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# HuddleCamHD

## 10XA with Audio

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**USB 2.0 PTZ Camera w/ built-in Mic Array**  
**Installation and Operation Manual**



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## Precautions

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### Safety Tips

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- Please be aware any deviation from these tips *may* void your warranty
- 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 tilt mechanism.
- 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 HuddleCamHD dealer.
- After long term operation, moving components may wear down. Please contact your authorized HuddleCamHD dealer for repair.

## What's in the Box

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### Supplied Hardware

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- HuddleCamHD 10XA - 10X Optical Zoom USB 2.0 camera
  - Camera
  - Dual Microphone Array
- 12V 2.0A DC Power Adapter
- Mounts: Tripod Mount
- USB 2.0 A-B cable (4.9m 16ft)
- IR Remote Controller
- Quick Start Guide

## Physical Description

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### Front View of the Camera

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- 1. Lens**  
10X Optical Zoom
- 2. Left Microphone Element**
- 3. IR Receiver**  
To receive IR remote controller signal
- 4. Power LED**  
Blue LED lights when unit is powered and is dark in Stand-By status.
- 5. IR Receiver**  
To receive IR remote controller signal
- 6. Right Microphone Element**

## Physical Description

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### Rear View of the Camera

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**7. USB 2.0 Interface**

For video/audio connection to PC (USB 2.0 Port. Will also function in a USB 3.0 port as a USB 2.0 device)

**8. IR Receiver**

To receive IR remote controller signals

**9. DC IN 12V socket**

Only use the Power Adapter supplied with this camera

## Physical Description

### Bottom View of the Camera



#### 10. Dip-Switches

Used for selecting serial (virtual com port via USB) and IR communications settings.)

#### 11. Tripod

Will accept 1 / 4 20 bolt from 3<sup>rd</sup> party tripod, wall or ceiling mount using included tripod adapter.

## Dip-Switch Settings

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**Bottom Switch:** Used for serial and IR communication settings.

**Note:** When changing Dip-Switch settings, make all changes with camera powered off.

DIP-1,2:

Virtual COM Port – Baud Rate & Communication Protocol

Baud Rate	Switch State	Communication Protocol	Switch State
	DIP-1		DIP-2
9600bps	OFF (Default)	VISCA	OFF (Default)
38400bps	ON	PELCO-D	ON

DIP-3,4,5:

IR Remote Control – Camera ID

IR Remote Address	Switch State		
	DIP-3	DIP-4	DIP-5
1 (Default)	OFF (Default)	OFF (Default)	OFF (Default)
1	ON	OFF	OFF
2	OFF	ON	OFF
3	OFF	OFF	ON

## OSD Menu

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### Dome

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- **Pan Speed** **Default Value: 20**
  - Set speed of Pan motor
    - Range = 1 – 63
- **Tilt Speed** **Default Value: 20**
  - Set speed of Tilt Motor
    - Range = 1 – 63



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- **Scan Speed (Auto Pan Mode)** **Default Value: 6**
  - Set speed of boundary scan
    - Range = 1 – 63
- **Tour Path (Uses presets)** **Default Value: 1**
  - Select desired tour path
    - Range = 1 – 4
- **Tour Dwell** **Default Value: 5**
  - Set duration to dwell on each preset
    - Range = 1 – 60
- **Proportion** **Default Value: On**  
**(Pan + Tilt speed proportional to zoom level)**
  - Set Proportion
    - Range = On – Off
- **Auto Rev** **Default Value: P**
  - Set camera mounting orientation
    - N for inv ceiling mount, P for std. mount
- **Frame** **Default: 60Hz**
  - Set Refresh Rate
    - Range = 50Hz or 60Hz
- **Preset Freeze** **Default: On**
  - Provides automatic temporary freeze frame when switching between presets
    - Range = On – Off
- **POS COMEBACK**
  - Allows the camera to revert to last position left at for 30+ seconds
    - Range = On = Off

## Lens

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- **BL (Backlight)** **Default Value: OFF**
  - ON/OFF
- **Saturation** **Default Value: 9**
  - 0 – 15
- **Sharpness** **Default Value: 3**
  - 0 – 15
- **NR (Noise Reduction)** **Default Value: Auto**
  - Adjustable Value: OFF, AUTO, 1 – 4
- **WB (White Balance)** **Default Value: Auto**
  - Auto/Indoor/Outdoor/Onepush/ATW/Manual



