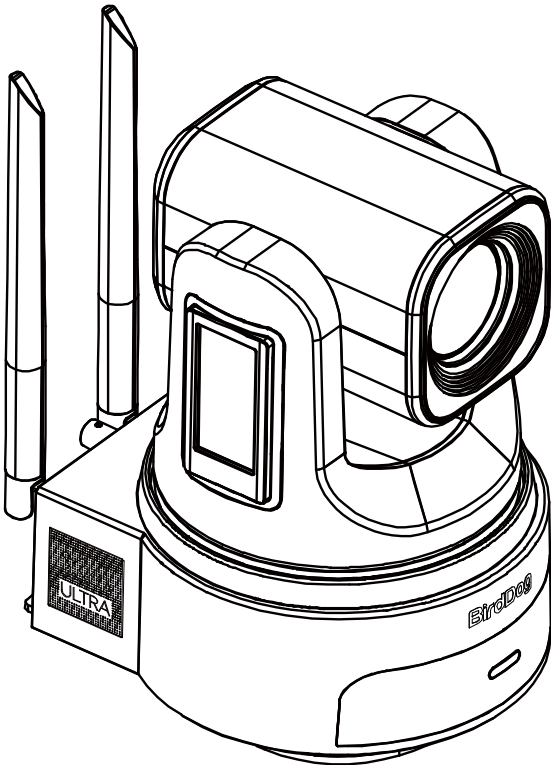
4K UHD Wireless PTZ Camera



User Manual

FCC NOTICE (Class A)

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:

Warning

Operating this equipment in a residential environment may cause radio interference.

European Community Compliance Statement (Class A)

- RF exposure information: The Maximum Permissible Exposure (MPE) level has been calculated based on a distance of d=20 cm between the device and the human body. To maintain compliance with RF exposure requirement, use product that maintain a 20cm distance between the device and human body.
- Bluetooth (2402-2480MHz) Max EIRP is 9.25dBm.
- Declaration of Conformity Hereby, You Tec Ltd declares that the radio equipment type X3 is in compliance with directive 2014/53/EU and RER 2017 (SI 2017/1206).

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1 Safety Precautions

- During the installation and operation, all electrical safety regulations of the country and region of use must be strictly observed.
- Please use the power adapter that comes standard with this product.
- Do not rotate the camera by hand, otherwise it may cause mechanical failure.
- When installing this product on a wall or ceiling, make sure the device securely and there are no obstacles within the rotation range; Do not power on until all installations are completed.
- To avoid heat build-up, please keep smooth ventilation around the device.
- If the device smokes, smells, or makes noises, please turn off the power and unplug the power cord immediately, then contact the dealer in time.
- This device is not waterproof, please keep the device dry.
- This product has no user serviceable parts, damage caused by disassembly by the user is not covered by the warranty.

Warning

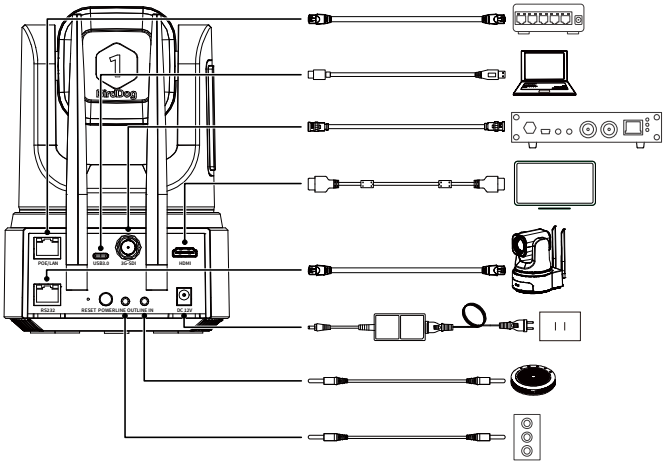
- To avoid damage the camera, do not use without installing the antenna!
- When using the camera with wireless connection, it is prohibited to simultaneously connect the camera to the LAN network port. Doing so may result in a network loop, leading to network disconnection.

2 Pack List

Name	Quantity
Camera	1
Power Adapter	1
Power Cable	1
Remote Control	1
Antenna	2
User Manual	1

3 Product Connection

1) Please check connections are correct before starting.



