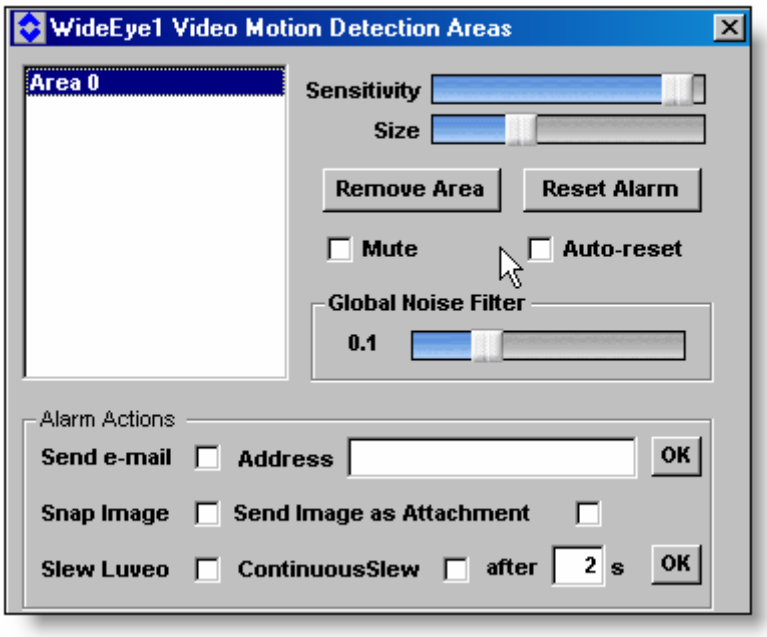

Figure 24 – VMD Configuration

Once VMD areas are configured, Cue Luveo can be used when an alarm goes off. You will need to set GeoReference first, see sections 3.3.1 and 3.3.2.

Note: The pan/tilt will not cue to an alarm if it is set to automatically scan in the sensor's pan/tilt controls via the Console. Automatic scan must be turned off first (via the Console control for the sensor's pan/tilt).

3.2.5 Zoom Window

From the Luveo top toolbar, select **Sensors, WideEye**. Or right click on ThermoVision WideEye window. Select **Zoom window**. See Figure 25 – Zoom Window.

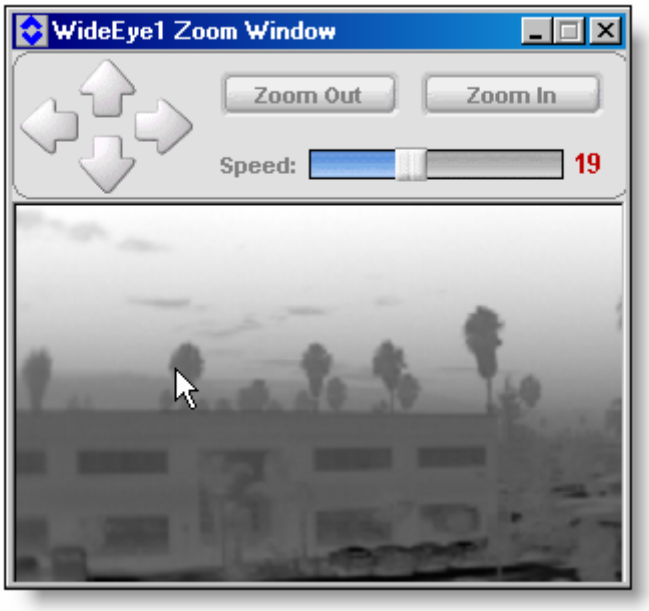

Figure 25 – Zoom Window

Use the WideEye zoom window to move in all four directions, including zoom in and out at the selected speed.

Figure 26 – Zoom Pan

A pan should now show on the ThermoVision WideEye. Click inside the pan and drag to desired area on the window. See Figure 26 – Zoom Pan.

3.2.6 Profile

Select **Save** to save current setting or **load** for previous setting. See Figure 27 – WideEye Profile Load or Save.

