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# HuddleCamHD

## HuddleView

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Auto Framing Camera

Installation & Operation Manual



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## 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

- 12X HuddleView Camera
- Power Supply
- IR remote
- RS-232 Control Cable
- Setup Documentation
- 3m / 9.8' USB 3.0 A-B Cable



## 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" CMOS, 2.14 Mega Pixel
Lens	12X Optical, f=3.9-46.8mm
Max Framing Distance	25 feet   7.6 m
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
Framing Horizontal FoV	6.3° ~ 72.5°
Framing Vertical FoV	4° ~ 45°
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 2.0: 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, Max Distance: 30m, VISCA protocol
Storage Interface	1 x TF Micro SD slot (card 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 X+, Linux (Tracking Configuration software is Windows only)
Video Format	USB 2.0 – 1080p-60/50/30/25, 1080i-60/50, 720p-60/50
UVC PTZ Control	Supported, UVC 1.1 ~ 1.5



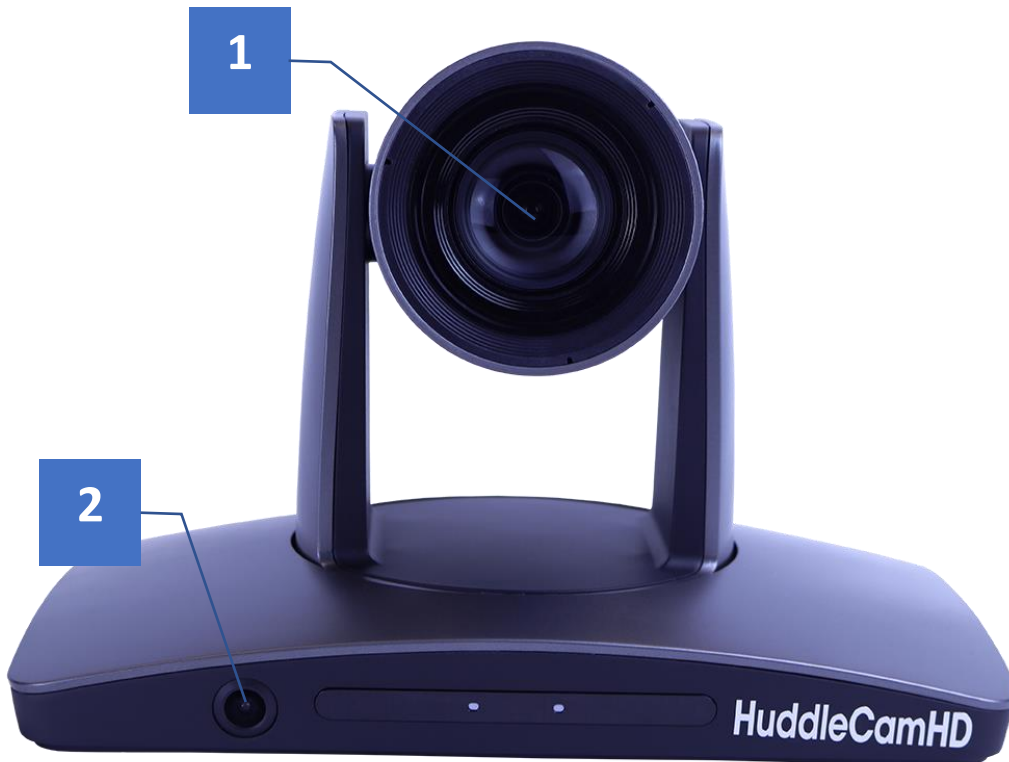
# HuddleCamHD™

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
Warranty	3 years



## Physical Descriptions

### Front View of the Camera



**1. Framing Camera Lens**

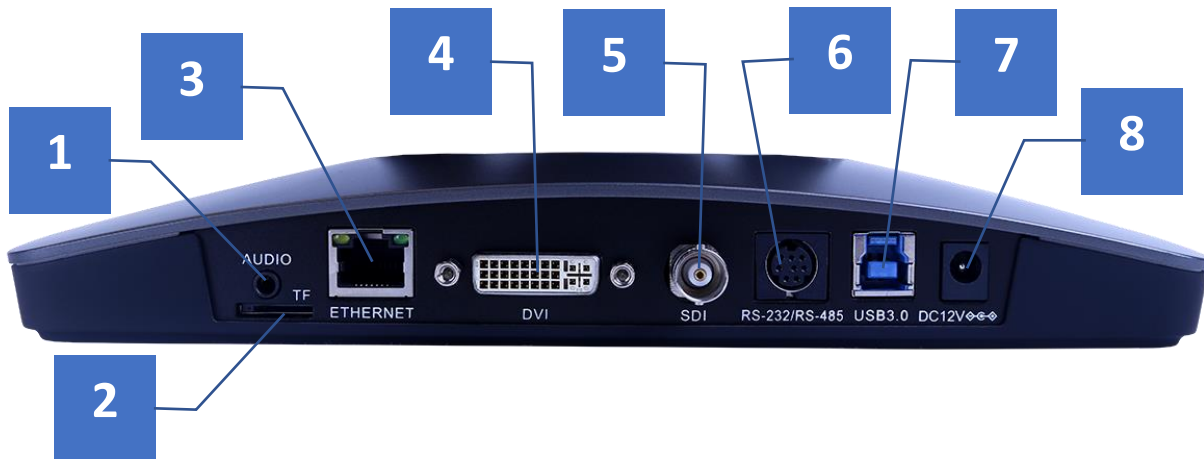
- a. 12X Optical Zoom
- b. Field of View: 6.3° (tele) to 72.5° (wide)

**2. Reference Camera Lens**

- a. Field of View: 86° (Horizontal) x 52° (Vertical)



## Rear View of the Camera



1. **3.5mm Audio Input** (Embeds over RTSP or RTMP)
2. **Micro SD Card Slot** (Allows for Photobooth functionality)
3. **RJ34 – Ethernet Port** (Allows for setup & RTSP RTMP video feed)
4. **DVI-D Video Output** (Outputs up to 1080p60)
5. **SDI Video Output** (Outputs up to 1080p60)
6. **8 pin Mini Din VISCA Input** (Supports RS-232 & RS-485)
7. **USB 2.0 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 HuddleView software on your Windows PC on the same network as the camera
5. Open the HuddleView 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 2.0 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.