Note The schematic diagram is for reference only. Please refer to the actual application scenario for product connection.

2) After powering on the camera, it begins initialization. It first rotates to the lower-left limit position, then moves to the upper-right and lower-left limit positions, and finally returns to the HOME position. The motors stop, and initialization is complete. (Note: If preset position 0 has been saved, the PTZ will rotate to preset position 0.)

4 About Product

4.1 Features

- **4K UHD**

Using high-quality 1/1.8-inch UHD CMOS sensor with 8.42 million effective pixels for ultra-high resolution up to 4K (3840x2160), downward compatible with 1080P and 720P resolutions.

- **AI Tracking**

With the help of AI computing power of chip, the camera is equipped with advanced AI algorithms to realize monocular humanoid tracking, which can realize automatic tracking of scenes such as education, conferences and live broadcasts.

- **20x Optical Zoom + 60° Wide-angle Lens**

Using high-quality 4K ultra long focal lens, the field of view angle can reach 60°. Support 20x optical zoom and 16x digital zoom. Supports night vision mode, with automatic switching of the infrared filter.

- **NDI|HX2**

NDI|HX2 is a new generation of network video transmission method known for its plug-and-play capability, low latency, easy deployment, strong ecosystem, and support simultaneous transmission of audio, video and control signals.

- **Wireless Transmission**

Stable and reliable wireless transmission, 2x2 MIMO and transmitter beamforming technology, with a maximum transmission rate of 300Mbps, strong penetration, and a transmission distance of up to 200 meters. Equipped with automatic search and intelligent configuration functions, with high transmission efficiency.

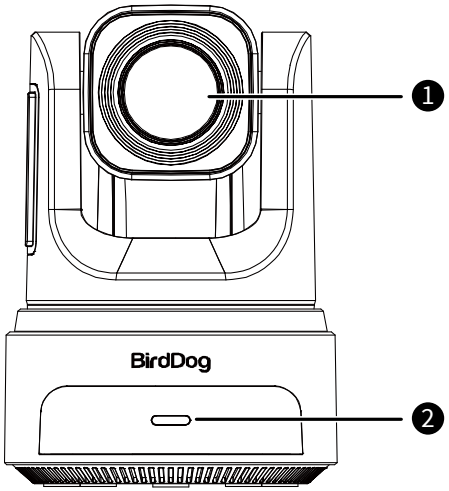
- **Multiple Control Method**

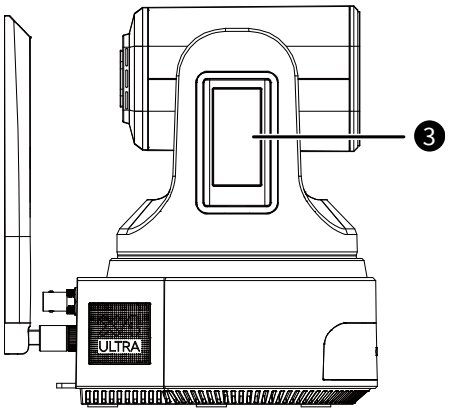
Using RS232, network and USB to control the camera.

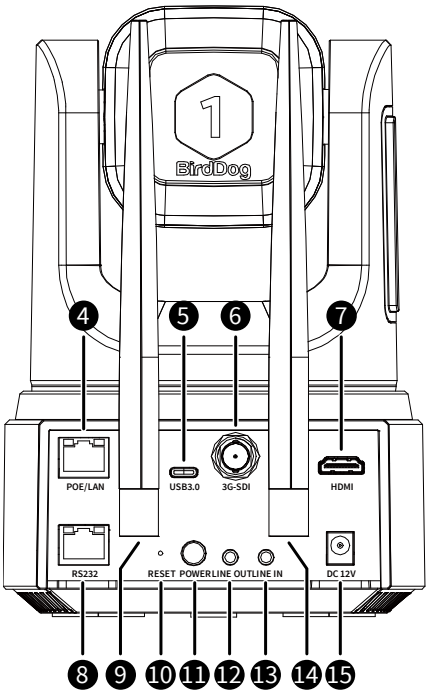
- **Built in e-ink screen**

Display information such as output resolution, battery level, wireless signal strength, IP address.

