HuddleCamHD
152 Robbins Rd, Downingtown, PA, 19335, USA - HuddleCamHD.com I 1 800 - 486-5276

HuddleCamHD SimplTrack2

Auto Tracking Camera

Installation & Operation Manual

Ver. 1.4 – 6-21

Table of Contents

Precautions

Safety Tips

- 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

Supplied Hardware

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

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Technical Specifications

Main Features	
Resolutions	**1080p**-60/50/30/25 **1080i**-60/50 **720p**-60/50/30 **704x480**-30 **320x240**-30 (RTSP & RTMP streams limited to 30 FPS)
Image Sensor	1/2.8" EXMOR, 2.14 Mega Pixel
Lens	20X Optical, f=4.7-94mm
Digital Zoom	1x ~ 11x
Minimal Illumination	0.5 lux
Shutter	1/1 ~ 1/10000
White Balance	Auto, ATW, One Push, Indoor, Outdoor, Manual, Sodium Lamp, Fluo Lamp
Tracking Horizontal FoV	3° ~ 59°
Tracking Vertical FoV	2° ~ 36°
Reference Horizontal FoV	86°
Reference Vertical FoV	52°
Horizontal Pan Range	±170
Vertical Tilt Range	-30° ~ +90°
Image Mirror	Supported
Image Flip	Not supported
Backlight Compensation	Not supported
PoE	Not supported
Local Storage	Supported (TF Micro SD slot)
Number of Presets	255
Preset Accuracy	0.1°
Input / Output Interface	
HD Outputs	1 x RJ45 IP Network stream 10/100M Adaptive Ethernet port
	1 x 3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard
	1 x DVI: DVI-I Dual Link
	1 x USB 3.0: B-type female
Audio Input	1-ch 3.5mm audio interface, Line In (RTSP & RTMP Network Stream only) (Unbalanced stereo)
Communication Interface	1 x RS-232 IN: 8pin mini-din, Mac Distance: 30m, VISCA protocol
Storage Interface	1 x TF Micro SD slot (not included)
Power Jack	DC 12V 2.5A
IP video Features	
Video Encoding	H.264 & H.265

Video Stream	Four (4) IP video output streams available
1st Stream Resolution	1080p-30, 720p-30, 704x480-30, 320x240-30
2nd Stream Resolution	720p-30, 704x480-30, 320x240-30
3rd Stream Resolution	720p-30, 704x480-30, 320x240-30
4th Stream Resolution	704x480-30, 320x240-30
Video Bit Rate	1 ~ 16383 Kbps
Supported Protocols	TCP/IP, UDP, HTTP, RTSP, RTMPS, DHCP, Multicast, etc.
USB Video Features	
Operating System	Windows 7 / 8.1 / 10 / 11, Mac OS, Linux (Control software is Windows only)
Video Format	USB 3.0 – **1080p**-60/50/30/25, **1080i**-60/50, **720p**-60/50
UVC PTZ Control	Supported, UVC 1.1 ~ 1.5
Software Specifications	
PC Requirements	Windows 8.1 / 10 / 11 OS, P4 / 128M RAM / 40GHD / Support for scaled graphics card, support for DirectX8.0 or more advanced version.
Storage Requirements	50MB
Network Requirements	10/100M Wired or Wireless connectivity to a LAN
Minimum Resolution	1920x1080
General Specifications	
Input Voltage	DC IN 12V
Current Consumption	1.0A (Max)
Power Consumption	12W (Max)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Humidity Range	10% ~ 80%
Camera Size (W x D x H)	9.6” x 5.7” x 6.4” | 243mm x 145mm x 163mm
Camera Weight	2.64 lbs | 1.2 kg
Box Size (W x D x H)	11.75” x 9.5” x 11.5” | 298.45mm x 241.3mm x 292.1mm
Box Weight	5.7 lbs | 2.59 kg

Physical Descriptions

Front View of Camera

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

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

Network Connection

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

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

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

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

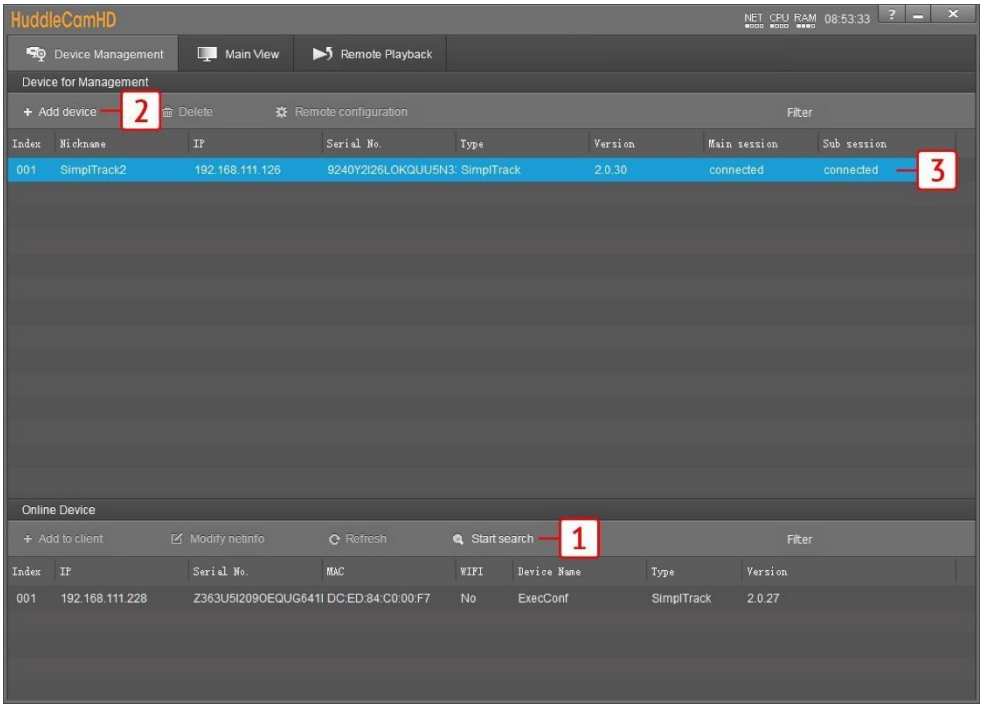
Failure to follow these sequences may result in no connection.

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.

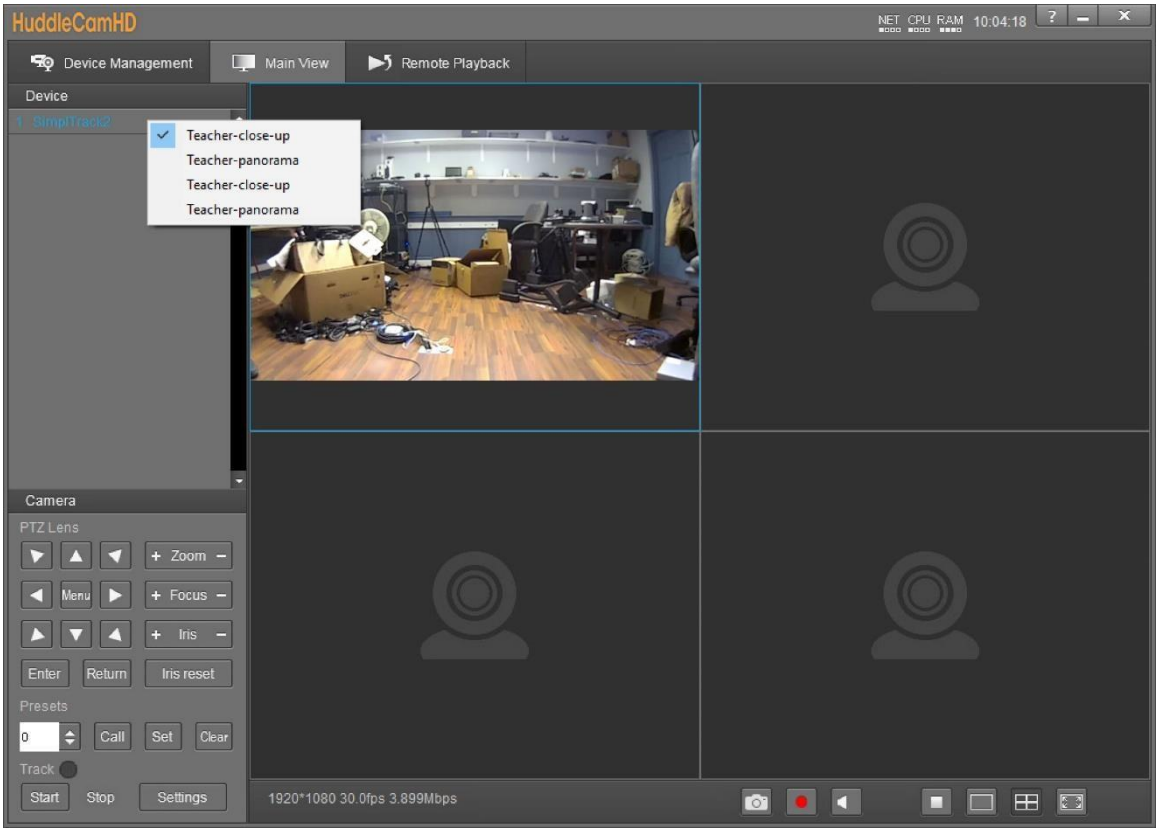


1. Click "**Start Search**" in the bottom section of the software to search for cameras on the same subnet mask as your PC.
    a. Note: The camera utilizes DHCP by default, if your PC is also utilizing DHCP this search should find your camera.
2. Alternatively, you can use **"+ Add Device**" at the 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