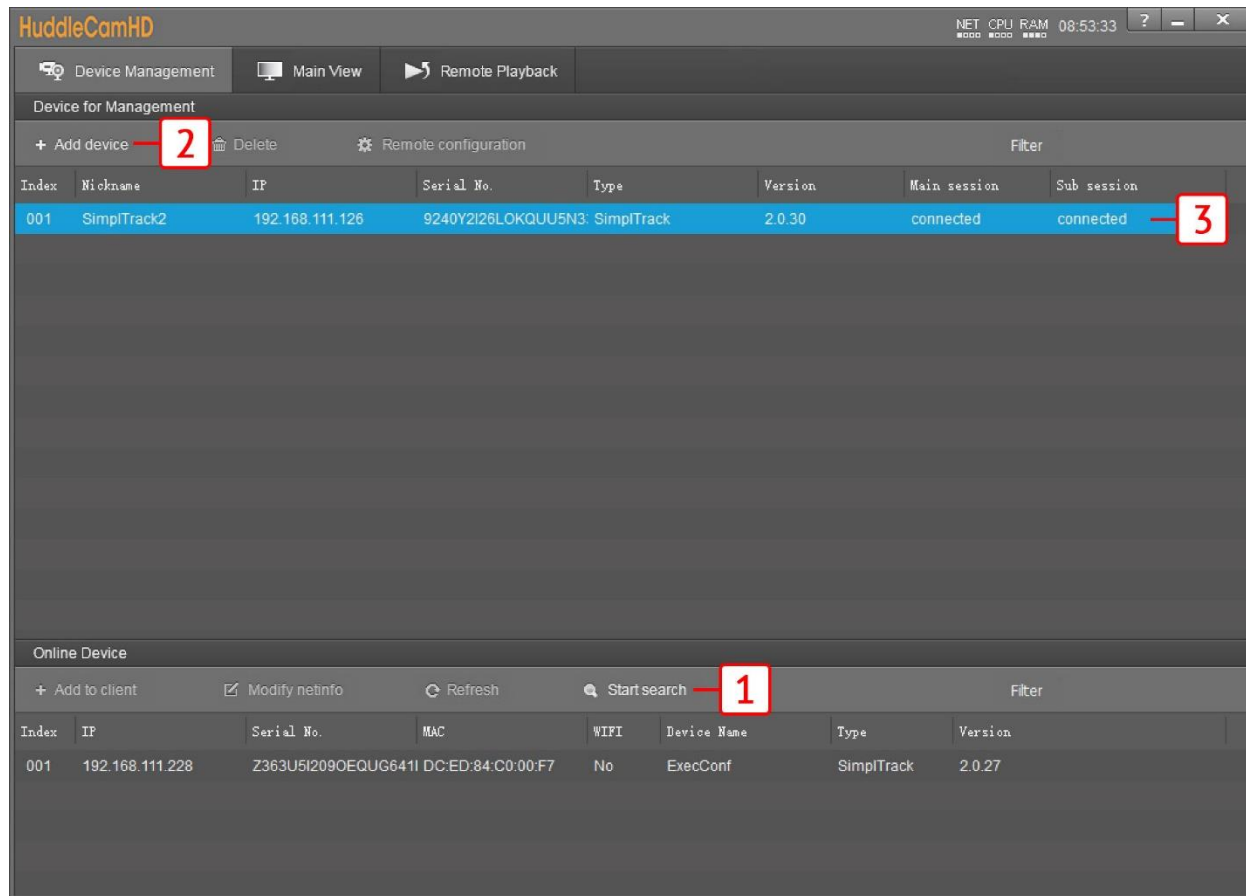


## Setting up the Camera

### 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 [Rear View of the Camera](#) on page 7 for more information.

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



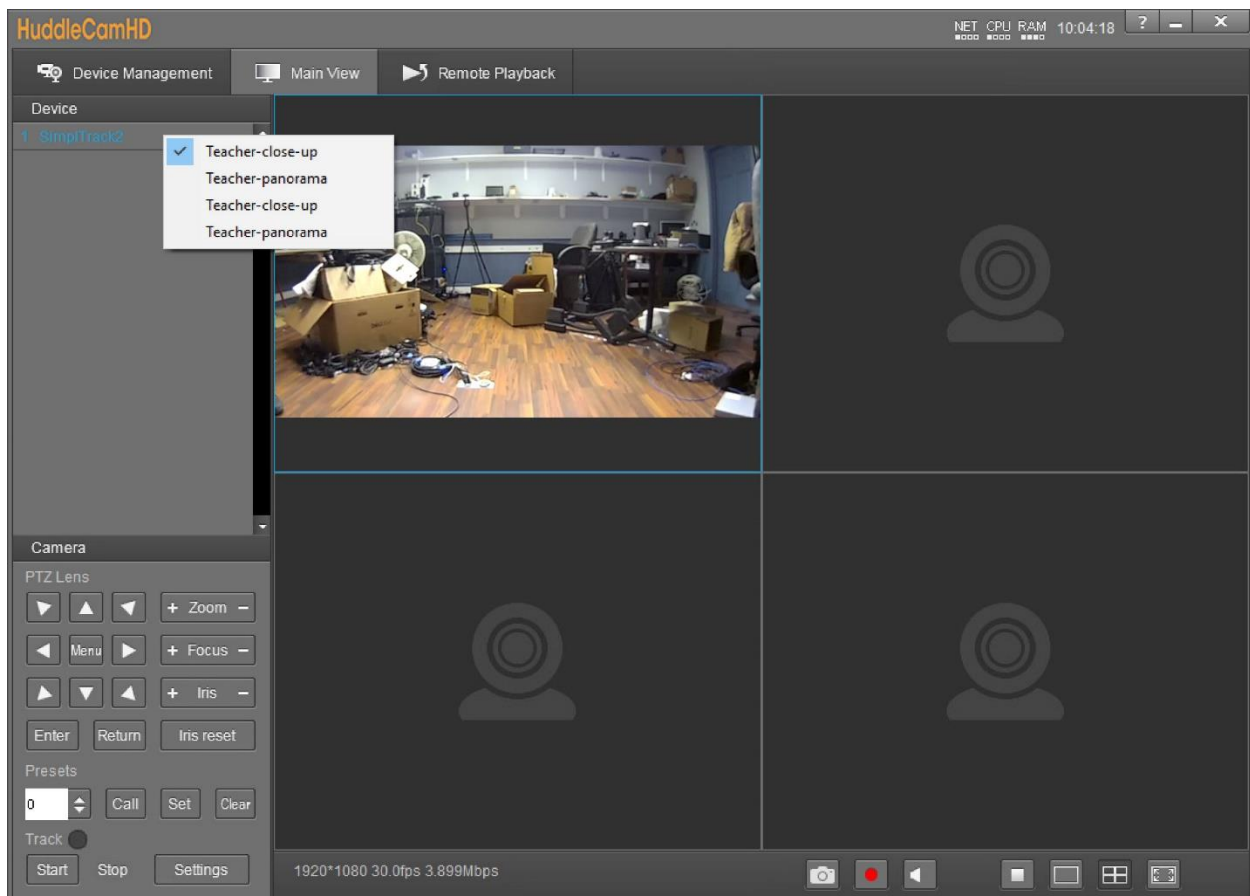
1. Click "Start Search" in the bottom section of the software to search for cameras on the same subnet mask as your PC.
  - a. Note: The camera utilizes DHCP by default, if your PC is also utilizing DHCP this search should find your camera.
2. Alternatively, you can use "+ Add Device" at the top to manually add a camera to the software using the cameras IP address & Port (Default: 5000), 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 framing parameters.



## Configure Framing

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.

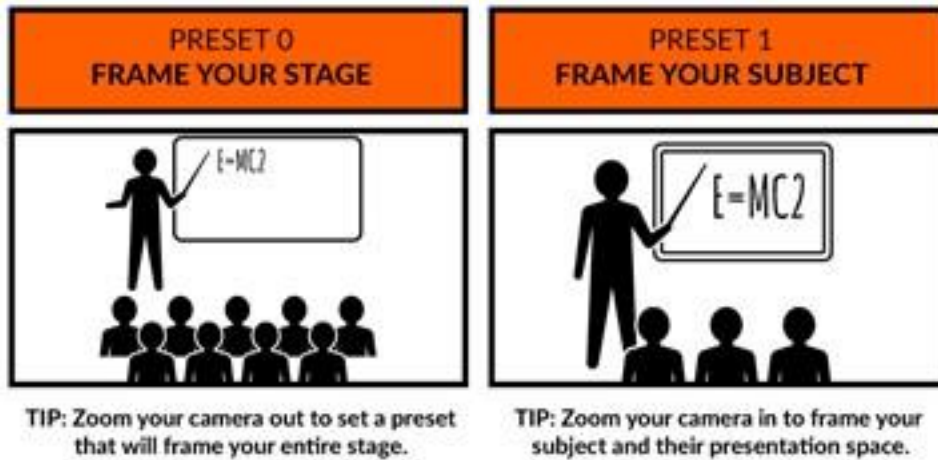
- Teacher-close-up: Main RTSP feed (PTZ camera)
- Teacher-panorama: Sub RTSP feed (Reference camera)
- Teacher-close-up: RTSP stream 3 feed (PTZ camera)
- Teacher-panorama: RTSP stream 4 feed (PTZ camera)



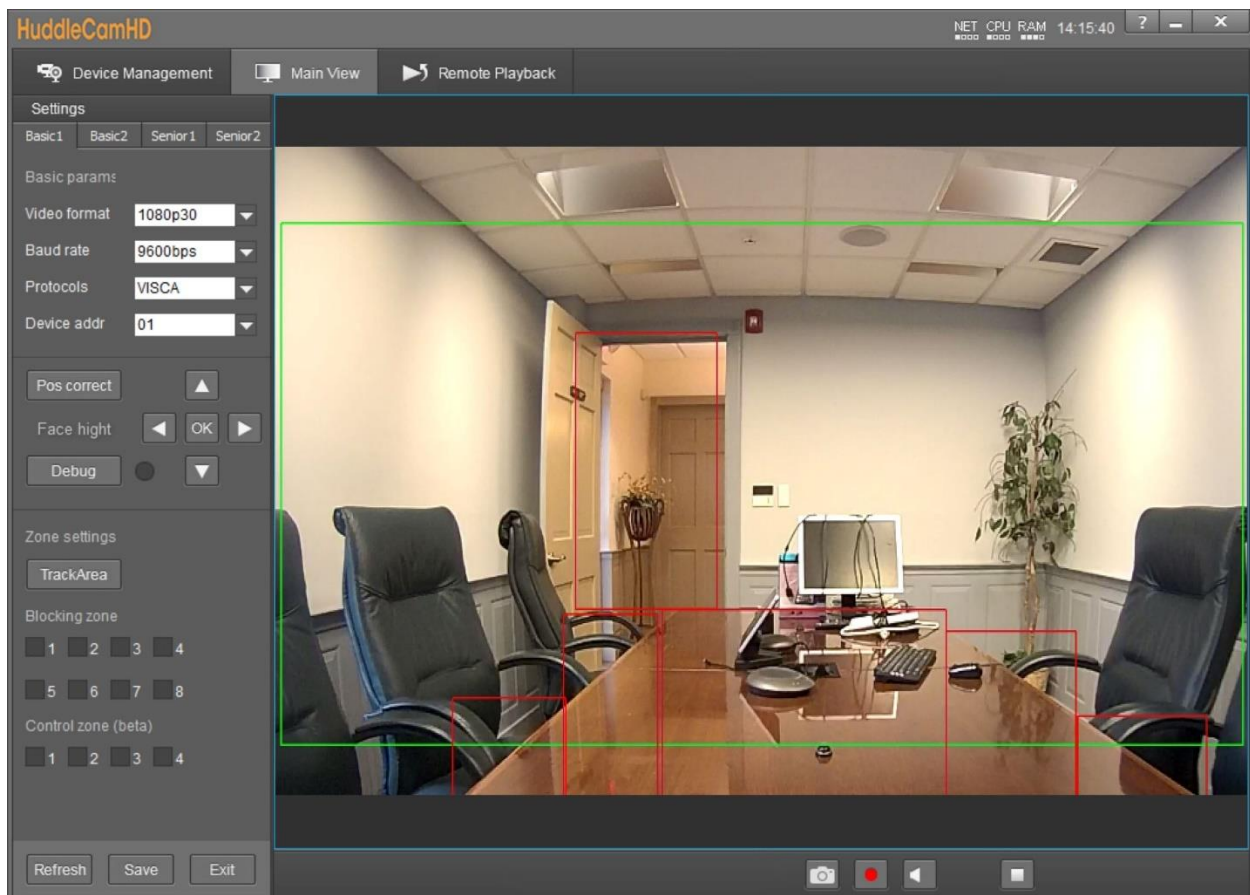
1. The first thing you'll want to do is set preset 0 & preset 1. Use the guide below to properly set the preset positions.



