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# HuddleCamHD

## SimplTrack2

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Auto Tracking Camera

Installation & Operation Manual

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## Precautions

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### Safety Tips

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- Please read this manual carefully before using the camera.
- Avoid damage from stress, violent vibration or liquid intrusion during transportation, storage, or installation.
- Take care of the camera during installation to prevent damage to the camera case, ports, lens, or PTZ mechanism.
- Do not apply excessive voltage, use only the specified voltage. Otherwise, you may experience an electrical shock.
- Keep the camera away from strong electromagnetic sources.
- Do not aim the camera at bright light sources (e.g. bright lights, the sun, etc.) for extended periods of time.
- Do not clean the camera with any active chemicals or corrosive detergents.
- Do not disassemble the camera or any of the camera's components. If problems arise, please contact your authorized dealer.
- After long term operation, moving components can wear down. Contact your authorized dealer for repair.

## What's in the Box

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### Supplied Hardware

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- 20X SimplTrack2 Camera
- Power Supply
- IR Remote
- RS-232 control cable
- This User Manual
- 3m / 9.8' USB 3.0 A-B Cable
- Software installation disk

## Physical Descriptions

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### Front View of Camera

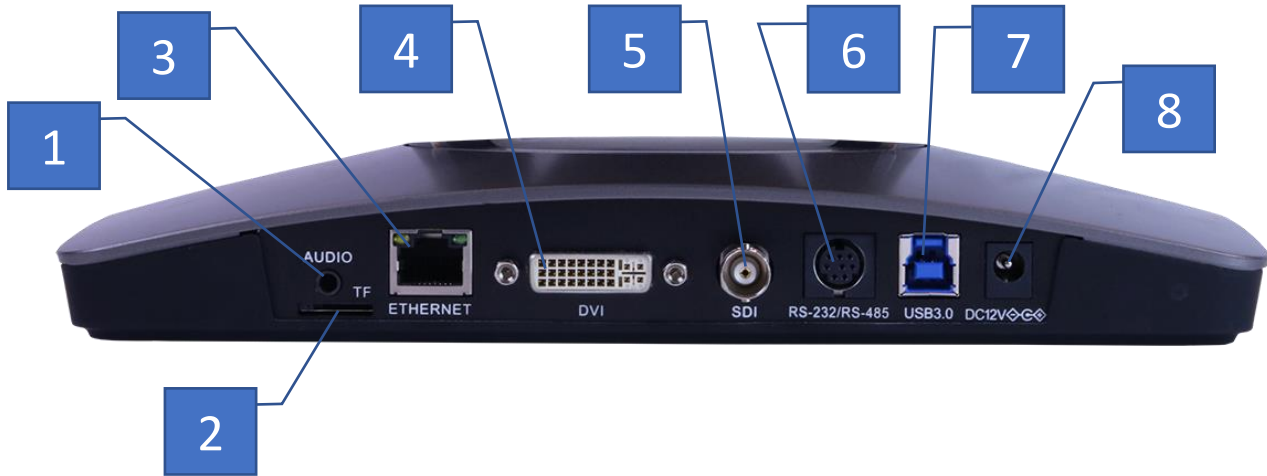
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- 1. Tracking Camera Lens**
  - a. 20X Optical Zoom
  - b. Field of View: 3° (tele) to 59° (wide)
- 2. Reference Camera Lens**
  - a. 86° (Horizontal) x 52° (Vertical)

## Rear View of Camera

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1. **3.5mm Audio Input** (Embeds over RTSP or RTMP)
2. **Micro SD Card Slot** (Allows for Photobooth functionality)
3. **RJ45 - Ethernet Port** (Allows for setup & RTSP/RTMP video feed)
4. **DVI-D Video Output** (Includes DVI to HDMI converter for HDMI output)
5. **SDI Video Output** (Outputs up to 1080p60)
6. **8-Pin Mini Din VISCA Input** (Supports RS-232 & RS-485)
7. **USB 3.0 video Output** (Outputs up to 1080p60)
8. **DC12V 2.5A Power Connector**

## Basic Connection Instructions

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### Network Connection

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1. Connect a live network connection, from a network with a DHCP server, to the camera.
2. Connect the included Power Supply to the camera.
3. Wait for camera to come to Home Position.
4. Install the SimplTrack software on your Windows PC on the same network as the camera
5. Open the SimplTrack software to connect to your camera

*Note: To pull the **main RTSP** stream please use the following URL*  
*rtsp://<camera ip>:<rtsp port>/main.h264*  
*(example: rtsp://192.168.111.85:5000/main.h264)*

*Note: To pull the **sub RTSP** stream please use the following URL*  
*rtsp://<camera ip>:<rtsp port>/sub.h264*  
*(example: rtsp://192.168.111.85:5000/sub.h264)*

*Note: To pull the **3rd or 4th RTSP** stream please use the following URL*  
*rtsp://<camera ip>:<rtsp port>/<3 or 4>.h264*  
*(example: rtsp://192.168.111.85:5000/<3 or 4>.h264)*

### SDI Connection

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1. Connect an SDI cable to the SDI output on the camera.
2. Connect the SDI cable to your equipment with an available SDI input.
  - a. Adjust output resolution via the Software Interface
  - b. Adjust output frame rate via the Software Interface

### USB Connection

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1. Connect a USB 3.0 cable to the USB output on the camera.
2. Connect the USB output of the camera to an available USB 3.0 port on your PC
  - a. Camera will auto adjust frame rate & resolution upon connecting to a video software

### DVI Connection

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1. Connect a DVI cable to the DVI output of the camera.
  - a. You can also connect a DVI to HDMI converter to the DVI output and run HDMI from the camera.
2. Connect the DVI/HDMI cable to your equipment

**NOTE:** The camera will auto power cycle upon connection to video software. It will auto scale the best resolution

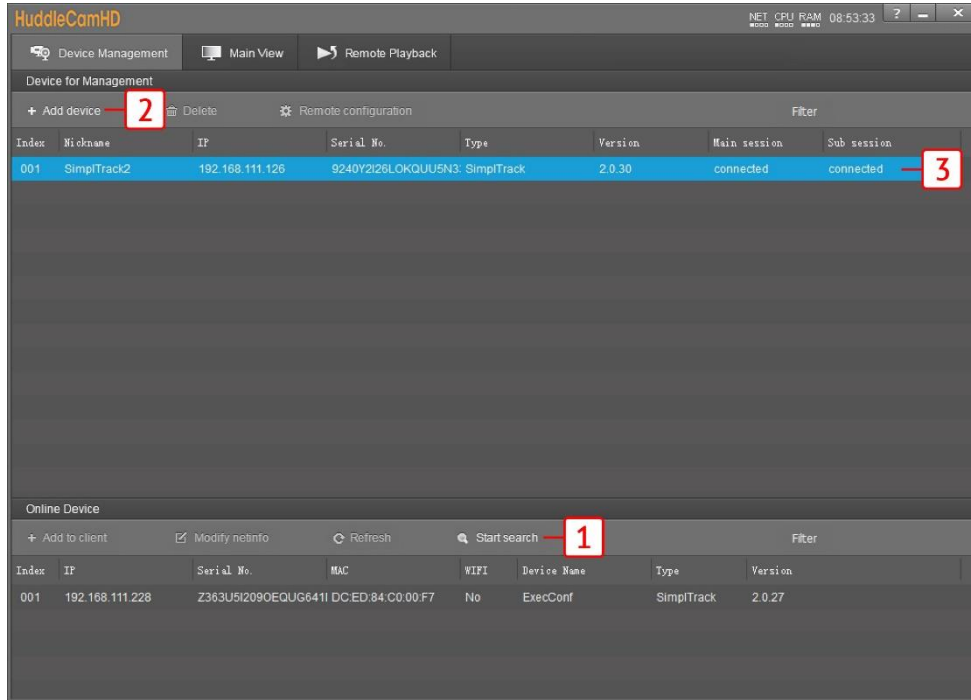
Failure to follow these sequences may result in no connection.

## Setting up the Camera

### Connect Camera

Begin by physically connecting the camera to power, a Local Area Network (LAN), and USB, SDI, or DVI if you plan on utilizing them. View [page 6](#) for more information.

Now that your camera is connected to a LAN, open the tracking software to connect to your camera.

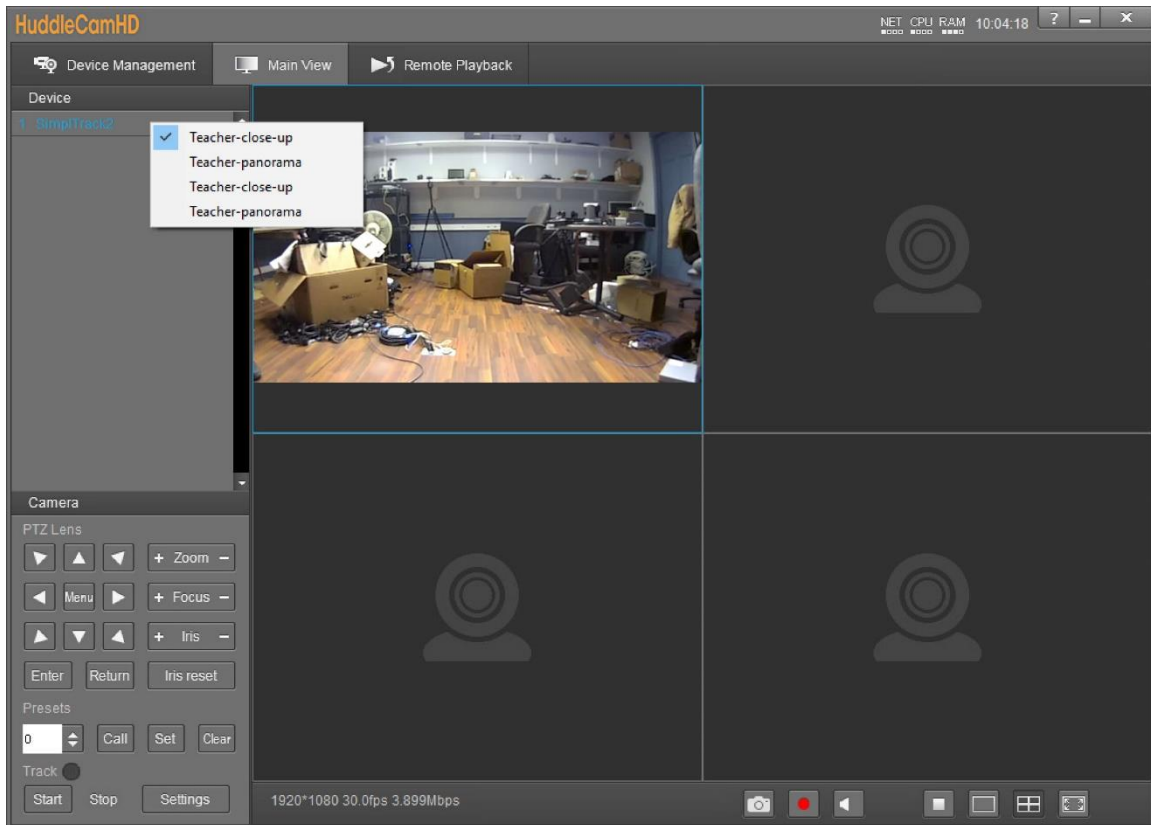


1. Click **"Start Search"** in the bottom section of the software to search for cameras on the same subnet mask as your PC.
  - a. Note: The camera utilizes DHCP by default, if your PC is also utilizing DHCP this search should find your camera.
2. Alternatively, you can use **" + Add Device "** at the top to manually add a camera to the software using the cameras IP address & Port (Default: 5001), or import using a \*.csv
  - a. Note: Although not needed by default, the login credentials are Username: "admin", Password: "admin"
3. Now that your camera is connected, click **"Main View"** at the top of the software to begin setting up the tracking parameters.

## Configure Tracking

Now that you have a camera connected, you can select an empty cell and right-click the camera to select a video feed for that cell, as shown below.

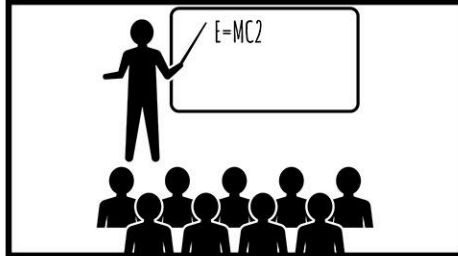
- Teacher-close-up: Main RTSP feed (PTZ camera)
- Teacher-panorama: Sub RTSP feed (Reference camera)
- Teacher-close-up: RTSP stream 3 feed (PTZ camera)
- Teacher-panorama: RTSP stream 4 feed (PTZ camera)



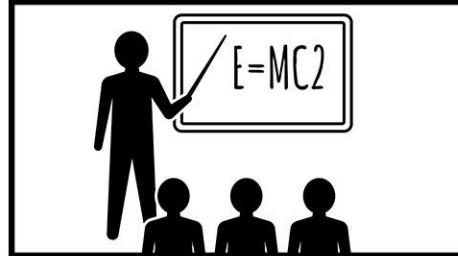
1. The first thing you'll want to do is set preset 0 & preset 1. Use the guide below to properly set the preset positions.



