

HuddleCamHD SimplTrack Lite



User Manual
Model No. HC20X-SIMPLTRACKLITE
V1.0
(English)

Please check huddlecamed.com for the most up to date version of this document.



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Preface

Preface

Thank you for using the HD Professional Video Conferencing Camera. This manual introduces the function, installation, and operation of the HD camera. Prior to installation and usage, please read the manual thoroughly.

Precautions

This product can only be used in the specified conditions in order to avoid any damage to the unit itself.

- Don't subject the camera to rain or moisture.
- Don't remove the cover. Removal of the cover may result in an electric shock. In addition to voiding the warranty. In case of abnormal operation, contact support@huddlecamed.com.
- Never operate outside of the specified operating temperature range, humidity, or with any other power supply than the one originally provided with the unit.
- Please use a soft dry cloth to clean the unit. If the unit is very dirty, clean it with diluted neutral detergent; do not use any type of solvents, which may damage the surface.

Warning

• Electrical Safety

Installation and operation must be in accordance with national and local electric safety standards. Do not use any power supply other than the one originally supplied with this camera.

• Polarity of Power Supply

The power supply output for this product is 12V DC with a maximum current supply of 2A. Polarity of the power supply plug is critical and is as follows:



• Handling

- o Avoid any stress, vibration, or moisture during transportation, storage, installation, and operation.
- o Do not lift or move the camera by grasping the camera head. Do not turn the camera head by hand. Doing so may result in mechanical damage.
- o Do not expose the camera to any corrosive solid, liquid, or gas to avoid damage to the cover which is made of a plastic material.
- o Ensure that there are no obstacles in the pan or tilt ranges of the camera lens.
- o Never power the camera on before installation is complete.

- **Do not dismantle the camera** – HuddleCamHD is not responsible for any unauthorized modification or dismantling

Warranty

HuddleCamHD includes a limited parts & labor warranty for all HuddleCamHD manufactured cameras. The warranty is valid only if HuddleCamHD receives proper notice of such defects during the warranty period. HuddleCamHD, at its option, will repair or replace products that prove to be defective. HuddleCamHD manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry standard practices.

Supplied Accessories

When you unpack your camera, check that all the supplied accessories are included:

- Camera 1
- AC Power Supply 1
- RS-232C Cable 1
- IR Remote Controller 1
- Quick Start Guide 1
- AAA Batteries 2



FCC Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radiofrequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. Operation is subject to the following two conditions: This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- **Warning** - This is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.
- **Remote Control Battery Safety Information** - Store batteries in a cool and dry place. Do not throw away used batteries in the trash. Properly dispose of used batteries through specially approved disposal methods. Remove the batteries if they are not in use for long periods of time. Battery leakage and corrosion can damage the remote control. Do not use old batteries with new batteries. Do not mix and use different types of batteries: alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium). Do not dispose of batteries in a fire. Do not attempt to short-circuit the battery terminals.

Copyright Notice

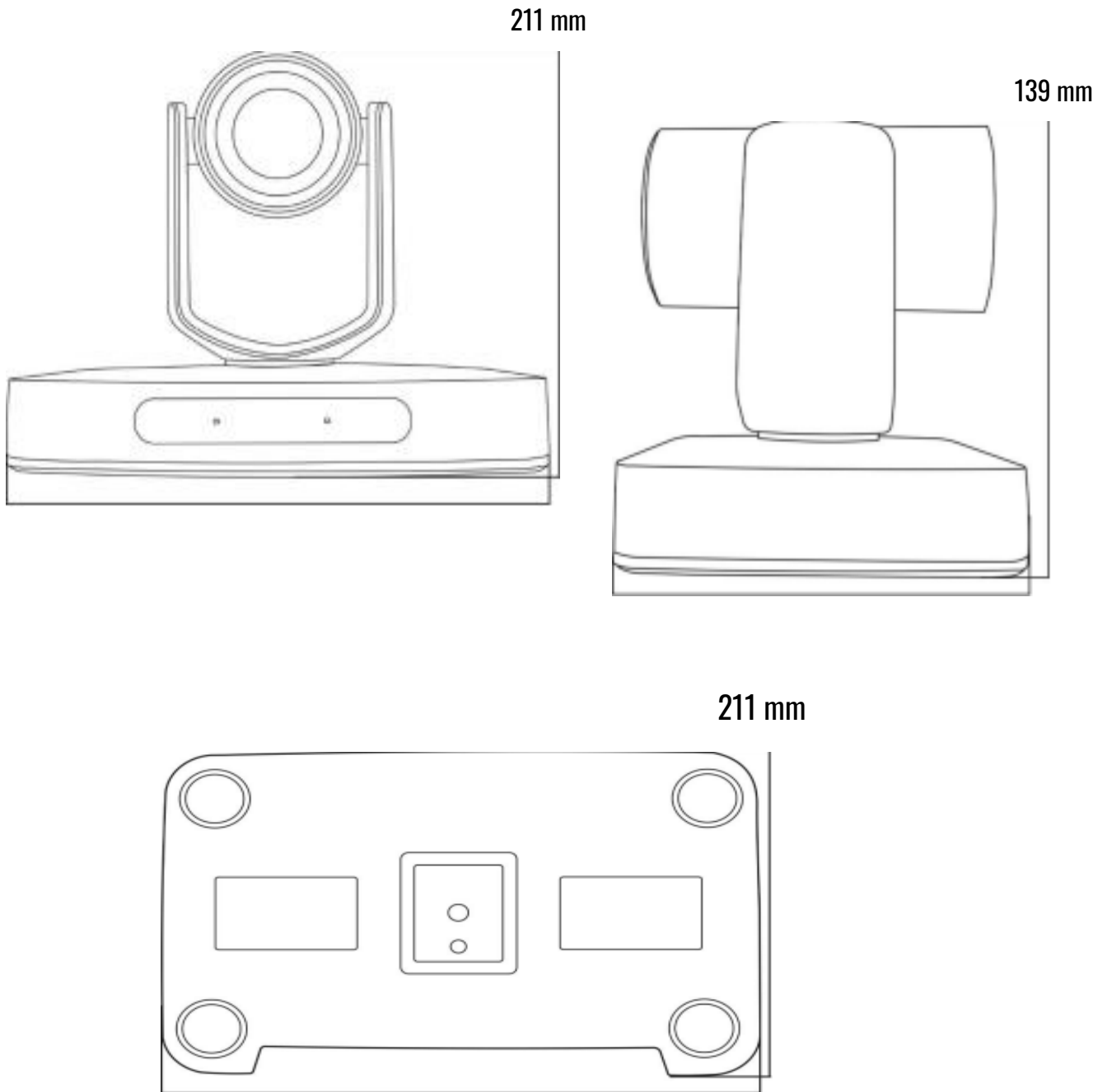
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Connection Guide



1. USB 2.0 USB 2.0 type B female connection
2. HDMI HDMI ver. 1.4 connection
3. Line In 3.5mm audio connection
4. Network RJ45 port for NDI® | HX & network streaming / control
5. SDI 3G-SDI connection
6. RS-232 In 8-pin mini din connection for joystick controller
7. RS-232 Out 8-pin mini din connection for daisy chaining
8. DC12V DC 12V power connection

Dimensional Drawings (mm)





Features

- All-in-One Solution - The SimplTrack Lite does not require a dedicated computer to operate. This simplifies deployment and provides a more seamless less-complicated solution you can rely on for the long term. No need to manage dedicated auto-tracking software, this camera can be tuned to your room and set to operate trouble-free and independent from additional hardware.
- Dedicated Management Software - The SimplTrack Lite features dedicated camera management software that can be controlled from any Windows computer on the network. You don't need a dedicated computer to run the system You can use any Windows PC running the Management Software to remotely manage the cameras when necessary.

•Image Sensor

- 1/2.8", 2.14 million effective pixels, HD CMOS sensor.
- High quality telephoto lens supporting 20X optical zoom and optional 12X digital zoom.
- Full HD 1920x1080p resolution up to 60 frames per second.
- 2D & 3D noise reduction with our latest "low noise CMOS sensor".
- Wide angle 59.5° horizontal field of view.
- Dynamic Range Control (DRC) for higher image quality and detail across simultaneously well-lit and shadowed scenes.
- High SNR (signal to noise ratio) of the CMOS sensor ($\geq 55\text{dB}$), combined with 2D & 3D noise reduction algorithms, effectively reduces noise, even under low illuminated conditions.

•Video Outputs

- Simultaneous NDI®|HX using NDI® 4 / IP network streaming, USB 2.0, 3G-SDI, & HDMI 1.4 o USB 2.0 Full HD video output up to 1080p 30 frames per second.
- 3G-SDI Full HD video output up to 1080p 60 frames per second.
- HDMI 1.4 Full HD video output up to 1080p 60 frames per second.
- RTSP, RTMP, & RTMPS streaming using H.264 or MJPEG.
- Line level audio embeds over NDI®|HX / network stream. Uses AAC audio encoding for better sound quality and lower bandwidth usage.

•Control and Settings

- Automatic tracking of active participant.
- NDI®|HX control through NDI® approved platforms that offer control
- HuddleCamHD VISCA & VISCA over IP
- IR Remote Control
- RS-232 & RS-485 VISCA & Pelco-D control

•Installation

- Standard 1/4-20 female thread for camera mounting
- 12V DC 2.5A Power Supply
- PoE+ 802.3af

•Warranty

- 3-year warranty



Technical Specifications

Model	HC20X-SIMPLTRACKLITE	
Type	HuddleCamHD SimplTrack Lite HD 1080p Color Video Camera	
Camera		
Video System	1080p-60/50/30/25, 1080i-60/50, 720p-60/50	
Sensor	1/2.8" CMOS, 2.14 megapixel	
Lens	20X	
Digital Zoom	12X Digital Zoom	
Shutter	1/1 ~ 1/10000	
White Balance	Auto, ATW, OnePush, Indoor, Outdoor, Manual, Sodium Lamp, Fluo Lamp	
Backlight Compensation	Supported	
Digital Noise Reduction	2D & 3D Digital Noise Reduction	
Video S/N	≥55dB	
Horizontal Field of View	2.9° ~ 59.5°	
Vertical Field of View	2° ~ 36°	
Horizontal Rotation Range	±170°	
Vertical Rotation Range	-30° ~ +90°	
Pan Speed Range	0.2° ~ 100°/s	
Tilt Speed Range	0.2° ~ 60°/s	
Image Flip / Mirror	Supported	
Image Freeze	Not supported	
PoE+	Supports PoE+ (802.3af)	
Face Detection	Not supported	
Local Storage	Not supported	
Number of Presets	64	
Preset Accuracy	0.1°	
Input / Output Interface		
HD Output	1 x RJ45 NDI® HX using NDI® 4 / IP Network 10/100M Ethernet port	
	1 x USB 2.0, Type B Female	



	1 x HDMI version 1.4
	1 x 3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard
Network Interface	1 x RJ45: 10/100M Adaptive Ethernet ports
Audio Interface	1 x 3.5 audio interface, Line in (NDI® HX & IP Network stream only) (Unbalanced stereo)
Communication Interface	1 x RS-232 In: 8-pin mini DIN, Max Distance 30m, Protocol: VISCA/Pelco-D
	1 x RS-232 Out: 8-pin mini DIN, Max Distance 30m, Protocol: VISCA daisy chaining only
IR	4 x IR addresses, Max Distance 9m (30ft)
Power Jack	JEITA type (DC IN 12V)
IP Video Features	
Video Compression	NDI® HX / H.264 / H.265
Video Stream	Two (2) IP video output streams available
First Stream Resolutions	1080p / 720p / 704x480(D1) / 320x240(QVGA) – 60/50/30/25
Second Stream Resolutions	704x480(D1) / 320x240(QVGA) – 60/50/30/25
Video Bit Rate	0Kbps ~ 16383 Kbps
Bit Rate Type	Constant or Variable bit rate
Frame Rate	50Hz: 1 ~ 50 FPS, 60Hz: 1 ~ 60 FPS
Audio Compression	AAC
Audio Bit Rate	16Kbps, 32Kbps, 48Kbps
Supported Protocols	TCP/IP, HTTP, RTSP, RTMP, DHCP, Multicast, NDI®, etc.
Generic Specifications	
Input Voltage	DC 12V / PoE+ (802.3at)(optional)
Current Consumption	<15W
Operating Temperature	32°F ~ 104° (0°C ~ +40°C)
Storage Temperature	-4°F ~ 140° (-20°C ~ +60°C)
Humidity Range	10% RH ~ 90% RH
Size in. (W x D x H)	8.31" x 5.47" x 8.19" 211mm x 139mm x 208mm
Camera Weight	2.43lbs 1.1kg



NDI®|HX with NDI® 4 Connection

The NDI®|HX connection allows you to connect and control your camera through any NDI compatible hardware or software on your Local Area Network. Once your camera is setup on a LAN, you can utilize the NDI®|HX connection.