# HuddleCamHD™



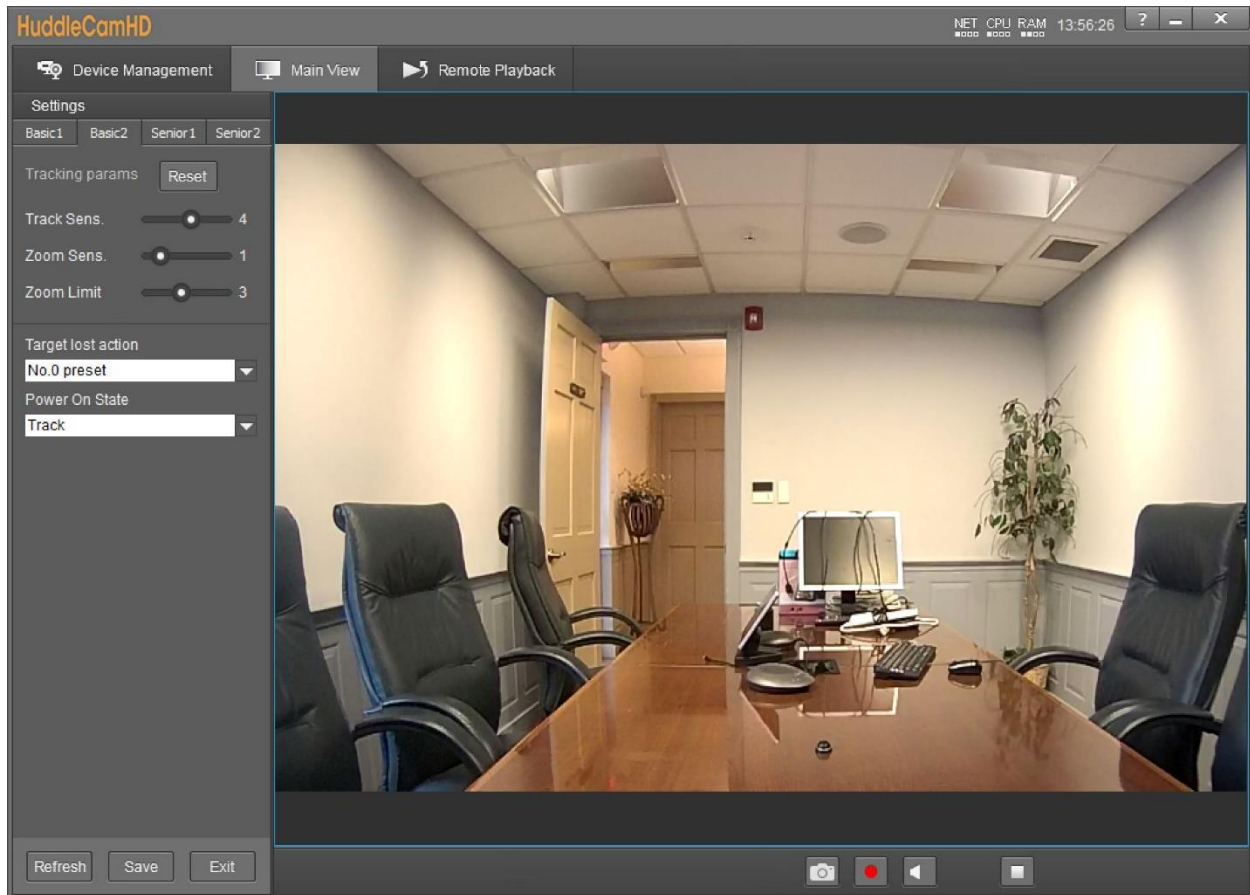
2. From here, open “Settings” from the bottom left of the tracking software. This will open the Basic 1 menu.



3. Set the framing zone and blocking zones for your environment.
  - a. Note: As shown above, the framing zone encompasses anywhere that may include a face. The blocking zones are set anywhere that could be framed that shouldn't be, such as individuals walking by the doorway, or faces reflected in the table.
4. Click “Save” to save the Framing & Blocking zones.



5. Click “Basic 2” along the top left of the software to open the secondary page of framing parameters.



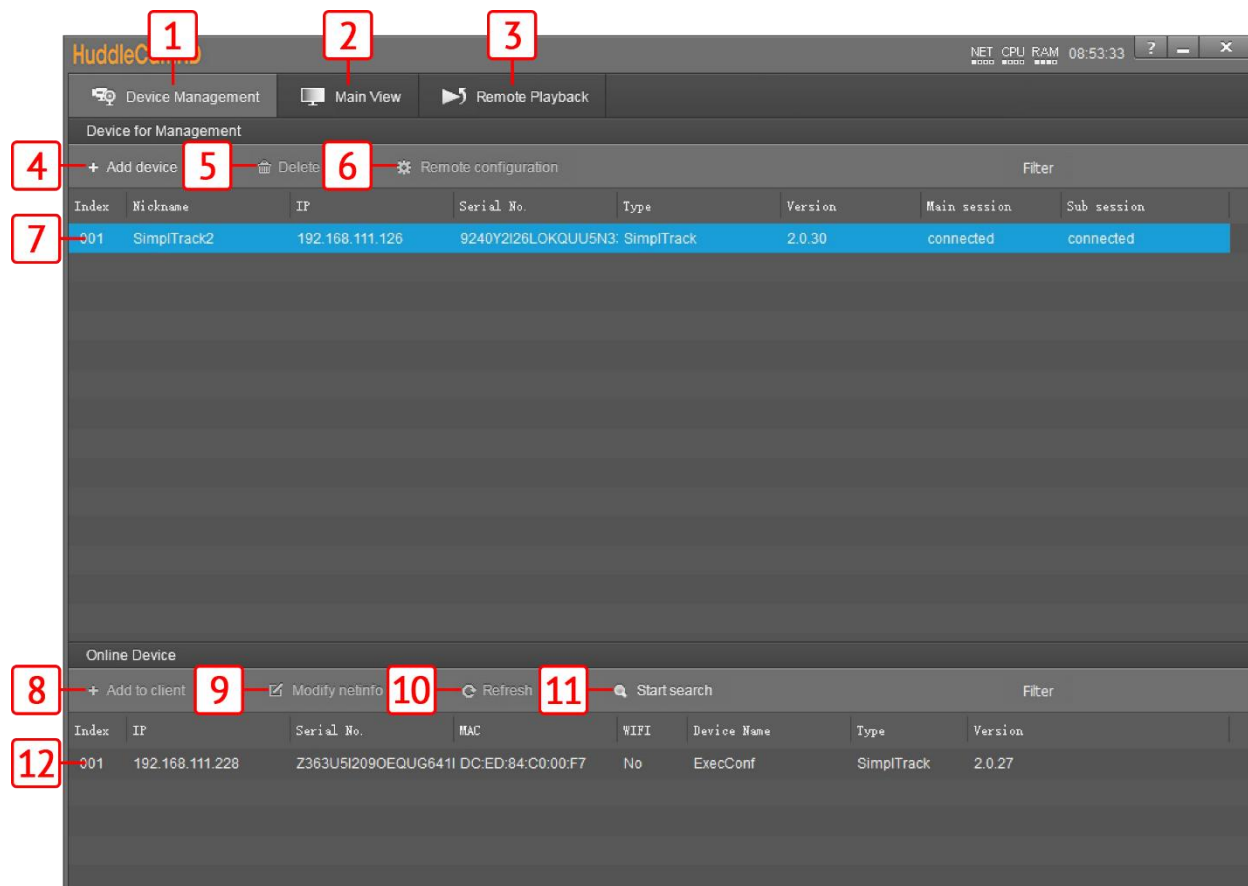
6. In Basic 2, you can adjust the Framing limitations of the camera.
  - a. Framing Parameters: Tracking Sensitivity, Zoom Sens., & Zoom Limit as required by your room.
  - b. Target Lost Action: Dropdown and select “No. 0 preset” to ensure the camera is tracking properly.
  - c. Power On State: Select 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 24.