## Configure Tracking (Continued)

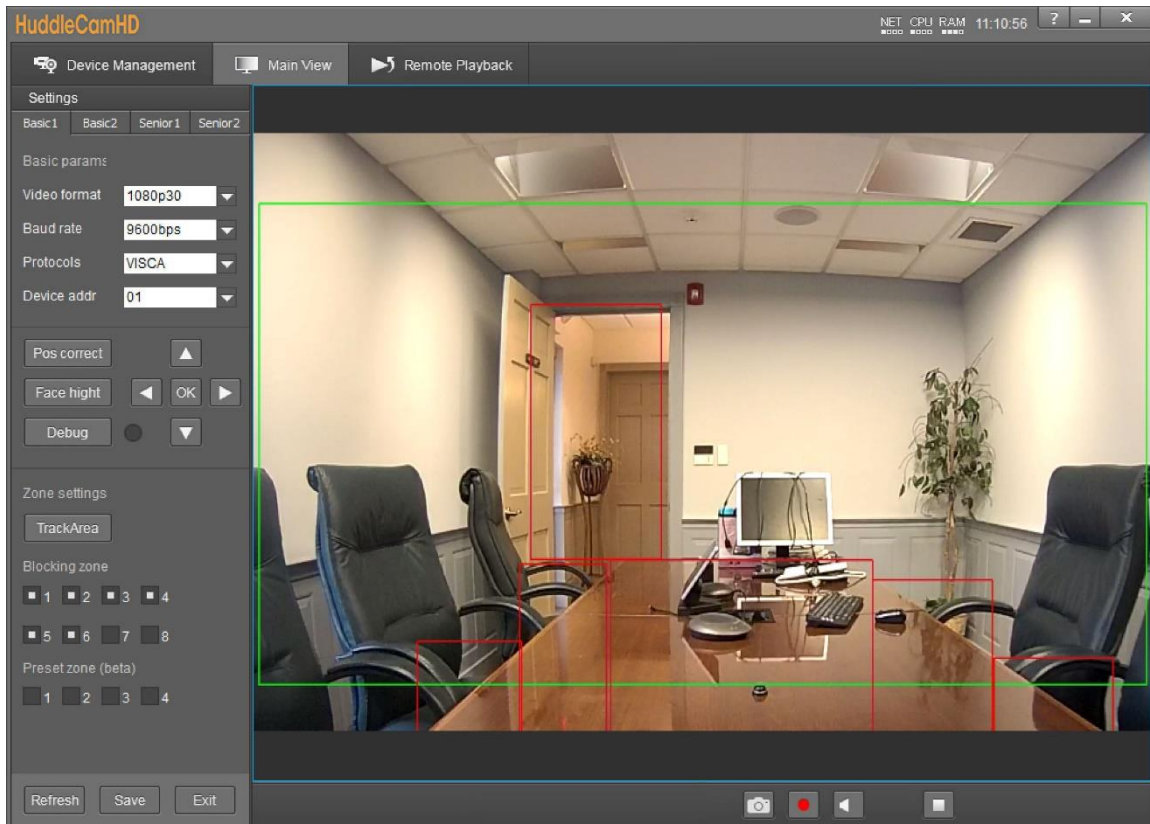


TIP: Zoom your camera out to set a preset that will frame your entire stage.



TIP: Zoom your camera in to frame your subject and their presentation space.

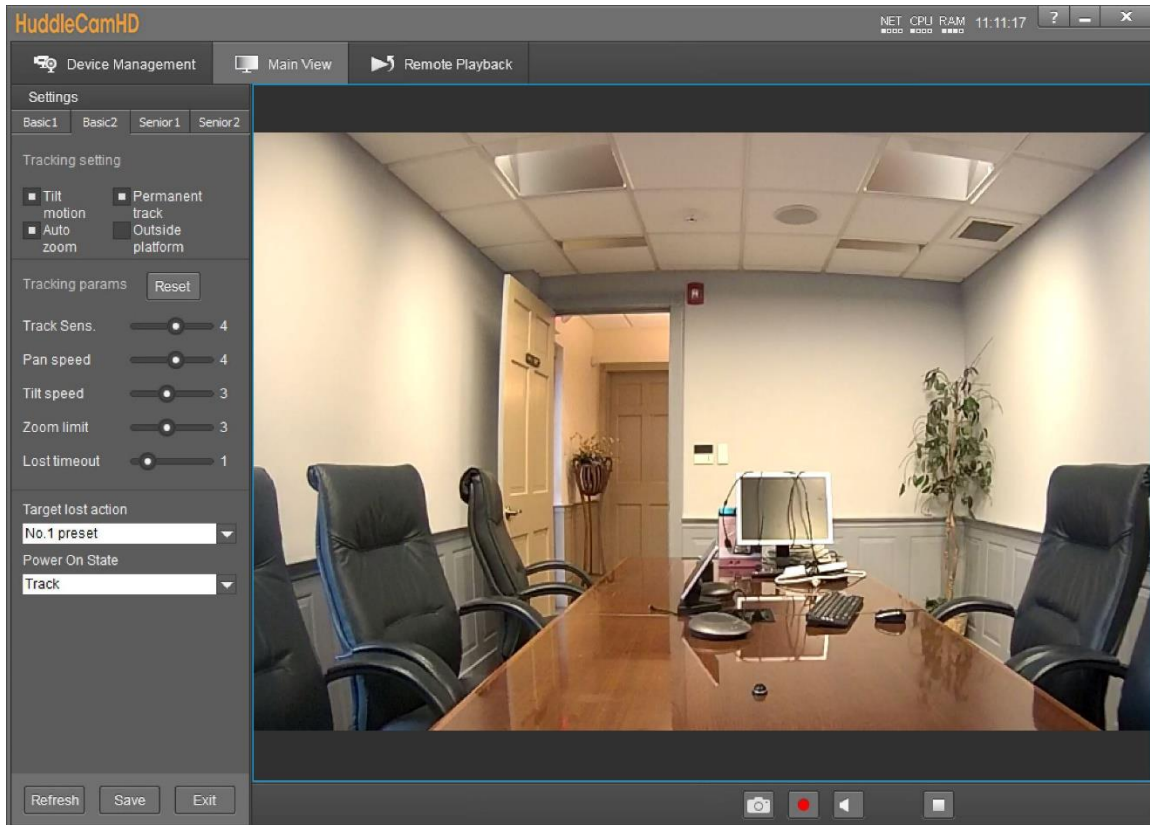
- From here, open “Settings” from the bottom left of the tracking software. This will open the Basic 1 menu.



- Set the tracking zone and blocking zones for your environment.
  - Note:** As shown above, the tracking zone encompasses anywhere that may include a face. The blocking zones are set anywhere that could be tracked that shouldn't be, such as individuals walking by the doorway, or faces reflected in the table.

## Configure Tracking (Continued)

4. Click **“Save”** to save the Tracking & Blocking zones.
5. Click **“Basic 2”** along the top left of the software to open the secondary page of tracking parameters.

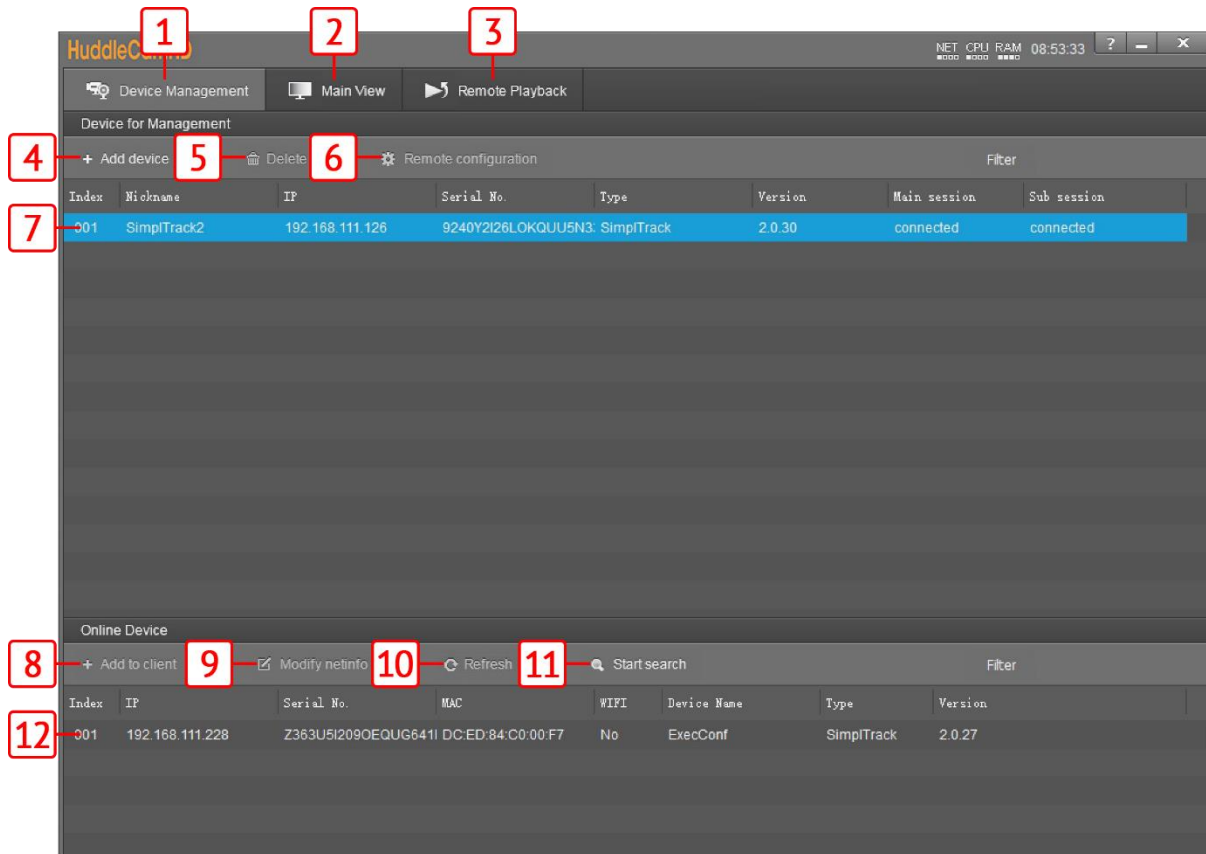


6. In Basic 2, you can adjust the Tracking limitations of the camera.
  - a. **Tracking Settings:** Enable/Disable Tilt Motion, Auto Zoom, Permanent Track, & Outside Platform.
  - b. **Tracking Parameters:** Tracking Sensitivity, Pan Speed, Tilt Speed, Zoom Limit, & Lost Timeout as required by your room.
  - c. **Target Lost Action:** Dropdown and select “No. 0 preset” to ensure the camera is tracking properly.
  - d. **Power On State:** Select how the camera performs when powered on.
7. Click **“Save”** to save the adjusted settings.
8. When you’re finished adjusting the tracking parameters, click **“Exit”** to return to **“Main View”**.
  - a. For more information on the options available within Settings, view [Configure Tracking Settings](#) on page 22.

## Interface Descriptions

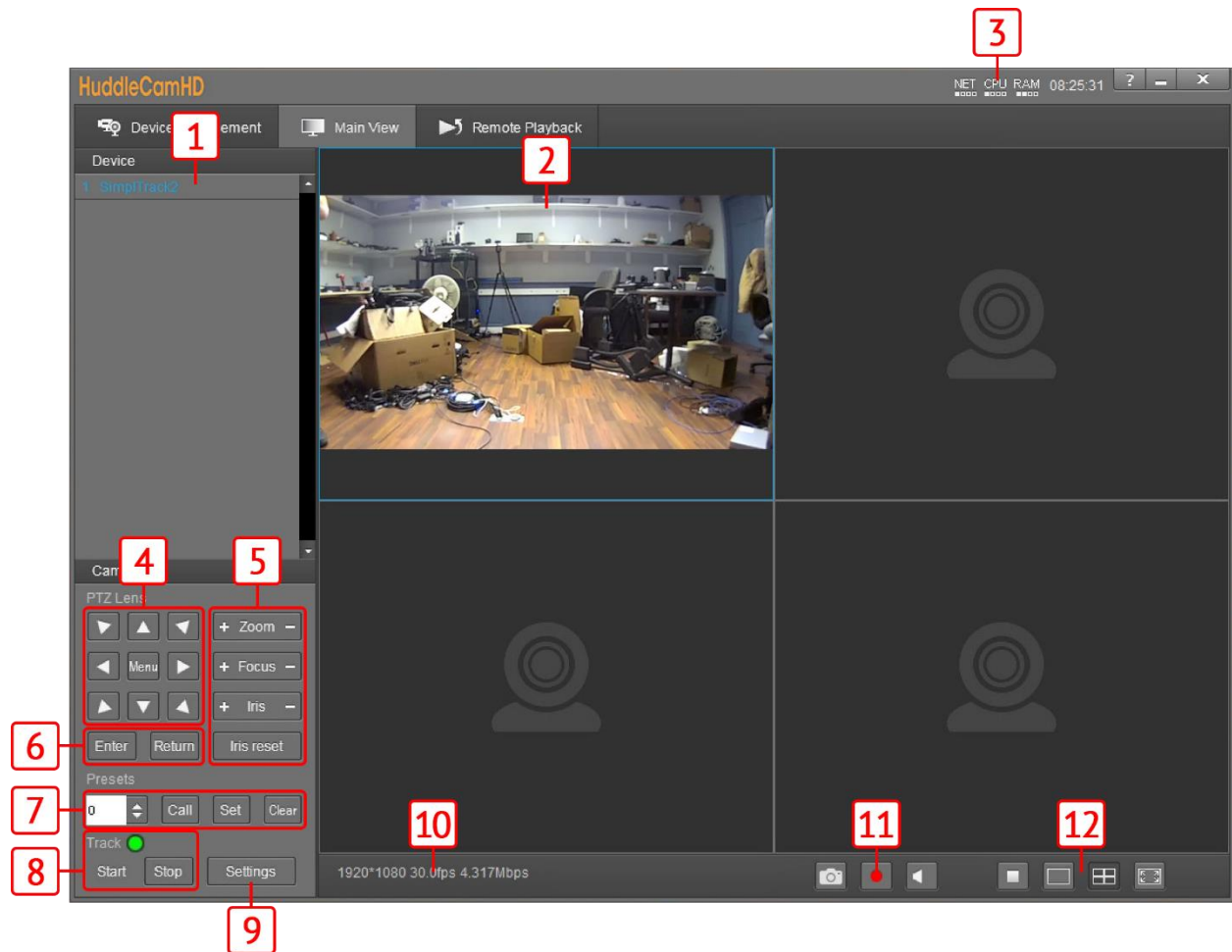
### Tracking Software

#### Device Management Interface



- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1 Device Management interface</li> <li>2 Video configuration interface</li> <li>3 View &amp; download video and/or photos.<br/>*Micro SD card required</li> <li>4 Manually add device using IP address, Port number, Username &amp; Password</li> <li>5 Delete selected device from Device Management list</li> <li>6 Configure network settings of camera</li> </ul> | <ul style="list-style-type: none"> <li>7 *Selected* device within Device Management</li> <li>8 Add selected camera from Online Device section</li> <li>9 Modify network settings of selected Online Device</li> <li>10 Refresh Online Device list</li> <li>11 Start/Stop searching for Online Devices</li> <li>12 *Unselected* device from Online Device section</li> </ul> |
|--|---|