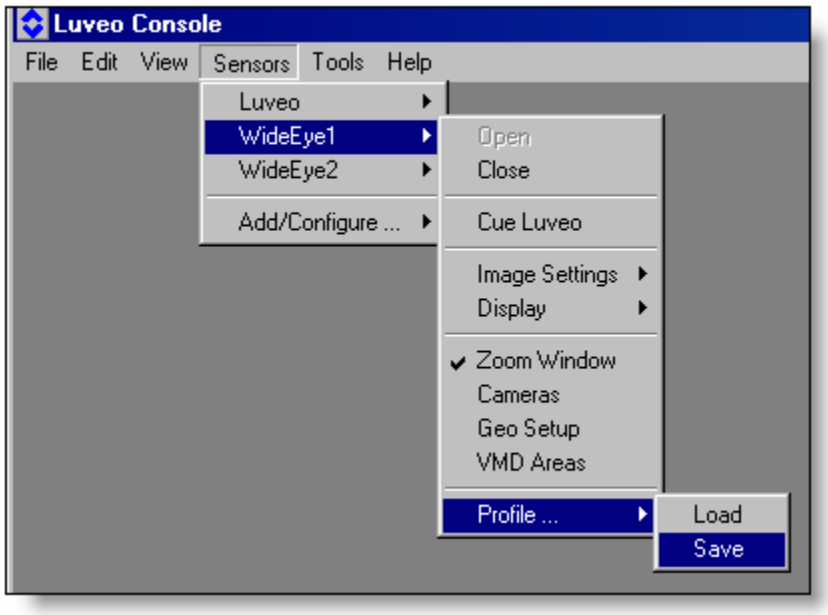

Figure 27 – WideEye Profile Load or Save

3.3 Console Operation – Cueing Slewable Sensors

The WideEye may be set up to provide azimuth and elevation cues to a slewable sensor (such as Sentry). The sensors must be calibrated in azimuth and elevation in order to have this cueing function effectively. Then the cueing may be enabled as a function of operator input or alarm events.

3.3.1 Geo Setup

Geo (GeoReference) Setup is to be performed on a Stand Alone WideEye combined with other Luveo sensors in the same system. This allows the WideEye to cue the slewable sensor to points of interest either via clicking on the WideEye image, or as a result of target detection alarms enabled in WideEye.

In order to calibrate the WideEye field of regard, and the slewable sensor aximuth and elevation, the Geo Setup function must be used. The operator selects a target (roughly in the middle of the WideEye image) to use as a reference for this calibration. The WideEye registers the target location via the use of the Geo Setup crosshairs and the slewable sensor registers the target location as a result of being pointed to the target and following through the Geo Setup process.

From the Luveo top toolbar, select **Sensors, WideEye**. Or right click on ThermoVision WideEye window. Select **Geo Setup**. See Figure 28 – Geo Setup.

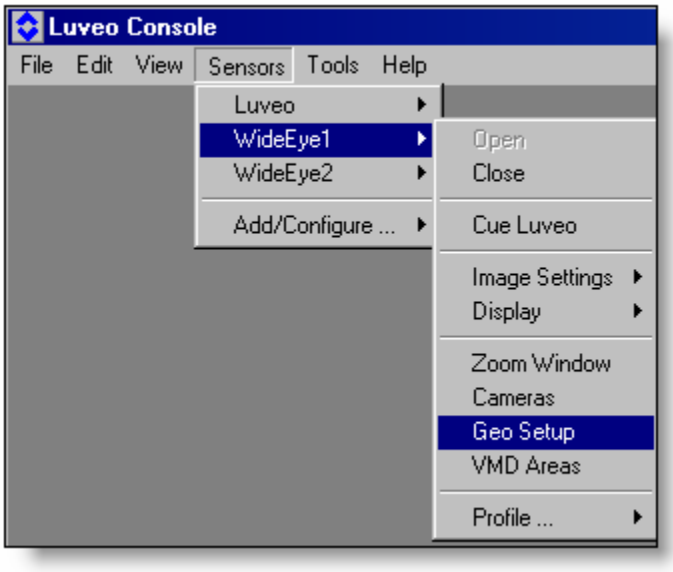

Figure 28 – Geo Setup

Once you select Geo Setup, the mouse pointer over the ThermoVision WideEye screen becomes a crosshair positioning itself at the very left corner of the ThermoVision WideEye screen as shown in Figure 29 – GeoReference Crosshair. Also the

GeoReference Configuration window will pop up. See Figure 30 – GeoReference Configuration.