Two Easy Steps:

1. Download and install the latest NDI®|HX Tools.
2. Select your camera within the NDI®|HX compatible device.

Step 1. Download and install the latest NDI®|HX Tools from <https://www.ndi.tv/tools>.

Step 2 (Optional). Configure your camera settings from the NDI Config tab in the camera's web interface.

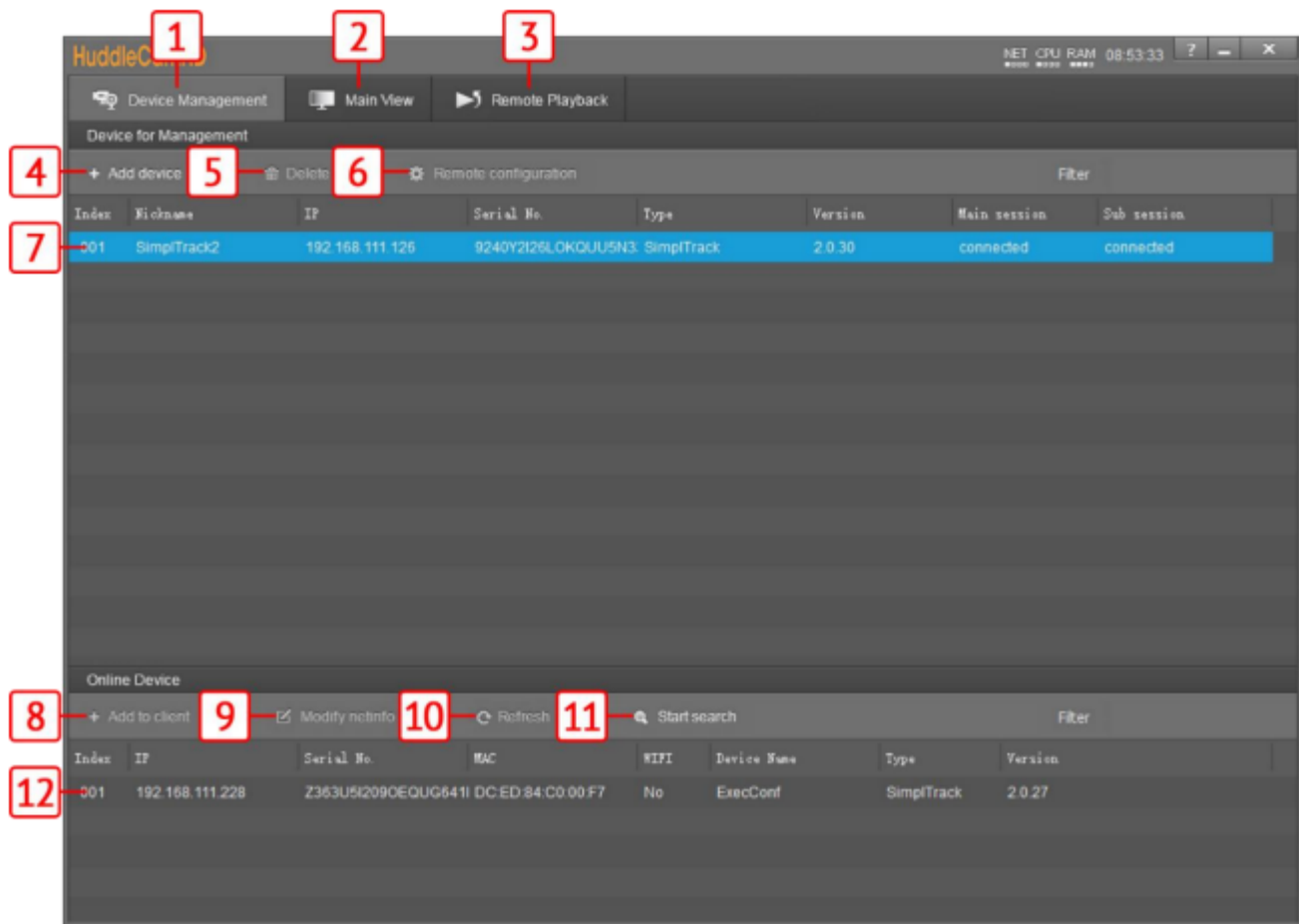
Step 3. Select your camera. The NDI feed will utilize the camera's device friendly name.

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Please note that your NDI License key is non-transferrable.

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.	9	Modify network settings of selected Online Device
4	Manually add device using camera info	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 Devices section

Connecting the Camera

To connect the camera to the Tracking Software, you will first need to make sure it is on the same network range as your PC. Once confirmed, choose your method of connection below. If your camera is not on the same network range as your PC, follow the instructions in the [Assigning an IP Address](#) section below.

Network Search – The Tracking Software is able to search your network for any HuddleView, SimpliTrack2, or SimpliTrack Lite cameras. Simply click the “Start Search” button from the Online Devices section to begin the search. Once a camera is discovered, you may click “+ Add to Client” to add it to the Device Management section.

Manually Adding – Alternatively, you have the ability to manually add a camera to the Device Management section. To do this, click the “+ Add Device” button from the Device Management section. From here, select “Add by IP” or “Add by Import” to determine the connection method.

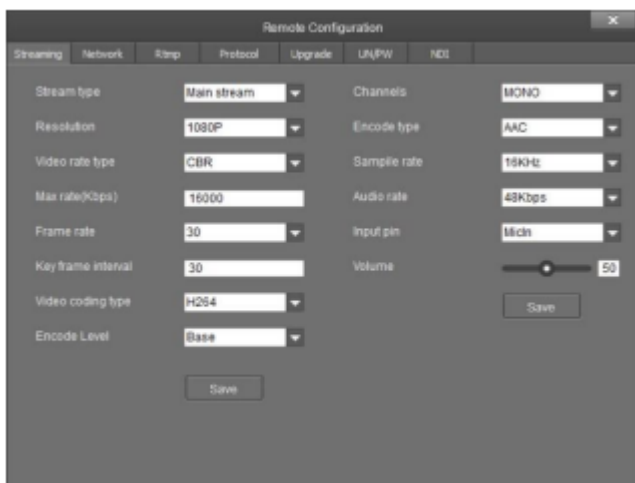
Add by IP – To add a camera by its IP address, you will need to know the camera’s IP address & port number. If the camera has authorization enabled, you will also need the connection username and password (“admin” by default).

Add by Import – To add a camera by import, you will need to have an import file already on hand. To produce this import file, click the “+ Add Device” button, then click “Add by Import”. From here, click the “Export Model” button to produce an import.csv file, that can be used by the Tracking Software.

Configuring the Camera

To configure a camera, you will need to connect it to the Device Management section using the methods above. From there, select the camera you wish to configure, then select “Remote Configuration”.

Streaming – The Streaming tab allows you to adjust the camera’s Real Time Streaming Protocol settings.

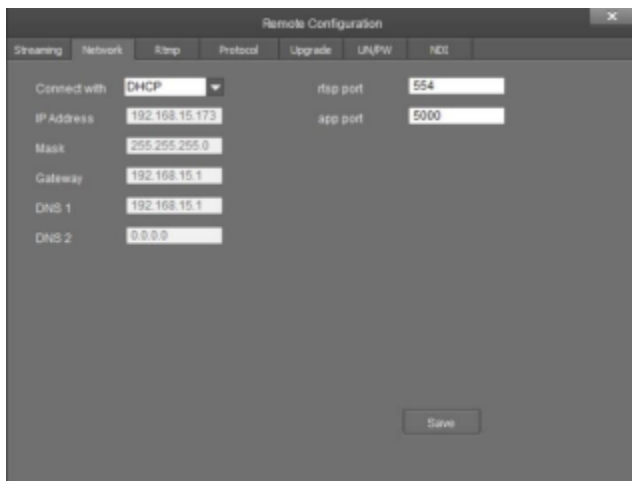


- **Stream Type** – RTSP stream dropdown selector.
 - Options include: Main Stream, Sub Stream, Stream 3, & Stream 4
- **Resolution** – RTSP resolution.
 - Main Stream resolutions: 1080p, 720p, 704x480(D1), & 320x240(QVGA)
 - Sub Stream resolutions: 720p, 704x480(D1), & 320x240(QVGA)
 - Stream 3 resolutions: 720p, 704x480(D1), & 320x240(QVGA)
 - Stream 4 resolutions: 704x480(D1) & 320x240(QVGA)
- **Video Rate Type** – Adjust the video rate.
 - Options include: CBR & VBR
 - Max Rate (Kbps) – Adjust the RTSP stream’s maximum bit rate

Options include: 1 ~ 16383 • Frame Rate – Adjust the RTSP stream’s frames per second.

- Main, Stream 3, & Stream 4 options include: fullfps, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25, 30, 50, & 60
- SubStream options include: fullfps, 1, 2, 4, 6, 8, 10, 12, 15, 16, 18, 20, 22, 25, & 30
- **Key Frame Interval** – Adjust the RTSP stream’s I-Key Frame Interval

- Options include: 1 ~ 120 (we recommend setting this value to double the stream's frame rate) • **Video Coding Type** – Adjust the Video Coding type.
- Options include: H.264 & MJPEG
- **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 embedded audio connection type.
 - Options include: LineIn & MicIn
- **Volume Slider** – Adjust the audio level of the embedded audio.
 - Range: 0 ~ 100



- Default value: 0.0.0.0
- **DNS 2** – Adjust the camera's DNS 2.
 - Default value: 0.0.0.0
- **RTSP Port** – Adjust the camera's RTSP port number.
 - Default value: 554
- **App Port** – Adjust the camera's App Port number.
 - Default value: 5000
- **RTMP** – The RTMP tab allows you to adjust the camera's Real Time Multimedia Protocol settings for up to 4 streams.
- **RTMP # Checkbox** – Enable / Disable the corresponding 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 and stream key you wish to stream to

- **Network** – The Network tab allows you to adjust the camera's network settings.
- **Connect With** – Adjust the method of network connection.
 - Options include: DHCP & Static IP

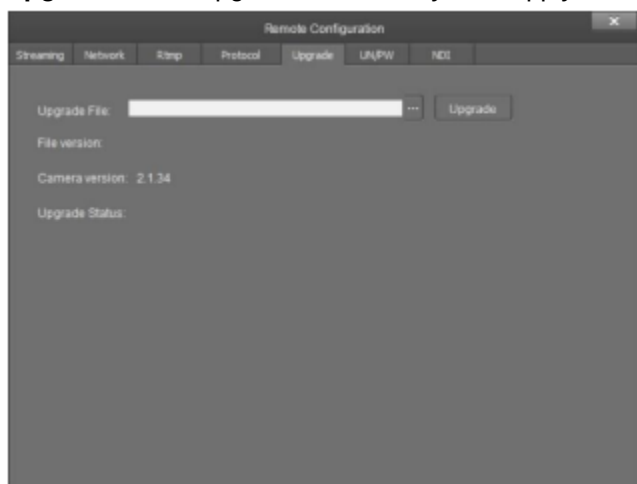
Note: While in DHCP, you can only adjust the RTSP Port & App Port.
- **IP Address** – Displays the IP Address of your camera. Default value: DHCP; or 192.168.1.180 (Fallback IP address).
- **Mask** – Adjust the camera's Subnet Mask.
 - Default Value: 255.255.255.0
- **Gateway** – Adjust the camera's gateway.
 - Default value: 192.168.1.1
- **DNS 1** – Adjust the camera's DNS 1.

Protocol – The Protocol tab allows you to adjust the camera's control settings.