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**Manual Settings:**

- **R GAIN (Red Gain)** **Default Value: 76**
  - Adjustable Scope: 0 – 255
- **B GAIN (Blue Gain)** **Default Value: 82**
  - Adjustable Scope: 0 – 255
- **AE (Auto Exposure)** **Default Value: Auto**
  - Auto/Manual

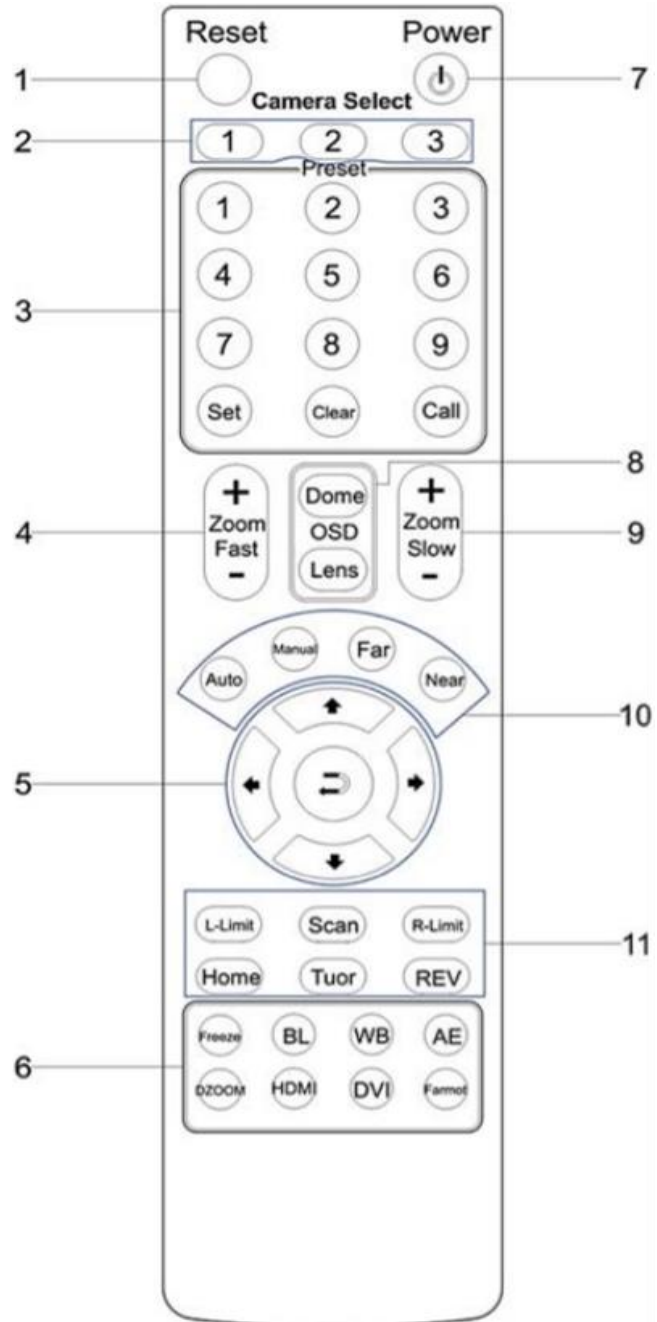
**Manual Settings:**

- **SHUTTER** **Default Value: 1/90**
  - Shutter Speed Range: 1/60 – 1/10000
- **IRIS**
  - FIXED only
- **BRIGHT** **Default Value: 8**
  - Set Brightness: 0 – 15