Figure 29 – GeoReference Crosshair

1. Use the Crosshair Horizontal & Vertical sliding bars on the GeoReference Configuration window to position at the desired reference over the WideEye video. You need to point the Luveo platform to that same location for calibration.

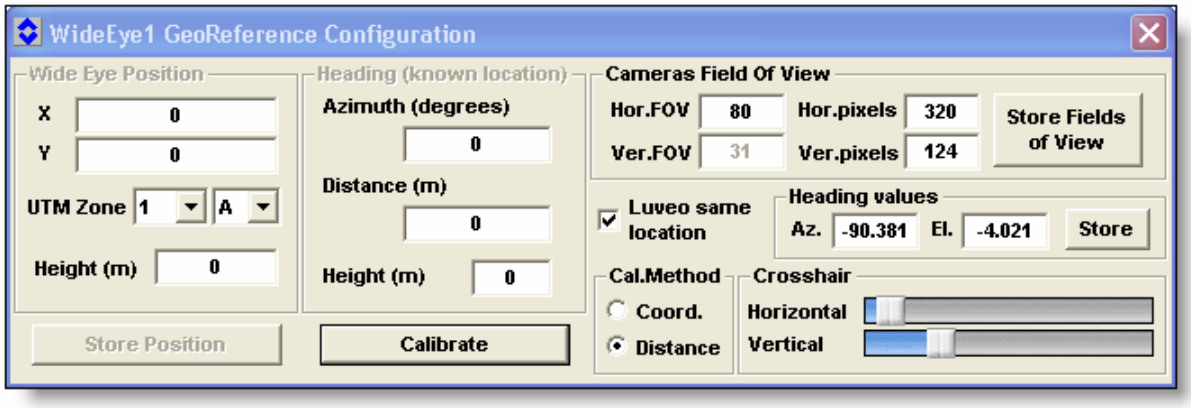

Figure 30 – GeoReference Configuration

Note that the settings need to be set as shown in order for the calibration process to function effectively (with the crosshair positions being a function of user selection to identify the selected target).

2. **Cameras Field of View**. This section defines the values of the Field of View of the cameras in pixels and degrees. Parameters should automatically default to the following:
   Hor.FOV: 80
   Hor.pixels: 320
   Ver.pixels: 120

3. Click on **Store Fields of View**
4. If Stand Alone WideEye, go to step 7 . If combined with other Luveo Sensors go to step 5

5. Make sure that Field **Luveo same location** is checked
6. Using Joystick or pad to position the IR camera at the same azimuth or the same location as the WideEye, go to step 8.
7. Enter **WideEye Position** or **Heading (Known location)** parameters, make sure **Luveo same location** field is **U**nchecked
8. Select **Calibrate**
9. Reading in **Heading Values** fields should now appear
10. Select **Store**
11. Close the GeoReference Window.

If other Luveo Sensors have being calibrated with the WideEye, a Reticle will appear on the ThermoVision screen, after **Cue Luveo** is selected. Point and click the reticle to make the IR camera slew to that same location. See Section 3.3.2 Cue Luveo.
Note that the IR camera will not cue to an alarm if it has been set to Automatic Scan. Automatic Scan must be disabled first (via the Console pan/tilt control panel for the sensor).

3.3.2 Cue Luveo

Cue Luveo can be performed after the Geo Setup, see section 3.3.1. From the Luveo top toolbar, select **Sensors, WideEye**. Or right click on ThermoVision WideEye window. When **Cue Luveo** is checked it can cue in as directed on the ThermoVision WideEye screen or it can cue to Alarm VMD. See Figure 31 – Cue Luveo.

Note that when cueing luveo the WideEye must have “Cue Luveo” selected in the WideEye image menu (right click on WideEye image to get to this menu).