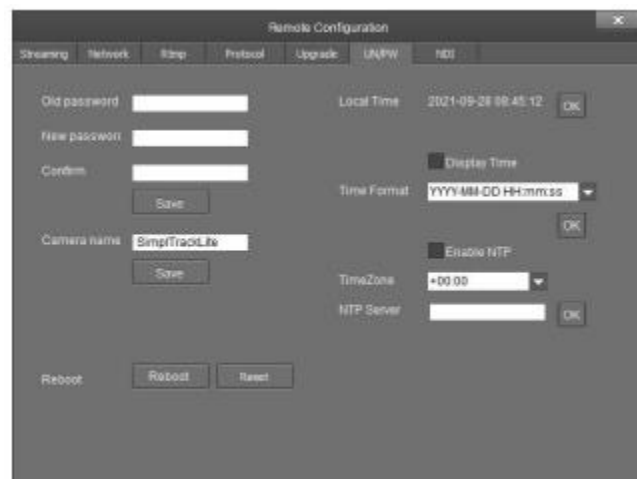
- **Enable** – Enable / Disable 3rd party control to the camera.
 - Options include: Enable & Disable
- **Protocol** – Adjust the control protocol method.
 - Options include: TCP & UDP
- **Camera As** – Adjust whether the camera acts as a server or a controllable device (Client).
 - Options include: Server & Client
- **IP** – Adjust the IP address to which the camera sends commands to (Server Mode).
 - Default value: 0.0.0.0
- **Port** – Adjust the control port of the device the camera sends commands to (Server mode).
 - Default value: 5678

Upgrade – The Upgrade tab allows you to apply firmware updates to the camera.



- **Upgrade File** – Browse your computer for the firmware upgrade file.
- **File Version** – Displays the firmware version of the selected file.
- **Camera Version** – Displays the firmware version of the connected camera.
- **Upgrade Status** – Displays the status of the firmware upgrade.

UN / PW – The UN / PW tab allows you to adjust the camera's name & password, as well as adjust the NTP settings.



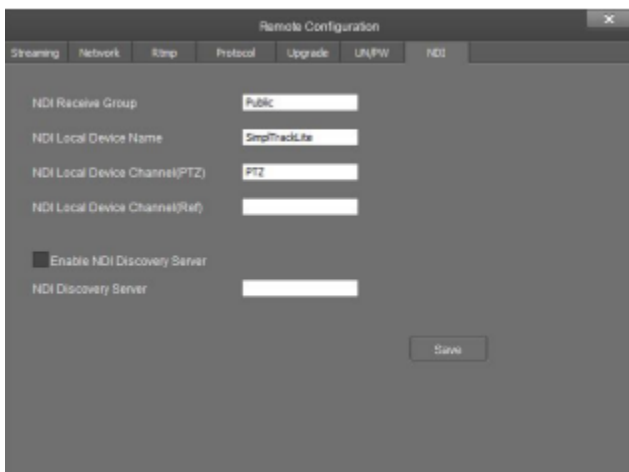
- **Old Password** – Type the old password into this field in order to change the camera password.
 - Default value: “admin”
- **New Password** – Type the new password into this field in order to change the camera password.

Note: Passwords must contain only letters and numbers. Special characters are not applicable. Max length: 15 characters.
- **Confirm** – Type the new password into this field again in order to change the camera password.
- **Camera Name** – Adjust the camera's friendly name.
 - Default value: SimpliTrack Lite
- **Reboot / Reset Buttons** –Reboot or Reset the camera.

- Reboot Button – Turns camera off and on.
- Reset Button – Sets camera to factory default settings.
- **Local Time** – Displays the camera's local time.
- **Display Time Checkbox** – Enable / Disable whether time is displayed in video feed.

- Default value: Off (unchecked).
- **Time Format** – Adjust the format in which time is displayed.
 - Options include: YYYY-MM-DDDD hh:mm:ss, MM-DD-YYYY hh:mm:ss, DD-MM-YYYY hh:mm:ss, YYYY-MM-DD week hh:mm:ss, MM-DD-YYYY week hh:mm:ss, DD-MM-YYYY week hh:mm:ss
- **Enable NTP Checkbox** – Enable / Disable the Network Time Protocol.
 - Default value: Off (unchecked).
- **TimeZone** – Adjust the time zone for your location.
 - Range: +14:00 ~ -12:00
- **NTP Server** – Type in the NTP Server address you wish to utilize, then click “OK”
 - Default value: (blank)

NDI – The NDI tab allows you to adjust the NDI protocol settings.



- **NDI Receive Group** – The NDI® Receive Group allows you to limit which users on your LAN can see the NDI® source
 - Default value: Public
 For best results, the Receive Group should remain “Public”. Once the Receive Group is changed, you will need to join the Receive Group through NDI® Access Manager.
- **NDI Local Device Name** – The friendly name the camera will show up as within NDI® devices.
 - Default value: SimplTrack Lite
 For best results, give all ‘like’ cameras the same Local Device Name. e.g., “Tracking cams” or “Framing Cams”

- **NDI Local Device Channel (PTZ)** – The channel name the camera will utilize within NDI® devices.
 - Default value: PTZ For best results, set a unique Local Device Channel for each camera. e.g., “Wide Shot” or “Tight Shot”
- **NDI Local Device Channel (Ref)** – This field is unused on this camera as it does not have a reference camera.
- **Enable NDI® Discovery Server Checkbox** – Enable / Disable connectivity to a NDI® Discovery Server.
 - Default value: Off (unchecked)
- **NDI® Discovery Server Textbox** – This field allows you to define the IP address of the NDI® Discovery Server.
 - Default value: (blank)

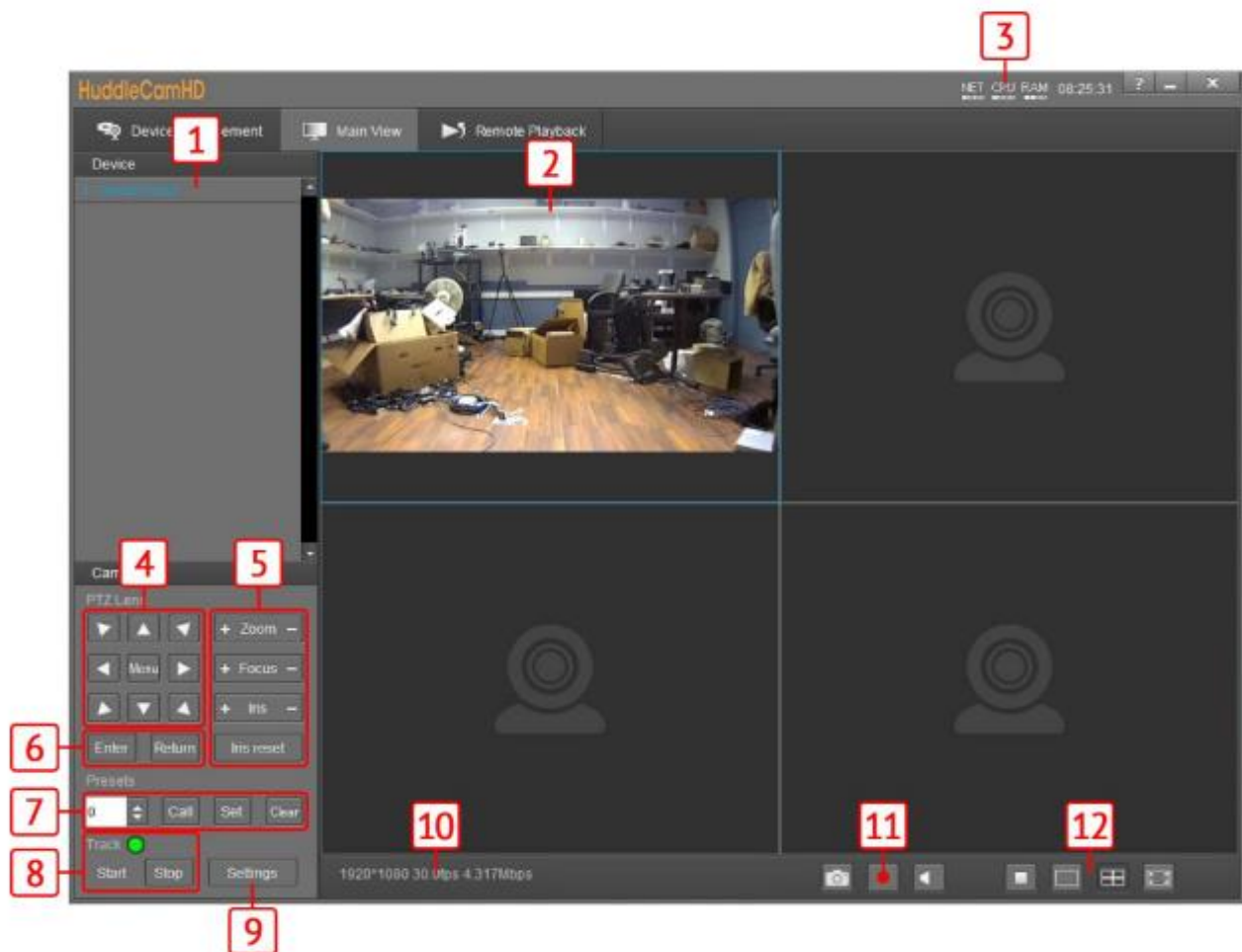
For information on the NDI Discovery Server, check out <https://support.newtek.com/hc/en-us/articles/218109477-NDI-Discovery-and-Registration>.

Removing the Camera

To remove a camera, you will need to select it from the Device Management section. From there, click the “Delete” button, then select “OK”.

Tracking Software

Main View Interface



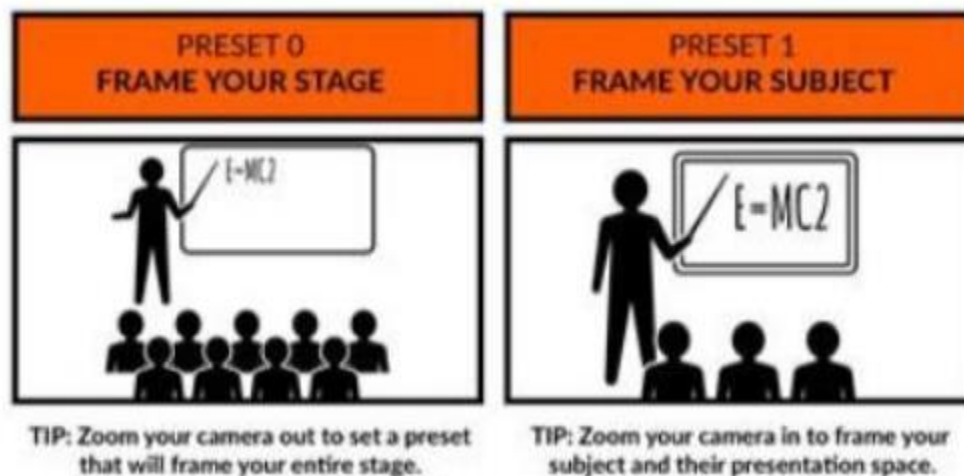
1	Cameras connected to Device Management	7	Preset control
2	Camera video feed	8	Enable / Disable tracking & Tracking Status
3	PC performance & time	9	Open Tracking Settings
4	Pan, Tilt, & OSD Menu control	10	Connected camera resolution & frame rate
5	Lens control	11	Snapshot, Enable / Disable recording,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

Controlling the Camera

The Main View can connect and control up to 4 cameras simultaneously. Right-click a camera from the Device Management section and select the RTSP feed you wish to view. From there, you have full control over Pan, Tilt, Zoom, Focus, Iris, Presets, the On-Screen Display Menu & Tracking Settings. To further cater the camera to your environment, click the Settings button.

Tracking Settings

The SimpliTrack Lite is truly plug and play tracking camera that does not require much set up before use. The camera only requires the Preset 0 & Preset 1 positions set, and the Face Height positioned properly.



Preset Zones

Preset Zones allow the camera to temporarily halt tracking once the subject enters a defined area. Once they enter that area, the camera will call a preset to frame the subject in that Preset Zone. This allows the subject to move around the stage and be framed when they enter the Preset Zone. Once the subject leaves that Preset Zone, the camera resumes tracking the subject normally.