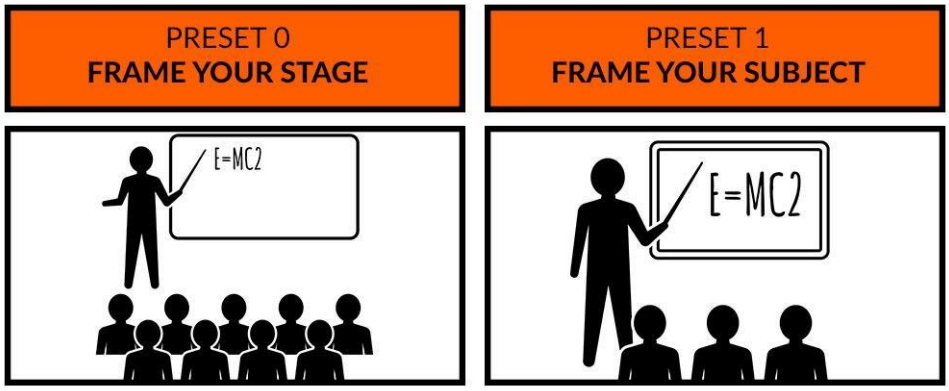
Now that you have a camera connected, you can select an empty cell and right-click the camera to select a video feed for that cell, as shown below.

- 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.

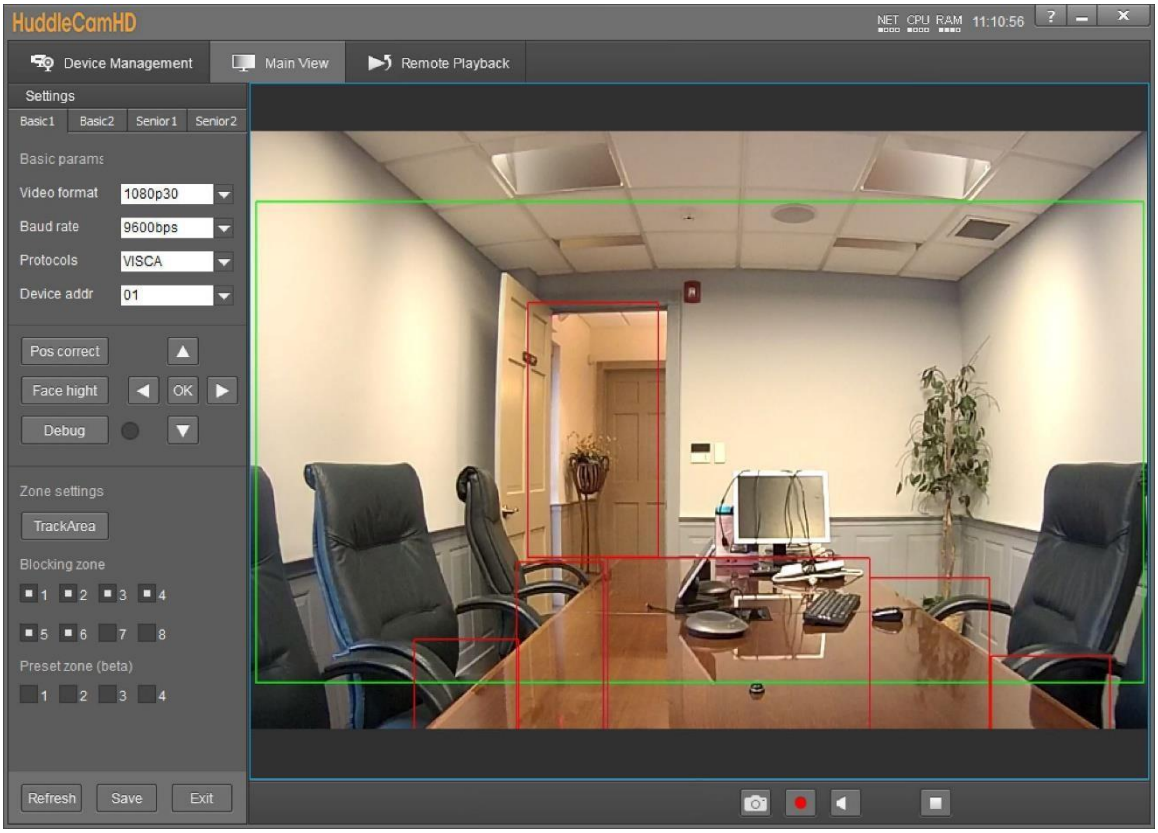
Configure Tracking (Continued)



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.

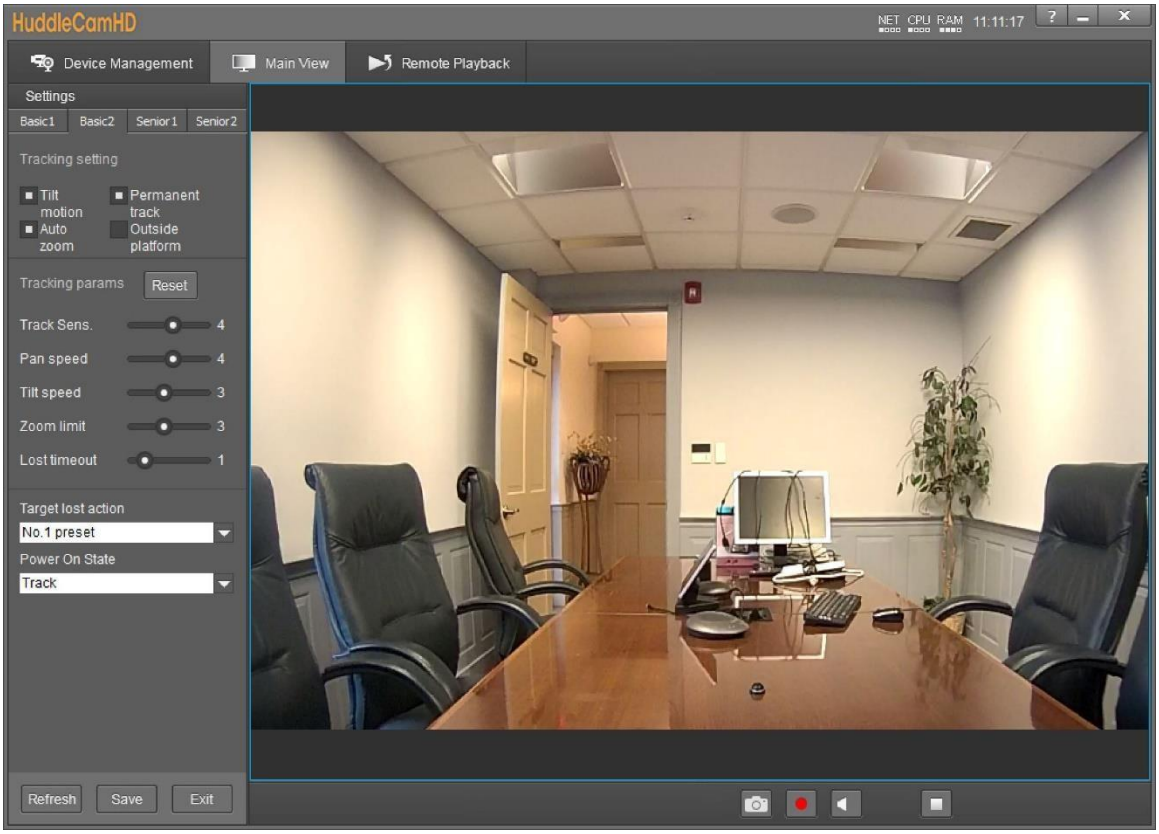
2. From here, open "**Settings**" from the bottom left of the tracking software. This will open the Basic 1 menu.



3. Set the tracking zone and blocking zones for your environment.
    a. **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.