## Interface Descriptions

### Tracking Software

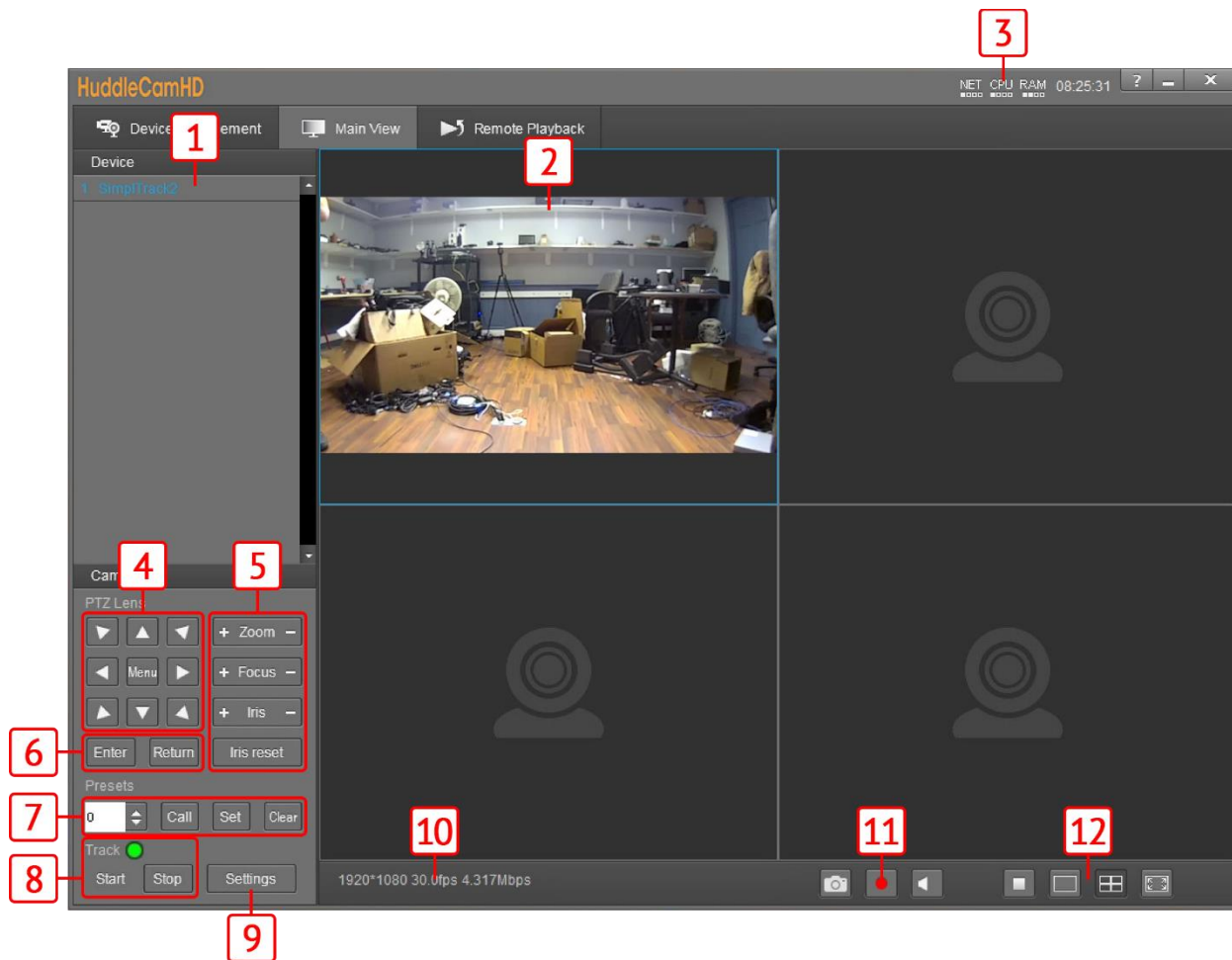
#### Device Management Interface



- |   |   |    |   |
|---|---|----|---|
| 1 | Device Management Interface                                       | 7  | *Selected* device within Device Management        |
| 2 | Video Configuration Interface                                     | 8  | Add selected camera from Online Device section    |
| 3 | View & Download video and / or photos.<br>*Micro SD card required | 9  | Modify network settings of selected Online Device |
| 4 | Manually add device using IP address & port number.               | 10 | Refresh Online Device list                        |
| 5 | Delete selected device from Device Management list                | 11 | Start/Stop searching for Online Devices           |
| 6 | Configure network settings of camera                              | 12 | *Unselected* device from Online Device section    |



## Video Configuration Interface



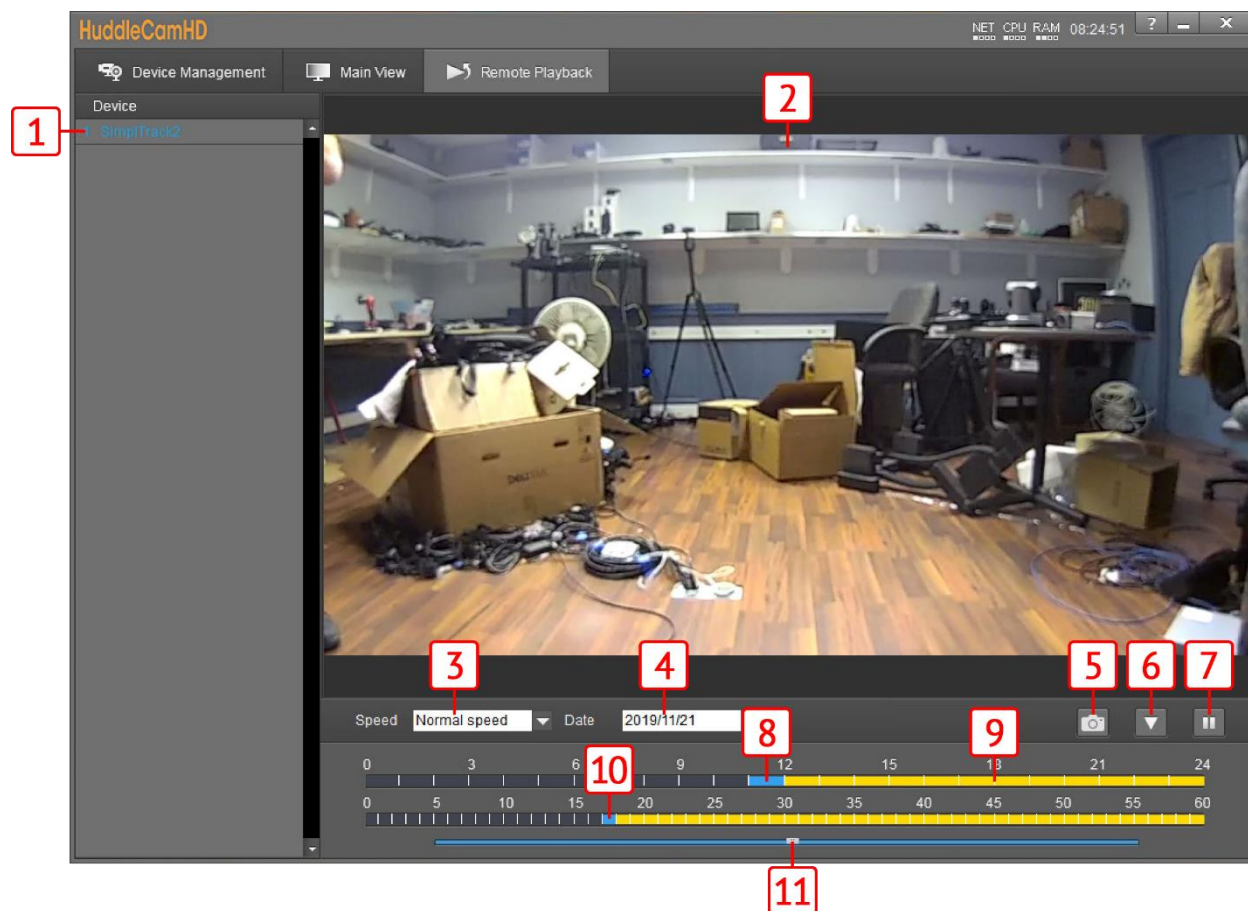
- |  |   |
|--|---|
| 1 Cameras connected to Device Management | 7 Preset control  |
| 2 Camera video feed                      | 8 Enable/Disable tracking & Tracking Status                                       |
| 3 PC performance & time                  | 9 Open tracking settings  |
| 4 Pan, Tilt,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





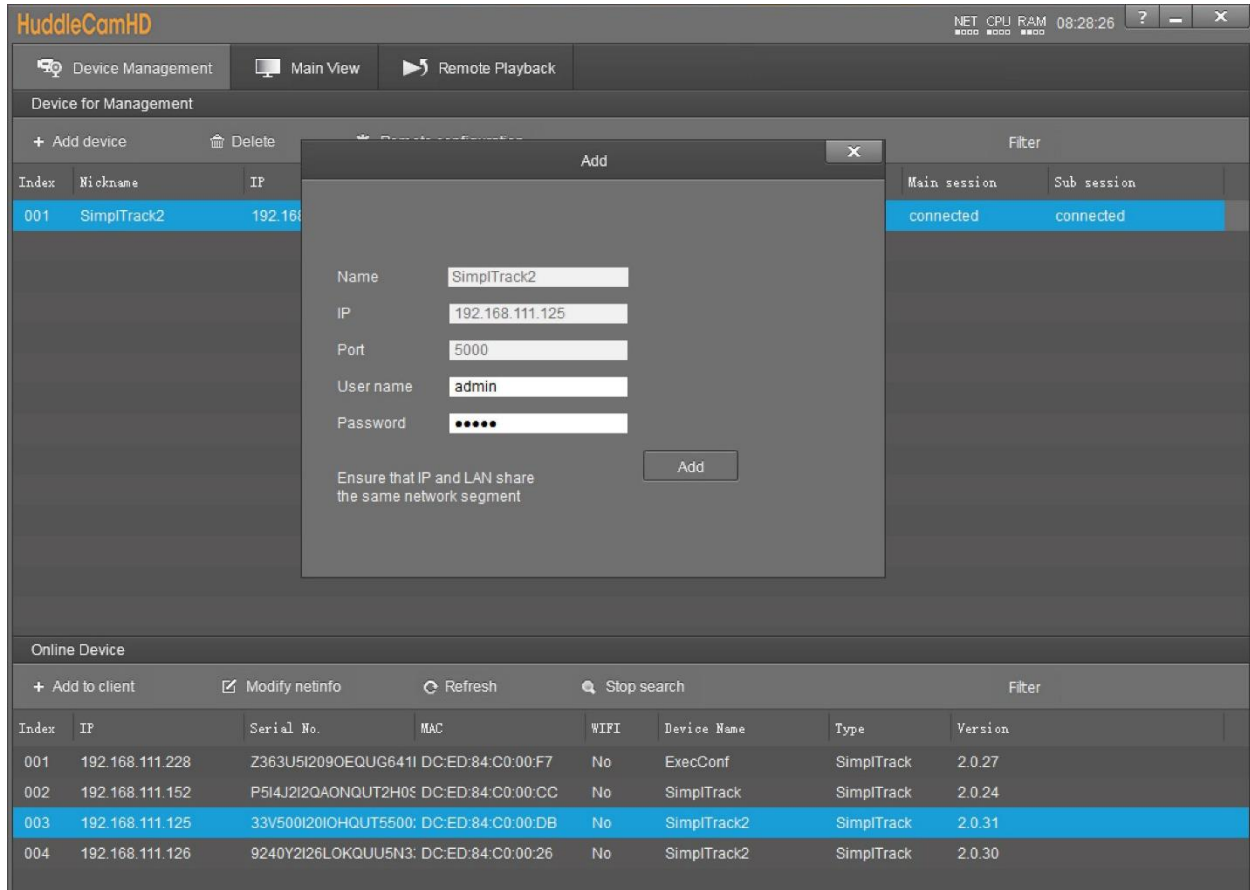
## Remote Playback

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

### Connect Camera



Index	Nickname	IP
001	SimpliTrack2	192.168.111.125

Index	IP	Serial No.	MAC	WIFI	Device Name	Type	Version
001	192.168.111.228	Z363U5I2090EQUG641I	DC:ED:84:C0:00:F7	No	ExecConf	SimpliTrack	2.0.27
002	192.168.111.152	P5I4J2I2QAONQUT2H0E	DC:ED:84:C0:00:CC	No	SimpliTrack	SimpliTrack	2.0.24
003	192.168.111.125	33V500I20I0HQUT5500	DC:ED:84:C0:00:DB	No	SimpliTrack2	SimpliTrack	2.0.31
004	192.168.111.126	9240Y2I26LOKQUU5N3	DC:ED:84:C0:00:26	No	SimpliTrack2	SimpliTrack	2.0.30

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





Add

☒ Add by IP
 ☐ Add by import

Name   
 IP   
 Port   
 User name   
 Password

Add

Add

☐ Add by IP
 ☒ Add by import

Import:  ...