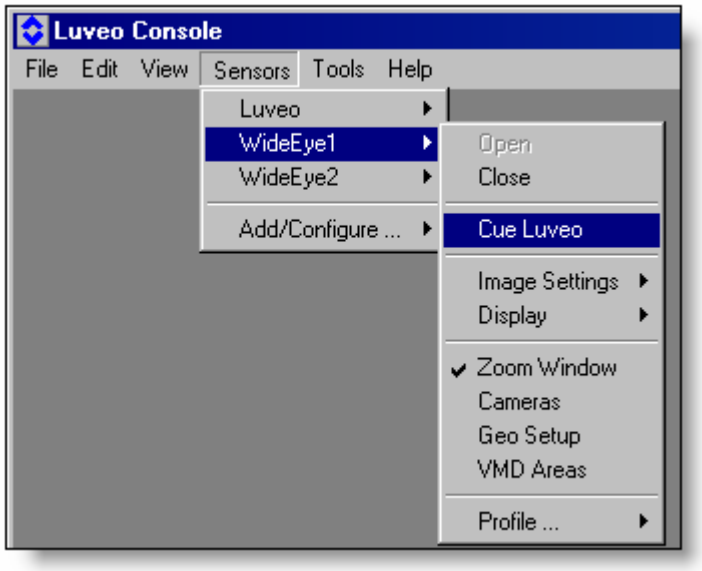

Figure 31 – Cue Luveo

3.4 Other Luveo Console Controls, for FLIR sensors other than WideEye

3.4.1 Preferences

i) Under the General tab, the user can configure the system to save various device configuration settings. The operator can also force the Console software windows to always be the top window displayed on the monitor. The **Open Server section**, allows the user to select which action the Console will execute upon opening a server. An example of this action, when **Open in Channel video from device** box is checked, the video signal from the selected device will open automatically, when a server is opened from the Luveo Console. The **Open last Active Server of this Desktop** will open all active servers present on the Console before closing. See Figure 32 – Preferences General Tab.

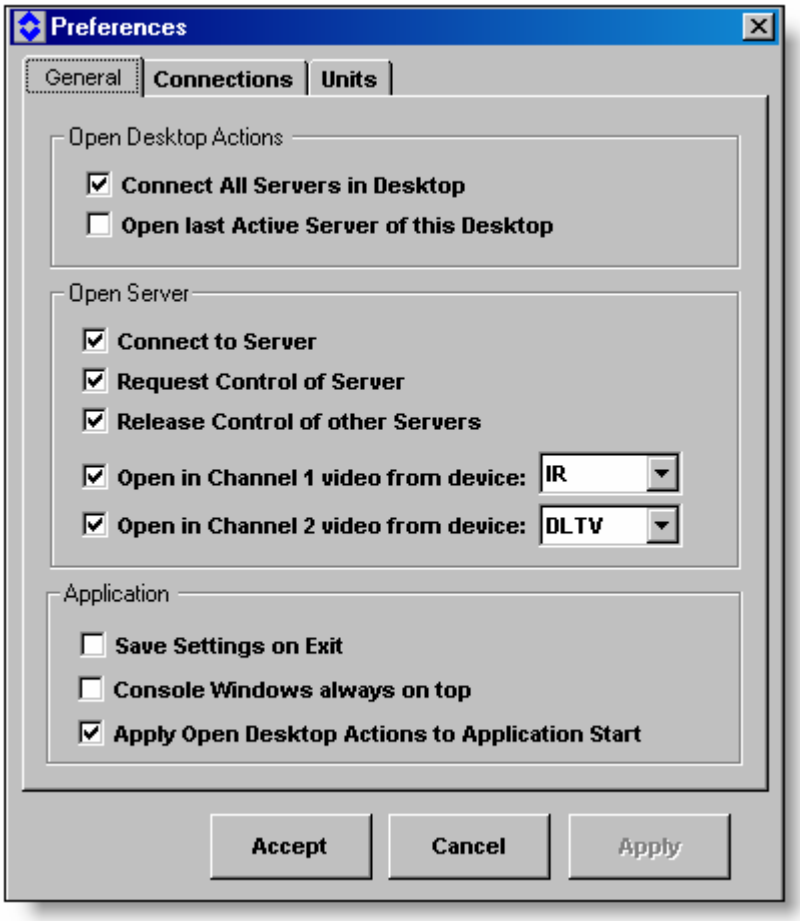

Figure 32 – Preferences General Tab

ii) The connections tab, allows the operator to configure the system to automatically assign the joystick to the console requesting control. Network discovery port and various system timeouts are also displayed in this window. See Figure 33 – Preference Connections tab.