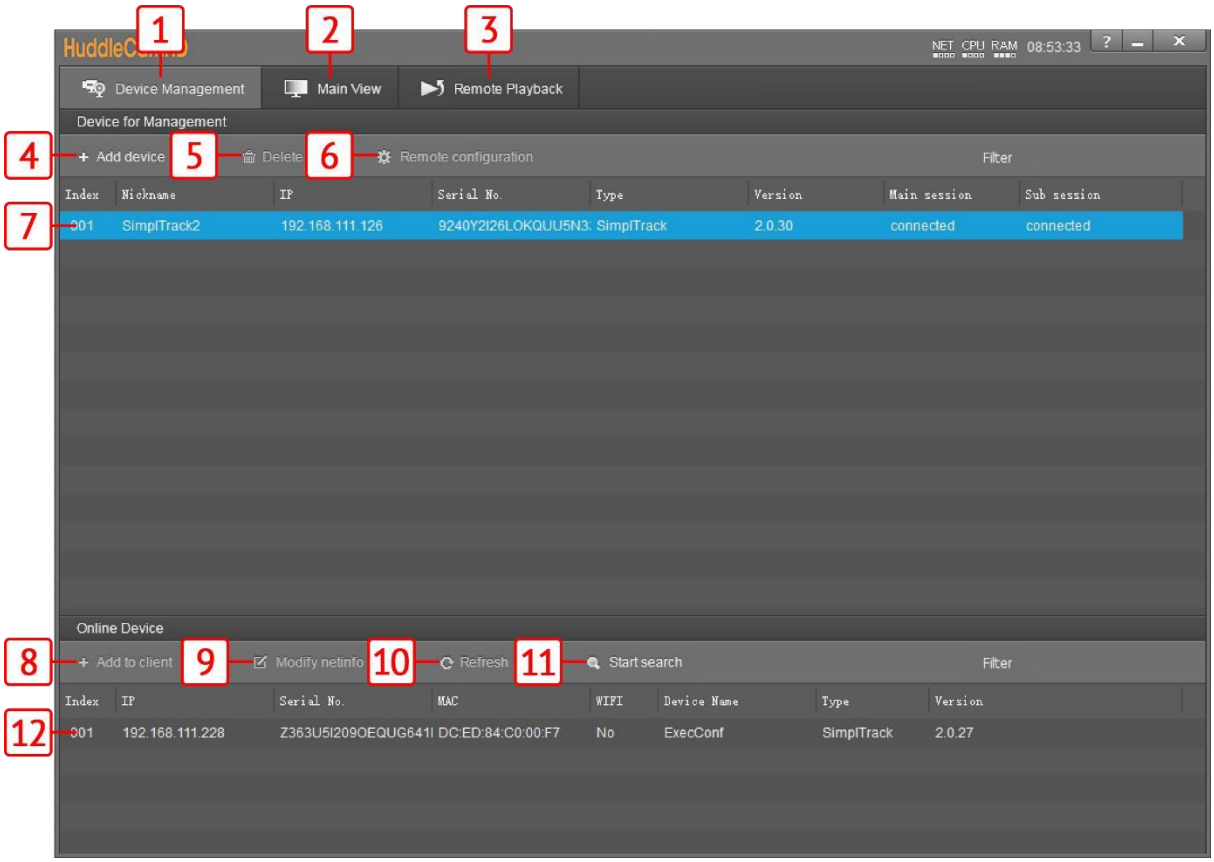


6. In Basic 2, you can adjust the Tracking limitations of the camera.
    a. **Tracking Settings:** Enable/Disable Tilt Motion, Auto Zoom, Permanent Track, & Outside Platform.
    b. **Tracking Parameters:** Tracking Sensitivity, Pan Speed, Tilt Speed, Zoom Limit, & Lost Timeout as required by your room.
    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



1 Device Management interface

2 Video configuration interface

3 View & download video and/or photos. *Micro SD card required

4 Manually add device using IP address, Port number, Username & Password

5 Delete selected device from Device Management list

6 Configure network settings of camera

7 *Selected* device within Device Management

8 Add selected camera from Online Device section

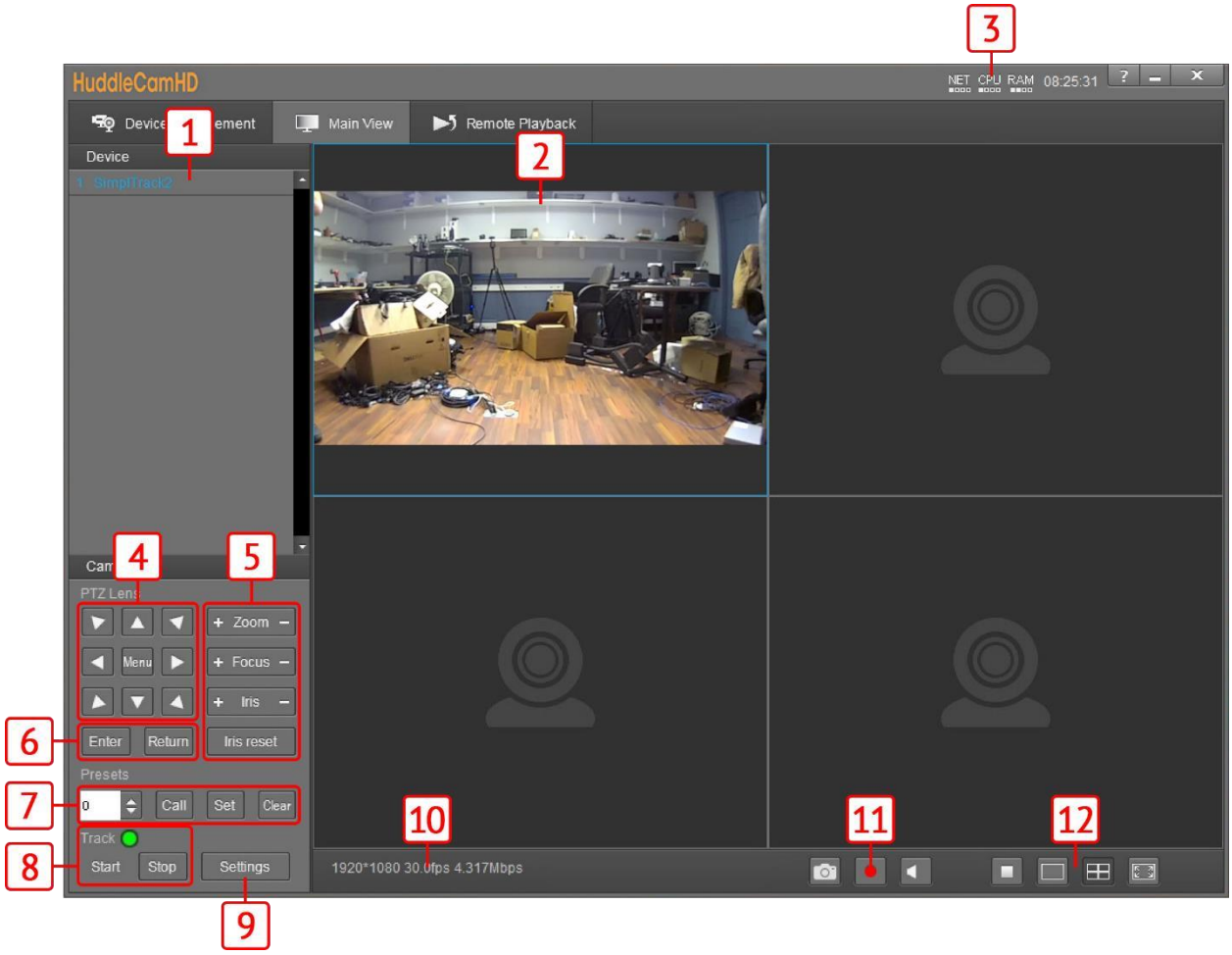
9 Modify network settings of selected Online Device