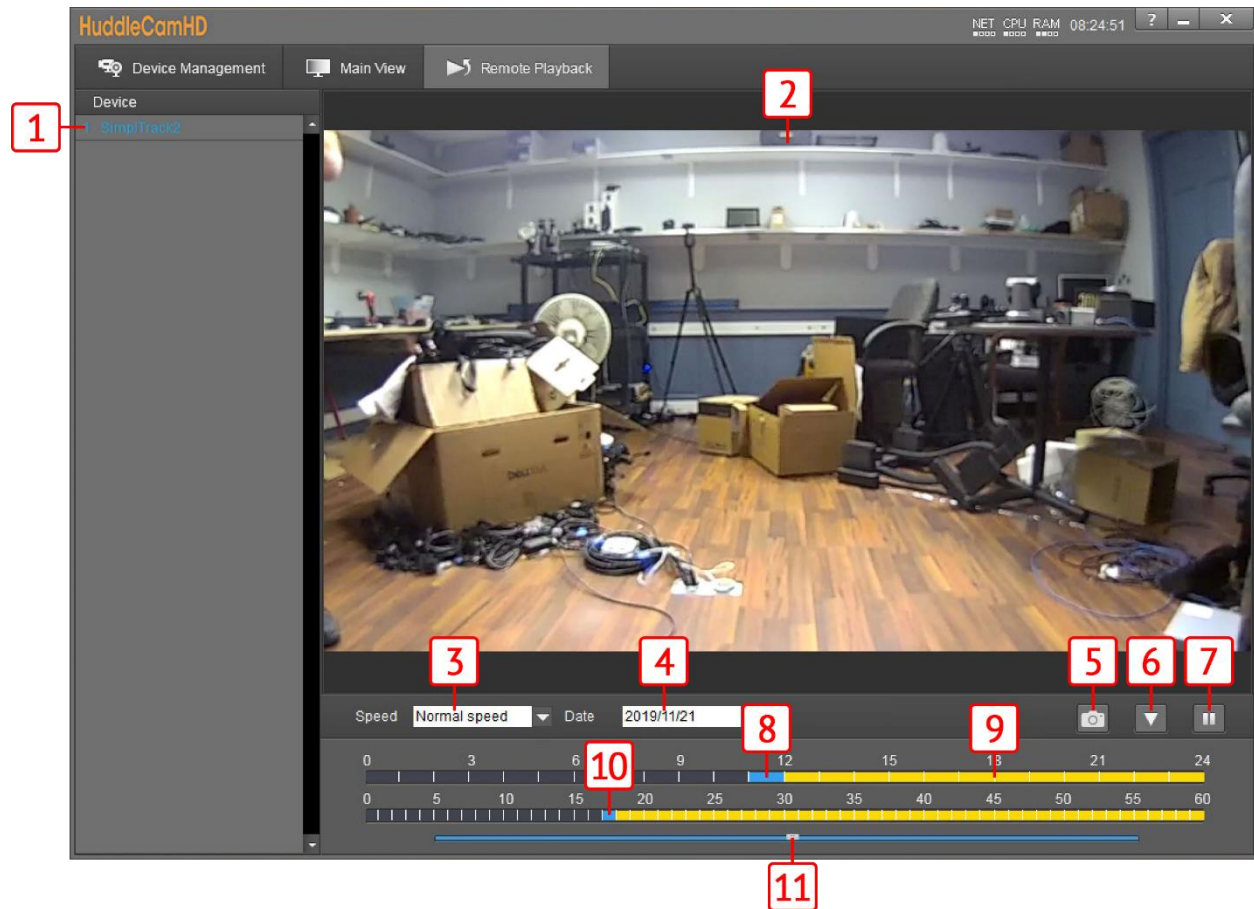
## Video Configuration Interface



- |   |  |
|---|--|
| <b>1</b> Cameras connected to Device Management | <b>7</b> Preset control  |
| <b>2</b> Camera video feed                      | <b>8</b> Enable/Disable tracking & Tracking Status                 |
| <b>3</b> PC performance & time                  | <b>9</b> Open tracking settings                                    |
| <b>4</b> Pan, Tilt, & OSD Menu control          | <b>10</b> Connected camera resolution & frame rate                 |
| <b>5</b> Lens control                           | <b>11</b> Snapshot, Enable/Disable recording, Enable/Disable audio |
| <b>6</b> OSD Menu enter/return                  | <b>12</b> Stop video, full screen, and gallery view                |

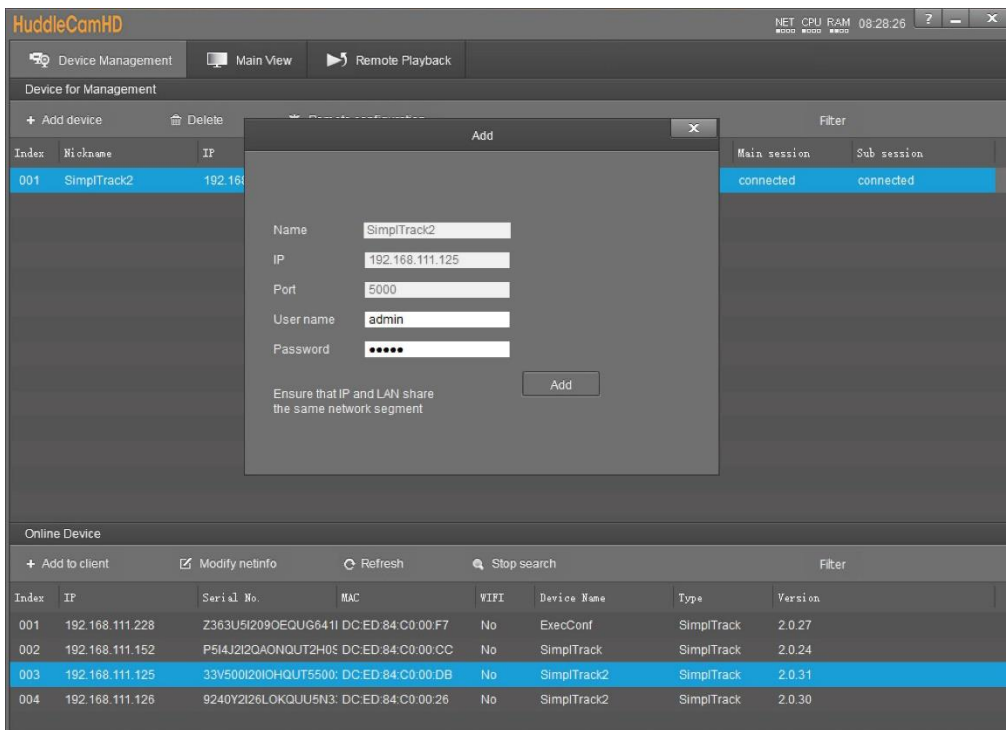
## Remote Playback

To utilize Remote Playback you will need to install a Micro SD card into the Micro SD Card slot on the back of the camera.



- |  |   |
|--|---|
| <p>1 Device list</p> <p>2 Video feed of recording</p> <p>3 Video feed playback speed<br/>Options include: Fast, normal, &amp; slow speed</p> <p>4 Recorded video dropdown date</p> <p>5 Takes a snapshot of the current video feed.</p> <p>6 Opens a selection window for downloading the recorded video</p> | <p>7 Pause/Play video feed</p> <p>8 Currently selected time (in hours) for video feed</p> <p>9 Recorded video (in hours)</p> <p>10 Currently selected time (in minutes) for video feed)</p> <p>11 Current time of video feed (in seconds)</p> |
|--|---|

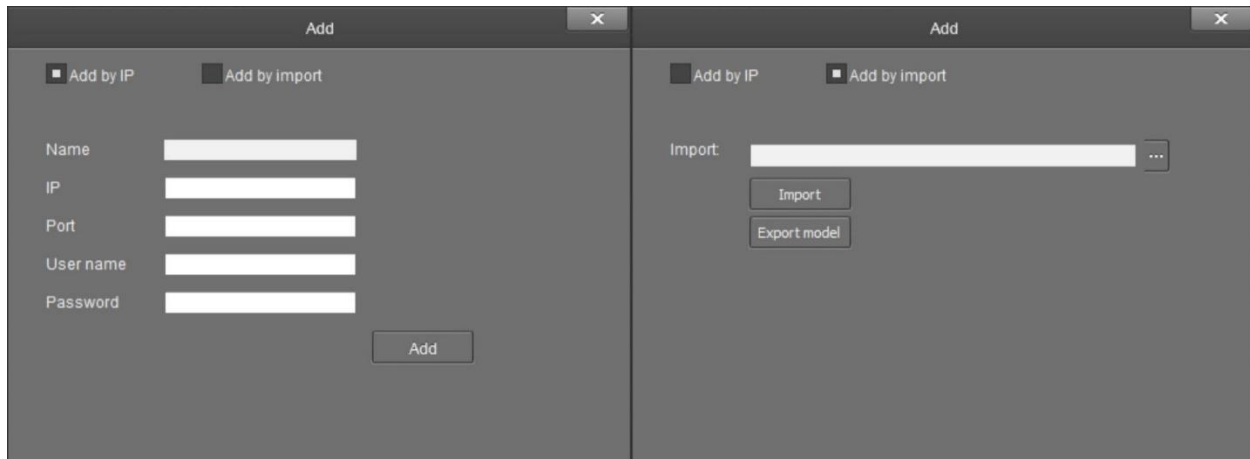
## Connect Camera



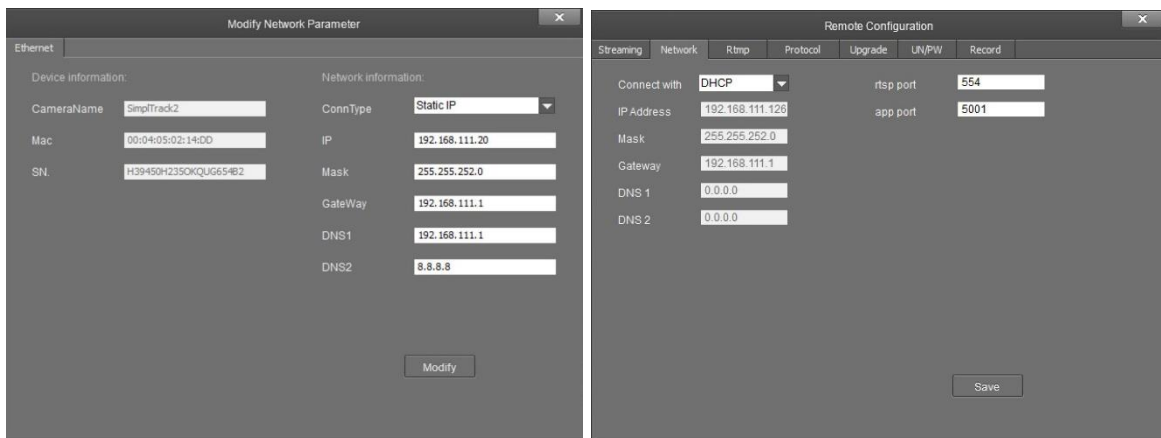
To add a camera to the **Device Management** list, you can go about this by searching in the **Online Device** section, or manually by using the **+ Add Device** button in the Device Management section.

When utilizing the Online Device section, you can simply click **Search**, and the Tracking Software will automatically search the subnet your network for any HuddleView & SimpliTrack2 cameras. Select the camera and click **+ Add to Client** to add it to the Device Management list.

When utilizing the **+ Add Device** button within the Device Management section, you can connect your camera through its **IP address**, **Port number**, & optional **Username & Password**; or you can **Import** a \*.csv file.



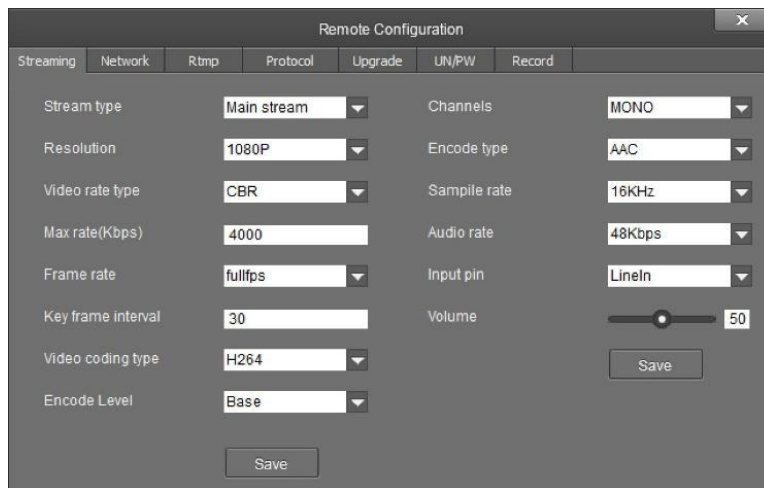
## Network Configuration



To configure the network settings, select the camera from the Online Device list and click **Modify Netinfo**. You can also adjust the network settings of a connected camera by selecting it from the Device Management list and clicking **Remote Configuration**, then traversing to the **Network** section.