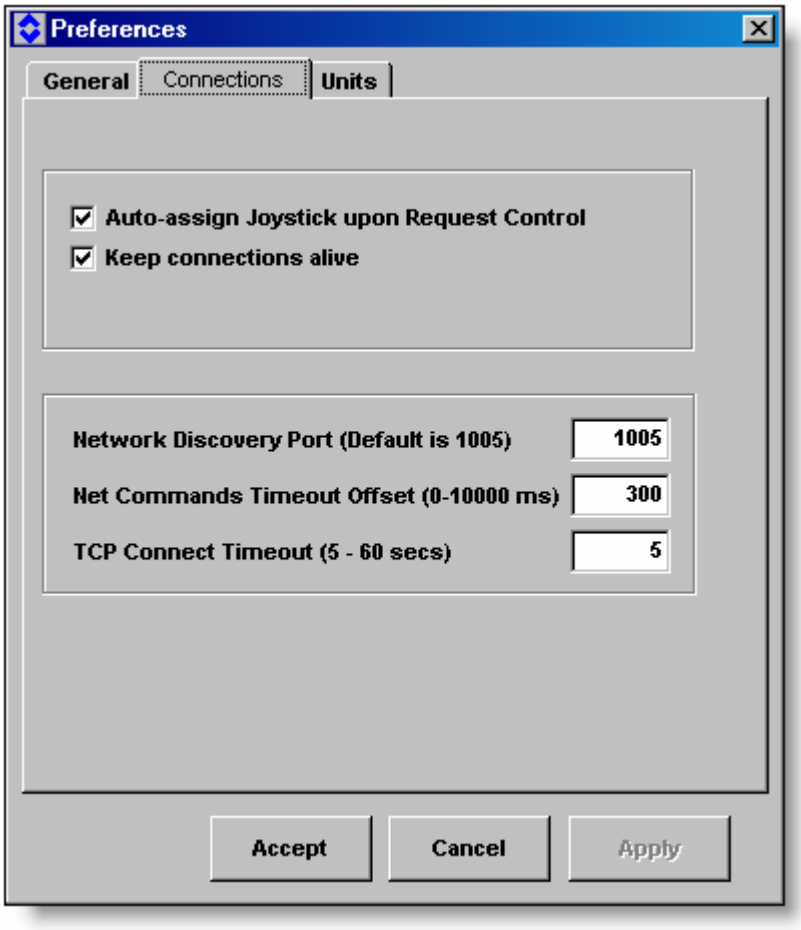

Figure 33 – Preference Connections tab

iii) Parameters in the Units tab are defaulted from the setup. The **Maintenance Mode Activation** field is for factory use. See Figure 34 – Preferences Units