Import  
 Export model

## Network Configuration

Modify Network Parameter

Ethernet

Device information:  
 CameraName   
 Mac   
 SN

Network information:  
 ConnType   
 IP   
 Mask   
 GateWay   
 DNS1   
 DNS2

Modify

Remote Configuration

Streaming Network Rtmp Protocol Upgrade UN/PW NDI

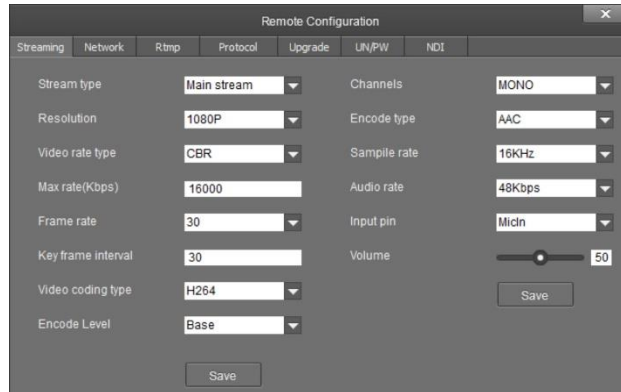
Connect with  rtsp port   
 IP Address  app port   
 Mask   
 Gateway   
 DNS 1   
 DNS 2

Save

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

The **Streaming** category allows you to configure the IP Video Network Stream of the camera, as well as the embedded audio.



Remote Configuration			
Streaming	Network	Rtmp	Protocol
Stream type	Main stream	Channels	MONO
Resolution	1080P	Encode type	AAC
Video rate type	CBR	Sample rate	16KHz
Max rate(Kbps)	16000	Audio rate	48Kbps
Frame rate	30	Input pin	MicIn
Key frame interval	30	Volume	50
Video coding type	H264		
Encode Level	Base		
Save			

- 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
- 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.

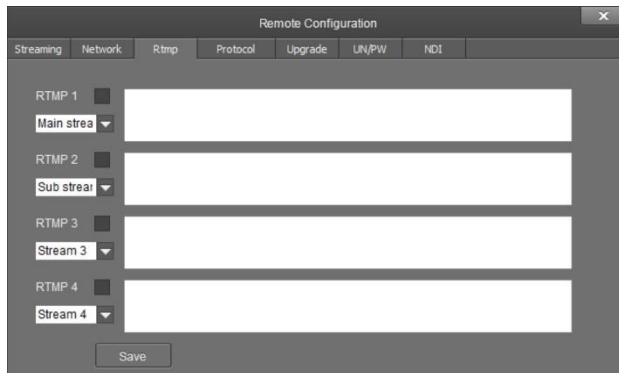
Remote Configuration						
Streaming	Network	Rtmp	Protocol	Upgrade	UN/PW	NDI
Connect with	DHCP		rtsp port		554	
IP Address	192.168.15.173		app port		5000	
Mask	255.255.255.0					
Gateway	192.168.15.1					
DNS 1	192.168.15.1					
DNS 2	0.0.0.0					

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

Note: While in DHCP you can only adjust RTSP Port & App Port

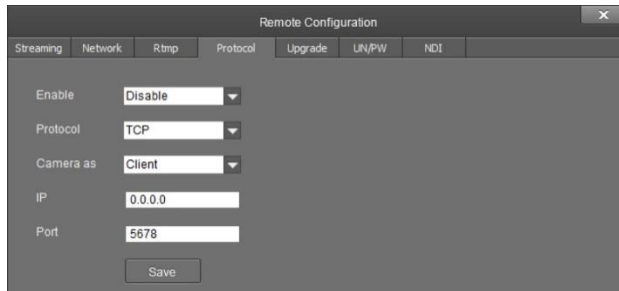
- IP Address: Displays IP Address & allows for adjustment the IP address of your camera
  - Default value: DHCP; or 192.168.1.180 while in Static or no connection to a DHCP server
- Mask: Adjust the Subnet Mask of your camera
  - Default value: 255.255.255.0
- Gateway: Adjust the gateway of your camera
  - Default value: 192.168.1.1
- DNS 1: Adjust the DNS 1 (Dynamic Name System)
  - Default value: 0.0.0.0
- 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: 5000

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.

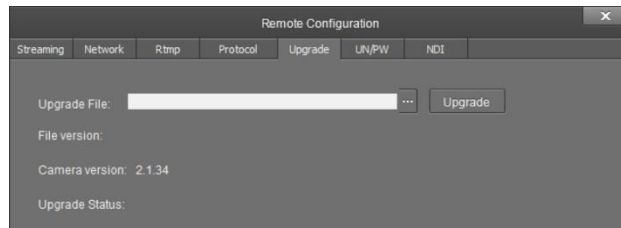
The **Protocol** category allows you to set the control parameters of the camera.



- **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

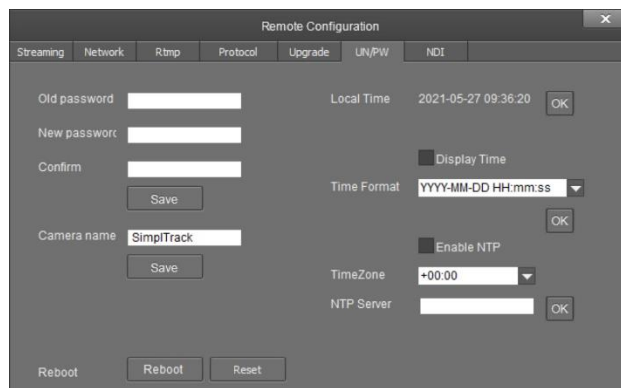


The **Upgrade** category allows you to upgrade the firmware of the camera.



- 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

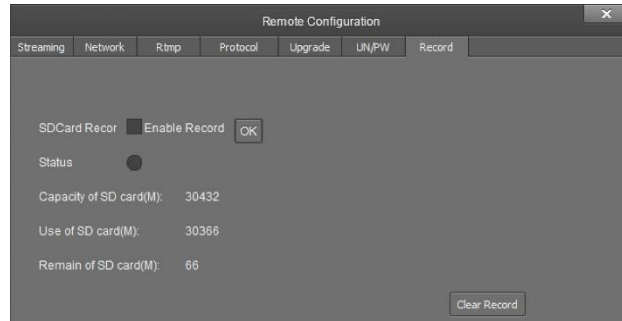
The **Username/Password** category allows you to change the device name, password, and adjust the time format.



- Old Password: Input the old password in order to change the login credentials o 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: "HuddleView"
- 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



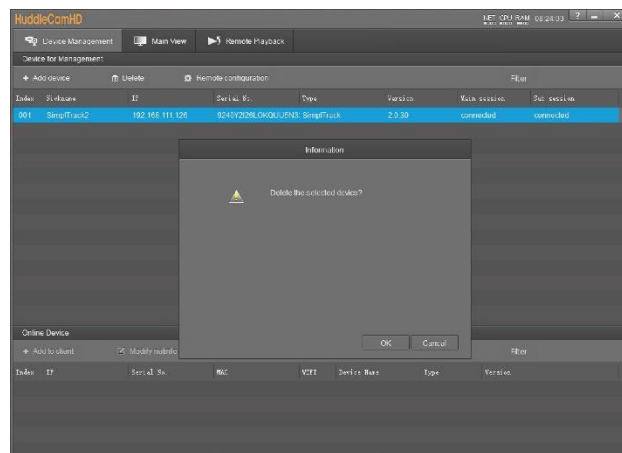
The **Record** category allows you to set up and view the status of the Photobooth recording. Note: A Micro SD card is required for use with the Photobooth feature.