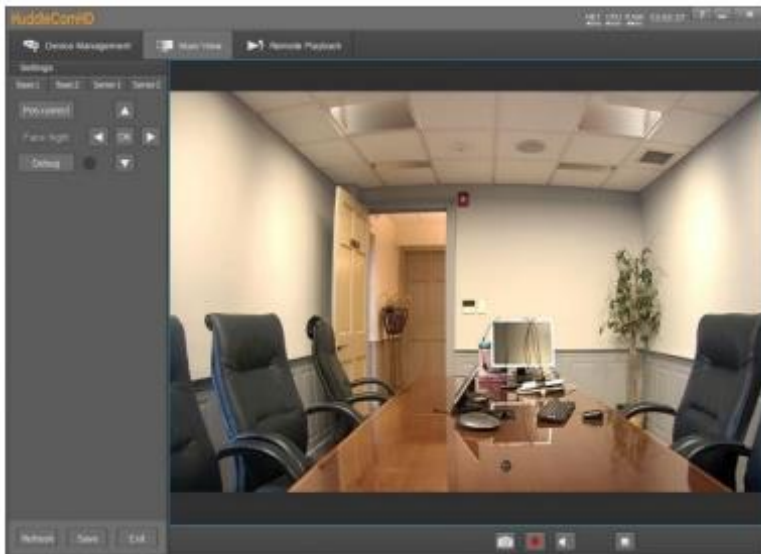
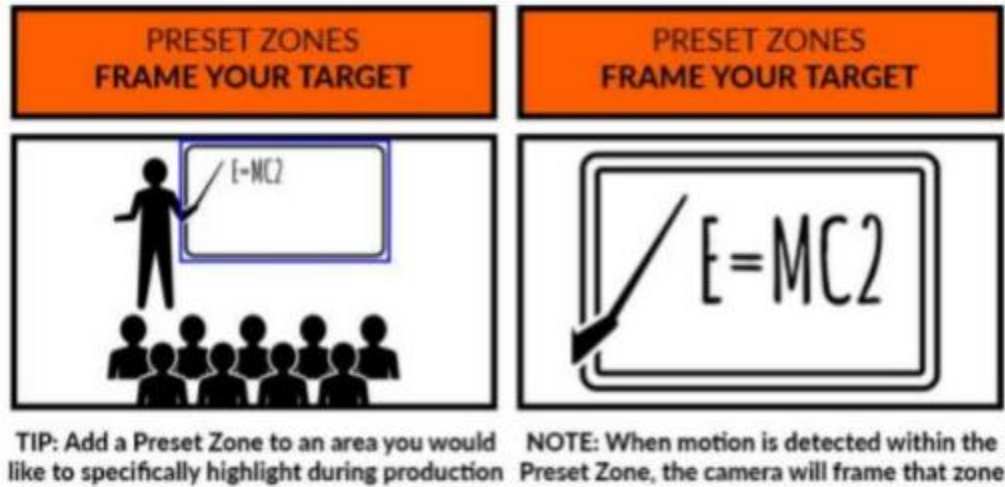
There are 4 Preset Zones: 84-87 for Zones 1-4. You must set up Preset 0 as the Stage and Preset 1 as the subject. The subject must be in the view during the setup for the focus to be correct.

Each Preset Zone has a specific preset number associated with it:

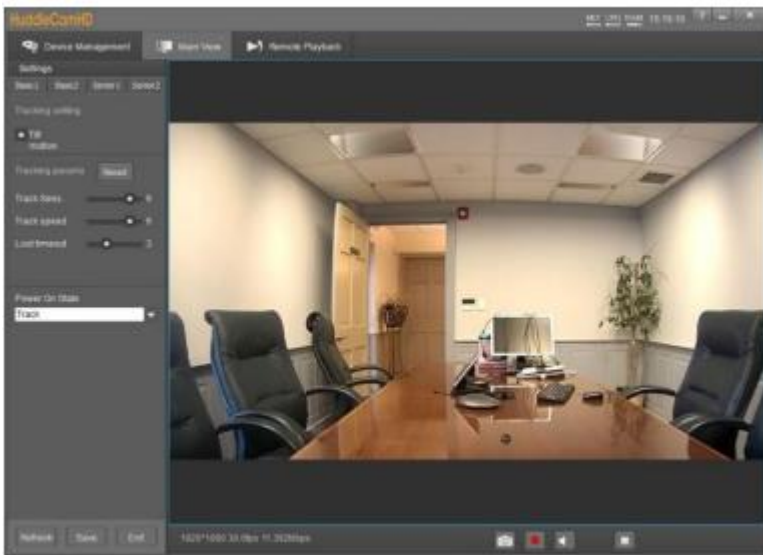
- Preset Zone 1 = preset 84
- Preset Zone 2 = preset 85
- Preset Zone 3 = preset 86
- Preset Zone 4 = preset 87

To set up a Preset Zone:

1. Open the tracking software and select the Main View tab.
2. Have the subject move to the desired Preset Zone location.
3. Position the camera view in the location you'd like the corresponding Preset Zone to move to.
4. "Set" the corresponding preset number (84 ~ 87) using the Presets section of the Main View tab.
 - a. You can double check that the presets are in the desired location by "Calling" the corresponding preset number.
5. Enable tracking and allow the subject to enter the Preset Zone



Basic 2 – The Basic 2 tab allows you to adjust the tracking & zoom settings of the camera.



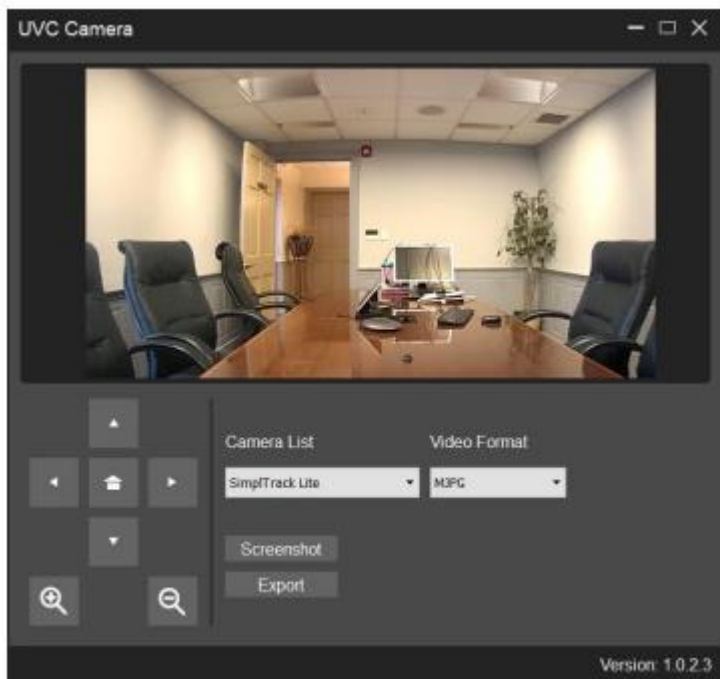
Senior 1 & Senior 2 tabs are not usable on the SimplTrack Lite.

Remote Playback

Remote Playback is not usable on the SimplTrack Lite.

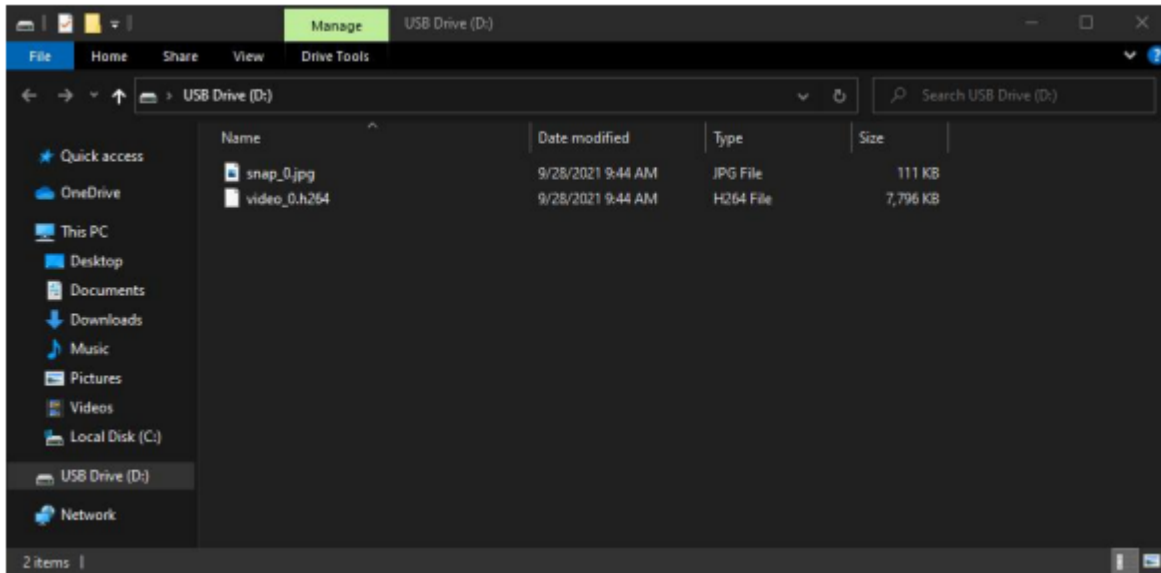
Video Recording & Screenshot

You can record short videos and take screenshots using a secondary UVC recording software and save those files directly to your camera. To do so, connect the SimplTrack Lite to your PC, then open the UVC Camera SFX program.



To take a screenshot, click the “Screenshot” button. Once the screenshot is finished being taken, you’ll be greeted with a “Screenshot Successful” notification.

To record a short video to the camera, click the “Export” button. Once the video is finished being recorded, a new File Explorer window will open under a new “USB Drive” directory. This USB Drive is the camera’s memory. While accessing the camera’s memory, you will be unable to use its video capabilities. To return the SimpliTrack Lite to a usable state, power it off and back on.



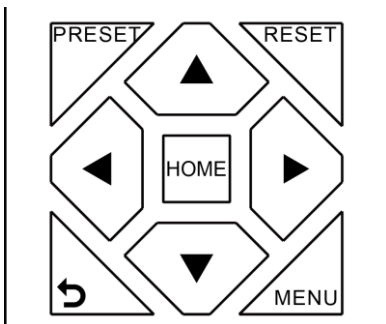
In this example, “snap_0.jpg” is the photo file, and “video_0.h264” is the video file. View the video file within VLC Media Player for best results.

IR Remote Controller Guide

To perform a command on the IR remote, press and release the button. A special note will be given when you can press and hold the button.

To perform a shortcut, press the buttons in a sequence when a right-angle bracket is shown. (>), or simultaneously when a plus sign (+) is shown.

1. Pan & Tilt Control



Tilt Up: Press 

Tilt Down: Press 

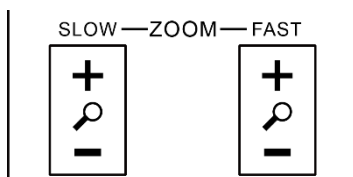
Pan Left: Press 

Pan Right: Press 

Face camera to front: Press 

Press and hold the Up / Down / Left / Right buttons to continue panning or tilting. The camera stops as soon as the button is released, or the limit is reached.

2. Zoom Control

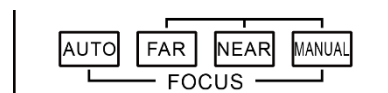


Zoom In: Press  Fast or Slow

Zoom Out: Press  Fast or Slow

Press and hold the “-” or “+” button to continue zooming in or out. The zooming stops as soon as the button is released, or the limit is reached.

3. Focus Control



Auto Focus Mode: Press 

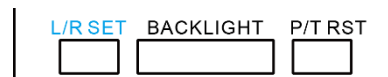
Manual Focus Mode: Press 

Focus Far: Press 

Focus Near: Press 

Press and hold the “Near” or “Far” button to continue focusing in or out. The focusing stops as soon as the button is released, or the limit is reached.

4. Backlight, L/R Set, & P/T RST Controls



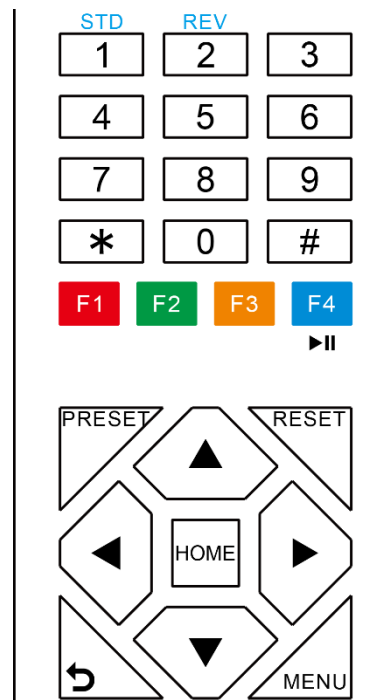
Reverse Pan Control: Press  + 

Standard Pan Control: Press  + 

Backlight Compensation: Press 

Self-Calibration Test: Press 

5. Presets – Setting, Calling, and Clearing



Set Preset: Press  > preset number

Call Preset: Press preset number

Clear Preset: Press `{RESET}` > preset number

Clear ALL Presets: Press `[*]` > `[#]` > `[RESET]`

Note: No action will be executed when calling a preset that has not yet been saved.