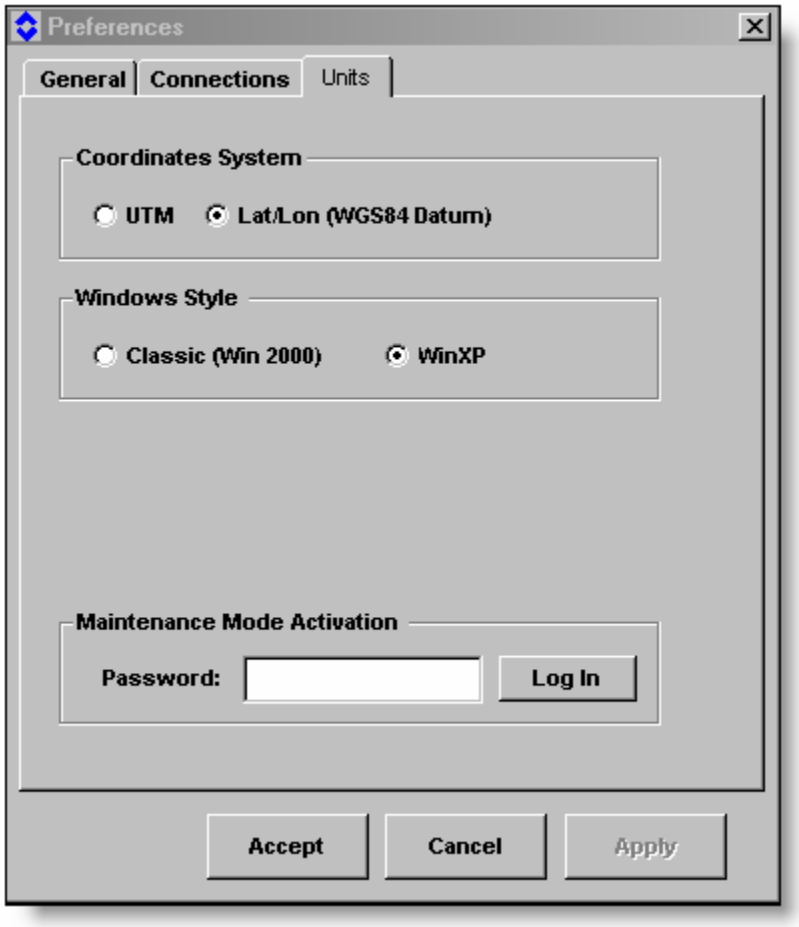

Figure 34 – Preferences Units

3.4.2 View

Main Toolbar: From the Luveo Console Toolbar, select **View, Main Toolbar**. A small Luveo Toolbar will appear in the right bottom corner of the screen. See Figure 35 – Main Toolbar.

Figure 35 – Main Toolbar

Sensors Panel: From the Luveo Console Toolbar, select **View, Sensors Panel**. A small Sensors Panel window will appear at the left bottom corner of the screen, displaying a list of different sensors configured on the system. See Figure 36 – Sensors Panel.

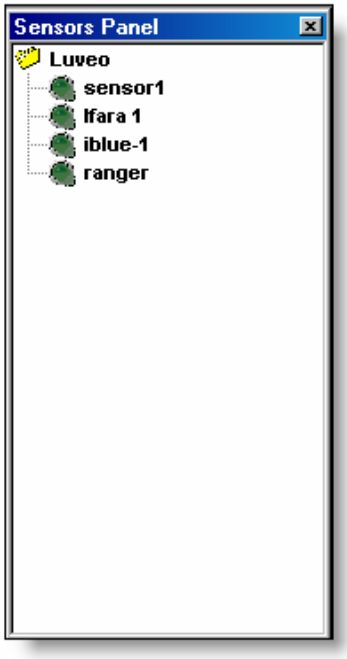

Figure 36 – Sensors Panel

3.4.3 Sensors

From the Luveo Console tab, select **Sensors**, **Luveo**, **Open**, **select a sensor**.
Arrange the various toolboxes windows so that all functions can be seen on the desktop simultaneously. See Figure 37 – Luveo Sensors.