- 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

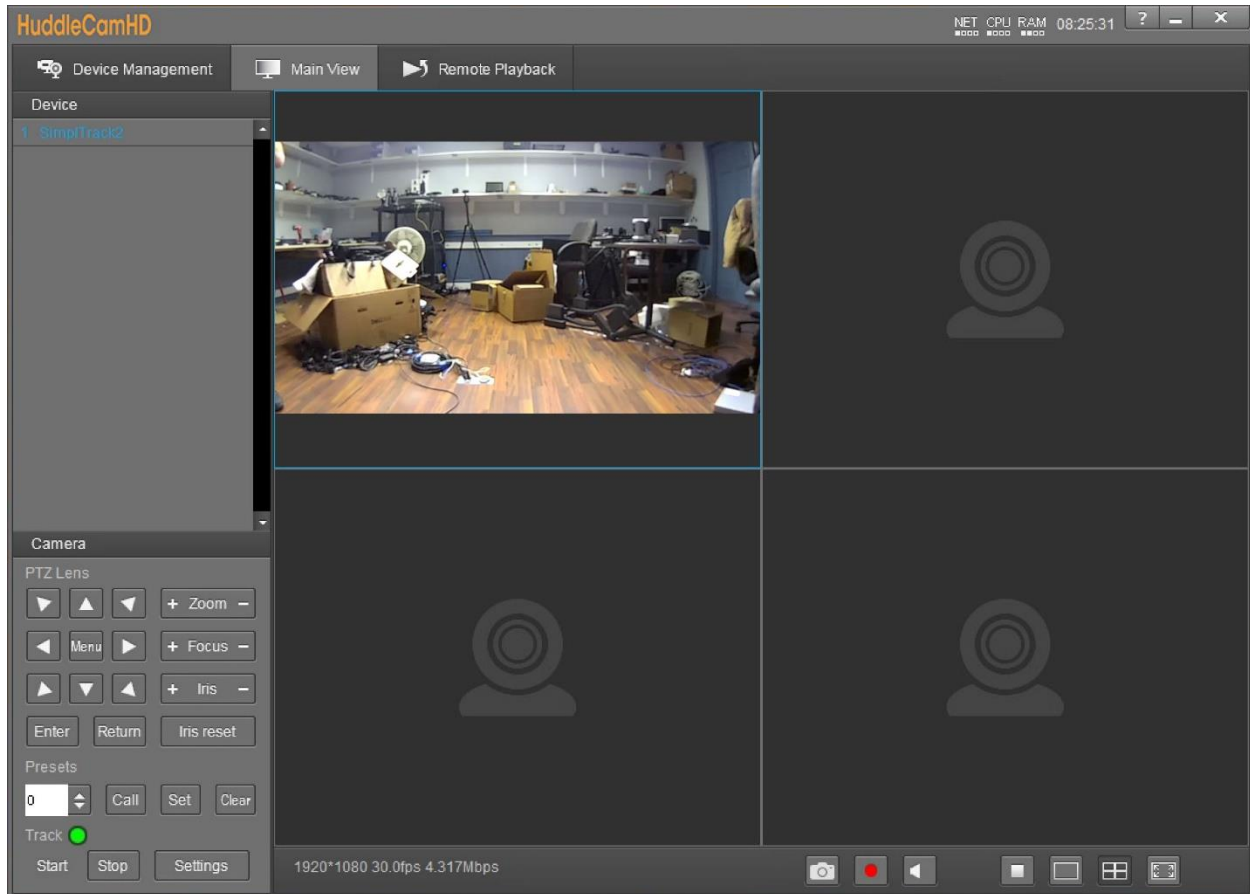
## [Remove Camera](#)

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.





## Main View



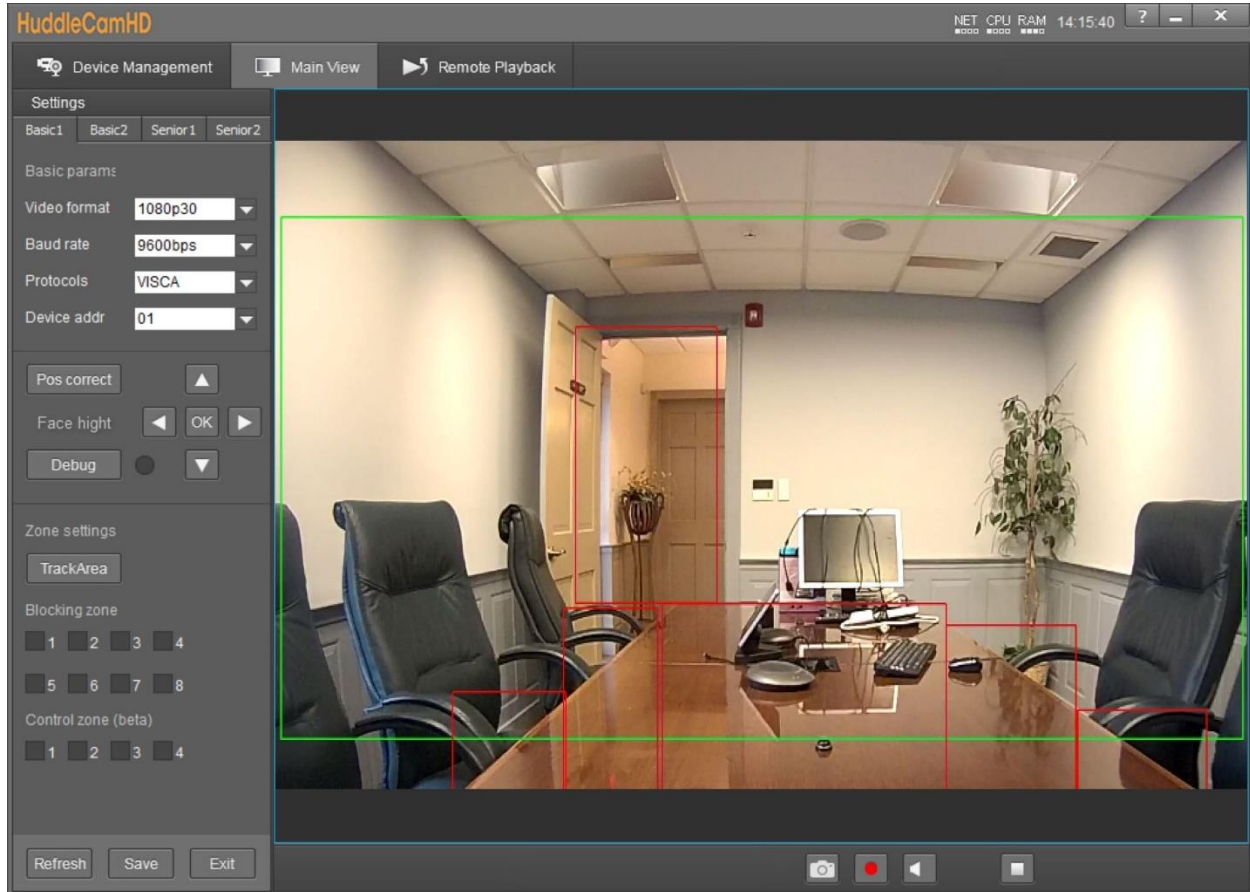
In the **Video Interface** you can view and control up to four cameras simultaneously. You have full control over **Pan, Tilt, Zoom, Focus, Iris, OSD Menu, Presets & Tracking Settings**. **Device List:** List of added cameras from the Device Management section

- **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](#)



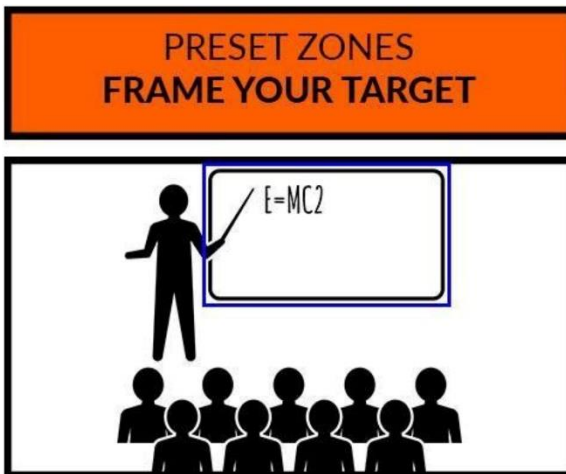
To adjust the **Tracking Parameters** of the selected camera, you must click the **Settings** button in the tracking control area. Once opened, you'll be greeted with the **Basic 1** parameters. From here, you have control over **Video Format**, **Baud Rate**, **Control Protocol**, **Device Address**,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

- **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.

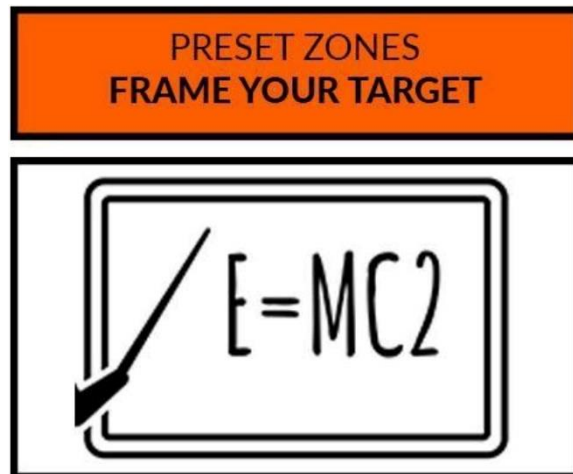




- **Face Height:** Adjust the height the camera frames a face.
  - Default Value: 100. It allows you to adjust the height up or down in intervals of 10. Range: 0 – 200.
- **Debug:** Displays Blue & Green boxes around framed objects/individuals.
  - Green box: The green box displays tracked motion
  - Blue box: The blue box displays tracked faces
- **Track Area:** The area at which the camera frames individuals.
  - Allows for designation of the tracking zone.
- **Blocking Zones:** Designate the area you do not wish to frame, 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.
- **Control Zones:** Zones the camera will frame when the subject is captured within the zone.
  - Allows for up to 4 Control Zones. Once a Control Zone is designated, motion within the zone will trigger a preset, causing the camera to focus on a specific location.