4.2 Ports and Keys



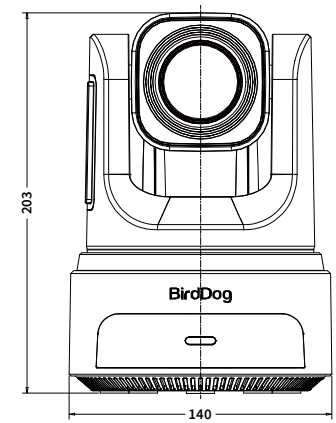


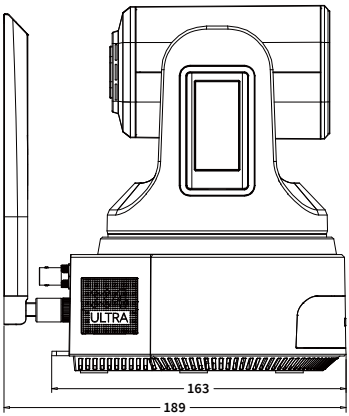


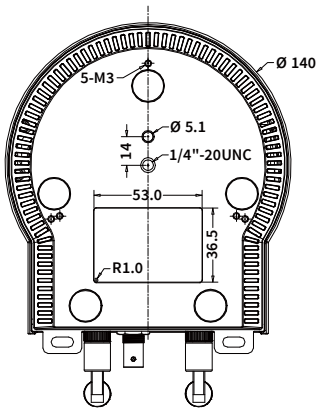
No.	Name
1	Camera Lens
2	STANDBY/POWER Indicator
3	e-ink Screen
4	POE/LAN Port
5	USB3.0 Port
6	3G-SDI Port
7	HDMI Port
8	RS232 Port
9	Antenna Port
10	RESET Key
11	Power Key (long press on/off)
12	LINE OUT Port
13	LINE IN Port
14	Antenna Port
15	DC 12V Port

4.3 Dimension

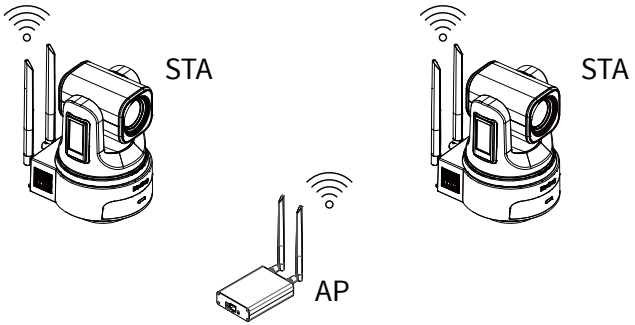
Unit: mm



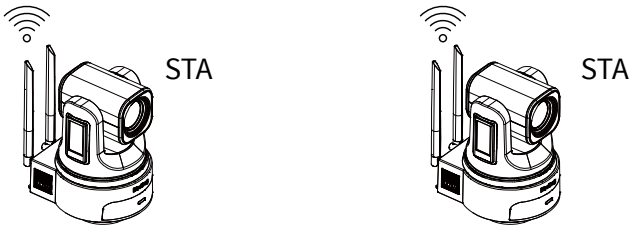




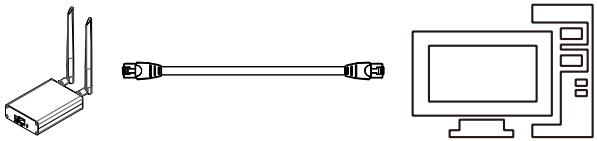
4.4 Wireless Function



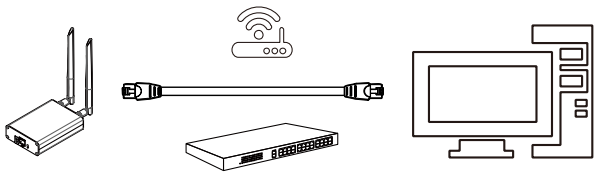
the receiver box is an optional accessory



The camera can be automatically paired with the receive box. There are two methods to connect the receive box.