## IR Remote Controller (Note: Some buttons do not operate for all camera modes)

1. **Reset:**  
Restarts the camera and restores it to Factory Default settings.  
(Note: Will delete all memory).
2. **Camera Selection**  
Select Camera ID: 1, 2 or 3
3. **Preset Positions**  
1-9: Preset Positions  
Set: Setting Preset Position  
Clear: Clear Preset Position  
Call: Call Preset Position  
**Note:** To Set / Call preset position 1, you should press number key "1", then press Set / Call to Set or Call the position.
4. **Fast Zoom in/out Control Zone**  
+: Zoom in quickly  
-: Zoom out quickly
5. **Pan/Tilt Controller**  
  - ↑ Move Up
  - ↓ Move Down
  - ← Move Left
  - Move Right
  - ↻ Auto Pan
6. **Additional Function Zone**  
Freeze: Image Freeze  
BL: Back-light Compensation  
WB: White Balance  
AE: Auto Exposure  
D Zoom: Digital Zoom  
HDMI: Swap to HDMI video output  
DVI: Swap to DVI video output  
Format: Swap between different formats
7. **Power Supply Switch**  
Power On / Off button
8. **OSD Menu Zone**  
Dome OSD: Enter Pan Tilt Zoom OSD menu  
Lens OSD: Enter lens OSD menu
9. **Slow Zoom In/Out Zone**  
+: Zoom in slowly  
-: Zoom out slowly
10. **Focus Control Zone**  
Auto: Turn on auto focus  
Manual: Turn on manual focus  
Far: Set focus at farther distance  
Near: Set focus at nearer distance
11. **Pan/Tilt Function Zone**  
L-Limit: Set left boundary limit scanning position  
Scan: Enable Boundary Scanning (Auto Panning)  
R-Limit: Set right boundary limit scanning position  
Home: Go to camera's Home position  
Tour: Enable automatic patrol tour of presets  
Rev: Enable image flip for ceiling mounting



## Connection Instructions

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1. Connect included Power Supply to the camera.
2. Wait for camera to come to Home Position.
3. Connect included USB 2.0 cable to camera and USB 2.0 port of PC.
4. Select and configure camera in your software of choice.

**NOTE:** Failure to follow this sequence may result in no connection to PC.

## Care of the Unit

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

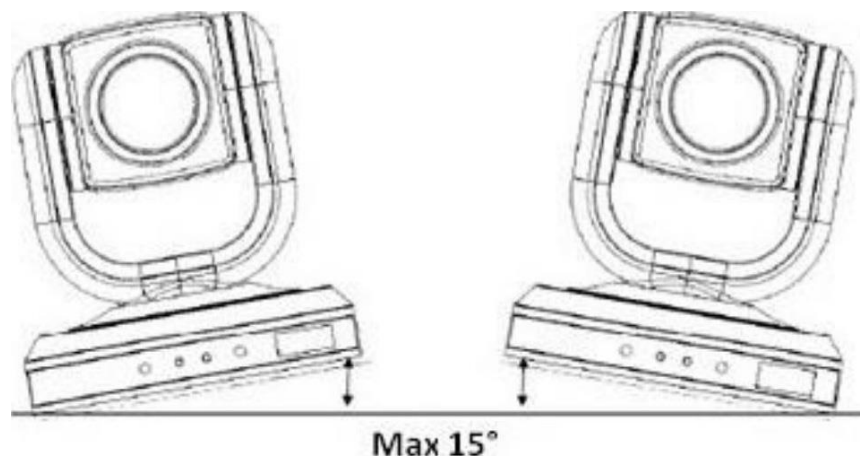
## Installation Instructions

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### Desktop Installation

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When using the HuddleCam on a desk, make sure that it will stand level. If you want to use the camera on an incline, make sure the angle is less than 15 degrees to ensure that the camera's pan and tilt mechanism operates normally.



## Desktop Installation

When using the HuddleCam with a tripod, screw the tripod to the bottom of the camera. The tripod screw must fit below specifications:

**Note:** Tripod must stand on a level surface.

To fix the tripod mount to the bottom of the camera, use the supplied screws to hold it in place.



Then screw the tripod to the tripod bracket.

## Troubleshooting

<b>Problem</b>	<b>Cause</b>	<b>Resolution</b>
There is no power to the camera.	Power adapter is disconnected from mains or from camera.	Check the connection between the camera, power adapter, and mains. If anything is disconnected, reconnect it.
Camera will not connect to the PC via USB	USB cable is bad.	Try new USB Cable
	Camera connects sometimes.	Connect USB only after camera has completely booted.
Camera unable to pan, tilt, and/or zoom.	Power adapter is disconnected from mains or from the camera	See Camera Power, above
	Pan, tilt, or zoom range limit was reached	Try to pan/tilt/zoom in the other direction
Remote control not working	The "camera select" button on the remote control is not set to match the "IR address" set on the camera dip switch.	Choose the correct "IR select" number to match camera settings (default address 1).
Camera cannot be controlled via VISCA.	The connection between the PC and camera is incorrect.	Refer to USB connectivity section of this manual.
	Commands being sent are incorrect.	Refer to VISCA section of this manual.
The camera is not working at all.	No response or image from camera.	Disconnect power, and wait a few minutes, then connect the power again. Retry.