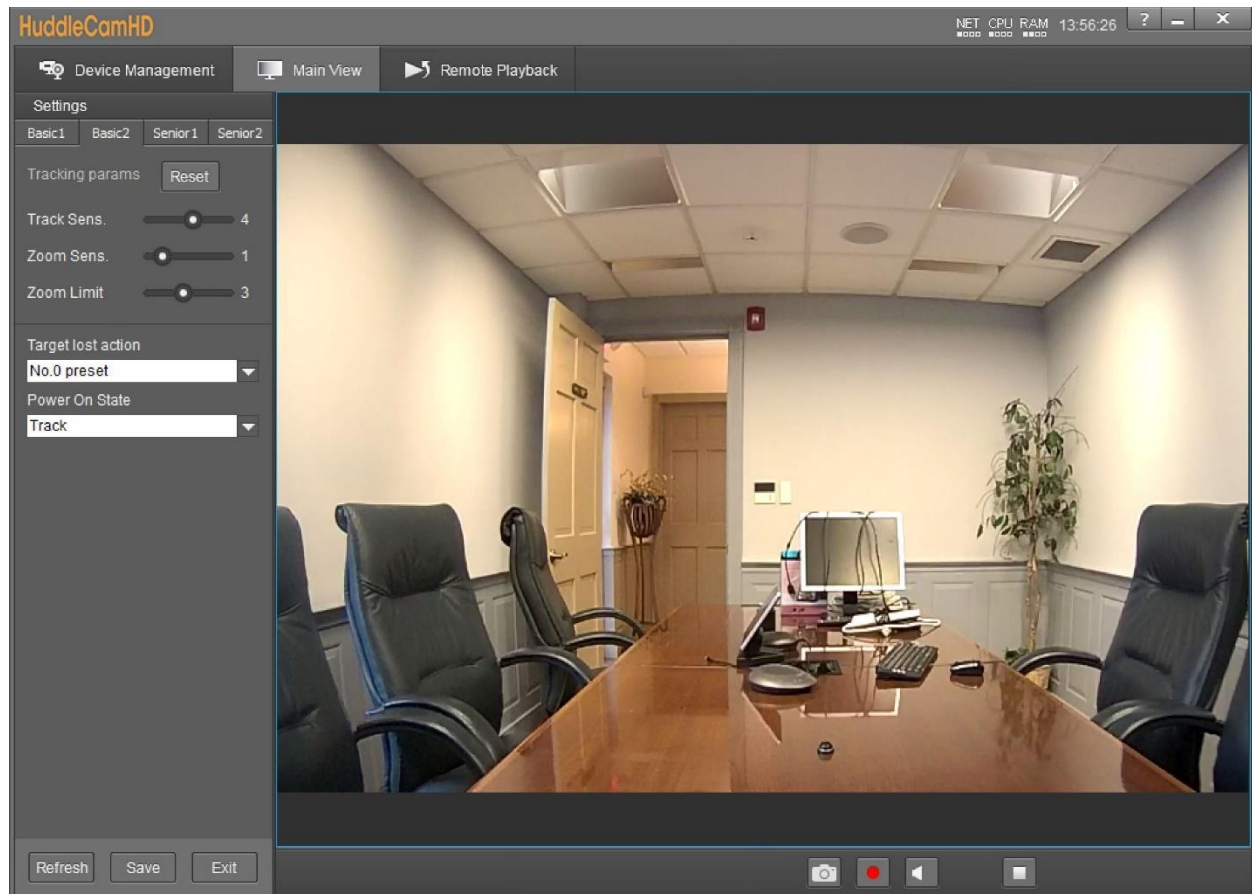
**NOTE:** When motion is detected within the Preset Zone, the camera will frame that zone



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



## Basic 2



Within **Basic 2** settings, you have control over **Tracking Parameters Reset**, **Tracking Sensitivity**, **Zoom Sensitivity**, **Zoom Limit**, **Target Lost Action**, & **Power On State**.

- **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 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
- **Power On State:** Affects whether the camera tracks or not upon powering on.
  - Options include: Track & Do not track



Senior 1

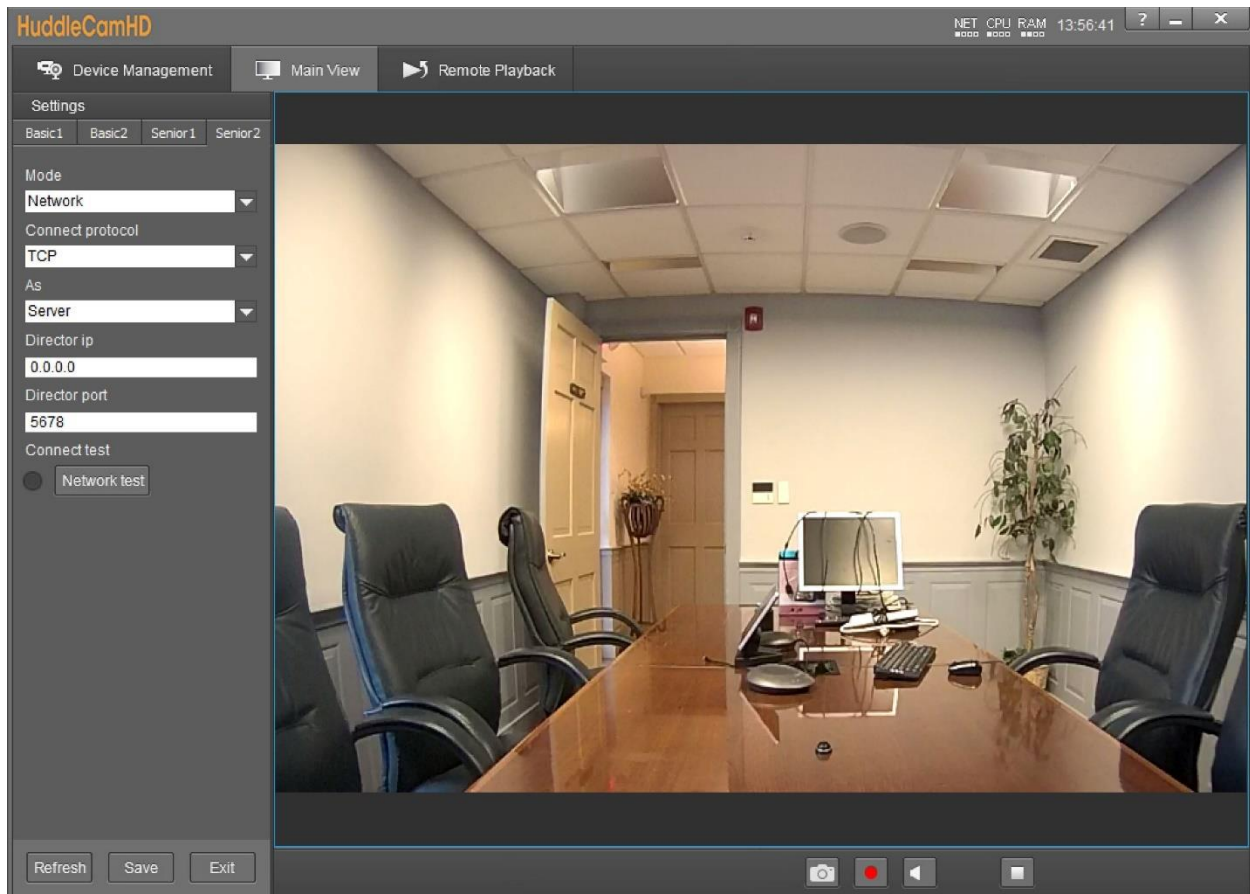
# HuddleCamHD™

The **Senior 1** tab allows for control of the **Control Zone Commands** and **On Exit** commands.

- **Control Zone # Checkbox:** Enable/Disable the corresponding Control Zone Trigger.
  - **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.
- **On Exit:** enable / Disable On Exit. This is a unique Control Zone that can be used when the subject moves out of the Control Zone. This trigger is called whenever the subject moves out of any of the (4) Control 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

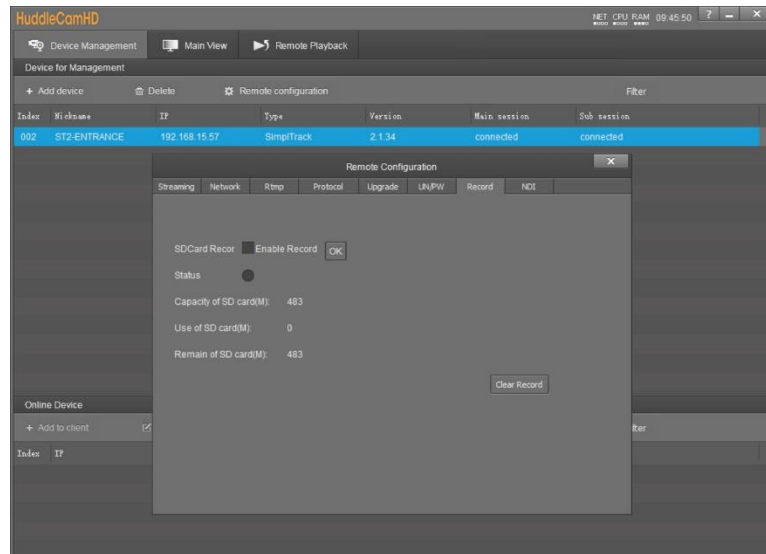


## Photobooth Functionality

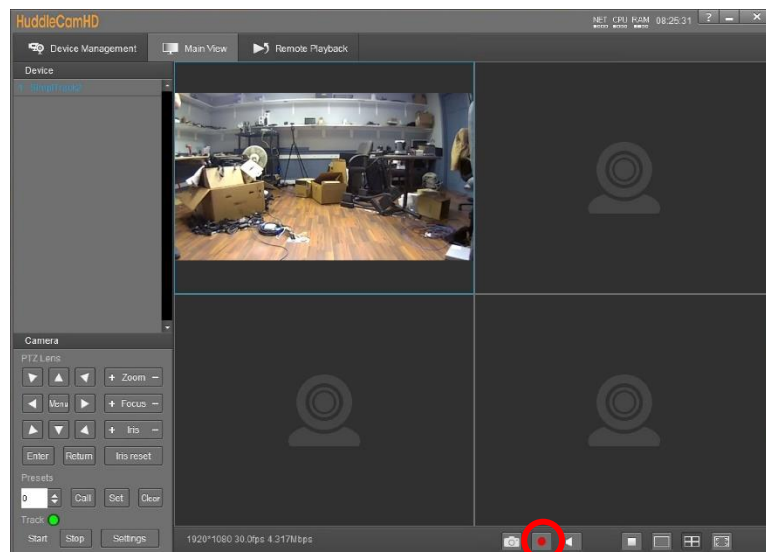
The Photobooth functionality allows you to take photos and record videos directly to the camera. To do so you will need a Micro SD card plugged into the Micro SD Slot on the back of the camera. For best results, we suggest formatting the Micro SD card to NTFS.