10 Refresh Online Device list

11 Start/Stop searching for Online Devices

12 *Unselected* device from Online Device section

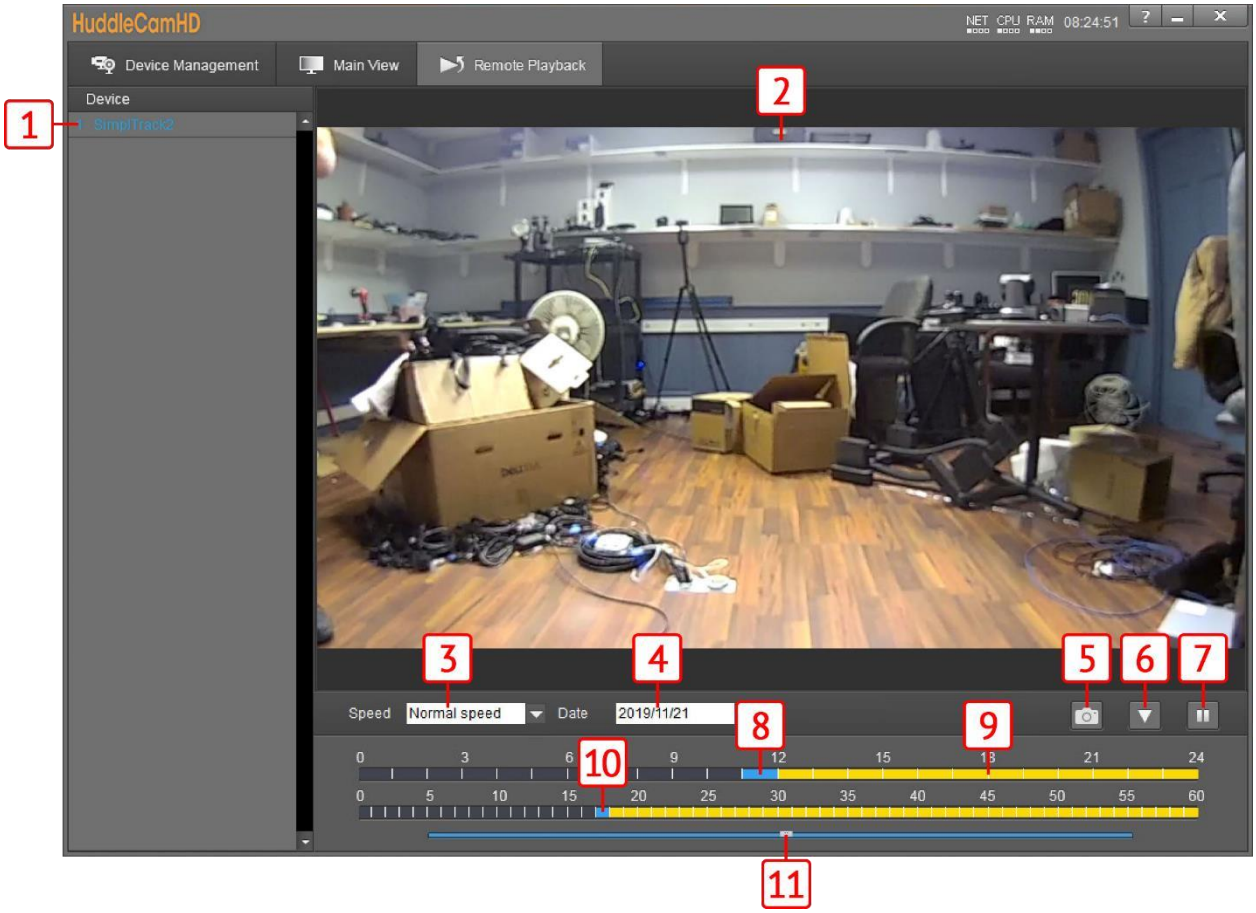
Video Configuration Interface



1	Cameras connected to Device Management	**7**	Preset control
2	Camera video feed	**8**	Enable/Disable tracking & Tracking Status
3	PC performance & time	**9**	Open tracking settings
4	Pan, Tilt, & OSD Menu control	**10**	Connected camera resolution & frame rate
5	Lens control	**11**	Snapshot, Enable/Disable recording, Enable/Disable audio
6	OSD Menu enter/return	**12**	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.



1 Device list

2 Video feed of recording

3 Video feed playback speed
Options include: Fast, normal, & slow speed

4 Recorded video dropdown date

5 Takes a snapshot of the current video feed.

6 Opens a selection window for downloading the recorded video

7 Pause/Play video feed

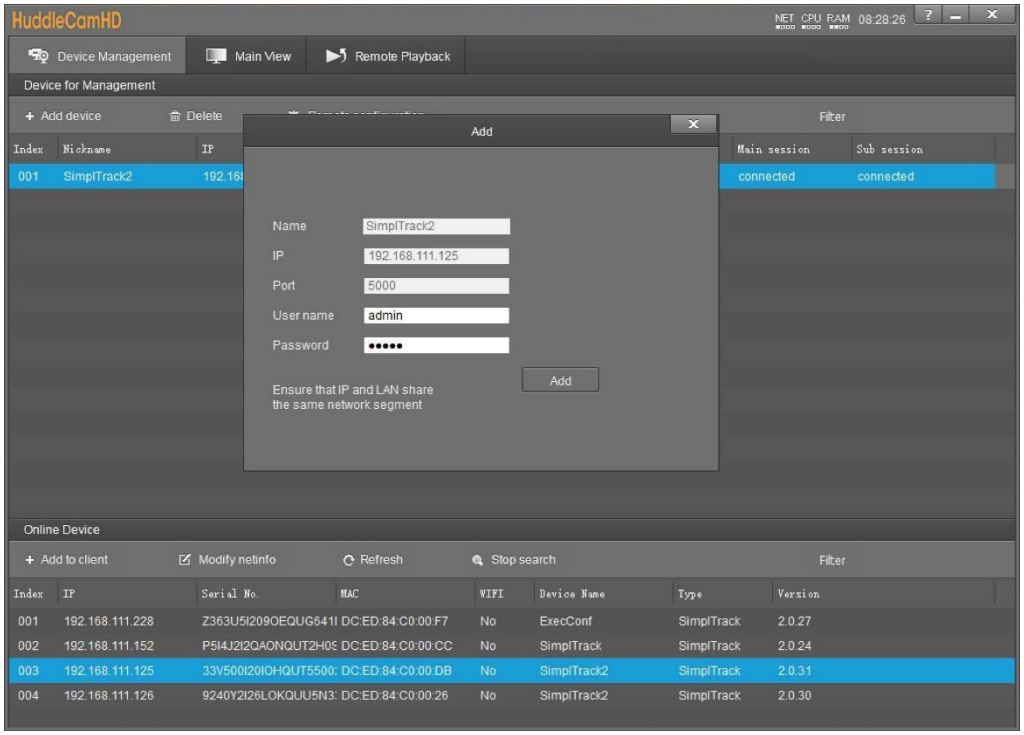
8 Currently selected time (in hours) for video feed

9 Recorded video (in hours)

10 Currently selected time (in minutes) for video feed)

11 Current time of video feed (in seconds)

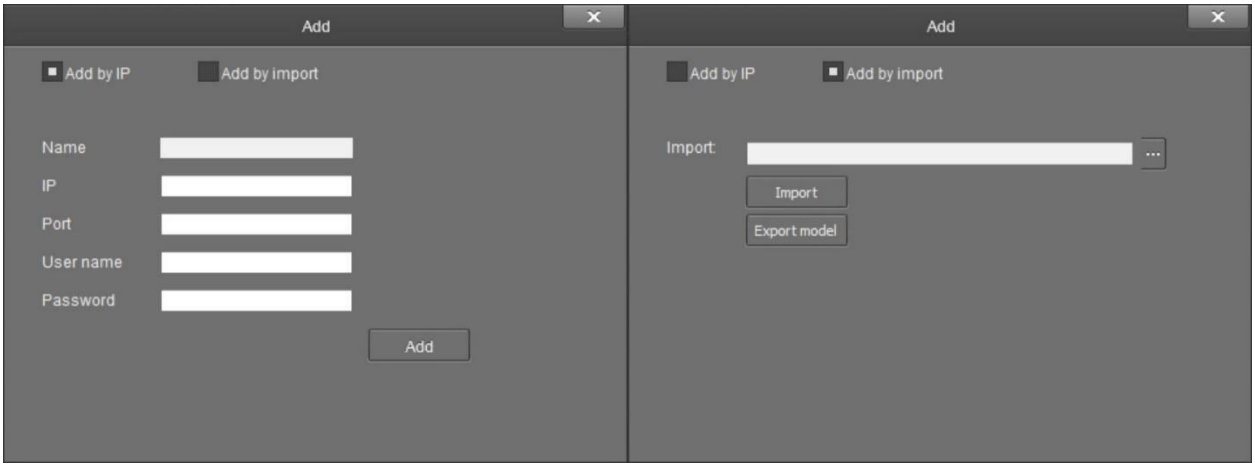
Connect Camera



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 & SimplTrack2 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 it's **IP address**, **Port number**, & optional **Username** & **Password**; or you can **Import** a *.csv file.

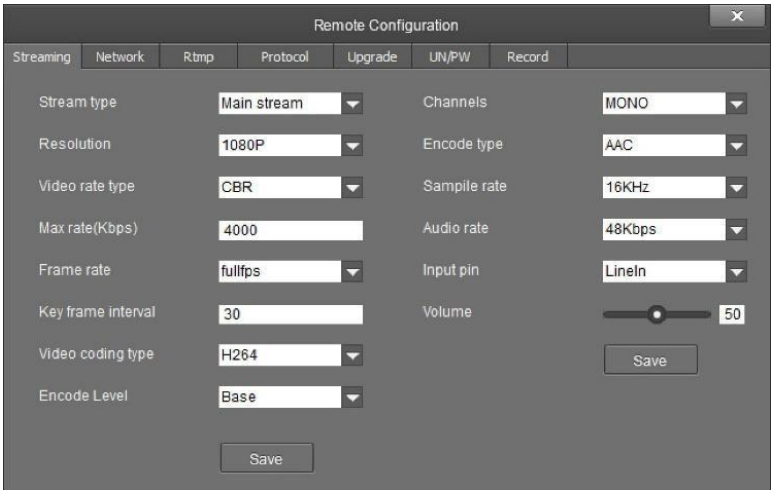


Network Configuration

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**.