## Remote Configuration

Remote Configuration includes: **Streaming, Network, RTMP, Protocol, Upgrade, Username/Password, & Record**.

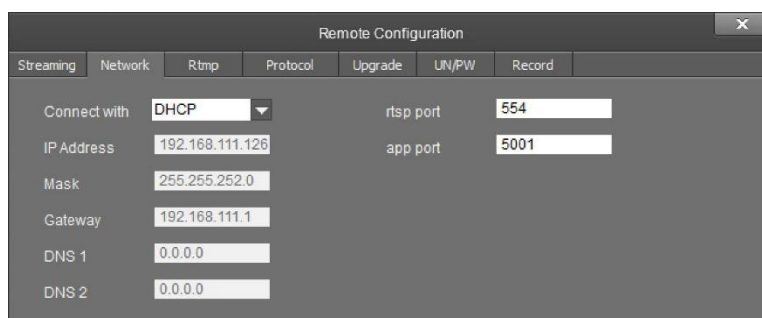


- **Stream Type:** Select the RTSP feed you wish to adjust.
  - Options include: Main stream, Sub stream, Stream 3, & Stream 4.
- **Resolution:** Change the resolution of the stream you wish to adjust.
  - Main Stream resolutions: QVGA(320x240), D1(704x480), HD720, & 1080P
  - Sub Stream resolutions: QVGA, D1 & HD720
  - Stream 3 resolutions: QVGA, D1 & HD720
  - Stream 4 resolutions: QVGA & D1

## Remote Configuration (Continued)

- **Video Rate Type:** Adjust the video rate type
  - Options include: CBR (Constant Bit Rate) & VBR (Variable Bit Rate)
- **Max Rate (Kbps):** Sets the maximum kilobytes per second of the Video Rate Type.
  - Range: 0 - 16383
- **Frame Rate:** Adjust the frame rate of the RTSP feed
  - Options include: Full FPS, 1 - 30
- **Key Frame Interval:** Adjust the I Key Frame Interval
  - Range 0 – 255
- **Video Coding Type:** Adjust the Video Encoding type
  - Options include: H.264 & H.265
- **Encode Level:** Adjust the level at which the video is encoded
  - Options include: Base, Main & High
- **Channels:** Adjust the audio channel of the embedded audio
  - Options include: Mono & Stereo
- **Encode Type:** Adjust the Audio Encoding type of the embedded audio
  - Options include: AAC
- **Sample Rate:** Adjust the audio sample rate of the embedded audio
  - Options include: 16KHz, 44.1KHz, & 48KHz
- **Audio Rate:** Adjust the audio rate of the embedded audio
  - Options include: 48Kbps, 64Kbps, 96Kbps, & 128Kbps
- **Input Pin:** Adjust the audio connection type
  - Options include: Lineln & MicIn
- **Volume:** Adjust the audio level of the embedded audio
  - Range: 0 – 100

The **Network** category allows you to assign a dynamic or static IP address for the camera, in addition to settings the port numbers for RTSP & control.



| Remote Configuration |                 |           |          |         |       |        |
|----------------------|-----------------|-----------|----------|---------|-------|--------|
| Streaming            | Network         | Rtmp      | Protocol | Upgrade | UN/PW | Record |
| Connect with         | DHCP            | rtsp port | 554      |         |       |        |
| IP Address           | 192.168.111.126 | app port  | 5001     |         |       |        |
| Mask                 | 255.255.252.0   |           |          |         |       |        |
| Gateway              | 192.168.111.1   |           |          |         |       |        |
| DNS 1                | 0.0.0.0         |           |          |         |       |        |
| DNS 2                | 0.0.0.0         |           |          |         |       |        |

- **Connect With:** Adjust the network connection method
  - Options include: DHCP (Dynamic) & Static IP
  - Note: While in DHCP you can only adjust RTSP Port & App Port
- **IP Address:** Displays IP Address & allows for adjustment the IP address of your camera
  - Default value: DHCP; or 192.168.1.180 while in Static or no connection to a DHCP server

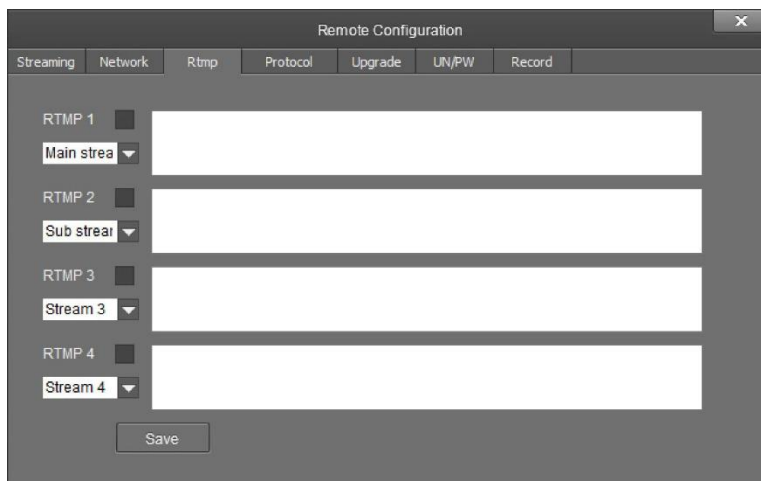


## Remote Configuration (Continued)

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- **Mask:** Adjust the Subnet Mask of your camera
  - Default value: 255.255.255.0
- **Gateway:** Adjust the gateway of your camera
  - Default value: 192.168.1.1
- **DNS 1:** Adjust the DNS 1 (Dynamic Name System)
  - Default value: 0.0.0.0
- **DNS 2:** Adjust the DNS 2 (Dynamic Name System)
  - Default value: 0.0.0.0
- **RTSP Port:** Adjust the RTSP connection port
  - Default value: 554
- **App Port:** Adjust the app control port
  - Default value: 5001

The **RTMP** category allows you to define a RTMP server.

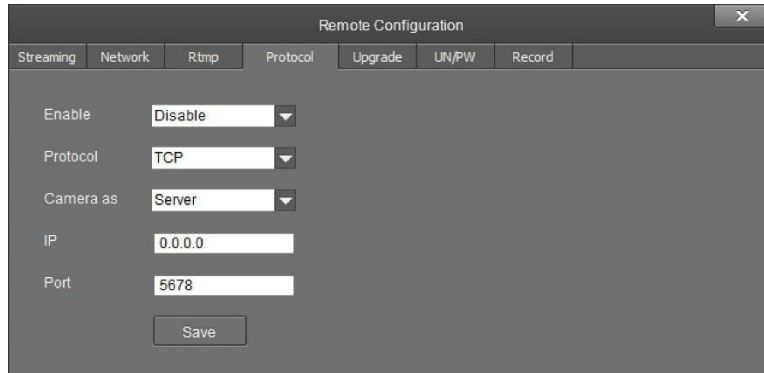


The screenshot shows a 'Remote Configuration' window with a 'Rtmp' tab selected. The window contains four rows for configuring RTMP streams. Each row has a checkbox to enable/disable the stream, a dropdown menu to select the stream type, and a text input field for the RTMP server address. The dropdown menus are currently set to 'Main stream', 'Sub stream', 'Stream 3', and 'Stream 4'. A 'Save' button is located at the bottom of the form.

- **RTMP # Checkbox:** This checkbox allows you to enable or disable a RTMP stream.
- **Stream # Dropdown:** Select the stream you would like to utilize
  - Options include: Main Stream, Sub Stream, Stream 3 & Stream 4
- **RTMP Text Field:** This field allows you to input the RTMP server address you wish to stream to.

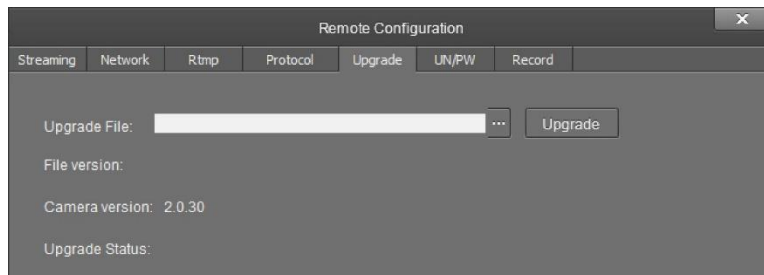
## Remote Configuration (Continued)

The **Protocol** category allows you to set the control parameters of the camera.



- **Enable:** Enable or disable 3rd party control to the camera
  - Options include: Enable & Disable
- **Protocol:** Adjust the control protocol method
  - Options include: TCP & UDP
- **Camera as:** Adjust whether the camera acts as a server or a controllable device
  - Options include: Server & Client
- **IP:** Adjust the IP address to which the camera sends commands to while in Server mode
  - Default value: 0.0.0.0
- **Port:** Adjust the Port number of the device you are connecting to while in Server mode
  - Default value: 5678

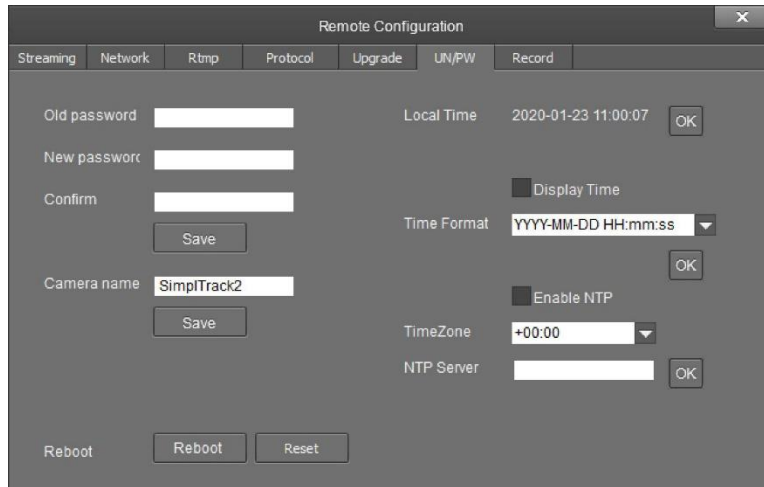
The **Upgrade** category allows you to upgrade the firmware of the camera.



- **Upgrade File:** Browse your computer for the firmware upgrade file
- **File Version:** Displays the version number of the file once selected
- **Camera Version:** Displays the version number of the camera currently connected
- **Upgrade Status:** Displays the status of the firmware upgrade

## Remote Configuration (Continued)

The **Username/Password** category allows you to change the device name, password, and adjust the time format.



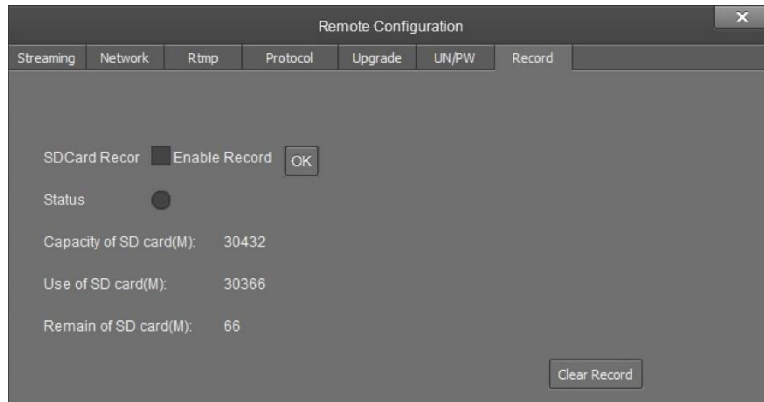
The screenshot shows the 'Remote Configuration' window with the following fields and controls:

- Old password:** Text input field.
- New password:** Text input field.
- Confirm:** Text input field.
- Save:** Button below the password fields.
- Camera name:** Text input field with 'SimplTrack2' entered.
- Save:** Button below the camera name field.
- Local Time:** 2020-01-23 11:00:07 with an OK button.
- Display Time:** Checked checkbox.
- Time Format:** Dropdown menu showing 'YYYY-MM-DD HH:mm:ss'.
- Enable NTP:** Checked checkbox.
- TimeZone:** Dropdown menu showing '+00:00'.
- NTP Server:** Text input field with an OK button.
- Reboot:** Section with 'Reboot' and 'Reset' buttons.

- **Old Password:** Input the old password in order to change the login credentials
  - Default value: "admin"
- **New Password:** Input the new password in order to change the login credentials
- **Confirm:** Input the new password again in order to confirm the change in login credentials
- **Camera Name:** Adjust the camera device name
  - Default value: "SimplTrack2"
- **Display Time checkbox:** When enabled, displays the time in the main video feed
  - Default value: Unchecked (Off)
- **Time Format:** Adjust the time format
  - Options include: YYYY-MM-DD HH:mm:ss, MM-DD-YYYY HH:mm:ss, DD-MM-YYYY HH:mm:ss, YYYY-MM-DD week HH:mm:ss, MM-DD-YYYY week HH:mm:ss, & DD-MM-YYYY week HH:mm:ss
- **Enable NTP checkbox:** When enabled, support compatibility with Network Time Protocol
  - Default value: Unchecked (Off)
- **TimeZone:** Adjust the time zone for your location
  - Range: +14:00 ~ -12:00
- **NTP Server:** Input the NTP server address you wish to utilize when using NTP

## Remote Configuration (Continued)

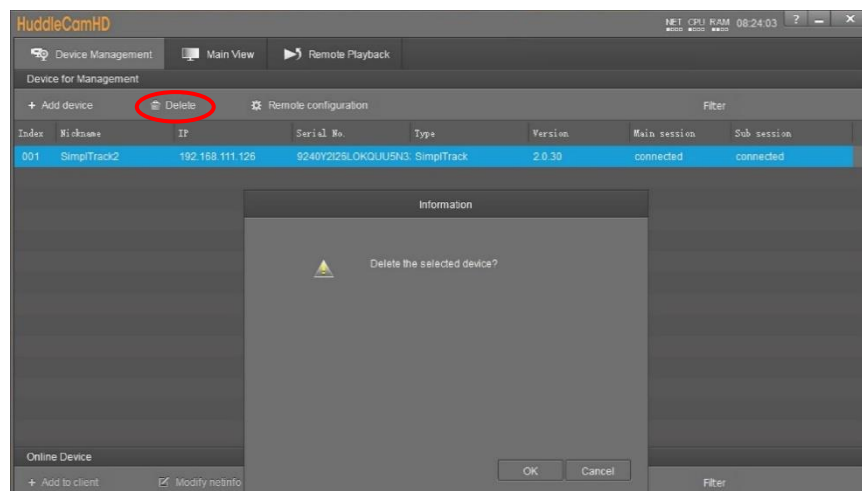
The **Record** category allows you to set up and view the status of the Photobooth recording.  
 Note: A Micro SD card is required for use with the Photobooth feature.