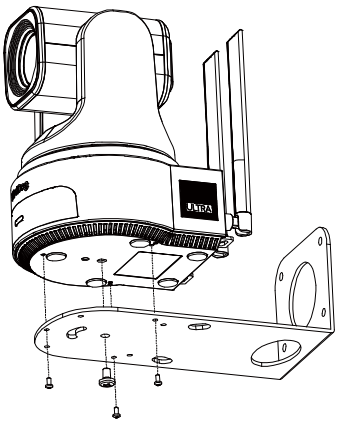
Connect by Network Cable



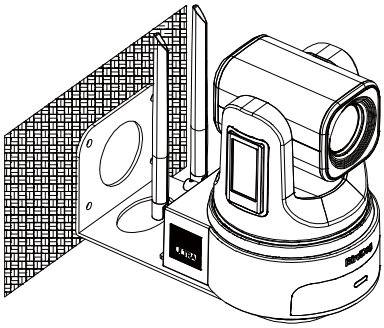
Connect by Switch/Router

4.5 Installation

❶



❷ **Wall Mount**



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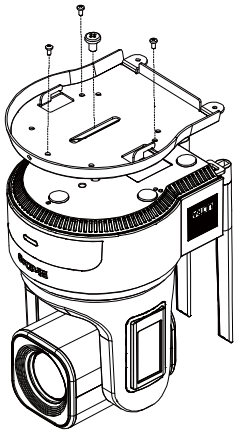
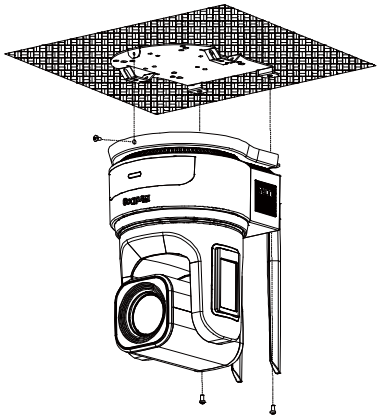
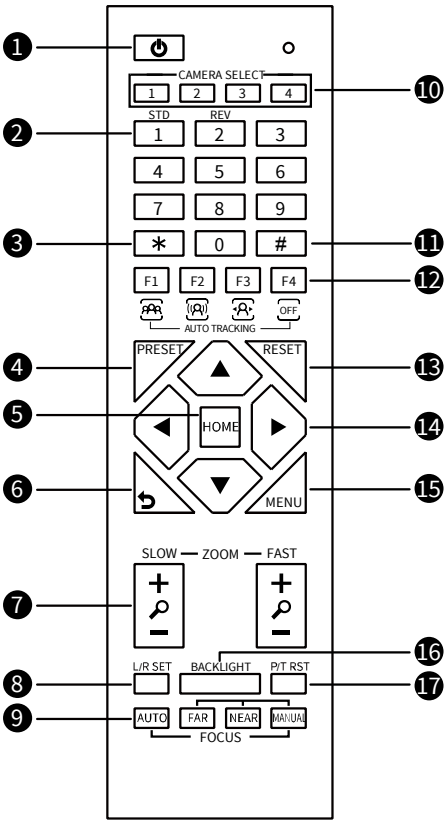


❷ **Ceiling Mount**



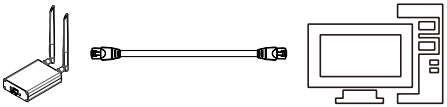
Note The installation diagram is for reference only. For installation accessories, please refer to the actual product.