6. Image Freeze

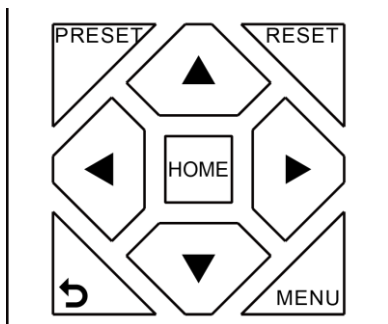


Enable Image Freeze: Press `[▶||]`

Disable Image Freeze: Press `[▶||]`

Note: After enabling / disabling Image Freeze, you will need to power cycle your camera to activate / deactivate the feature.

7. On Screen Display Menu Control



Open / Close OSD: Press `[MENU]`

OSD Up: Press `[▲]`

OSD Down: Press `[▼]`

OSD Left: Press `[◀]`

OSD Right: Press `[▶]`

OSD Enter: Press `[HOME]`

OSD Back: Press `[↶]`

8. Change Camera IR Address



Address 1: `[*]` > `[#]` > `[F1]`

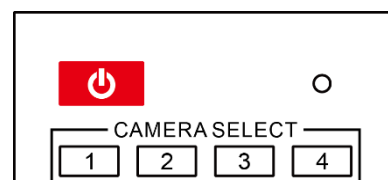
Address 2: `[*]` > `[#]` > `[F2]`

Address 3: `[*]` > `[#]` > `[F3]`

Address 4: `[*]` > `[#]` > `[F4]`

Note: Ensure that only one camera is 'listening' to the IR Address shortcut at a time. If multiple cameras receive the command, they will all change their IR address.

9. Camera Select



Control IR address 1: Press `[Cam Select 1]`

Control IR address 2: Press `[Cam Select 2]`

Control IR address 3: Press `[Cam Select 3]`

Control IR address 4: Press `[Cam Select 4]`

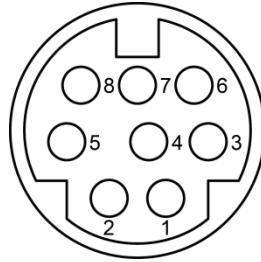
10. Standby Control



Enable Standby Mode: Press `[⏻]`

Disable Standby Mode: Press `[⏻]`

RS232 Interface



No.	Function
1	DTR
2	DSR
3	TXD
4	GND
5	RXD
6	GND
7	IR OUT
8	NC

The correspondence between the camera and Windows DB-9 pin:

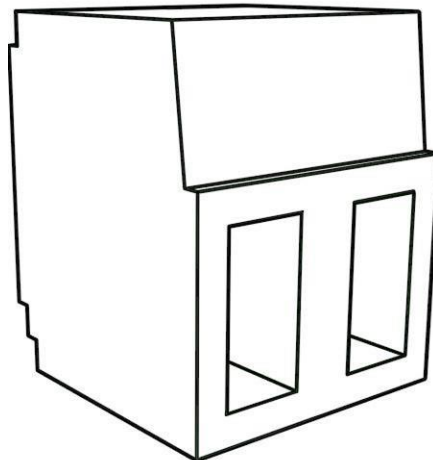
Camera	Windows DB-9
1.DTR	1.CD
2.DSR	2.RXD
3.TXD	3.TXD
4.GND	4.DTR
5.RXD	5.GND

Camera	Windows DB-9
6.GND	6.DSR
7.IR OUT	7.RTS
8.NC	8.CTS
	9.RI

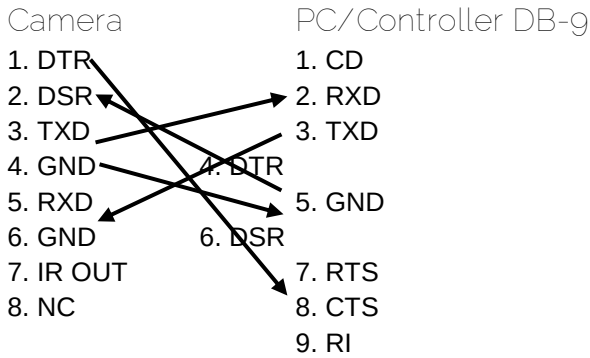
The correspondence between the camera and the Mini DIN pin:

Camera	Mini DIN
1.DTR	1.DTR
2.DSR	2.DSR
3.TXD	3.TXD
4.GND	4.GND
5.RXD	5.RXD
6.GND	6.GND
7.IR OUT	7.NC
8.NC	8.NC

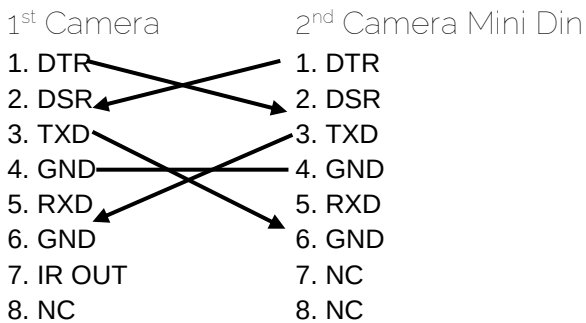
RS-485 Interface



For Initial Connection

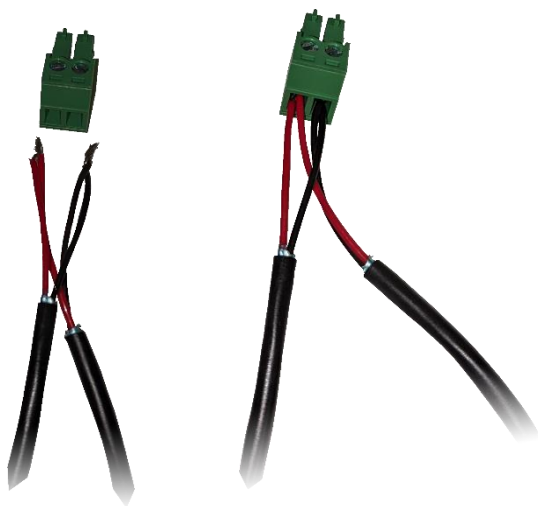


For Daisy Chain Control

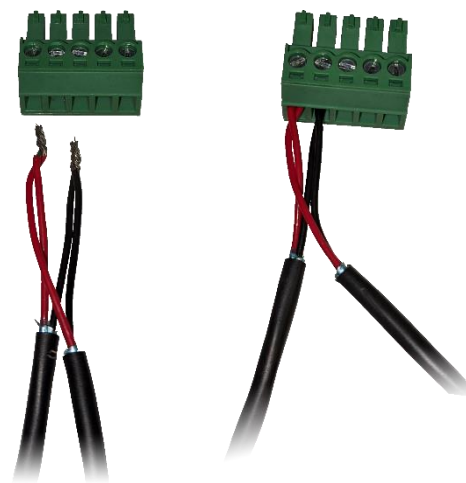


To utilize an RS-485 connection, you will need an unterminated two (2) conductor cable.

1. First, connect the positive (red) wire to the camera's positive phoenix connector port (left).
2. Then, connect the negative (black) wire to the camera's negative phoenix connector port (right).
3. Next, connect the positive and negative wires to the positive and negative ports on your joystick controller.
4. To connect multiple cameras, you have the option to connect via daisy-chain or home run.
5. In either method, multiple wires will be connected to a single phoenix connector port.



RS-485 Daisy-Chain connection



RS-485 Home Run connection

Serial Communication Control

In default working mode, the camera is able to connect to a VISCA controller with an RS-232 and/or RS-485 serial interface

RS-232 Communication Control

Baud rate: 2400/4800/9600/38400;

Starting Position: 1 bit

Data bit: 8 bits

Stop bit: 1 bit

Check digit: None

RS485 Communication Control

RS-485 Communication Control

Baud rate: 2400/4800/9600/38400;

Starting position: 1 bit

Data bit: 8 bits

Stop bit: 1 bit

Check digit: None

After power on, the camera goes to the upper right limit and then back to the middle position. The zoom lens is pulled to the farthest position, auto focus, and the aperture is adjusted to the default value. If the camera has preset 0 saved, the camera will be set to position 0 after the initialization is completed. At this point, the user can use the serial port command to control the camera.²⁰

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HuddleCamHD VISCA Command List

Part 1: Camera Issued Messages

ACK / Completion Messages			
Command	Function	Command Packet	Comments
ACK / Completion Messages	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	Function	Command Packet	Comments
Error Messages	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 No. 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 mode.

z = Camera Address + 8

Part 2: HuddleCamHD VISCA Command List

Command	Function	Command Packet	Comments
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) – 7 (high)
	Wide (Variable)	8x 01 04 07 3p FF	
	Direct	8x 01 04 47 p q r s FF	
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) – 7 (high)
	Near (Variable)	8x 01 04 08 3p FF	
	Direct	8x 01 04 48 0p 0q 0r 0s FF	pqrs: Zoom Position (0x04 0x00 0x00 0x00 = Full Zoom in. 0x00 0x00 0x00 0x00 = Full Zoom out.)
	Auto Focus	8x 01 04 38 02 FF	Auto Focus On / Off
	Manual Focus	8x 01 04 38 03 FF	
	Auto / Manual	8x 01 04 38 10 FF	
	Focus Lock	8x 0a 04 68 02 FF	Prevents any other operation or command from adjusting the current focus state.
	Focus Unlock	8x 0a 04 68 03 FF	
CAM_WB	Auto	8x 01 04 35 00 FF	Normal Auto mode
	Indoor	8x 01 04 35 01 FF	Indoor mode
	Outdoor	8x 01 04 35 02 FF	Outdoor mode
	OnePush	8x 01 04 35 03 FF	One Push White Balance mode
	Manual	8x 01 04 35 05 FF	Manual control mode
	ColorTemperature (VAR)	8x 01 04 35 20 FF	Color Temperature mode
	OnePush Trigger	8x 01 04 10 05 FF	One Push White Balance Trigger
CAM_RGain	Reset	8x 01 04 03 00 FF	Manual control of red 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: Red Gain
CAM_BGain	Reset	8x 01 04 04 00 FF	Manual control of blue 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: Blue Gain
CAM_ColorTemp	Reset	8x 01 04 20 00 FF	Default ColorTemperature settings
	Up	8x 01 04 20 02 FF	
	Down	8x 01 04 20 03 FF	
	Direct	8x 01 04 20 0p 0q FF	pq: ColorTemperature position: 0x00: 2500K ~ 0x37: 8000K
CAM_AE	Full Auto	8x 01 04 39 00 FF	Automatic Exposure mode
	Manual	8x 01 04 39 03 FF	Manual exposure mode
	Shutter Priority	8x 01 04 39 0A FF	Shutter priority auto exposure mode
	Iris Priority	8x 01 04 39 0B FF	Iris priority auto exposure mode
	Bright	8x 01 04 39 0D FF	Bright manual exposure mode
CAM_Iris	Reset	8x 01 04 0B 00 FF	Default Iris position
	Up	8x 01 04 0B 02 FF	Iris setting
	Down	8x 01 04 0B 03 FF	
	Direct	8x 01 04 4B 00 00 0p 0q FF	pq: Iris position
CAM_Shutter	Reset	8x 01 04 0A 00 FF	Default shutter position
	Up	8x 01 04 0A 02 FF	Shutter setting
	Down	8x 01 04 0A 03 FF	
	Direct	8x 01 04 4A 00 00 0p 0q FF	pq: Shutter position
CAM_Bright	Reset	8x 01 04 0D 00 FF	Default Bright position