## Recording Video

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

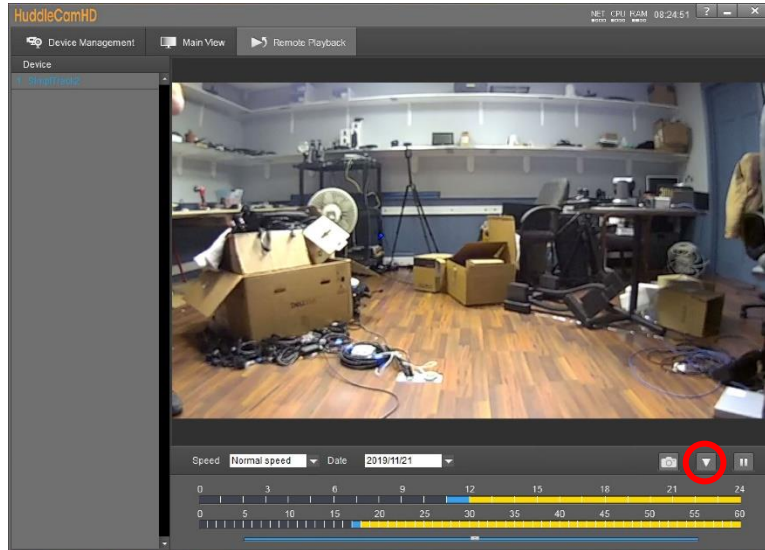


3. Click the “SDCard Record” checkbox, then click the OK button to begin recording video straight to the SD Card.
  - a. To disable, simply uncheck the checkbox then click OK.



4. Alternatively, you can click the record button from the bottom of Main View

5. To retrieve the recorded video, enter the “Remote Playback” page from 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.

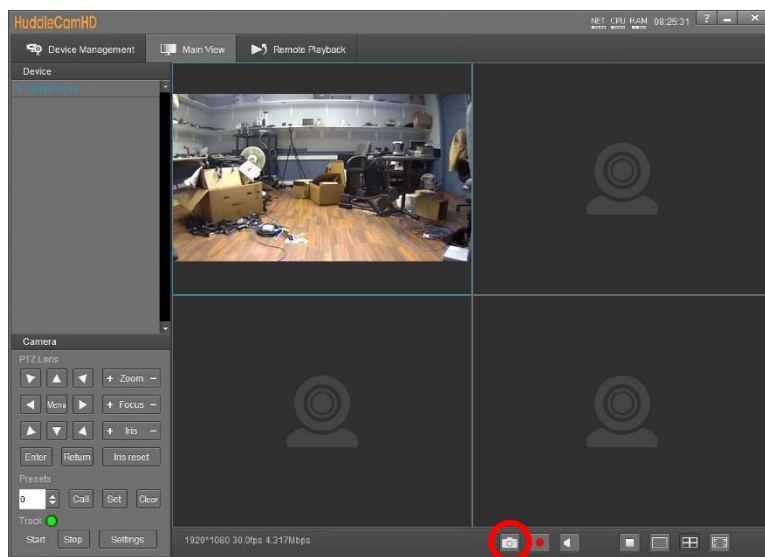


7. From there, name your file and browse your PC for a storage location.

## Taking Photos

You have two methods of taking photos using the HuddleView. 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

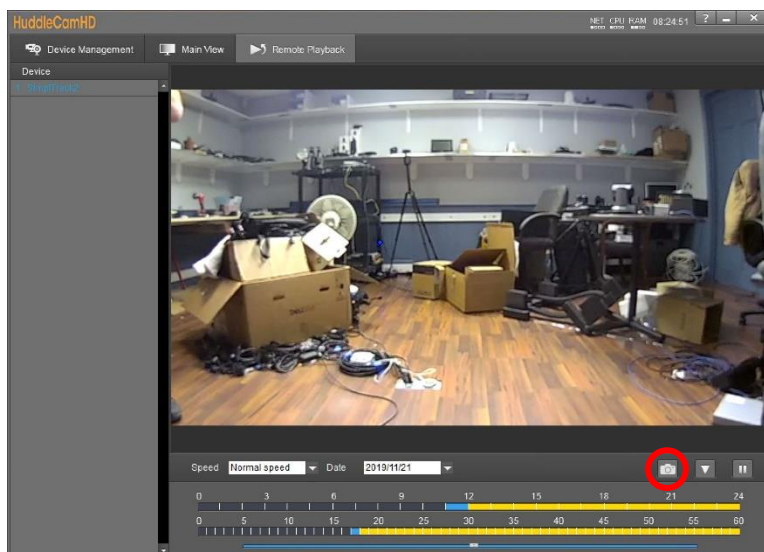


1. Alternatively, follow steps 1 – 4 of “Recording Video” to record video to the SD card.





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

	Field	Range	Default
Video	Sharpness	0 – 15	5
	Brightness	0 – 14	5
	Contrast	0 – 14	7
	Gamma Mode	0 – 4	2
	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

	Category	Field	Range	Default
Exposure	Full Auto	Exp-Comp	Off, On	Off
		Level	-7 – +7	0
		BLC	Off, On	Off
		Anti-Flicker	Off, 50Hz, 60Hz	50Hz
	Manual	Gain	0 – 30	0
		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	1/60



<b>Exposure</b>		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 Pri	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	1/60
	Iris Pri	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 Pri	Bright	0 – 27	17
		Anti-Flicker	Off, 50Hz, 60Hz	50Hz

	Category	Field	Range	Default
<b>Color</b>	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

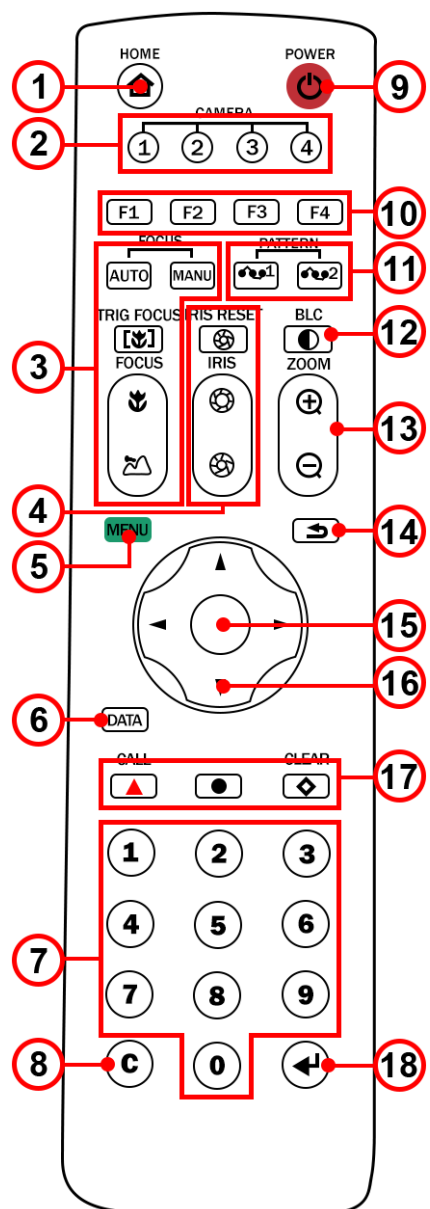
	Field	Range	Default
<b>Pan Tilt Zoom</b>	Pan/Tilt Speed	1 – 8	5
	D-Zoom Limit	X1 – X11	X1
	PTZ Trig AF	Off, On	On
	Ratio Speed	Off, On	On
	Power Up Act	Home, Preset1 – Preset9	Home





	Field	Range	Default
<b>System</b>	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



- Home Button**  
Press the Home button to send the camera to pan and tilt position "0", where the camera initially settles after power up.
- Camera Selection Button**  
Use the Camera Select Buttons to switch between IR channels for multiple camera control.
- Focus**  
Use "Auto" or "Manu" to select auto or manual focus. "Trig Focus" enable auto focus whenever the camera is zoomed. Near / Far allows for focus adjustment while in manual focus.
- Iris**  
Use the Open / Close buttons to open and close the Iris. Reset the Iris to the default value using the Iris Reset button.
- Menu**  
Use the Menu button to Open or Close the OSD Menu.
- Data Button**  
Use the Data button to Enable / Disable display of the Pan / Tilt angle, Zoom time, and other prompt messages.
- Number Keys**  
Use the Number keys to input numbers, such as preset numbers.
- Cancel Button**  
Use the Cancel button to cancel number input.
- Power Button**  
Use the Power button to turn the camera On and Off.
- Shortcut Buttons (F1, F2, F3, F4)**  
Use the Shortcut buttons to input shortcut commands. See [IR Remote Shortcuts](#) on the next page.
- Pattern Buttons**  
Use the Pattern Buttons to activate Pattern Scan 1 or Pattern Scan 2.



## 12. BLC Button

Use the BLC button to Enable / Disable Backlight Compensation.

## 13. Zoom Buttons

Use the Zoom buttons to zoom in or zoom out.

## 14. Back Button

Use the Back button to go back to the previous menu in the OSD Menu.

## 15. OK button

**In OSD Menu:** Select the corresponding option.

**Out of OSD Menu:** Adjust the Pan / Tilt control speed.

## 16. Direction / Menu Operation

**In OSD Menu:** Traverse the OSD Menu.

**Out of OSD Menu:** Pan & Tilt the camera

## 17. Preset Buttons

Use the Number Keys to input a preset number, then press Call / Store / Clear to perform the corresponding command.

## 18. Enter Button

After inputting numbers, press the Enter 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 Framing
- [F1] > [6] > [ENTER] - End Framing
- [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.



## 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
	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



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) 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.
CAM_IDWrite		8x 01 04 22 0p 0q 0r 0s FF	pqrs: Camera ID (=0000 to FFFF)



Command Set	Command	Command Packet	Comments
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	
	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
CAM_WebInterface	Enable	8x 01 04 3F 02 54 FF	Enable web interface
	Disable	8x 01 04 3F 02 55 FF	Disable web interface



## 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
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



Inquiry Command	Command Packet	Inquiry Packet	Comments	
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	www = 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 & 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 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