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## Important Notes Regarding USB Connectivity

USB 3.0 ports are backwards compatible with USB 2.0 devices. USB 2.0 ports are not completely forward compatible with USB 3.0 devices (some USB 3.0 devices will connect to USB 2.0 with limited functionality).

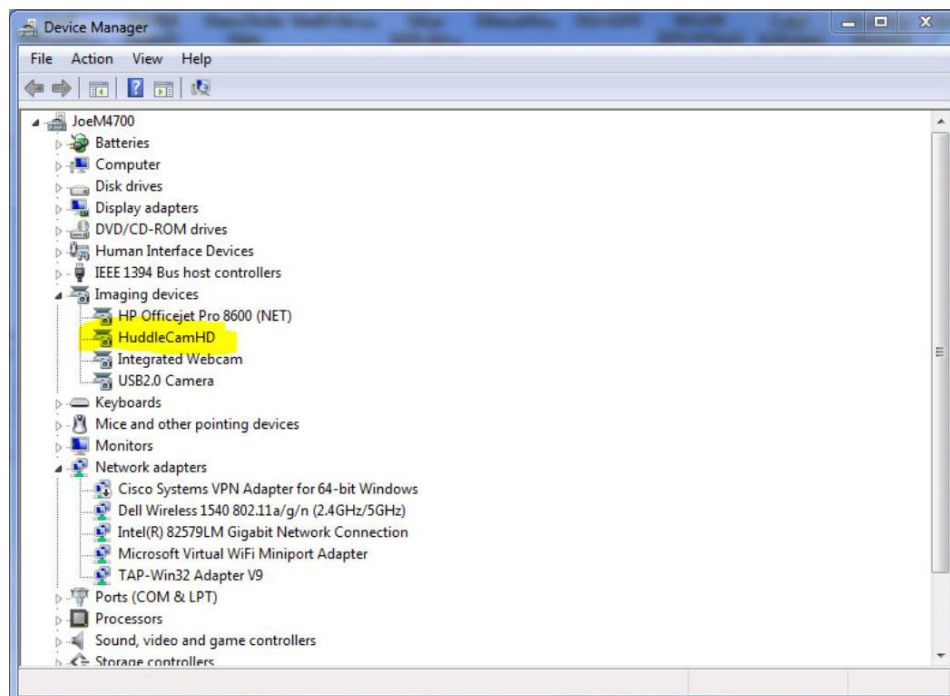
External USB hubs should be avoided (i.e. give the camera its own USB port on the device) as they are not well suited to transmitting HD video reliably.

USB extension systems must be fully compatible with the version of USB that you are using and must utilize an external power supply, when required. Always connect the HuddleCam directly to the device in order to associate the UVC drivers before attempting to use any extension system.

USB power saving settings in the device's operating system should be turned off completely for reliable USB camera connectivity.

### **HuddleCam Cameras – Video (General to all HuddleCamHD models)**

All HuddleCamHD cameras utilize the UVC (USB Video Class) drivers that are built into Windows, Mac OS, and Linux to stream HD video to your device via your device's USB port (USB 2.0 or USB 3.0 depending upon HuddleCam model). When your device successfully recognizes the camera, your device will register the HuddleCam as an "image device". You can see this in your Windows Device Manager program (type "device manager" into the Windows search tool) as shown in the screenshot, below:





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In this example, you can see the HuddleCam model in use connected as a fully functional USB 3.0 device (HuddleCamHD) as well as a USB 2.0 device with limited functionality (USB 2.0 Camera).

If your device has not connected to or has not recognized the HuddleCam as an imaging device (in which case, you may see a new “unknown device”, “Westbridge” or “CYTFX3” labeled device show up in Device Manager’s “Universal Serial Bus Controllers” section rather than in the “Imaging Devices” section), the HuddleCam will not be available to programs that utilize a camera. In this case, try restarting the device and reconnecting the camera via USB – and to a different available USB port, if possible.