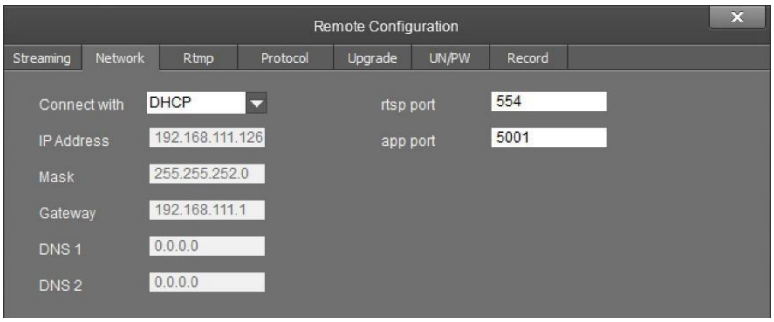


- **Stream Type:** Select the RTSP feed you wish to adjust.
    - Options include: Main stream, Sub stream, Stream 3, & Stream 4.
- **Resolution:** Change the resolution of the stream you wish to adjust.
    - Main Stream resolutions: QVGA(320x240), D1(704x480), HD720, & 1080P ○ Sub Stream resolutions: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



- **Connect With:** Adjust the network connection method ○ Options include: DHCP (Dynamic) & Static IP

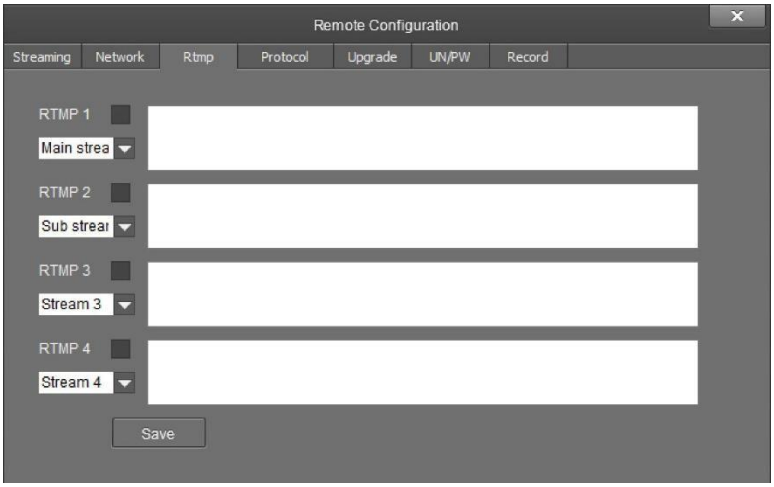
  Note: While in DHCP you can only adjust RTSP Port & App Port
- **IP Address:** Displays IP Address & allows for adjustment the IP address of your camera ○ Default value: DHCP; or 192.168.1.180 while in Static or no connection to a DHCP server
- **Mask:** Adjust the Subnet Mask of your camera ○ Default 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

Remote Configuration (Continued)

The

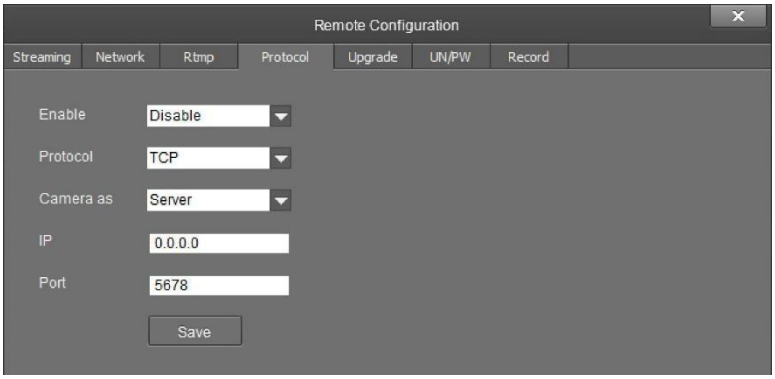
- **DNS 2:** Adjust the DNS 2 (Dynamic Name System) ○ Default value: 0.0.0.0
- **RTSP Port:** Adjust the RTSP connection port ○ Default value: 554
- **App Port:** Adjust the app control port ○ Default value: 5001

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



- **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.

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

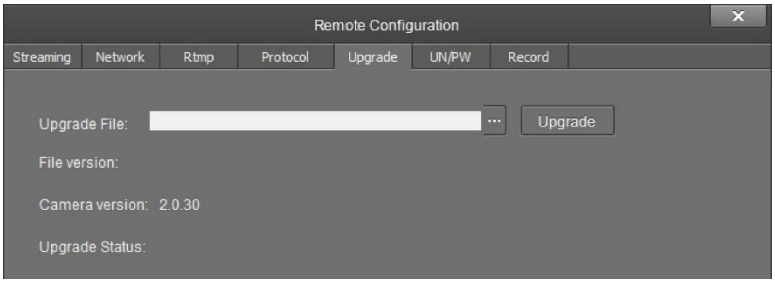


- **Enable:** Enable or disable 3rd party control to the camera ○ Options include: Enable & Disable
- **Protocol:** Adjust the control protocol method ○ Options include: TCP & UDP
- **Camera as:** Adjust whether the camera acts as a server or a controllable device ○ Options include: Server & Client

Remote Configuration (Continued)

- **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.

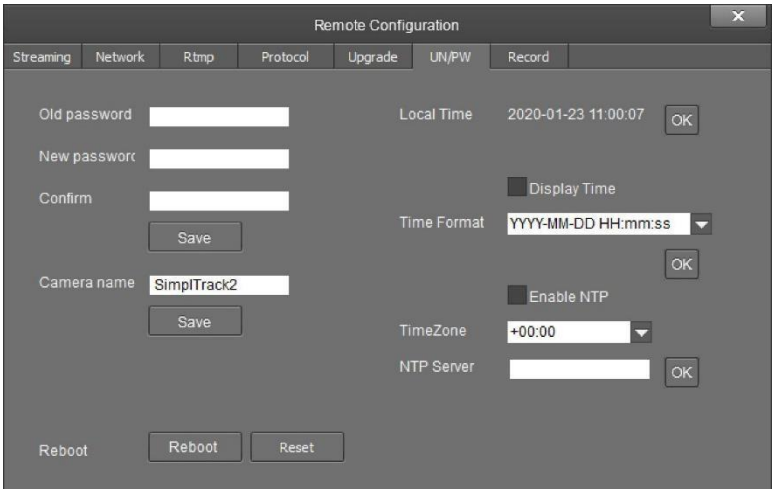


- **Upgrade File:** Browse your computer for the firmware upgrade file
- **File Version:** Displays the version number of the file once selected
- **Camera Version:** Displays the version number of the camera currently connected
- **Upgrade Status:** Displays the status of the firmware upgrade

Remote Configuration (Continued)

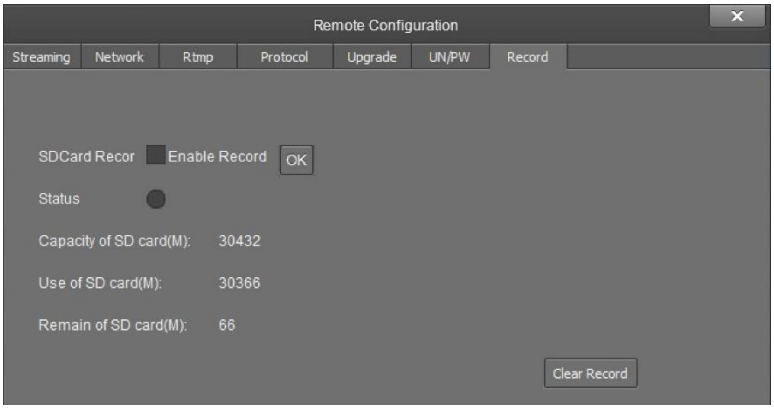
The

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



- **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-MMYYYY 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

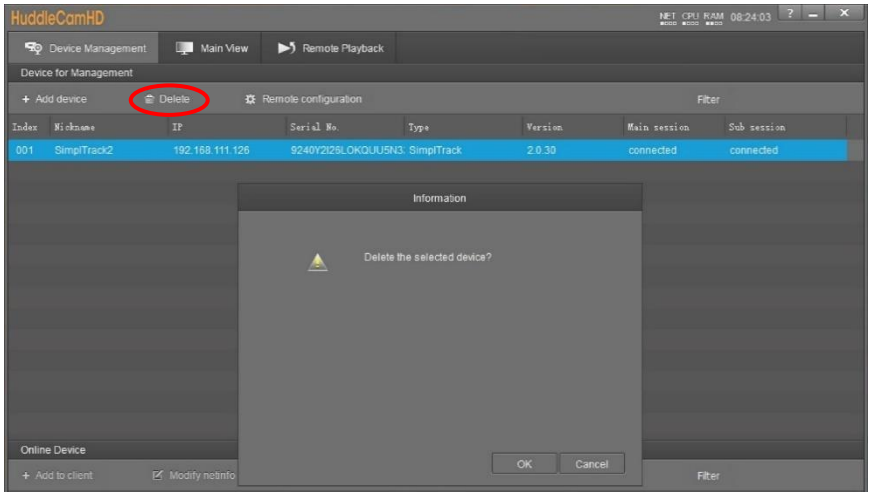
Record category allows you to set up and view the status of the Photobooth recording. Note: A Micro SD card is required for use with the Photobooth feature.