	Up	8x 01 04 0D 02 FF	Bright setting
	Down	8x 01 04 0D 03 FF	
	Direct	8x 01 04 0D 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	Default ExpComp position
	Up	8x 01 04 0E 02 FF	ExpComp setting
	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	Backlight Compensation On / Off
	Off	8x 01 04 33 03 FF	
CAM_Flicker		8x 01 04 23 0p FF	p: Flicker settings - (0: Off, 1: 50Hz, 2: 60Hz)
CAM_Picture Effect	Off	8x 01 04 63 00 FF	Picture Effect setting
	B&W	8x 01 04 63 04 FF	
CAM_Memory	Reset	8x 01 04 3F 00 pp FF	pp: Memory number (=0 to 127)
	Set	8x 01 04 3F 01 pp FF	
	Recall	8x 01 04 3F 02 pp FF	
Preset_Recall_Speed	Preset Speed	8x 01 06 01 p FF	P: Speed grade (0x01 ~ 0x18)
CAM_LR_Reverse	On	8x 01 04 61 02 FF	Image Flip Horizontal On / Off
	Off	8x 01 04 61 03 FF	
CAM_PictureFlip	On	8x 01 04 66 02 FF	Image Flip Vertical On / Off
	Off	8x 01 04 66 03 FF	
CAM_ColorGain	Direct	8x 01 04 49 00 00 00 0p FF	P: Color Gain setting 0h (60%) to Eh(200%)
Pan_TiltDrive	Up	8x 01 06 01 VV WW 03 01 FF	VV: Pan Speed 0x01 (low) to 0x18 (high) WW: Tilt Speed 0x01 (low) to 0x14 (high)
	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	YYYY: Pan position, ZZZZ: Tilt position
	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 position, ZZZZ: Tilt position
	LimitClear	8x 01 06 07 01 0W 07 0F 0F 0F 07 0F 0F 0F FF	
CAM_Brightness	Direct	8x 01 04 A1 00 00 0p 0q FF	pq: Brightness position
CAM_Contrast	Direct	8x 01 04 A2 00 00 0p 0q FF	pq: Contrast position
CAM_Flip	Off	8x 01 04 A4 00 FF	Single Command for video flip
	Flip-H	8x 01 04 A4 01 FF	
	Flip-V	8x 01 04 A4 02 FF	
	Flip-HV	8x 01 04 A4 03 FF	
CAM_SettingSave	Save	8x 01 04 A5 10 FF	Save Current Setting
CAM_AWB Sensitivity	High	8x 01 04 A9 00 FF	
	Normal	8x 01 04 A9 01 FF	
	Low	8x 01 04 A9 02 FF	
CAM_AFZone	Top	8x 01 04 AA 00 FF	AF Zone weight select
	Center	8x 01 04 AA 01 FF	
	Bottom	8x 01 04 AA 02 FF	
CAM_ColorHue	Direct	8x 01 04 4F 00 00 00 0p FF	P: Color Hue setting 0h (-14°) to Eh (+14°)
OSD_Control	Open / Close	8x 01 04 3F 02 5F FF	
	Navigate Up	8x 01 06 01 0E 0E 03 01 FF	
	Navigate Down	8x 01 06 01 0E 0E 03 02 FF	

	Navigate Left	8x 01 06 01 0E 0E 01 03 FF	
	Navigate Right	8x 01 06 01 0E 0E 02 03 FF	
	Enter	8x 01 06 06 05 FF	
	Return	8x 01 06 06 04 FF	
CAM_NDIMode	High	8x 0B 01 01 FF	
	Medium	8x 0B 01 02 FF	
	Low	8x 0B 01 03 FF	
	Off	8x 0B 01 04 FF	
CAM_Multicast Mode	Multicast Mode	8x 0B 01 23 0p FF	p=1: On, p=2: Off
CAM_PTZMotion Sync	PTZ Motion Sync On	8x 0A 11 13 02 FF	
	PTZ Motion Sync Off	8x 0A 11 13 03 FF	
	PTZ MS Upper Speed Limit	8x 0A 11 14 pq FF	pq: Speed stage
	PTZ MS Lower Speed Limit	8x 0A 11 14 pq FF	
CAM_UACStatus	Toggle USB Audio	8x 2a 02 a0 04 0p FF	p=2: On, p=3: Off

x = Camera Address + 8

Part 3: HuddleCamHD VISCA Query Command List

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_FocusAFModelInq	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_WBModelInq	8x 09 04 35 FF	y0 50 00 FF	Auto
		y0 50 01 FF	Indoor
		y0 50 02 FF	Outdoor
		y0 50 03 FF	OnePush
		y0 50 05 FF	Manual

		y0 50 20 FF	ColorTemperature
CAM_RGainInq	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: Red Gain
CAM_BGainInq	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: Blue Gain
CAM_ColorTempInq	8x 09 04 20 FF	y0 50 pq FF	pq: ColorTemperature position
CAM_AEModeInq	8x 09 04 39 FF	y0 50 00 FF	Full Auto
		y0 50 03 FF	Manual
		y0 50 0A FF	Shutter Priority (SAE)
		y0 50 0B FF	Iris Priority (AAE)
		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_BrightPosInq	8x 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: Bright position
CAM_ExpCompModelInq	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_BacklightModelInq	8x 09 04 33 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_Noise2DModelInq	8x 09 04 50 FF	y0 50 02 FF	Auto Noise 2D
		y0 50 03 FF	Manual Noise 2D
CAM_Noise2DLevel	8x 09 04 53 FF	y0 50 0p FF	Noise Reduction (2D) p: 0 to 5
CAM_Noise3DLevel	8x 09 04 54 FF	y0 50 0p FF	Noise Reduction (3D) p: 0 to 5
CAM_FlickerModelInq	8x 09 04 55 FF	y0 50 0p FF	p=0: Off, 1: 50Hz, 2: 60Hz
CAM_ApertureModelInq (Sharpness)	8x 09 04 05 FF	y0 50 02 FF	Auto Sharpness
		y0 50 03 FF	Manual Sharpness
CAM_ApertureInq (Sharpness)	8x 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture gain
SYS_MenuModelInq	8x 09 06 06 FF	y0 50 02 FF	On

		y0 50 03 FF	Off
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CAM_PictureEffectModelInq	8x 09 04 63 FF	y0 50 02 FF	Off
		y0 50 04 FF	B&W
CAM_LR_ReverseInq	8x 09 04 61 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_PictureFlipInq	8x 09 04 66 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_ColorGainInq	8x 09 04 49 FF	y0 50 00 00 00 0p FF	P: Color gain 0h (60%) to Eh (200%)
CAM_PanTiltPosInq	8x 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	WWW: Pan position, ZZZ: Tilt position
CAM_GainLimitInq	8x 09 04 2C FF	y0 50 0q FF	p: Gain limit
CAM_AFSensitivityInq	8x 09 04 58 FF	y0 50 01 FF	High
		y0 50 02 FF	Normal
		y0 50 03 FF	Low
CAM_BrightnessInq	8x 09 04 A1 FF	y0 50 00 00 0p 0q FF	pq: Brightness position
CAM_ContrastInq	8x 09 04 A2 FF	y0 50 00 00 0p 0q FF	pq: Contrast position
CAM_FlipInq	8x 09 04 A4 FF	y0 50 00 FF	Off
		y0 50 01 FF	Flip-H
		y0 50 02 FF	Flip-V
		y0 50 03 FF	Flip-HV
CAM_AFZone	8x 09 04 AA FF	y0 50 00 FF	Top
		y0 50 01 FF	Center
		y0 50 02 FF	Bottom
CAM_ColorHueInq	8x 09 04 4F FF	y0 50 00 00 00 0p FF	P: Color Hue 0h (-14°) to Eh (+14°)
CAM_AWBSensitivityInq	8x 09 04 A9 FF	y0 50 00 FF	High
		y0 50 01 FF	Normal
		y0 50 02 FF	Low
CAM_UACInq	8x 2A 02 A0 04 FF	y0 50 02 FF	On
		y0 50 03 FF	Off

Block Inquiry Command List

Command	Command Packet	Inquiry Packet	Comments
CAM_LensBlockInq	8x 09 7E 7E 00 FF	y0 50 0u 0u 0u 0u 00 00 0v 0v 0v 0v 00 0w 00 FF	UUUU: Zoom position VVVV: Focus position W.bit0: Focus mode 1: Auto, 0: manual
CAM_CameraBlockInq	8x 09 7E 7E 01 FF	y0 50 0p 0p 0q 0q 0r 0s tt 0u vv ww 00 xx 0z FF	PP: Red Gain, QQ: Blue Gain R: WB Mode, S: Aperture TT: AE Mode, U.bit2: Backlight U.bit1: Exposure Comp, VV: Shutter position. WW: Iris position, XX Bright position, Z: Exposure Comp position
CAM_OtherBlockInq	8x 09 7E 7E 02 FF	y0 50 0p 0q 00 0r 00 00 00 00 00 00 00 00 00 FF	P.bit0: Power 1: On, 0: Off Q.bit2: LR Reverse: 1: On, 0: Off R.bit3~0: Picture Effect Mode
CAM_EnlargmentBlockInq	8x 09 7E 7E 03 FF	y0 50 00 00 00 00 00 00 00 00 0p 0q rr 0s 0t 0u FF	P: AF sensitivity Q.bit0: Picture flip: 1: On, 0: Off RR.bit6~3: Color Gain (0h (60%) to Eh (200%)) S: Flip 0: Off, 1: Flip-H, 2: FlipV, 3: Flip-HV T.bit2~0: NR2D level U: Gain limit

Part 4: HuddleCamHD VISCA over IP Command List

Command	Function	Command Packet	Comments
CAM_Power	On	81 01 04 00 02 FF	Power On/Off
	Off	81 01 04 00 03 FF	
CAM_Zoom	Stop	81 01 04 07 00 FF	
	Tele (Standard)	81 01 04 07 02 FF	
	Wide (Standard)	81 01 04 07 03 FF	
	Tele (Variable)	81 01 04 07 2p FF	p = 0 (low) – 7 (high)
	Wide (Variable)	81 01 04 07 3p FF	
	Direct	81 01 04 47 p q r s FF	

CAM_Focus	Stop	81 01 04 08 00 FF	
	Far (Standard)	81 01 04 08 02 FF	
	Near (Standard)	81 01 04 08 03 FF	
	Far (Variable)	81 01 04 08 2p FF	p = 0 (low) – 7 (high)
	Near (Variable)	81 01 04 08 3p FF	
	Direct	81 01 04 48 0p 0q 0r 0s FF	pqrs: Zoom Position (0x04 0x00 0x00 0x00 = Full Zoom in. 0x00 0x00 0x00 0x00 = Full Zoom out.)
	Auto Focus	81 01 04 38 02 FF	Auto Focus On / Off
	Manual Focus	81 01 04 38 03 FF	
	Auto / Manual	81 01 04 38 10 FF	
	Focus Lock	81 0a 04 68 02 FF	Prevents any other operation or command from adjusting the current focus state.
	Focus Unlock	81 0a 04 68 03 FF	
CAM_WB	Auto	81 01 04 35 00 FF	Normal Auto mode
	Indoor	81 01 04 35 01 FF	Indoor mode
	Outdoor	81 01 04 35 02 FF	Outdoor mode
	OnePush	81 01 04 35 03 FF	One Push White Balance mode
	Manual	81 01 04 35 05 FF	Manual control mode
	ColorTemperature (VAR)	81 01 04 35 20 FF	Color Temperature mode
	OnePush Trigger	81 01 04 10 05 FF	One Push White Balance Trigger
CAM_RGain	Reset	81 01 04 03 00 FF	Manual control of red gain
	Up	81 01 04 03 02 FF	
	Down	81 01 04 03 03 FF	
	Direct	81 01 04 43 00 00 0p 0q FF	pq: Red Gain
CAM_BGain	Reset	81 01 04 04 00 FF	Manual control of blue gain
	Up	81 01 04 04 02 FF	
	Down	81 01 04 04 03 FF	
	Direct	81 01 04 44 00 00 0p 0q FF	pq: Blue Gain
CAM_ColorTemp	Reset	81 01 04 20 00 FF	Default ColorTemperature settings

	Up	81 01 04 20 02 FF	
	Down	81 01 04 20 03 FF	
	Direct	81 01 04 20 0p 0q FF	pq: ColorTemperature position: 0x00: 2500K ~ 0x37: 8000K
CAM_AE	Full Auto	81 01 04 39 00 FF	Automatic Exposure mode
	Manual	81 01 04 39 03 FF	Manual exposure mode
	Shutter Priority	81 01 04 39 0A FF	Shutter priority auto exposure mode
	Iris Priority	81 01 04 39 0B FF	Iris priority auto exposure mode
	Bright	81 01 04 39 0D FF	Bright manual exposure mode
CAM_Iris	Reset	81 01 04 0B 00 FF	Default Iris position
	Up	81 01 04 0B 02 FF	Iris setting
	Down	81 01 04 0B 03 FF	
	Direct	81 01 04 4B 00 00 0p 0q FF	pq: Iris position
CAM_Shutter	Reset	81 01 04 0A 00 FF	Default shutter position
	Up	81 01 04 0A 02 FF	Shutter setting
	Down	81 01 04 0A 03 FF	
	Direct	81 01 04 4A 00 00 0p 0q FF	pq: Shutter position
CAM_Bright	Reset	81 01 04 0D 00 FF	Default Bright position