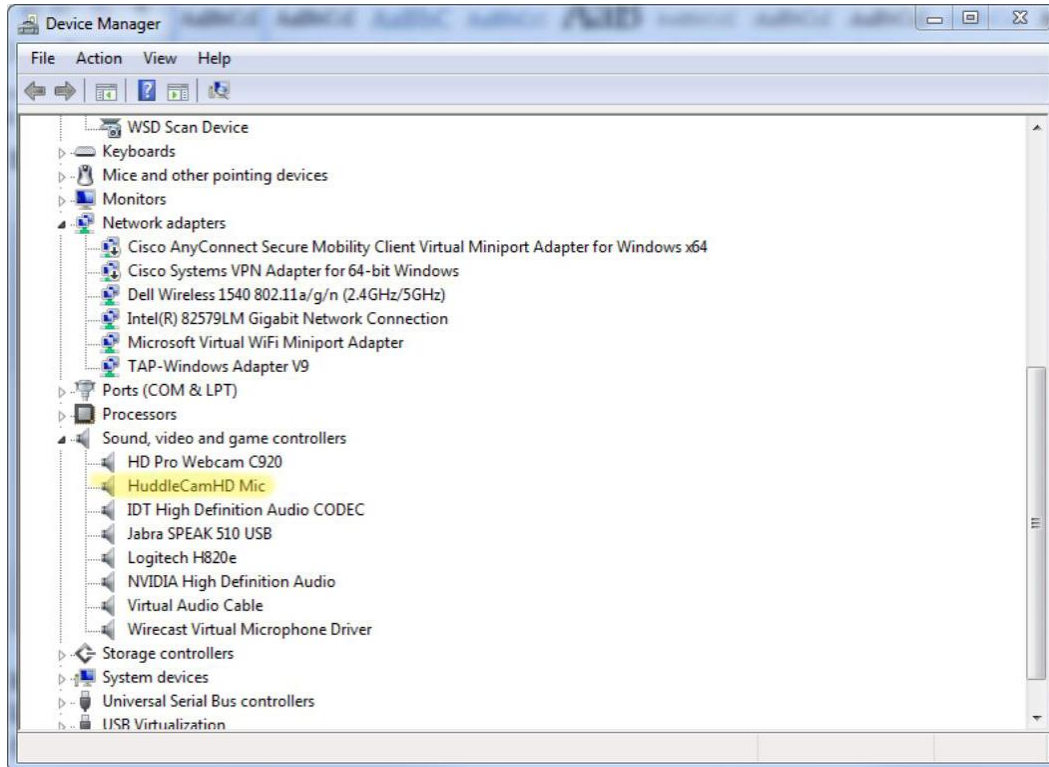
Similarly, you can see a connected device in System Information on a MAC. See screenshot below:



In this example, you can see the HuddleCam model in use connected as a fully functional USB 3.0 device “HuddleCamHD” as well as a “USB2.0 camera” with limited functionality (USB 2.0 camera).

## **HuddleCam Cameras – Audio (Specific to HuddleCamHD models with built-in audio)**

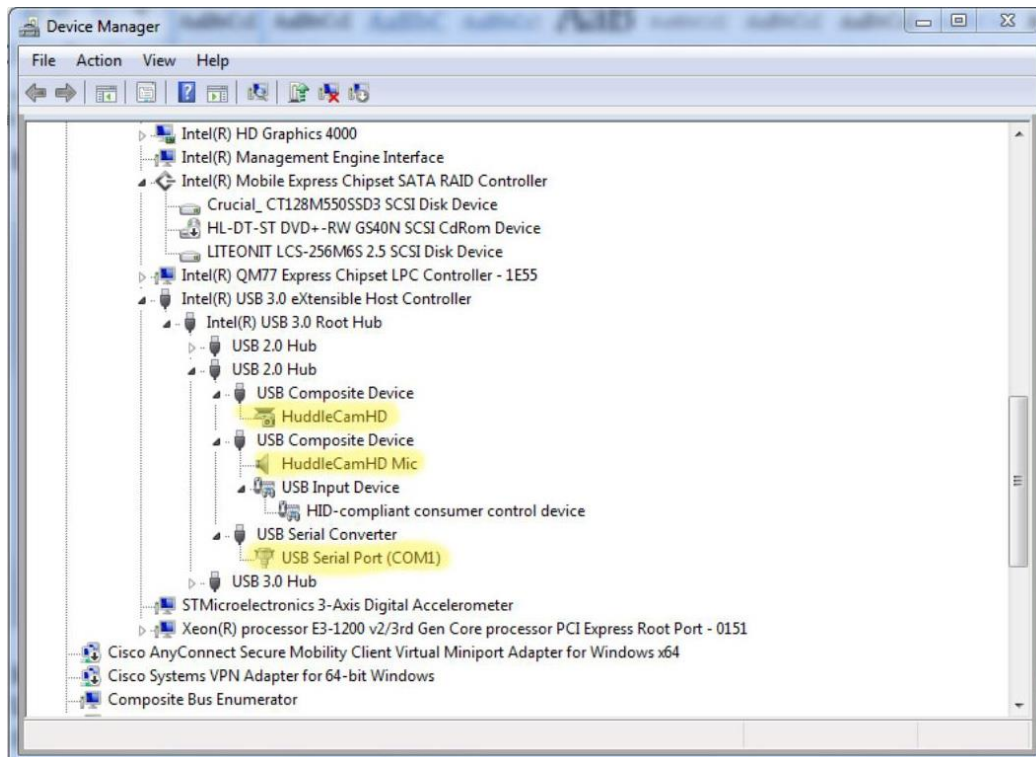
In the case of the HuddleCamHD model HC10XA-xx, the unit also has a built-in microphone array. Because of this, it also shows up as a UAC (USB Audio Class) device on your PC.