- **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

Remote Configuration (Continued)

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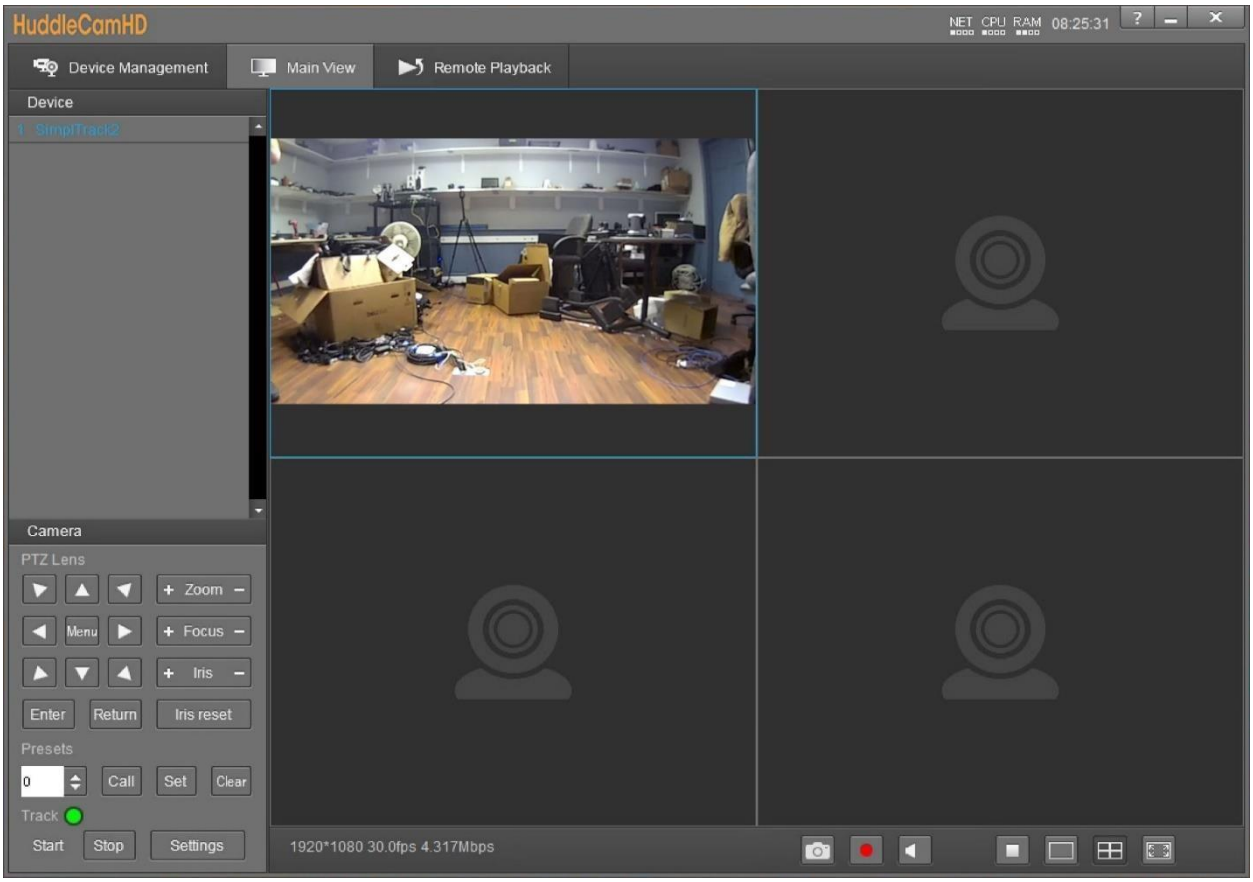


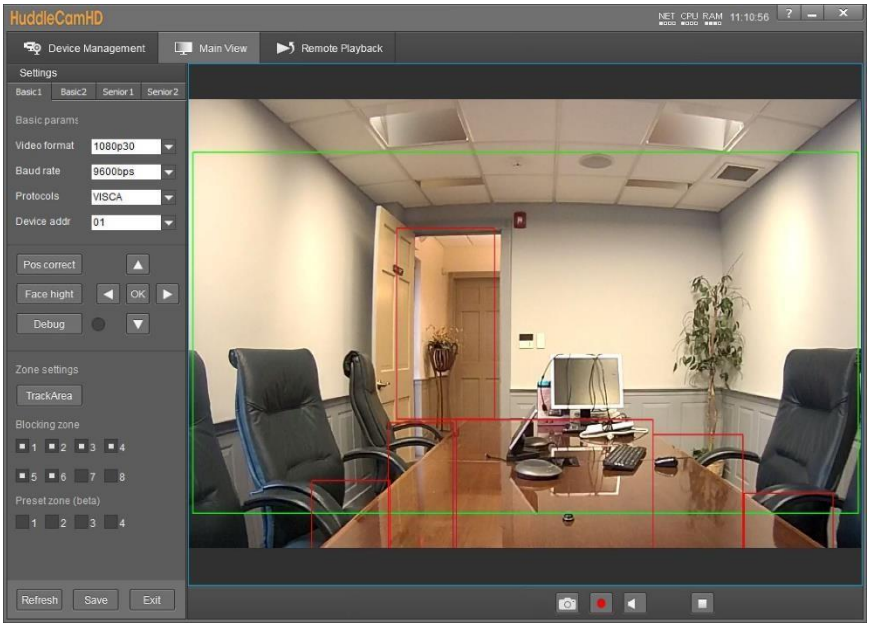
In the **Video Interface** you can view and control up to four cameras simultaneously. You have full control over **Pan**, **Tilt**, **Zoom**, **Focus**, **Iris**, **OSD Menu**, **Presets** & **Tracking Settings**. **Device List:** List of added cameras from the Device Management section

- **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

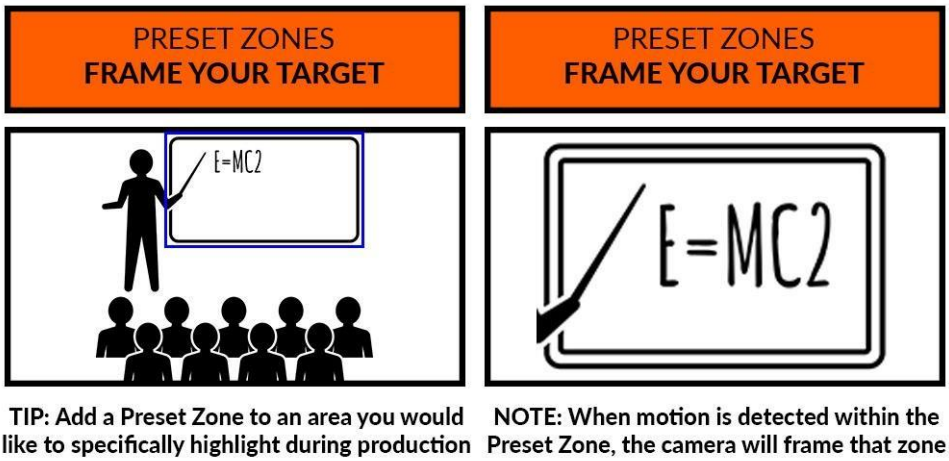
To adjust the **Tracking Parameters** of the selected camera, you must click the **Settings** button in the tracking control area. Once opened, you'll be greeted with the **Basic 1** parameters. From here, you have control over **Video Format**, **Baud Rate**, Control **Protocol**, **Device Address**,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



- **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



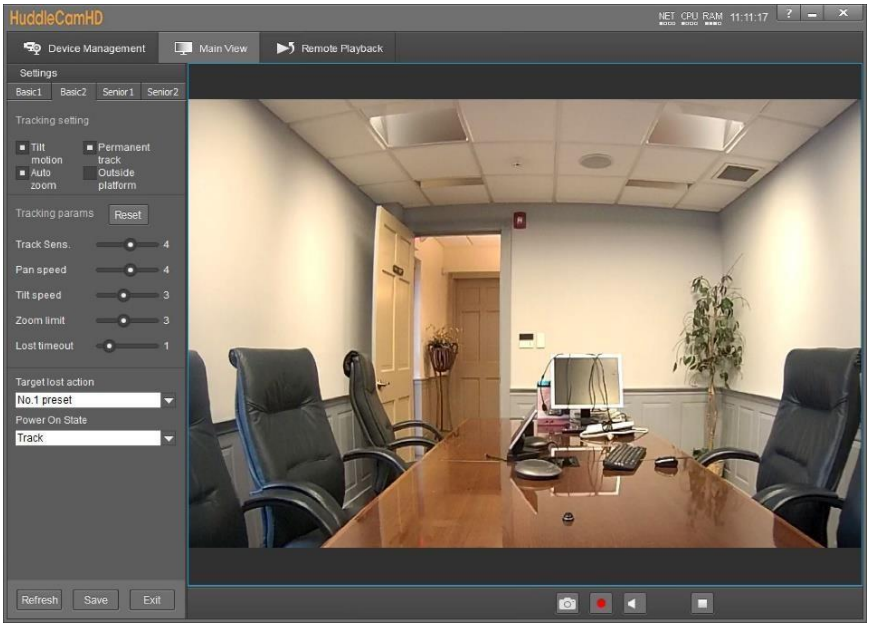
TIP: Add a Preset Zone to an area you would like to specifically highlight during production

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**.