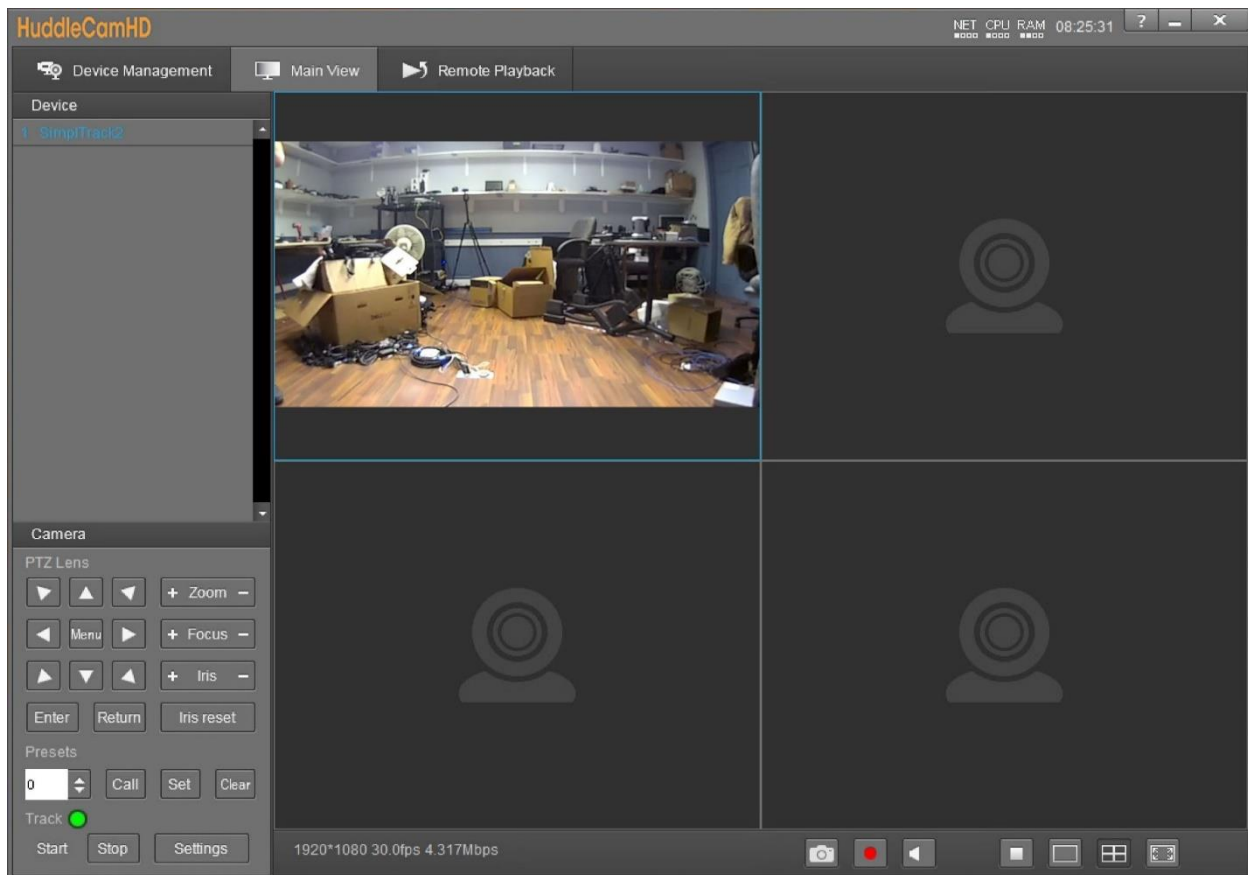
- **SD Card Record:** Enable or disable recording to the Micro SD card
  - Default value: Unchecked (Off)
- **Enable Record:** After changing “SD Card Record” value, click “OK” to apply
- **Status:** Displays status of SD card recording
  - Options include: Black/Unlit: Not recording, Green: recording, Red: Cannot record to SD card
- **Capacity of SD card(M):** Displays total size of Micro SD card in kilobytes
- **Use of SD card(M):** Displays the number of kilobytes consumed on Micro SD card
- **Remain of SD card(M):** Number of kilobytes remaining on the Micro SD card

## Remove Camera

To remove a camera from the Device Management list, first select it, then click the **Delete** button above the list. You will be prompted with a confirmation window to remove the camera. Click **OK** to remove the device or **Cancel** to keep the current settings.



## Configure Video Settings



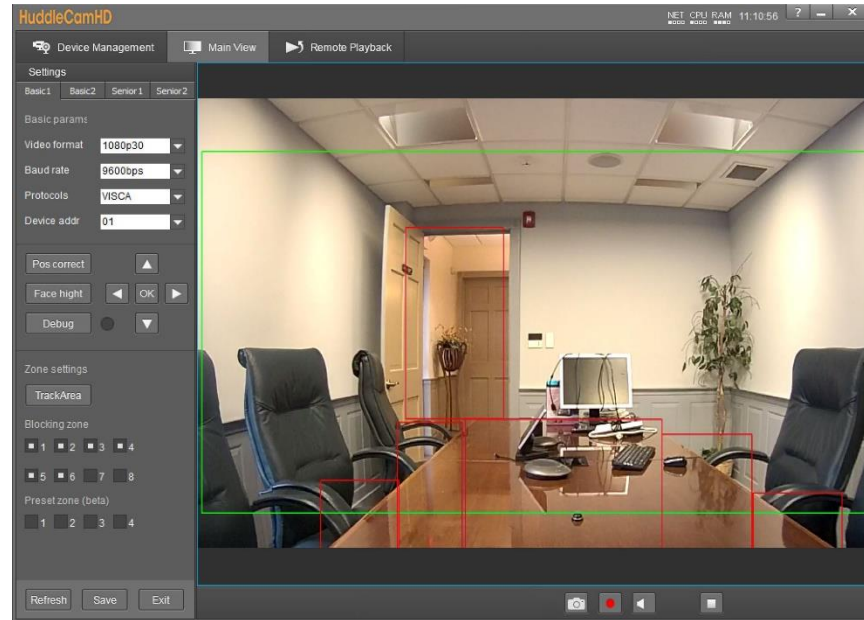
In the **Video Interface** you can view and control up to four cameras simultaneously. You have full control over **Pan, Tilt, Zoom, Focus, Iris, OSD Menu, Presets & Tracking Settings**. **Device List:** List of added cameras from the Device Management section

- **Camera(s) Video Feed:** Video feed from camera head or reference camera
  - Right click camera from Device List and select video feed you wish to view.
    - Teacher Close-Up: Tracking camera video feed
    - Teacher Panorama: Reference camera video feed
- **PTZ Control:** Control the selected camera
- **Menu Button:** Opens the OSD Menu of the selected camera
- **Zoom Control:** Zoom the selected camera in or out
- **Focus Control:** Focus the selected camera tele or wide
- **Iris Control:** Adjust the Iris value up or down
- **Iris Reset:** Reset the Iris value
- **Preset Control:** Call, set & clear camera presets.
  - Options include: 0 ~ 255
- **Tracking Control:** Enable or Disable tracking control
- **Settings Button:** Opens the tracking settings

## Configure Tracking Settings

### Basic 1

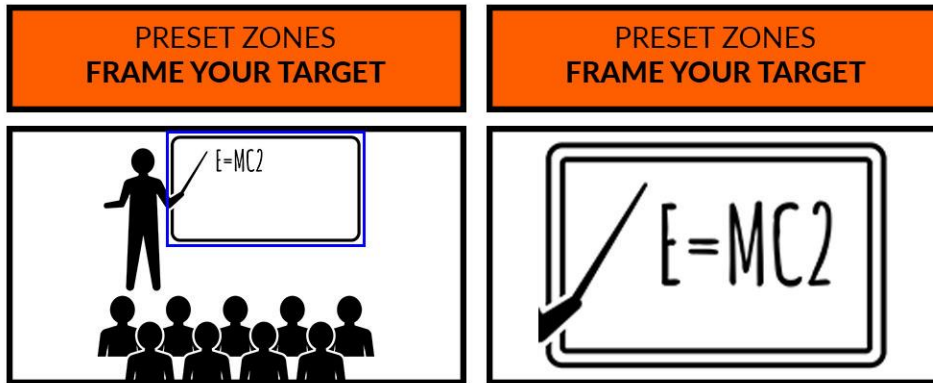
To adjust the **Tracking Parameters** of the selected camera, you must click the **Settings** button in the tracking control area. Once opened, you'll be greeted with the **Basic 1** parameters. From here, you have control over **Video Format**, **Baud Rate**, **Control Protocol**, **Device Address**, **Position Correct**, **Face Height**, **Debug** mode, **Tracking Zones**, **Blocking Zones** & **Preset Zones** (beta).



- **Video Format:** Resolution and frame rate of video output.
  - Options include: 720p60, 720p50, 1080i60, 1080i50, 1080p30, 1080p25, 1080p60, 1080p50
- **Baud Rate:** Baud rate for analog control
  - Options include: 9600bps
- **Protocols:** Control protocol for camera control
  - Options include: VISCA & PELCO\_D
- **Device Address:** Analog device control address
  - Options include: 1, 2, 3, 4, 5, 6, & 7
- **Pos Correct:** Allows position correction of the camera head.
  - Use the PTZ control within Pos Correct to align the camera head and reference feed.
- **Face Height:** Adjust the height the camera tracks a face.
  - Default Value: 100. It allows you to adjust the height up or down in intervals of 10. Range: 0 – 200.
- **Debug:** Displays Blue & Green boxes around tracked objects/individuals.
  - Green box: The green box displays tracked motion
  - Blue box: The blue box displays tracked faces

## Configure Tracking Settings (Continued)

- **Track Area:** The area at which the camera tracks individuals.
  - Allows for designation of the tracking zone.
- **Blocking Zones:** Designate the area you do *not* wish to track, such as monitors, doorways, etc.
  - Allows for up to 8 Blocking Zones. Upon checking one of the blocking zone boxes, you are given the ability to designate blocked areas.
- **Preset Zones:** Zones the camera will frame when motion is captured. (*SimplTrack2 only*)
  - Allows for up to 4 Preset Zones. Once a Preset Zone is designated, motion within the zone will trigger a preset the camera calls in order to capture the desired location.
    - Preset Zone 1: Camera Preset 5
    - Preset Zone 2: Camera Preset 6
    - Preset Zone 3: Camera Preset 7
    - Preset Zone 4: Camera Preset 8



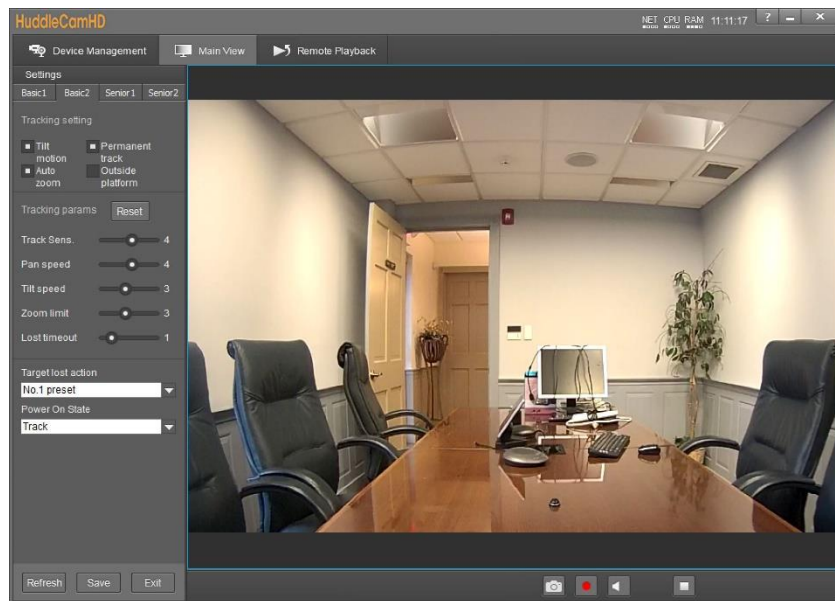
**TIP:** Add a Preset Zone to an area you would like to specifically highlight during production

**NOTE:** When motion is detected within the Preset Zone, the camera will frame that zone

## Basic 2

Within **Basic 2** settings, you have control over **Tilt Motion**, **Auto Zoom**, **Permanent Track**, **Outside Platform**, **Tracking Parameters Reset**, **Tracking Sensitivity**, **Zoom Sensitivity**, **Zoom Limit**, **Target Lost Action**, & **Power On State**.