	Up	81 01 04 0D 02 FF	Bright setting
	Down	81 01 04 0D 03 FF	
	Direct	81 01 04 0D 00 00 0p 0q FF	pq: Bright position
CAM_ExpComp	On	81 01 04 3E 02 FF	Exposure Compensation On / Off
	Off	81 01 04 3E 03 FF	
	Reset	81 01 04 0E 00 FF	Default ExpComp position
	Up	81 01 04 0E 02 FF	ExpComp setting
	Down	81 01 04 0E 03 FF	
	Direct	81 01 04 4E 00 00 0p 0q FF	pq: ExpComp position
CAM_Backlight	On	81 01 04 33 02 FF	Backlight Compensation On / Off
	Off	81 01 04 33 03 FF	

CAM_Flicker		81 01 04 23 0p FF	p: Flicker settings - (0: Off, 1: 50Hz, 2: 60Hz)
CAM_Picture Effect	Off	81 01 04 63 00 FF	Picture Effect setting
	B&W	81 01 04 63 04 FF	
CAM_Memory	Reset	81 01 04 3F 00 pp FF	pp: Memory number (=0 to 127)
	Set	81 01 04 3F 01 pp FF	
	Recall	81 01 04 3F 02 pp FF	
Preset_Recall_Speed	Preset Speed	81 01 06 01 p FF	P: Speed grade (0x01 ~ 0x18)
CAM_LR_Reverse	On	81 01 04 61 02 FF	Image Flip Horizontal On / Off
	Off	81 01 04 61 03 FF	
CAM_PictureFlip	On	81 01 04 66 02 FF	Image Flip Vertical On / Off
	Off	81 01 04 66 03 FF	
CAM_ColorGain	Direct	81 01 04 49 00 00 00 0p FF	P: Color Gain setting 0h (60%) to Eh(200%)
Pan_TiltDrive	Up	81 01 06 01 VV WW 03 01 FF	VV: Pan Speed 0x01 (low) to 0x18 (high) WW: Tilt Speed 0x01 (low) to 0x14 (high)
	Down	81 01 06 01 VV WW 03 02 FF	
	Left	81 01 06 01 VV WW 01 03 FF	
	Right	81 01 06 01 VV WW 02 03 FF	
	UpLeft	81 01 06 01 VV WW 01 01 FF	
	UpRight	81 01 06 01 VV WW 02 01 FF	
	DownLeft	81 01 06 01 VV WW 01 02 FF	
	DownRight	81 01 06 01 VV WW 02 02 FF	
	Stop	81 01 06 01 VV WW 03 03 FF	
	AbsolutePosition	81 01 06 02 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	YYYY: Pan position, ZZZZ: Tilt position
	RelativePosition	81 01 06 03 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
	Home	81 01 06 04 FF	
	Reset	81 01 06 05 FF	
Pan_TiltLimitSet	LimitSet	81 01 06 07 00 0W 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	W: 1 (UpRight), 0: DownLeft YYYY: Pan position, ZZZZ: Tilt position
	LimitClear	81 01 06 07 01 0W 07 0F 0F 0F 07 0F 0F 0F FF	

CAM_Brightness	Direct	81 01 04 A1 00 00 0p 0q FF	pq: Brightness position
CAM_Contrast	Direct	81 01 04 A2 00 00 0p 0q FF	pq: Contrast position
CAM_Flip	Off	81 01 04 A4 00 FF	Single Command for video flip
	Flip-H	81 01 04 A4 01 FF	
	Flip-V	81 01 04 A4 02 FF	
	Flip-HV	81 01 04 A4 03 FF	
CAM_SettingSave	Save	81 01 04 A5 10 FF	Save Current Setting
CAM_AWB Sensitivity	High	81 01 04 A9 00 FF	
	Normal	81 01 04 A9 01 FF	
	Low	81 01 04 A9 02 FF	
CAM_AFZone	Top	81 01 04 AA 00 FF	AF Zone weight select
	Center	81 01 04 AA 01 FF	
	Bottom	81 01 04 AA 02 FF	
CAM_ColorHue	Direct	81 01 04 4F 00 00 00 0p FF	P: Color Hue setting 0h (-14°) to Eh (+14°)
OSD_Control	Open / Close	81 01 04 3F 02 5F FF	
	Navigate Up	81 01 06 01 0E 0E 03 01 FF	

	Navigate Down	81 01 06 01 0E 0E 03 02 FF	
	Navigate Left	81 01 06 01 0E 0E 01 03 FF	
	Navigate Right	81 01 06 01 0E 0E 02 03 FF	
	Enter	81 01 06 06 05 FF	
	Return	81 01 06 06 04 FF	
CAM_NDIMode	High	81 0B 01 01 FF	
	Medium	81 0B 01 02 FF	
	Low	81 0B 01 03 FF	
	Off	81 0B 01 04 FF	
CAM_Multicast Mode	Multicast Mode	81 0B 01 23 0p FF	p=1: On, p=2: Off

CAM_PTZMotion Sync	PTZ Motion Sync On	81 0A 11 13 02 FF	
	PTZ Motion Sync Off	81 0A 11 13 03 FF	
	PTZ MS Upper Speed Limit	81 0A 11 14 pq FF	pq: Speed stage
	PTZ MS Lower Speed Limit	81 0A 11 14 pq FF	
CAM_UACStatus	Toggle USB Audio	81 2a 02 a0 04 0p FF	p=2: On, p=3: Off

Part 5: HuddleCamHD VISCA over IP Query Command List

CAM_PowerInq	81 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	81 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Zoom position
CAM_FocusAFModelInq	81 09 04 38 FF	y0 50 02 FF	Auto Focus
		y0 50 03 FF	Manual Focus
CAM_FocusPosInq	81 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position
CAM_WBModelInq	81 09 04 35 FF	y0 50 00 FF	Auto
		y0 50 01 FF	Indoor
		y0 50 02 FF	Outdoor
		y0 50 03 FF	OnePush
		y0 50 05 FF	Manual
		y0 50 20 FF	ColorTemperature
CAM_RGainInq	81 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: Red Gain
CAM_BGainInq	81 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: Blue Gain
CAM_ColorTempInq	81 09 04 20 FF	y0 50 pq FF	pq: ColorTemperature position
CAM_AEModelInq	81 09 04 39 FF	y0 50 00 FF	Full Auto
		y0 50 03 FF	Manual
		y0 50 0A FF	Shutter Priority (SAE)
		y0 50 0B FF	Iris Priority (AAE)
		y0 50 0D FF	Bright
CAM_ShutterPosInq	81 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: Shutter position

CAM_IrisPosInq	81 09 04 4B FF	y0 50 00 00 0p 0q FF	pq: Iris position
CAM_BrightPosInq	81 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: Bright position
CAM_ExpCompModelInq	81 09 04 3E FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_ExpCompPosInq	81 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpComp position
CAM_BacklightModelInq	81 09 04 33 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_Noise2DModelInq	81 09 04 50 FF	y0 50 02 FF	Auto Noise 2D
		y0 50 03 FF	Manual Noise 2D
CAM_Noise2DLevel	81 09 04 53 FF	y0 50 0p FF	Noise Reduction (2D) p: 0 to 5
CAM_Noise3DLevel	81 09 04 54 FF	y0 50 0p FF	Noise Reduction (3D) p: 0 to 5
CAM_FlickerModelInq	81 09 04 55 FF	y0 50 0p FF	p=0: Off, 1: 50Hz, 2: 60Hz
CAM_ApertureModelInq (Sharpness)	81 09 04 05 FF	y0 50 02 FF	Auto Sharpness
		y0 50 03 FF	Manual Sharpness
CAM_ApertureInq (Sharpness)	81 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture gain
SYS_MenuModelInq	81 09 06 06 FF	y0 50 02 FF	On
		y0 50 03 FF	Off

CAM_PictureEffectModelInq	81 09 04 63 FF	y0 50 02 FF	Off
		y0 50 04 FF	B&W
CAM_LR_ReverseInq	81 09 04 61 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_PictureFlipInq	81 09 04 66 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_ColorGainInq	81 09 04 49 FF	y0 50 00 00 00 0p FF	P: Color gain 0h (60%) to Eh (200%)
CAM_PanTiltPosInq	81 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	WWWW: Pan position, ZZZZ: Tilt position
CAM_GainLimitInq	81 09 04 2C FF	y0 50 0q FF	p: Gain limit
CAM_AFSensitivityInq	81 09 04 58 FF	y0 50 01 FF	High
		y0 50 02 FF	Normal

		y0 50 03 FF	Low
CAM_BrightnessInq	81 09 04 A1 FF	y0 50 00 00 0p 0q FF	pq: Brightness position
CAM_ContrastInq	81 09 04 A2 FF	y0 50 00 00 0p 0q FF	pq: Contrast position
CAM_FlipInq	81 09 04 A4 FF	y0 50 00 FF	Off
		y0 50 01 FF	Flip-H
		y0 50 02 FF	Flip-V
		y0 50 03 FF	Flip-HV
CAM_AFZone	81 09 04 AA FF	y0 50 00 FF	Top
		y0 50 01 FF	Center
		y0 50 02 FF	Bottom
CAM_ColorHueInq	81 09 04 4F FF	y0 50 00 00 00 0p FF	P: Color Hue 0h (-14°) to Eh (+14°)
CAM_AWBSensitivityInq	81 09 04 A9 FF	y0 50 00 FF	High
		y0 50 01 FF	Normal
		y0 50 02 FF	Low
CAM_UACInq	81 2A 02 A0 04 FF	y0 50 02 FF	On
		y0 50 03 FF	Off

Block Inquiry Command List			
Command	Command Packet	Inquiry Packet	Comments
CAM_LensBlockInq	81 09 7E 7E 00 FF	y0 50 0u 0u 0u 0u 00 00 0v 0v 0v 0v 00 0w 00 FF	UUUU: Zoom position VVVV: Focus position W.bit0: Focus mode 1: Auto, 0: manual
CAM_CameraBlockInq	81 09 7E 7E 01 FF	y0 50 0p 0p 0q 0q 0r 0s tt 0u vv ww 00 xx 0z FF	PP: Red Gain, QQ: Blue Gain R: WB Mode, S: Aperture TT: AE Mode, U.bit2: Backlight U.bit1: Exposure Comp, VV: Shutter position. WW: Iris position, XX Bright position, Z: Exposure Comp position

CAM_OtherBlockInq	81 09 7E 7E 02 FF	y0 50 0p 0q 00 0r 00 00 00 00 00 00 00 00 00 FF	P.bit0: Power 1: On, 0: Off Q.bit2: LR Reverse: 1: On, 0: Off R.bit3~0: Picture Effect Mode
CAM_EnlargmentBlockInq	81 09 7E 7E 03 FF	y0 50 00 00 00 00 00 00 00 0p 0q rr 0s 0t 0u FF	P: AF sensitivity Q.bit0: Picture flip: 1: On, 0: Off RR.bit6~3: Color Gain (0h (60%) to Eh (200%)) S: Flip 0: Off, 1: Flip-H, 2: FlipV, 3: Flip-HV T.bit2~0: NR2D level U: Gain limit

Part 6: Pelco-D Protocol Command List

Function	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
Up	0xFF	Address	0x00	0x08	Pan Speed	Tilt Speed	SUM
Down	0xFF	Address	0x00	0x10	Pan Speed	Tilt Speed	SUM
Left	0xFF	Address	0x00	0x04	Pan Speed	Tilt Speed	SUM
Right	0xFF	Address	0x00	0x02	Pan Speed	Tilt Speed	SUM
Zoom In	0xFF	Address	0x00	0x20	0x00	0x00	SUM
Zoom Out	0xFF	Address	0x00	0x40	0x00	0x00	SUM
Focus Far	0xFF	Address	0x00	0x80	0x00	0x00	SUM
Focus Near	0xFF	Address	0x00	0x00	0x00	0x00	SUM
Set Preset	0xFF	Address	0x00	0x03	0x00	Preset ID	SUM
Clear Preset	0xFF	Address	0x00	0x05	0x00	Preset ID	SUM
Call Preset	0xFF	Address	0x00	0x07	0x00	Preset ID	SUM
Auto Focus	0xFF	Address	0x00	0x2B	0x00	0x01	SUM
Manual Focus	0xFF	Address	0x00	0x2B	0x00	0x02	SUM
Query Pan Position	0xFF	Address	0x00	0x51	0x00	0x00	SUM
Query Pan Position Response	0xFF	Address	0x00	0x59	Value High Byte	Value Low Byte	SUM
Query Tilt Position	0xFF	Address	0x00	0x53	0x00	0x00	SUM
Query Tilt Position Response	0xFF	Address	0x00	0x5B	Value High Byte	Value Low Byte	SUM
Query Zoom Position	0xFF	Address	0x00	0x55	0x00	0x00	SUM
Query Zoom Position Response	0xFF	Address	0x00	0x5D	Value High Byte	Value Low Byte	SUM

On Screen Display Menu

Main Menu

There are many ways to adjust the camera's On-Screen Display (OSD) Menu. The following instructions will go over the OSD Menu while using the included IR remote. Press the [Menu] button to display the OSD Menu. Use the arrow buttons to traverse the OSD menu, the [Enter] button to make selections, and the [Return] button to go back a sub menu.