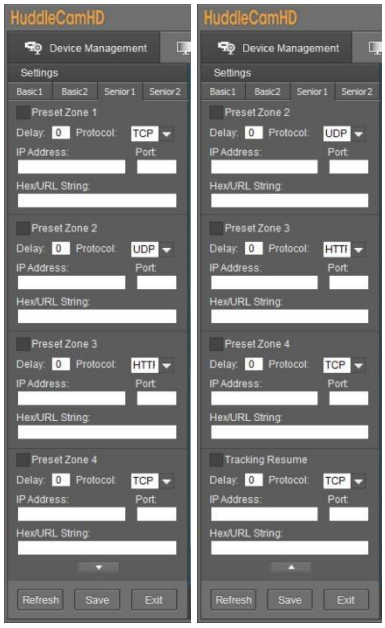
Basic 2 (Continued)



- **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** tab allows for control of the **Preset Zone Triggers**, **Tracking Resumes**, & **Dynamic Blocking Zones**. To use this tab, you will first need to define the Preset Zone(s).



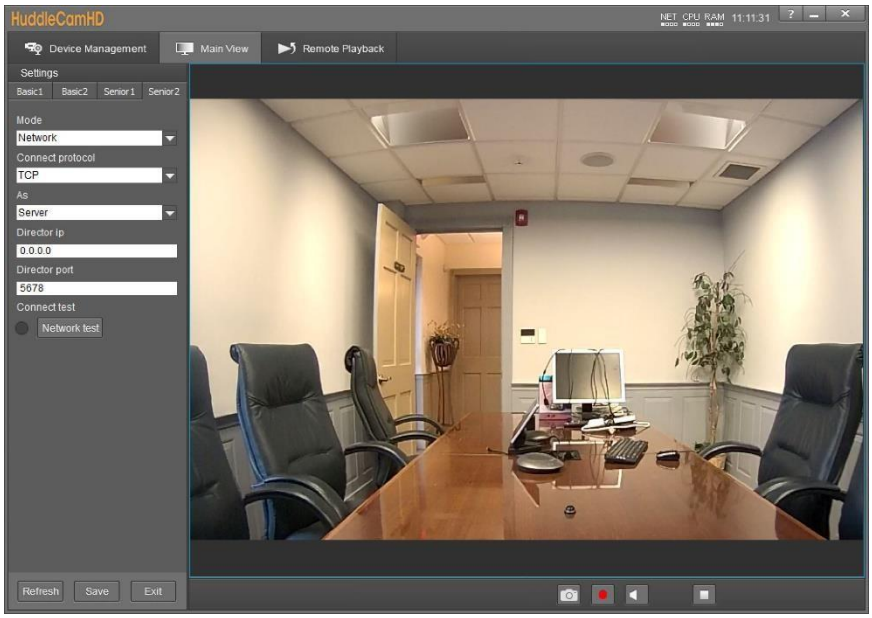
- **Preset Zone # Checkbox:** Enable/Disable the corresponding Preset Zone Trigger. These Preset Zones are used ○ **Protocol:** Define
  control protocol.
    - ✦ Options include: TCP, UDP, HTTP ○ **Delay:** Define the number of seconds to wait before sending the command. ○ **IP Address:** Define IP address to send command to. ○ **Port:** Define port number of the controlled device.
  - ○ **Hex/URL String:** Insert the command to send to the controlled device.
- **Tracking Resumes:** Enable/Disable Tracking Resumes. This is a unique Preset Zone Trigger that can be used when a subject moves out of a Preset Zone. This trigger is called whenever the subject moves out of any of the (4) Preset Zones.
- **Dynamic Blocking Zones:** These zones allow you to overlay a Blocking Zone when the subject enters a Preset Zone. By default, these zones are disabled. You can enable them by sending a VISCA command to the camera.
  - ○ 81 0B 0D 02 08 01 FF – Associate Preset Zones 1-4 with Blocking Zones 5-8
  - ○ 81 0B 0D 01 05 00 FF – Remove association of Preset Zone 1 with Blocking Zone 5 ○ 81 0B 0D 01 06 00 FF – Remove association of Preset Zone 2 with Blocking Zone 6 ○ 81 0B 0D 01 07 00 FF – Remove association of Preset Zone 3 with Blocking Zone 7 ○ 81 0B 0D 01 08 00 FF – Remove association of Preset Zone 4 with Blocking Zone 8 ✦ When a subject is within a Preset Zone associated with a Blocking Zone, that Blocking Zone will only be enabled while the subject is within the Preset Zone.
  - ○ Alternatively, you may want to enable/disable Blocking Zones while the subject is outside of the Preset Zones. To do so, use the commands below.
    - ✦ 81 0b 0d 00 05 01 ff – Turn ON Blocking Zone 5

- 81 0b 0d 00 05 00 ff – Turn OFF Blocking Zone 5
- 81 0b 0d 00 06 01 ff – Turn ON Blocking Zone 6
- 81 0b 0d 00 06 00 ff – Turn OFF Blocking Zone 6
- 81 0b 0d 00 07 01 ff – Turn ON Blocking Zone 7
- 81 0b 0d 00 07 00 ff – Turn OFF Blocking Zone 7
- 81 0b 0d 00 08 01 ff – Turn ON Blocking Zone 8
- 81 0b 0d 00 08 00 ff – Turn OFF Blocking Zone 8

These commands do not affect the association of Preset Zones and Blocking Zones

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**.



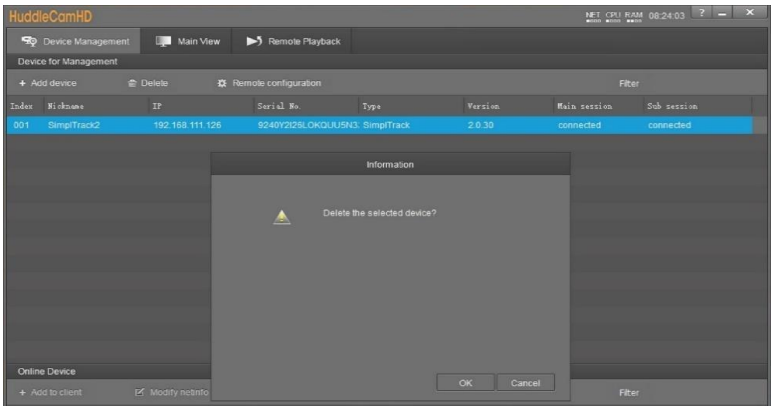
- **Mode:** Adjust the control method of the camera. ○ Options include: Network & Serial Port.
- **Connect Protocol:** Protocol connection type.
  - Options include: TCP & UDP
- **As:** Designate whether the camera is a server or client ○ Options include: Server & Client
- **Director IP:** Designate 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

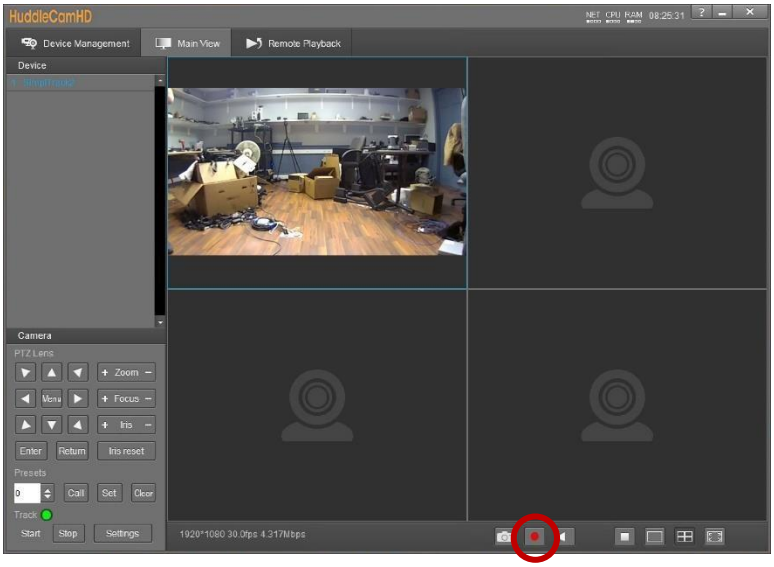
The Photobooth functionality allows you to take photos and record videos directly to the camera. To do so you will need a Micro SD card plugged into the Micro SD Slot on the back of the camera. For best results, we suggest formatting the Micro SD card to NTFS.