## Basic 2 (Continued)



- **Tilt Motion:** Enable/Disable tilting while tracking.
- **Auto Zoom:** Enable/Disable zooming while tracking.
- **Permanent Track:** Enable/Disable tracking any moving object.
- **Outside Platform:** Enable/Disable tracking outside the Tracking Zone.
- **Tracking Parameters Reset:** Resets the tracking settings to default values.
- **Tracking Sens.:** Affects the sensitivity at which the camera tracks objects/individuals.
  - Range: 0 – 7
- **Zoom Sens.:** Adjust the sensitivity of the zoom.
  - Range: 0 - 7
- **Zoom Limit:** Allows for adjustment of how much the camera zooms while tracking.
  - Range: 0 – 7
- **Target Lost Action:** Affects what the camera does when the tracked object or individual is lost.
  - Options include: No. 1 Preset, No. 2 Preset, Stay
    - Preset 0 is best utilized when framed around your “stage”.
    - Preset 1 is best utilized when framed around your “subject”.
- **Power On State:** Affects whether the camera tracks or not upon powering on.
  - Options include: Track & Do not track

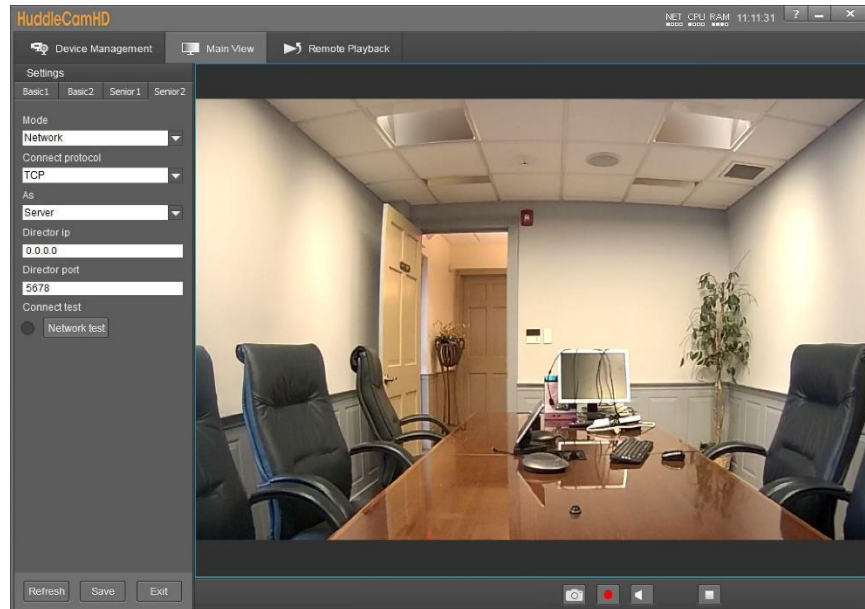
## Senior 1

The **Senior 1** settings tab is disabled and will be enabled with future updates.



## Senior 2

**Senior 2** allows for adjustment of camera control parameters. In this field, you have control over **Control Mode**, **Connection Protocol**, **Controlled As**, **Director IP**, **Director Port**, & **Connection Test**.



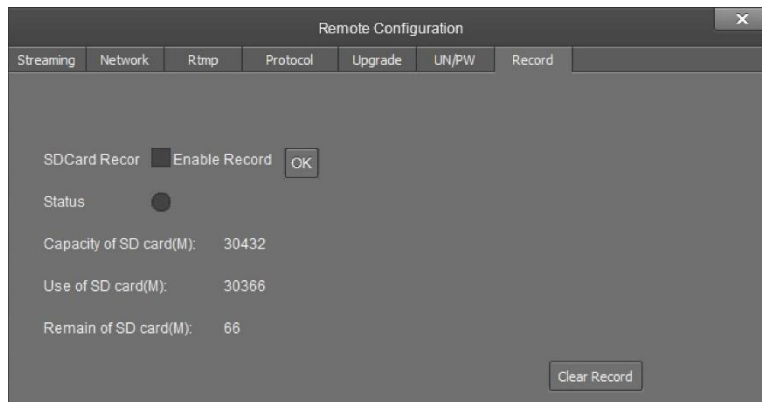
- **Mode:** Adjust the control method of the camera.
  - Options include: Network & Serial Port.
- **Connect Protocol:** Protocol connection type.
  - Options include: TCP & UDP
- **As:** Designate whether the camera is a server or client
  - Options include: Server & Client
- **Director IP:** Designate the IP address of the device you wish to control while in Server mode.
- **Director Port:** Designate the Port of the device you wish to control while in Server mode.
- **Connect Test:** Performs a connection test with the device and displays a status light
  - Green: Connection is successful, and commands can be sent
  - Red: Connection has failed and needs to be adjusted

## Photobooth Functionality

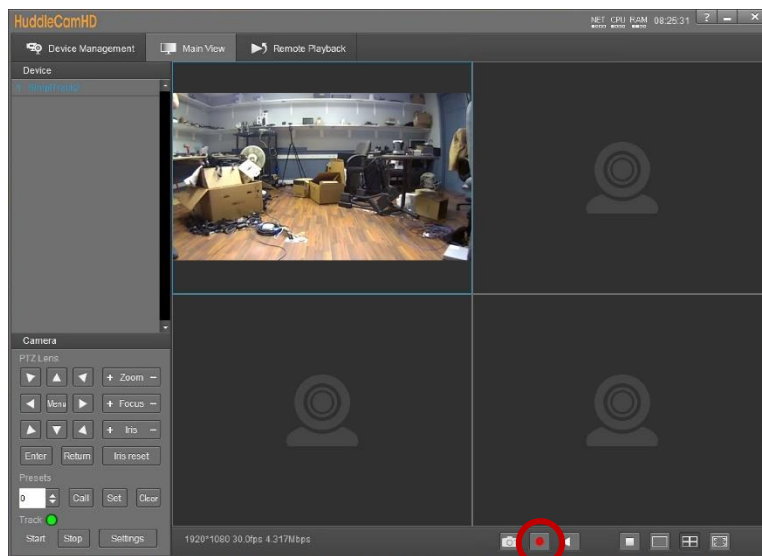
The Photobooth functionality allows you to take photos and record videos directly to the camera. To do so you will need a Micro SD card plugged into the Micro SD Slot on the back of the camera. For best results, we suggest formatting the Micro SD card to NTFS.

### Recording Video

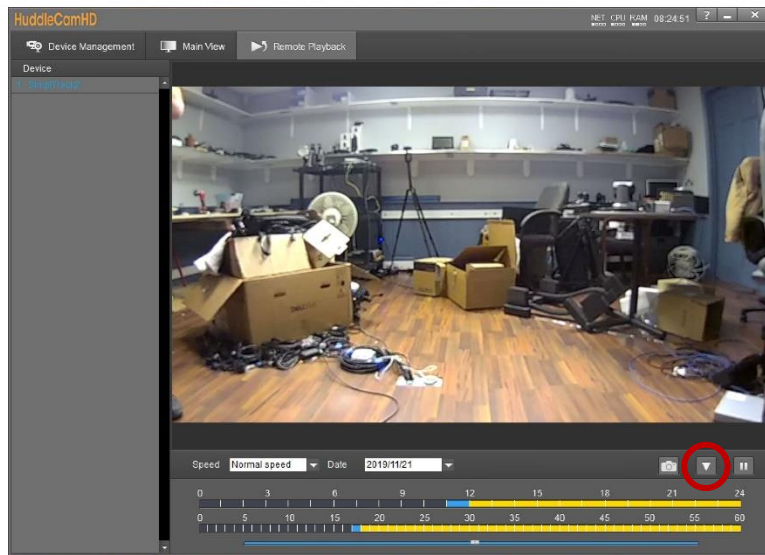
1. Select your camera from the Device Management page and select “Remote Configuration”.
2. Select the “Record” tab to begin setup.



3. Click the “SDCard Record” checkbox to begin recording video straight to the SD Card.
  - a. To disable, simply uncheck the checkbox.
4. Alternatively, you can click the record button from the bottom of Main View



5. To retrieve the recorded video, click the “Remote Playback” page at the top of the software.
6. Select your camera and click the “Download” button at the bottom right of the page to open the download window.

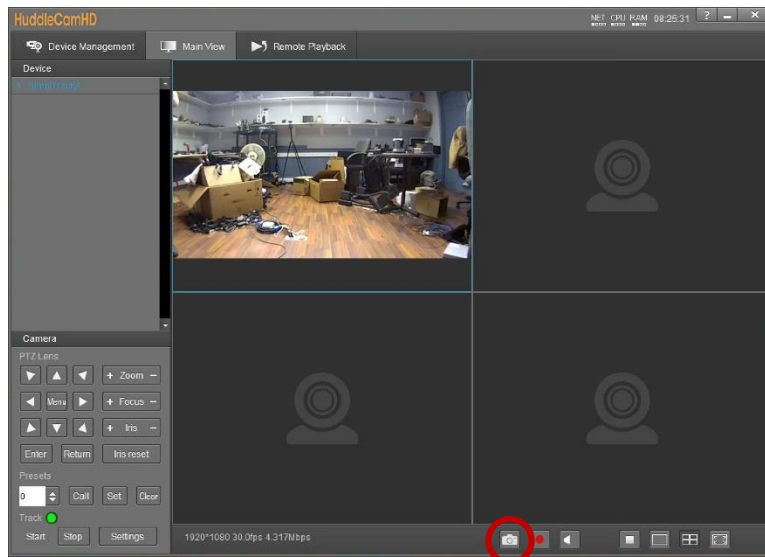


7. From there, name your file and browse your PC for a storage location.

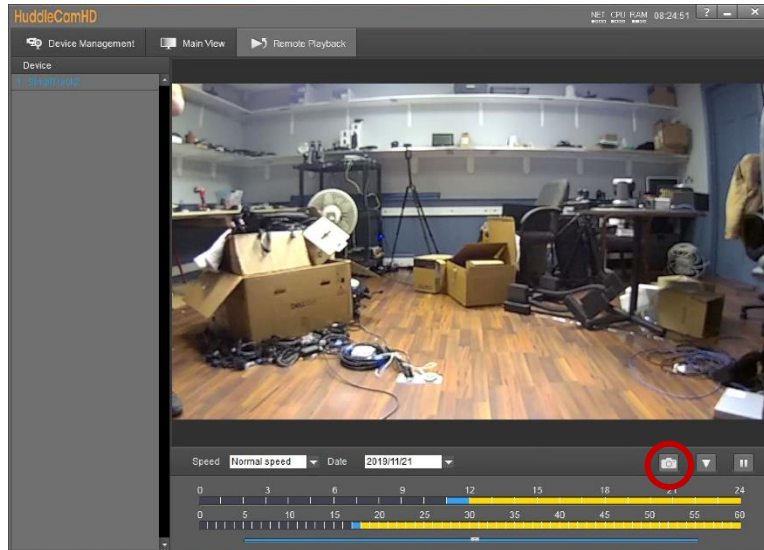
## Taking Photos

You have two methods of taking photos using the SimplTrack2. Option 1 allows you to take live photos from the Main View, and option 2 allows for snapshots of recorded video.

1. Select the Main View page from the top of the software.
2. Select your camera from the Device List
3. Click the “Snapshot” button at the bottom of Main View



1. Alternatively, follow steps 1 – 4 of “Recording Video” to record video to the SD card.
2. Select your camera and use the date dropdown and sliders to find the timeline you’re looking for.
3. Click the “Snapshot” button to take a photo of the selected scene.



## On Screen Display (OSD)

|       | Video Option  | Options Include | Default |
|-------|---------------|-----------------|---------|
| Video | Sharpness     | 0 – 15          | 5       |
|       | Brightness    | 0 – 14          | 5       |
|       | Contrast      | 0 – 14          | 7       |
|       | Gamma Mode    | 0 – 4           | 2       |
|       | Hue           | 0 – 14          | 8       |
|       | 2DNR          | OFF, 1 – 5      | 3       |
|       | 3DNR          | OFF, 1 – 5      | 3       |
|       | Wide Dynamic  | OFF, 1 – 5      | OFF     |
|       | Mirror        | OFF, ON         | OFF     |
|       | Flip          | OFF, ON         | OFF     |
|       | FV Brightness | 0 – 15          | 7       |
|       | FV LDC Level  | OFF, 1 – 10     | OFF     |

|          | Exposure Option  | Field        | Options Include | Default  |      |
|----------|------------------|--------------|-----------------|--|------|
| Exposure | Full Auto        | Exp-Comp     | OFF, ON         | ON   |      |
|          |                  | Level        | -7 – +7         | 0  |      |
|          |                  | BLC          | OFF, ON         | OFF  |      |
|          |                  | Anti-Flicker | OFF, 50Hz, 60Hz | 50Hz   |      |
|          | Manual           | Gain         |                 | 0 – 30   |      |
|          |                  | Speed        |                 | 1/1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 | 1/50 |
|          | Shutter Priority | Iris         |                 | CLOSE, F1.6, F2, F2.4, F2.8, F3.4, F4, F4.8, F5.6, F6.8, F8, F9.6, F11, F14  | F1.6 |
|          |                  | Speed        |                 | 1/1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000 | 1/50 |
|          | Iris Priority    | Iris         |                 | CLOSE, F1.6, F2, F2.4, F2.8, F3.4, F4, F4.8, F5.6, F6.8, F8, F9.6, F11, F14  | F1.6 |
|          |                  | Anti-Flicker |                 | OFF, 50Hz, 60Hz  | 50Hz |
|          | Bright Priority  | Bright       |                 | 0 – 27   | 17   |
|          |                  | Anti-Flicker |                 | OFF, 50Hz, 60Hz  | 50Hz |