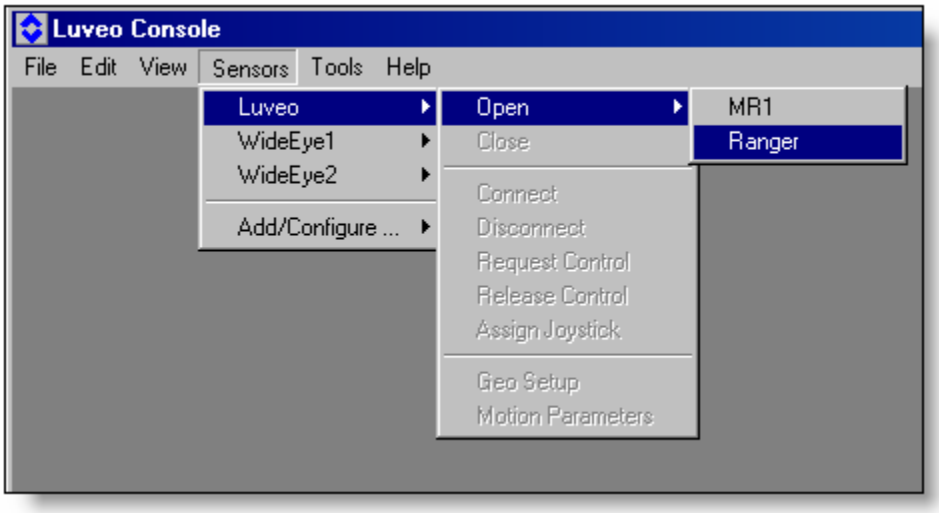

Figure 37 – Luveo Sensors

3.4.4 Tools

Select **Joystick Device** from the pull-down menu, use this submenu to select joystick device and display the various button assignments. See Figure 38 – Joystick.

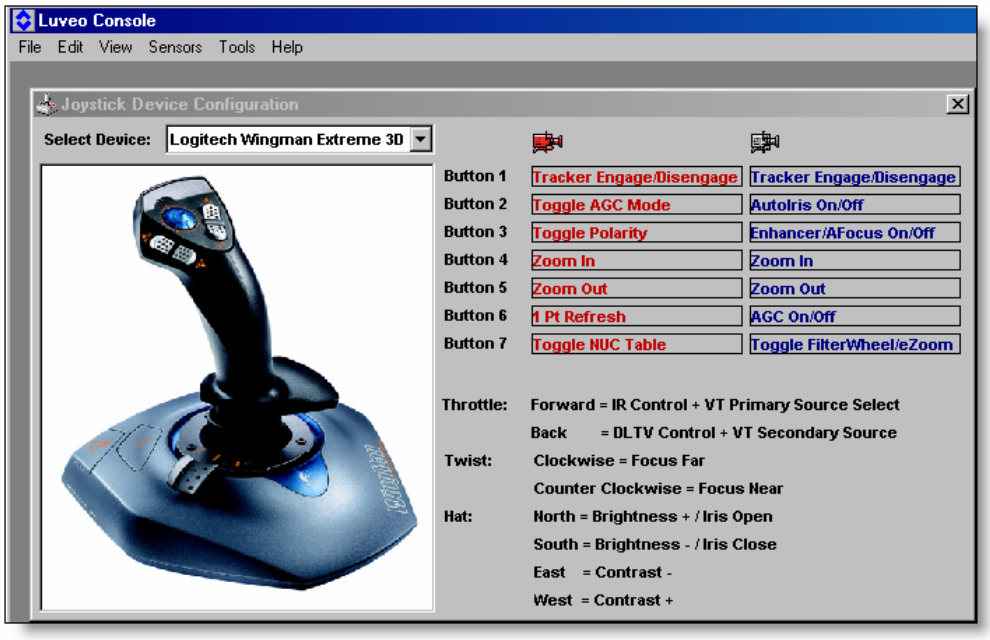

Figure 38 – Joystick

4. TROUBLESHOOTING

If any questions or problems are not addressed in this manual, contact FLIR Systems Client Services at (805) 964-9797.

What if the Luveo Console becomes completely non responsive?

Luveo Console application may become non responsive if the WideEye power gets disconnected without closing the application first. This may manifest as “Frozen” video or an application crash; In this case, restart the Luveo Console once power from the WideEye to the Console is re-established and reconfigure the WideEye with the correct IP address. Refer to WideEye configuration Section 3.1.

What if I assign the wrong IP address and causes IP collision in the network?

At the moment the WideEye does not offer the flexibility to modify previously assigned IP addresses, without cycling power to the sensor. Therefore, it is very important that the System Administrator assigns the correct IP address during original setup. If for some reason, you loose configuration and it becomes impossible to reconfigure with the correct IP, you need to close the Luveo Console, disconnect the WideEye to retrieve its MAC address and reconfigure with the correct IP address. Refer to WideEye configuration Section 3.1.

What if the WideEye Image freezes?

In case the WideEye Image appears frozen, close the WideEye window and reopen with existing setup.

What if the WideEye Image comes up all black?

In case the WideEye image window appears, but the image is all black, the configuration of the WideEye needs to be checked. Specifically, make sure the Frame Valid Edge Sensitive box is checked and the configuration saved. See Initial Configuration in this document.