Recording Video

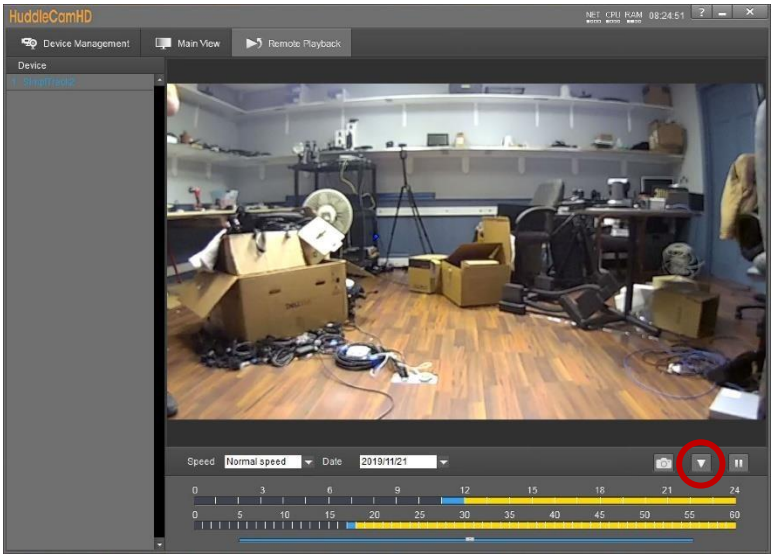
1. Select your camera from the Device Management page and select “Remote Configuration”.
2. Select the “Record” tab to begin setup.



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.

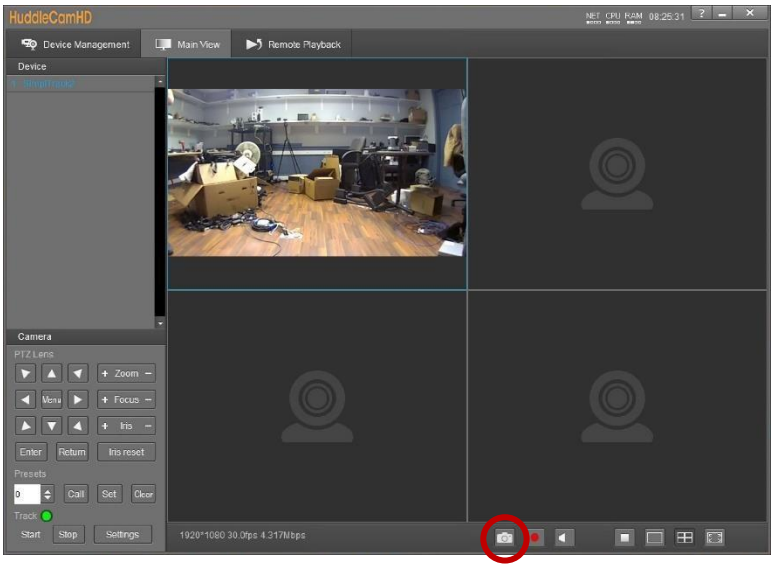


7. From there, name your file and browse your PC for a storage location.

Taking Photos

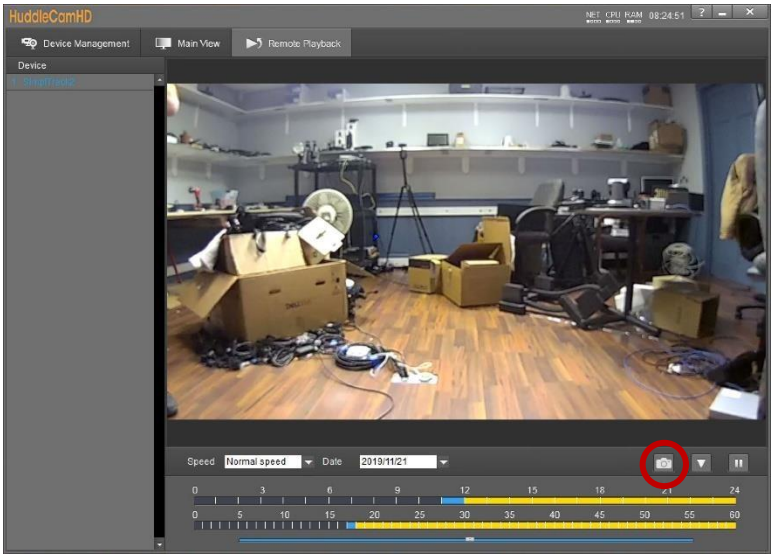
You have two methods of taking photos using the SimplTrack2. Option 1 allows you to take live photos from the Main View, and option 2 allows for snapshots of recorded video.

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
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

On Screen Display (OSD)

(Continued)

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
		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
	Shutter Priority	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

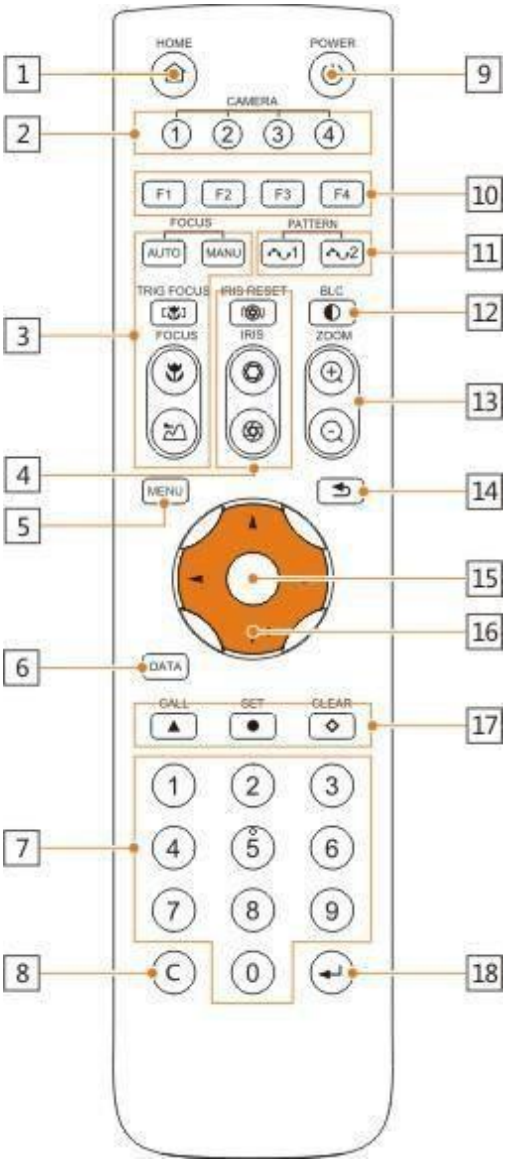
Color Option	Field	Options Include	Default

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

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)

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

- [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

ACK/Completion Messages

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

Error Messages

	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 (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 (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 (y:Execution command 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	
	Tele(Standard)	8x 01 04 07 02 FF	
	Wide(Standard)	8x 01 04 07 03 FF	
	Tele(Variable)	8x 01 04 07 2p FF	p=0 (Low) to 7 (High)
	Wide(Variable)	8x 01 04 07 3p FF	
	Direct	8x 01 04 47 0p 0q 0r 0s FF	pqrs: Zoom Position
CAM_Focus	Stop	8x 01 04 08 00 FF	
	Far(Standard)	8x 01 04 08 02 FF	
	Near(Standard)	8x 01 04 08 03 FF	
	Far(Variable)	8x 01 04 08 2p FF	p=0 (Low) to 7 (High)
	Near(Variable)	8x 01 04 08 3p FF	
	Direct	8x 01 04 48 0p 0q 0r 0s FF	pqrs: Focus Position
	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 0t 0u 0v 0w FF	pqrs: Zoom Position 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

Commands

	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

(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	

Commands

	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) 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.

(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 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 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 speed) to 0 x18 (high speed) WW: Tilt Speed 0 x 01 (low speed) to 0 x14 (high speed) YYYY: Pan Position 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	

Commands

	Stop	8x 01 06 01 VV WW 03 03 FF	
	AbsolutePosition	8x 01 06 02 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
	RelativePosition	8x 01 06 03 VV WW 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 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	W: 1 UpRight 0: DownLeft YYYY: Pan Limit Position 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 mn pq rs tu vw FF	mnpq: Model Code (0504) rstu: ROM version 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	60 Hz system
		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	50 Hz system
		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 zz = Tilt Max Speed	
Pan-tiltPosInq	8x 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	wwww = Pan Position 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, Y, Z][#][human][date powered on][date command was sent]	Inquires tracking status, current PTZ position, faces in sight, & when the command was sent	

Tips and Tricks

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 AutoZoom 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

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, selftest successfully, but not controllable	Wrong address / protocol / baud rate	Check & set again
	Wrong connection or open circuit of RS485/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 camera has been moved	Manually move camera back into place or rebuild tracking zones

the reference camera settings	A manual tracking / reference camera recalibration is required	Enter the Advanced Parameters settings and click the **Pos Correct** 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 **Debug** 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

Notes