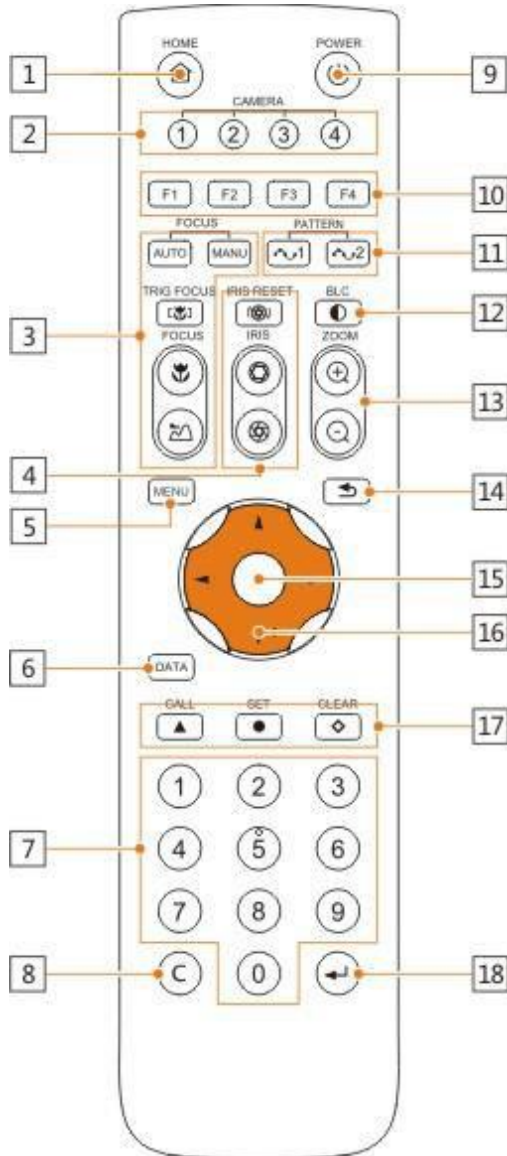
## On Screen Display (OSD) (Continued)

|             | Color Option | Field            | Options Include | Default  |
|-------------|--------------|------------------|-----------------|----------|
| Color       | Auto         | R. Gain          | -7 – +7         | 0        |
|             |              | G. Gain          | -7 – +7         | 0        |
|             |              | B. Gain          | -7 – +7         | 0        |
|             |              | Saturation       | 0 – 14          | 7        |
|             |              | Hue              | 0 – 14          | 7        |
|             | ATW          | R. Gain          | -7 – +7         | 0        |
|             |              | G. Gain          | -7 – +7         | 0        |
|             |              | B. Gain          | -7 – +7         | 0        |
|             |              | Saturation       | 0 – 14          | 7        |
|             |              | Hue              | 0 – 14          | 7        |
|             | One Push     | One Push Trigger | Press OK        | Press OK |
|             |              | Saturation       | 0 – 14          | 7        |
|             |              | Hue              | 0 – 14          | 7        |
|             | Indoor       | Saturation       | 0 – 14          | 7        |
|             |              | Hue              | 0 – 14          | 7        |
|             | Outdoor      | Saturation       | 0 – 14          | 7        |
|             |              | Hue              | 0 – 14          | 7        |
|             | Manual       | R. Gain          | 0 – 255         | 128      |
|             |              | B. Gain          | 0 – 255         | 128      |
|             |              | Saturation       | 0 – 14          | 7        |
| Hue         |              | 0 – 14           | 7               |          |
| Sodium Lamp | Saturation   | 0 – 14           | 7               |          |
|             | Hue          | 0 – 14           | 7               |          |
| Fluo Lamp   | Saturation   | 0 – 14           | 7               |          |
|             | Hue          | 0 – 14           | 7               |          |

|               | Field          | Options Include         | Default |
|---------------|----------------|-------------------------|---------|
| Pan Tilt Zoom | Pan/Tilt Speed | 1 – 8                   | 5       |
|               | D-Zoom Limit   | X1 – X11                | X1      |
|               | PTZ Trig AF    | OFF, ON                 | ON      |
|               | Ratio Speed    | OFF, ON                 | ON      |
|               | Power Up Act   | HOME, PRESET1 – PRESET9 | HOME    |

|        | Field        | Options Include  | Default       |
|--------|--------------|--|---------------|
| System | Address      | 1 – 7  | 1             |
|        | Protocol     | VISCA, PELCO-D, PELCO-P  | VISCA         |
|        | Baudrate     | 2400, 4800, 9600, 38400  | 9600          |
|        | IR Address   | 1 – 4  | 1             |
|        | Video Format | 720P60, 720P50, 1080P60, 1080P50, 1080P30, 1080P25, 1080I60, 1080I50 | 1080P30       |
|        | Mount Mode   | Stand, Ceiling   | Stand         |
|        | RS485 Port   | HALF-DUPLEX-1, HALF-DUPLEX-2   | HALF-DUPLEX-1 |
|        | Language     | English, Chinese   | English       |

## Using the IR Remote



- 1. HOME Button**  
Press the HOME Button to send the camera to the initial position where pan and tilt is 0.
- 2. Camera Selection Button**  
Use to switch between IR channels for multiple camera control. For example, 4 is address 4.
- 3. Focus**  
Use "AUTO" or "MANU" to select auto or manual focus. Trig Focus enables auto focus whenever the camera is zoomed. Near/Far allows for focus adjustment while in manual focus.
- 4. Iris**  
Press Iris Reset to set iris back to default value or use Open/Close to open and close the Iris.
- 5. Menu**  
Use to open/close the OSD Menu.
- 6. Data Button**  
Use the Data Button to enable/disable display of pan/tilt angle, zoom time, and other prompt messages.
- 7. Number Keys**  
Used for inputting numbers such as preset number.
- 8. Cancel Button**  
Cancel number input.
- 9. Power Button**  
User to power on/off the camera.
- 10. Shortcut Buttons (F1, F2, F3, F4)**  
Use these buttons for shortcut commands. (Shown below)
- 11. Pattern Buttons**  
Use to activate Pattern Scan 1 and Pattern Scan 2

- 12. BLC Button**  
Use to enable/disable Backlight Compensation.
- 13. Zoom buttons**  
Use to zoom in or zoom out.
- 14. Back Button**  
Use the Back Button to go back to the previous menu
- 15. OK Button**  
  - In OSD Menu:** select the corresponding option
  - Out of OSD Menu:** adjust pan/tilt control speed

## Using the IR Remote (Continued)

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### 16. Direction/Menu Operation

**In OSD Menu:** traverse OSD Menu

**Out of OSD Menu:** pan & tilt camera

### 17. Preset Settings

Use the Number Keys to input a preset number, then press call, store, clear to perform the corresponding command.

### 18. Enter

After inputting numbers, press this button to confirm.

### IR Remote Shortcuts

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- [F1] > [1] > [ENTER] - Change camera to Device Address 1
- [F1] > [2] > [ENTER] - Change camera to Device Address 2
- [F1] > [3] > [ENTER] - Change camera to Device Address 3
- [F1] > [4] > [ENTER] - Change camera to Device Address 4
- [F1] > [5] > [ENTER] - Start Tracking
- [F1] > [6] > [ENTER] - End Tracking
- [F2] > [0] > [0] > [1]: Set the IP address to DHCP
- [F2] > [0] > [8] > [1]: Set IP address to: 192.168.100.81
- [F2] > [0] > [8] > [2]: Set IP address to: 192.168.100.82
- [F2] > [0] > [8] > [3]: Set IP address to: 192.168.100.83
- [F2] > [0] > [8] > [4]: Set IP address to: 192.168.100.84
- [F2] > [0] > [8] > [5]: Set IP address to: 192.168.100.85
- [F2] > [0] > [8] > [6]: Set IP address to: 192.168.100.86
- [F2] > [0] > [8] > [7]: Set IP address to: 192.168.100.87
- [F2] > [0] > [8] > [8]: Set IP address to: 192.168.100.88
- [F2] > [0] > [8] > [9]: Set IP address to: 192.168.100.89
- [F2] > [0] > [8] > [0]: Set IP address to: 192.168.100.80



## VISCA Commands

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### ACK/Completion Messages

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|            | Command Messages           | Comments                                     |
|------------|----------------------------|--|
| ACK        | z0 4y FF<br>(y:Socket No.) | Returned when the command is accepted.       |
| Completion | z0 5y FF<br>(y:Socket No.) | Returned when the command has been executed. |

### Error Messages

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|                        | Command Messages   | Comments   |
|------------------------|--|--|
| Syntax Error           | z0 60 02 FF  | Returned when the command format is different or when a command with illegal command parameters is accepted.   |
| Command Buffer Full    | z0 60 03 FF  | Indicates that two sockets are already being used (executing two commands) and the command could not be accepted when received.                                  |
| Command Canceled       | z0 6y 04 FF<br>(y:Socket No.)  | Returned when a command which is being executed in a socket specified by the cancel command is canceled. The completion message for the command is not returned. |
| No Socket              | z0 6y 05 FF<br>(y:Socket No.)  | Returned when no command is executed in a socket specified by the cancel command, or when an invalid socket number is specified.                                 |
| Command Not Executable | z0 6y 41 FF<br>(y:Execution command<br>Socket No. Inquiry command:0) | Returned when a command cannot be executed due to current conditions. For example, when commands controlling the focus manually are received during auto focus.  |

z = Device address + 8

## Commands

| Command Set      | Command           | Command Packet                            | Comments                                      |           |
|------------------|-------------------|---|---|-----------|
| AddressSet       | Broadcast         | 88 30 01 FF                               | Address setting                               |           |
| IF_Clear         | Broadcast         | 88 01 00 01 FF                            | I/F Clear                                     |           |
| CommandCancel    |                   | 8x 2p FF                                  | p: Socket No.(=1or2)                          |           |
| CAM_Power        | On                | 8x 01 04 00 02 FF                         | Power ON/OFF                                  |           |
|                  | Off               | 8x 01 04 00 03 FF                         |   |           |
| CAM_Zoom         | Stop              | 8x 01 04 07 00 FF                         | p=0 (Low) to 7 (High)<br>pqrs: Zoom Position  |           |
|                  | Tele(Standard)    | 8x 01 04 07 02 FF                         |   |           |
|                  | Wide(Standard)    | 8x 01 04 07 03 FF                         |   |           |
|                  | Tele(Variable)    | 8x 01 04 07 2p FF                         |   |           |
|                  | Wide(Variable)    | 8x 01 04 07 3p FF                         |   |           |
|                  | Direct            | 8x 01 04 47 0p 0q 0r 0s FF                |   |           |
| CAM_Focus        | Stop              | 8x 01 04 08 00 FF                         | p=0 (Low) to 7 (High)<br>pqrs: Focus Position |           |
|                  | Far(Standard)     | 8x 01 04 08 02 FF                         |   |           |
|                  | Near(Standard)    | 8x 01 04 08 03 FF                         |   |           |
|                  | Far(Variable)     | 8x 01 04 08 2p FF                         |   |           |
|                  | Near(Variable)    | 8x 01 04 08 3p FF                         |   |           |
|                  | Direct            | 8x 01 04 48 0p 0q 0r 0s FF                |   |           |
|                  | Auto Focus        | 8x 01 04 38 02 FF                         |   | AF ON/OFF |
|                  | Manual Focus      | 8x 01 04 38 03 FF                         |   |           |
|                  | Auto/Manual       | 8x 01 04 38 10 FF                         |   |           |
| One Push Trigger | 8x 01 04 18 01 FF | One Push AF Trigger                       |   |           |
| CAM_ZoomFocus    | Direct            | 8x 01 04 47 0p 0q 0r 0s<br>0t 0u 0v 0w FF | pqrs: Zoom Position<br>tuvw: Focus Position   |           |
| CAM_WB           | Auto              | 8x 01 04 35 00 FF                         | Normal Auto                                   |           |
|                  | Indoor            | 8x 01 04 35 01 FF                         | Indoor mode                                   |           |
|                  | Outdoor           | 8x 01 04 35 02 FF                         | Outdoor mode                                  |           |
|                  | One Push WB       | 8x 01 04 35 03 FF                         | One Push WB mode                              |           |
|                  | Manual            | 8x 01 04 35 05 FF                         | Manual Control mode                           |           |
|                  | One push trigger  | 8x 01 04 10 05 FF                         | One Push WB Trigger                           |           |
| CAM_RGain        | Reset             | 8x 01 04 03 00 FF                         | Manual Control of R Gain                      |           |
|                  | Up                | 8x 01 04 03 02 FF                         |   |           |
|                  | Down              | 8x 01 04 03 03 FF                         |   |           |
|                  | Direct            | 8x 01 04 43 00 00 0p 0q FF                | pq: R Gain                                    |           |
| CAM_BGain        | Reset             | 8x 01 04 04 00 FF                         | Manual Control of B Gain                      |           |
|                  | Up                | 8x 01 04 04 02 FF                         |   |           |
|                  | Down              | 8x 01 04 04 03 FF                         |   |           |
|                  | Direct            | 8x 01 04 44 00 00 0p 0q FF                | pq: B Gain                                    |           |