MENU

Video
Exposure
Color
Pan Tilt Zoom
System
Status
Restore Defaults
Select [Enter] Next [] Exit

Video

Move the cursor to the "Video" option and press the [Enter] button to enter the Video page, as shown in the figure below.

Video

Image Mode Stand
Sharpness 5
Brightness 5
Contrast 7
Gamma Mode 2
2DNR 3
3DNR 3
Wide Dynamic OFF
Select [Enter] Next [] Exit

Image Mode: Reverse camera image horizontally.
Options include: Stand, Mirror

Sharpness: Adjust camera sharpness value.
Options include: 0 ~ 15

Brightness: Adjust camera brightness value.

Options include: 0 ~ 14

Contrast: Adjust camera contrast value.

Options include: 0 ~ 14

Gamma Mode: Adjust camera gamma value. Options include: 0 ~ 4

2DNR: Adjust 2D noise reduction value.

Options include: Off, 1 ~ 5

3DNR: adjust 3D noise reduction value.

Options include: Off, 1 ~ 5

Wide Dynamic: Adjust wide dynamic range strength.

Options include: Off, 1 ~ 5

Exposure

Move the cursor to the "Exposure" option and press the [Enter] button to enter the Exposure page, as shown in the figure below.

Exposure

Mode Full Auto
Exp-Comp On
Level 0
BLC Off
Anti-Flicker 60Hz
Select [Enter] Next [] Exit

(Exposure) Mode: Full Auto, Manual, Shutter Pri, Iris Pri, & Bright Pri

Exp-Comp: Toggle Exposure Compensation.

Options include: On, Off

Level: Exposure Compensation level.

Options include: -7 ~ +7

(Only available when Exp-Comp is On).

BLC: Toggle Backlight Compensation.

Options include: On, Off

(Only available in Full Auto mode).

Anti-Flicker: Anti-Flicker (Lighting).

Options include: Off, 50Hz, 60Hz

(Only available in Full Auto, Iris Pri, & Bright Pri modes)

Gain: Maximum Gain limit.

Options include: 0 ~ 30

(Only available in Manual mode).

Speed: Camera Shutter speed. Options include: 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 (Only available in Manual & Shutter Pri modes).

Iris: Camera Iris position.

Options include: 0 ~ 14 (Only available in Manual & Iris Pri modes).

Bright: Camera Brightness value.

Options include: 0 ~ 27

(Only available in Bright mode).

Color

Move the cursor to the “Color” option and press the [Enter] button to enter the Color page, as shown in the figure below.

Color

WB Mode Auto

Contrast 0

Sharpness 0

Flip-H 0

Flip-V 7

B&W Mode 7

Select [Enter] Next [] Exit

WB Mode: Auto, ATW, OnePush, Indoor, Outdoor, Manual, Sodium Lamp, & Fluo Lamp

R. Gain: Camera Red Gain value.

Options include: -7 ~ +7

(Only available in Auto, ATW, & Manual modes).

G. Gain: Camera Green Gain value.

Options include: -7 ~ +7

(Only available in Auto & ATW modes).

B. Gain: Camera Blue Gain value.

Options include: -7 ~ +7

(Only available in Auto, ATW, & Manual modes).

Saturation: Camera Saturation value.

Options include: 0 ~ 14

Hue: Camera Hue value.

Options include: 0 ~ 14

OnePush Trigger: OnePush trigger calculation Options include: “Press OK”

(Only available in OnePush mode).

Pan Tilt Zoom

Move the cursor to the “Pan Tilt Zoom” option and press the [Enter] button to enter the Pan Tilt Zoom page, as shown in the figure below.

Pan Tilt Zoom

Pan/Tilt Speed 5

D-Zoom Limit X1

PTZ Trig AF On

Ratio Speed On

Power Up Act Home

Select [Enter] Next [] Exit

Pan/Tilt Speed: Pan / Tilt speed value.

Options include: 1 ~ 8

D-Zoom Limit: Digital Zoom Limit

Options include: X1 ~ X11

PTZ Trig AF: Enable auto focus when camera P/T/Z

Options include: On, Off

Ratio Speed: P/T speed relates to Zoom speed Options include: On, Off

Power Up Act: Position the camera calls on power up

Options include: Home, Preset 1 ~ Preset 9

System

Move the cursor to the “System” option and press the [Enter] button to enter the System page, as shown in the figure below.

System

Address 1

Protocol VISCA

Baudrate 9600

IR Address 1

Video Format 1080p30

Mount Mode Stand

Language English

Select [Enter] Next [] Exit

Address: Camera control address.

Options include: 1 ~ 7

Protocol: Camera control protocol.

Options include: VISCA, Pelco-D, Pelco-P

Baudrate: Camera control baudrate.

Options include: 2400, 4800, 9600, 38400

IR Address: Change camera IR address

Options include: 1 ~ 4



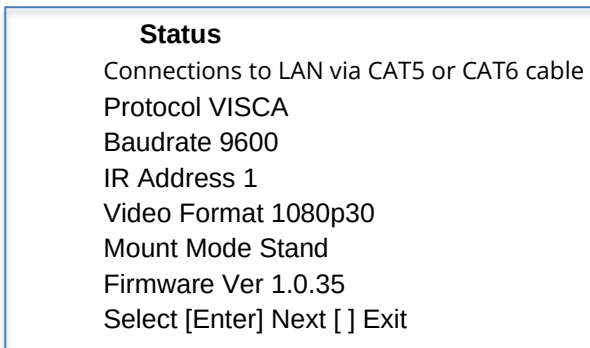
Video Format: Change camera resolution & framerate Options include: 720p60, 720p50, 1080p60, 1080p50, 1080p30, 1080p25, 1080i60, 1080

Mount Mode: Change mounting mode
Options include: Stand, Ceiling

Language: Change camera language
Options include: English, Chinese Status

Status

Move the cursor to the “Status” option and press the [Enter] button to enter the Status page, as shown in the figure below.



The Status tab shows the current settings of the camera.

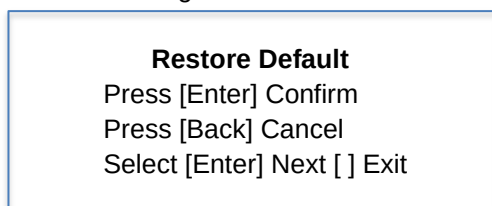
You cannot change the values in this tab.

Network Connection

Operating Environment

Restore Default

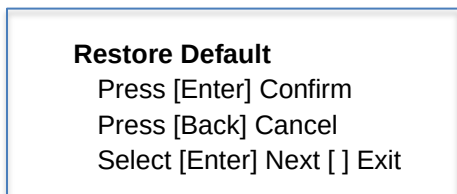
Move the cursor to the “Restore Default” option and press the [Enter] button to enter the Restore Default page, as shown in the figure below.



Note: Press the [Enter] button to confirm. All camera parameters will return to default, including IR remote & VISCA Addresses.

Operating Environment

- Restore Default
- Move the cursor to the “Restore Default” option and press the [Enter] button to enter the Restore Default page, as shown in the figure below.



Note: Press the [Enter] button to confirm. All camera parameters will return to default, including IR remote & VISCA addresses

Operating System: Windows 2000 / 2003 / XP / Vista / 7 / 8.1 / 10 / 11, Mac Catalina and later

Network Protocol: TCP/IP

Client PC: P4 / 128M RAM / 40GHD / support for scaled graphics card, support for DirectX8.0 or more advanced version.

Assigning an IP Address

By default, the camera is set to DHCP, meaning it will automatically obtain an IP address from your DHCP server, if available. If your network doesn't utilize a DHCP server, the camera will fallback to its static IP address of "192.168.1.180". To change this IP address to an IP address on your network range, follow the steps below.

DHCP

By default, the camera is set to DHCP. If your camera ever comes out of DHCP mode, you can quickly set it back by using the IR remote shortcut: [F1] > [0] > [0] > [1]: Sets the IP address to DHCP

Static Address

If your network doesn't support DHCP, or you want to give your camera a more permanent IP address, assign the camera a static IP address. You have two (2) options to assign this address.

1. Tracking Software – Assign a static IP address from the Modify Netinfo Interface.
2. Tracking Software – Assign a static IP address from the Remote Configuration > Network interface.
3. IR Remote – Press [F1] > [*] > [#] > [number 0~9]: Sets the camera's IP address to 192.168.100.8(number 0~9).

Modify Netinfo

Click the “Start Search” button from the Online Device section. This will search for all HuddleView, SimplTrack2, and SimplTrack Lite cameras on your network range. If you do not see your camera, you will need to change your computer's IP address to match the network range of the camera.



The camera's fallback IP address is 192.168.1.180, making the network range 192.168.1. Alternatively, you can use an IR remote shortcut to change the IP address to 192.168.100.8(0~9), making the network range 192.168.100. Change your computer's IP address to match the network range of the camera to begin discovering the camera.

Remote Configuration > Network Interface

The Remote Configuration tab allows you to modify the settings of a camera that is already connected to the software. Once you change the IP address of a camera through this method, you will need to re-add the camera to the Tracking Software.

Discovering your Network Info

To discover your IP address range/scheme, Subnet Mask, Gateway, & First DNS, follow the instructions below for Windows or Mac OS. You may need to talk with your IT department to obtain this information.

Windows

1. Open the Start menu and type "CMD" into the search bar.
2. Once the Command Prompt is open, type in "ipconfig" and press the Enter key.
3. Scroll down to the section titled "Ethernet adapter Ethernet" or "Ethernet adapter Wireless Network Connection".
4. Locate the "IPv4 Address" in that section. This is your computers local IP address.
5. In the example above, the PC's local address is "192.168.15.117", making the network range "192.168.15".

Mac

1. Open a new Finder window and go to the Applications folder.
2. Open the Utilities folder and select the Terminal program.
3. Once the Terminal program is open, type in "ipconfig getifaddr en0" and press the Enter key.
4. In the example above, the Mac's local address is 192.168.17.107", making the network range "192.168.17".

Maintenance and Troubleshooting

Unqualified Applications

- Do not shoot extremely bright objects for a long period of time, such as sunlight, ultra-bright light sources, etc.
- Do not operate close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

Troubleshooting

- No image
 - Check whether the power cord is connected, voltage is OK, & Power LED is illuminated.
 - Check whether the camera can "self-test" after startup (camera will do a brief pan/tilt tour and return to the home position, or preset 0, if that preset is set).
 - Check that the video cable is connected correctly.



- If SDI, make sure that the destination device is accessing the SDI port that you plugged into.
- If HDMI, make sure that the destination device is accessing the HDMI port that you plugged into. ○ Check that the lens cap is not installed onto the camera lens.
 - Check that the iris is not closed.
- Abnormal display of image
 - Check the rotary dial on the back of the camera. Be sure to use a resolution and frame rate that is supported by your software / hardware.
- Image is shaky or vibrating
 - Check whether the camera is mounted solidly or sitting on a stead horizontal and level surface. ○ Check the building and any supporting furniture for vibration. Ceiling mounts are often affected by building vibration more than wall mounts.
 - Any external vibration that is affecting the camera will be more apparent when in tele zoom (zoomed in) settings.
 - Control
- IR Remote controller does not control the camera
 - Does one of the four (4) “Camera Select” buttons (top row of remote) light up when you press any of the buttons on the remote?
- If not, change the batteries in the remote
 - Are the camera and remote set to the same IR address? When “Display Info” is enabled (within P/T/Z) in the OSD, the camera will display it’s IR address upon start up. Set the IR remote to the same IR address to control the camera.
 - Try removing other sources of IR interference (e.g., sunlight, fluorescent lighting, etc.)
- Serial communication does not control the camera
 - Make sure the camera is on and functioning with the IR remote controller.
 - Verify that the RS-232/RS-485 cable is connected correctly and using the proper pinout.
 - Verify the communication settings of the control software or device (e.g., joystick).
 - Verify that the communication port on the controlling device is activated (e.g., Com port on PC). ○ Verify that all communication settings in the OSD Setup Menu correlate to the commands being used (e.g. VISCA address).

Changelog

Sept/2021 – Rev 1.0	Initial Document
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