In this example, you can find the camera's mic system under Sound Controllers in the Windows Device Manager, shown as "HuddleCamHD Mic". If the camera is connected properly, the mics will show up here and be available to any program that is able to utilize your connected audio devices.

## HuddleCam Cameras – Serial Control (Specific to HuddleCamHD models with virtual COM)

Since the HuddleCamHD model HC10XA-xx also includes a virtual serial connection, the camera will actually make 3 separate connects to your PC: UVC for video, UAC for audio, and virtual com port for serial communication, as can be seen here:



This view uses the Windows Device Manager’s “View by Connection” mode rather than the default “View by Type” mode, which allows you to “sort” by physical connection to see your connected devices. However, all 3 USB connection types may be viewed in any of Device Manager’s viewing modes (just not grouped together like this).

Changing the Advanced Port properties of the USB Serial Port (right click on “USB Serial Port (COMx)” connection as shown above) will allow you to set the virtual Zom Port address of the camera to match the Com Port settings of your PTZ controlling software (like the free “Remote PTZ Control Software” available at <http://huddlecamhd.com/resources/>





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## Specifications

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Model Number: HC10XA-(xx)

Color (xx): BK=Black & WH=White

### Camera & Lens

- **Video CMOS Sensor** 1/2.8" CMOS, 2.1 Mega Pixel
- **Resolutions** 1080p-30/25, 720p-30/25, SVGA, VGA
- **Frame Rate** Up to 30fps (MJPEG)
- **Lens Zoom** 10X Optical Zoom f=4.7-47mm F1.6
- **Min Lux** 0.1 Lux at F1.6
- **Horizontal Field of View** 8° (Tele) to 60° (Wide)

### Built-in Audio

- **Mic Array** Dual Mics on front of camera base
- **Pickup Range** 360° up to 16.5 ft (5m)
- **Processing** Advanced Auto Gain and Noise Control

### Pan/Tilt Movement

- **Pan Movement** ±175°
- **Tilt Rotation** Up: 90°, Down: 30°
- **Presets** 64 Presets

### Rear Board Connectors

- **Video interface** USB 2.0
- **Control Signal Interface** USB 2.0 Virtual Com Port (VISCA, PelcoD)
- **Baud Rate** 9600, 38400 bps
- **Audio Interface** USB 2.0 Plug and Play
- **Power Supply Interface** DC 12V 1.2A

### Electrical Index

- **Power Supply Adapter** 12V DC 2A
- **Input Voltage** 12V DC (10.5-14V DC)
- **Input Power** 24W (Max)

### Physical

- **Material** Aluminum, Plastic
- **Dimensions** 7.1"W x 5.2"H x 3.1"D  
(180mm x 132mm x 78mm [140mmH w/ tilt])
- **Weight** 1.41 lbs (0.64 kg)
- **Color** Black & White
- **Operating Temperature** 32°F to + 113°F (0°C to +45°C)
- **Storage Temperature** -14°F to 140°F (-10°C +60°)
- **Working Environment** Indoor only

### Warranty

- **Mfg Warranty** 2 Years parts and labor