## Commands *(Continued)*

| Command Set       | Command          | Command Packet             | Comments  |
|-------------------|------------------|----------------------------|---|
| CAM_AE            | Full Auto        | 8x 01 04 39 00 FF          | Automatic Exposure mode   |
|                   | Manual           | 8x 01 04 39 03 FF          | Manual Control mode   |
|                   | Shutter Priority | 8x 01 04 39 0A FF          | Shutter Priority Automatic Exposure   |
|                   | Iris Priority    | 8x 01 04 39 0B FF          | Iris Priority Automatic Exposure mode   |
|                   | Bright           | 8x 01 04 39 0D FF          | Bright Mode (Manual control)  |
| CAM_Shutter       | Reset            | 8x 01 04 0A 00 FF          | Shutter Setting   |
|                   | Up               | 8x 01 04 0A 02 FF          |   |
|                   | Down             | 8x 01 04 0A 03 FF          |   |
|                   | Direct           | 8x 01 04 4A 00 00 0p 0q FF | pq: Shutter Position  |
| CAM_Iris          | Reset            | 8x 01 04 0B 00 FF          | Iris Setting  |
|                   | Up               | 8x 01 04 0B 02 FF          |   |
|                   | Down             | 8x 01 04 0B 03 FF          |   |
|                   | Direct           | 8x 01 04 4B 00 00 0p 0q FF | pq: Iris Position   |
| CAM_Gain          | Reset            | 8x 01 04 0C 00 FF          | Gain Setting  |
|                   | Up               | 8x 01 04 0C 02 FF          |   |
|                   | Down             | 8x 01 04 0C 03 FF          |   |
|                   | Direct           | 8x 01 04 4C 00 00 0p 0q FF | pq: Gain Position   |
| CAM_Bright        | Reset            | 8x 01 04 0D 00 FF          | Bright Setting  |
|                   | Up               | 8x 01 04 0D 02 FF          |   |
|                   | Down             | 8x 01 04 0D 03 FF          |   |
|                   | Direct           | 8x 01 04 4D 00 00 0p 0q FF | pq: Bright Position   |
| CAM_ExpComp       | On               | 8x 01 04 3E 02 FF          | Exposure Compensation ON/OFF  |
|                   | Off              | 8x 01 04 3E 03 FF          |   |
|                   | Reset            | 8x 01 04 0E 00 FF          | Exposure Compensation Amount Setting  |
|                   | Up               | 8x 01 04 0E 02 FF          |   |
|                   | Down             | 8x 01 04 0E 03 FF          |   |
|                   | Direct           | 8x 01 04 4E 00 00 0p 0q FF | pq: ExpComp Position  |
| CAM_Backlight     | On               | 8x 01 04 33 02 FF          | Back Light Compensation ON/OFF  |
|                   | Off              | 8x 01 04 33 03 FF          |   |
| CAM_Aperture      | Reset            | 8x 01 04 02 00 FF          | Aperture Control  |
|                   | Up               | 8x 01 04 02 02 FF          |   |
|                   | Down             | 8x 01 04 02 03 FF          |   |
|                   | Direct           | 8x 01 04 42 00 00 0p 0q FF | pq: Aperture Gain   |
| CAM_PictureEffect | Off              | 8x 01 04 63 00 FF          | Picture Effect Setting  |
|                   | Neg.Art          | 8x 01 04 63 02 FF          |   |
|                   | B&W              | 8x 01 04 63 04 FF          |   |
| CAM_Memory        | Reset            | 8x 01 04 3F 00 pp FF       | pp: Memory Number (=0 to 255)<br>Corresponds to 0 to 255 on the Remote Commander. |
|                   | Set              | 8x 01 04 3F 01 pp FF       |   |
|                   | Recall           | 8x 01 04 3F 02 pp FF       |   |
| SYS_Menu          | Off              | 8x 01 06 06 03 FF          | Turns off the menu screen.  |

## Commands *(Continued)*

| Command Set          | Command             | Command Packet                                  | Comments  |
|----------------------|---------------------|---|---|
| CAM_IDWrite          |                     | 8x 01 04 22 0p 0q 0r 0s FF                      | pqrs: Camera ID (=0000 to FFFF)   |
| IR_Receive           | On                  | 8x 01 06 08 02 FF                               | IR(remote commander) receive<br>ON/OFF  |
|                      | Off                 | 8x 01 06 08 03 FF                               |   |
| Information Display  | On                  | 8x 01 7E 01 18 02 FF                            | ON/OFF of the Operation status<br>display   |
|                      | Off                 | 8x 01 7E 01 18 03 FF                            |   |
| Pan-tiltDrive        | Up                  | 8x 01 06 01 VV WW 03 01 FF                      | VV: Pan speed 0 x01 (low<br>speed) to 0 x18 (high speed)<br>WW: Tilt Speed 0 x 01 (low<br>speed) to 0 x14 (high speed)<br>YYYY: Pan Position<br>ZZZZ: Tilt Position |
|                      | Down                | 8x 01 06 01 VV WW 03 02 FF                      |   |
|                      | Left                | 8x 01 06 01 VV WW 01 03 FF                      |   |
|                      | Right               | 8x 01 06 01 VV WW 02 03 FF                      |   |
|                      | UpLeft              | 8x 01 06 01 VV WW 01 01 FF                      |   |
|                      | UpRight             | 8x 01 06 01 VV WW 02 01 FF                      |   |
|                      | DownLeft            | 8x 01 06 01 VV WW 01 02 FF                      |   |
|                      | DownRight           | 8x 01 06 01 VV WW 02 02 FF                      |   |
|                      | Stop                | 8x 01 06 01 VV WW 03 03 FF                      |   |
|                      | AbsolutePosition    | 8x 01 06 02 VV WW<br>0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF |   |
|                      | RelativePosition    | 8x 01 06 03 VV WW<br>0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF |   |
|                      | Home                | 8x 01 06 04 FF                                  |   |
| Reset                | 8x 01 06 05 FF      |   |   |
| Pan-tiltLimitSet     | LimitSet            | 8x 01 06 07 00 0W<br>0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF | W: 1 UpRight 0: DownLeft<br>YYYY: Pan Limit Position<br>ZZZZ: Tilt Position   |
| CAM_AutoFrameTrigger | One Push Auto Frame | 8x 01 0E 24 6C 0p 0p FF                         | P: seconds  |

## Inquiry Commands

| Inquiry Command          | Command Packet | Inquiry Packet       | Comments                        |
|--------------------------|----------------|----------------------|---------------------------------|
| CAM_PowerInq             | 8x 09 04 00 FF | y0 50 02 FF          | On                              |
|                          |                | y0 50 03 FF          | Off (Standby)                   |
|                          |                | y0 50 04 FF          | Internal power circuit error    |
| CAM_ZoomPosInq           | 8x 09 04 47 FF | y0 50 0p 0q 0r 0s FF | pqrs: Zoom Position             |
| CAM_FocusModeInq         | 8x 09 04 38 FF | y0 50 02 FF          | Auto Focus                      |
|                          |                | y0 50 03 FF          | Manual Focus                    |
| CAM_FocusPosInq          | 8x 09 04 48 FF | y0 50 0p 0q 0r 0s FF | pqrs: Focus Position            |
| CAM_WBModeInq            | 8x 09 04 35 FF | y0 50 00 FF          | Auto                            |
|                          |                | y0 50 01 FF          | In Door                         |
|                          |                | y0 50 02 FF          | Out Door                        |
|                          |                | y0 50 03 FF          | One Push WB                     |
|                          |                | y0 50 05 FF          | Manual                          |
| CAM_RGainInq             | 8x 09 04 43 FF | y0 50 00 00 0p 0q FF | pq: R Gain                      |
| CAM_BGainInq             | 8x 09 04 44 FF | y0 50 00 00 0p 0q FF | pq: B Gain                      |
| CAM_AEModeInq            | 8x 09 04 39 FF | y0 50 00 FF          | Full Auto                       |
|                          |                | y0 50 03 FF          | Manual                          |
|                          |                | y0 50 0A FF          | Shutter Priority                |
|                          |                | y0 50 0B FF          | Iris Priority                   |
|                          |                | y0 50 0D FF          | Bright                          |
| CAM_ShutterPosInq        | 8x 09 04 4A FF | y0 50 00 00 0p 0q FF | pq: Shutter Position            |
| CAM_IrisPosInq           | 8x 09 04 4B FF | y0 50 00 00 0p 0q FF | pq: Iris Position               |
| CAM_GainPosInq           | 8x 09 04 4C FF | y0 50 00 00 0p 0q FF | pq: Gain Position               |
| CAM_BrightPosInq         | 8x 09 04 4D FF | y0 50 00 00 0p 0q FF | pq: Bright Position             |
| CAM_ExpCompModeInq       | 8x 09 04 3E FF | y0 50 02 FF          | On                              |
|                          |                | y0 50 03 FF          | Off                             |
| CAM_ExpCompPosInq        | 8x 09 04 4E FF | y0 50 00 00 0p 0q FF | pq: ExpComp Position            |
| CAM_BacklightModeInq     | 8x 09 04 33 FF | y0 50 02 FF          | On                              |
|                          |                | y0 50 03 FF          | Off                             |
| CAM_ApertureInq          | 8x 09 04 42 FF | y0 50 00 00 0p 0q FF | pq: Aperture Gain               |
| CAM_PictureEffectModeInq | 8x 09 04 63 FF | y0 50 00 FF          | Off                             |
|                          |                | y0 50 02 FF          | Neg.Art                         |
|                          |                | y0 50 04 FF          | B&W                             |
| CAM_MemoryInq            | 8x 09 04 3F FF | y0 50 0p FF          | p: Memory number last operated. |
| SYS_MenuModeInq          | 8x 09 06 06 FF | y0 50 02 FF          | On                              |
|                          |                | y0 50 03 FF          | Off                             |
| CAM_IDInq                | 8x 09 04 22 FF | y0 50 0p 0q 0r 0s FF | pqrs: Camera ID                 |

## Inquiry Commands *(Continued)*

| Inquiry Command     | Command Packet          | Inquiry Packet  | Comments  |
|---------------------|-------------------------|---|---|
| CAM_VersionInq      | 8x 09 00 02 FF          | y0 50 00 01<br>mn pq rs tu vw FF  | mnpq: Model Code (0504)<br>rstu: ROM version<br>vw: Socket Number (=02)                           |
| Information Display | 8x 09 7E 01 18 FF       | y0 50 02 FF   | On  |
|                     |                         | y0 50 03 FF   | Off   |
| VideoSystemInq      | 8x 09 06 23 FF          | y0 50 00 FF   | 1920 x1080i/60  |
|                     |                         | y0 50 01 FF   | 1920 x1080p/30  |
|                     |                         | y0 50 02 FF   | 1280 x720p/60   |
|                     |                         | y0 50 03 FF   | 1280 x720p/30   |
|                     |                         | y0 50 07 FF   | 1920 x1080p/60  |
|                     |                         | y0 50 08 FF   | 1920 x1080i/50  |
|                     |                         | y0 50 09 FF   | 1920 x1080p/25  |
|                     |                         | y0 50 0A FF   | 1280 x720p/50   |
|                     |                         | y0 50 0B FF   | 1280 x 720p/25  |
|                     |                         | y0 50 0F FF   | 1920 x1080p/50  |
| IR_Receive          | 8x 09 06 08 FF          | y0 50 02 FF   | On  |
|                     |                         | y0 50 03 FF   | Off   |
| Pan-tiltMaxSpeedInq | 8x 09 06 11 FF          | y0 50 ww zz FF  | ww = Pan Max Speed<br>zz = Tilt Max Speed   |
| Pan-tiltPosInq      | 8x 09 06 12 FF          | y0 50 0w 0w 0w 0w<br>0z 0z 0z 0z FF   | wwww = Pan Position<br>zzzz = Tilt Position   |
| Pan-tiltModeInq     | 8x 09 06 10 FF          | y0 50 pq rs FF  | pqrs: Pan/Tilt Status   |
| CAM_AnalyticsInq    | 8x 01 0E 24 6E 00 00 FF | [tracking status on/off][current X,<br>Y, Z][#][human][date powered<br>on][date command was sent] | Inquires tracking status, current PTZ<br>position, faces in sight, & when the<br>command was sent |

## Tips and Tricks

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**The “Stage”:** Imagine your subject moving around within the available presentation space and take note of the extremes, left or right and up or down, your presenter may happen to present from. The area you have just noted is what we will call our stage and is what you want to ensure is captured by the reference camera. Within this stage we normally want to set the priority tracking area to slightly above the presenter’s head for the top boundary and just above the audience’s heads for the bottom boundary.

**Shot Composition:** For a nice tight shot around the subject, the camera must be within 55’ of the subject. Beyond that, composition will be sacrificed for distance.

**Motion:** The faster the subject moves, the larger the shot composition should be. Depending on the subject, and desired impact, this is something that can require a bit of trial and error to find that perfect composition to high motion ratio.

**Keep it Simple:** When diving into the Advanced Parameters section of the software, think about what you’re trying to capture. Only enable the features you need to properly track within your “stage.” As an example, if you have a presenter at the front of the room only moving left or right do not enable Auto-Zoom or Auto-Tilt, as you’re just inviting undesired tracking results.

**Plan Ahead:** Before any event, large or small, test your entire setup as far in as possible. Waiting until the last minute is never a good idea.

## Care of the Unit

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Remove dust or dirt on the surface of the lens with a blower (*commercially available*).

## Troubleshooting

| Problem  | Possible Cause   | Solution  |
|--|--|---|
| No movement or image after power on                                    | Power supply failure   | Check power supply  |
|  | Power adapter damaged  | Replace power adapter   |
|  | Power cable connection is loose                                  | Check & reconnect   |
| No self-testing after powered on, or with motor noise                  | Not enough power   | Check & reconnect power cable connection  |
|  | Mechanical failure   | Send for authorized repair  |
| After power on, self-test successfully, but not controllable           | Wrong address / protocol / baud rate                             | Check & set again   |
|  | Wrong connection or open circuit of RS-485/RS422 or RS-232 cable | Check & reconnect   |
| Video loss when pans / tilts / zooms                                   | Not enough power   | Check & reconnect power cable   |
|  | Video cable not properly connected                               | Replace with a tested cable   |
| Auto tracking has locked on the wrong subject / object with no motion  | Lack of adequate lighting on the subject                         | Increase proper lighting on subject / stage. If the problem persists attempt to move the camera closer to the stage.  |
|  | Too complex of a scene with slightly improper lighting           |   |
| The tracking camera seems to be off from the reference camera settings | The camera has been moved  | Manually move camera back into place or rebuild tracking zones  |
|  | A manual tracking / reference camera recalibration is required   | Enter the Advanced Parameters settings and click the <b>Pos Correct</b> button. Once the tracking camera stops moving, align the crosshairs of the tracking camera to match the crosshairs of the reference camera.                       |
| The camera is tracking slightly below or above the subject             | A manual height recalibration is required                        | Enter the Advanced Parameters settings and click the <b>Debug</b> button. Have your subject stand in place within facing the tracking camera. Once a rectangle is around the face, use the Up and Down buttons to adjust tracking height. |
| Having trouble finding / connecting to camera on the network           | No DHCP Server available   | Connect to camera and set a static IP in the Configuration interface  |
|  | Multiple Network Connections                                     | Disable any secondary and or tertiary network connections on your Windows PC  |





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## Notes

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