4.6 Remote Control

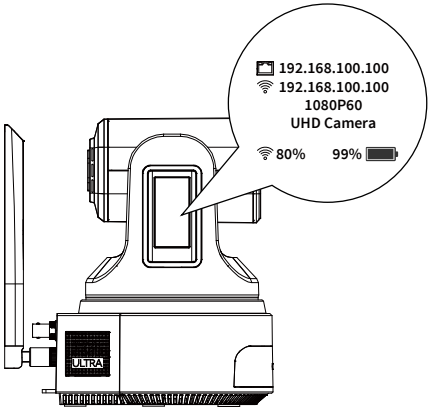


Key Description
1. ⏻ Standby/Power On Key
In standby, press to power on; After power on, press to enter standby
2. Number Keys
To set preset or call preset
3. * Key
Use with other keys
4. PRESET Key
Set preset: Successively press [PRESET] + Number key (0-9)
5. HOME Key
Confirm selection or press to turn PTZ back to the middle position
6. ⮌ (Return) Key
Press to return to the previous menu
7. ZOOM Keys
● SLOW: Zoom In [+] or Zoom Out [-] slowly ● FAST: Zoom In [+] or Zoom Out [-] fast
8. L/R SET Key
● Standard: Simultaneously press [L/R SET] + [1] ● Reverse: Simultaneously press [L/R SET] + [2]
9. FOCUS Keys
Auto/Manual/Far-end/Near-end focus
10. CAMERA SELECT Keys
Press to select and control the camera
11. # Key
Use with other keys
12. Auto Tracking Keys
[F1]: Disable [F2]: Disable [F3]: Turn On AI Tracking [F4]: Turn Off AI Tracking
13. RESET Key
Clear preset position: Successively press [RESET] + Number key (0-9)
14. PTZ Control Keys
PTZ moved according to the arrow indicates
15. MENU Key
Enter OSD menu or back to the previous menu
16. BACKLIGHT Key
Backlight ON/OFF: Press repeatedly to enable or disable the backlight compensation
17. P/T RST (PTZ Reset) Key
Press to preset Pan/Tilt self-test
Shortcut Set
Successively press [#] + [*] + [F4]: Enable or disable the Image Freeze Successively press [*] + [#] + [1]: OSD menu default English Successively press [*] + [#] + [3]: OSD menu default Chinese Successively press [*] + [#] + [4]: Display current IP address Successively press [*] + [#] + [6]: Quickly recover the default Successively press [*] + [#] + [8]: Check the camera version Successively press [*] + [#] + [9]: Quickly set up inversion Successively press [*] + [#] + [MANUAL]: Restore to default IP address and password Successively press [*] + [#] + [RESET]: Clear all preset positions

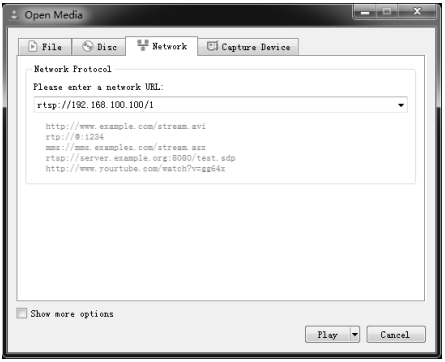
4.7 Setup Guide



Step 1: Connect the wireless receiver box.



Step 2: View IP address through camera screen.

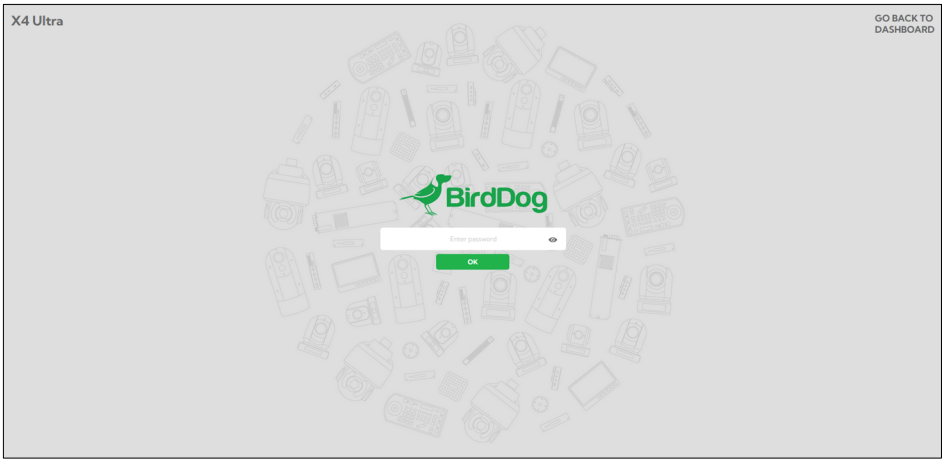


Step 3: Perform VLC stream through computer.

Step 4: For more settings, please visit the WEB configuration page.

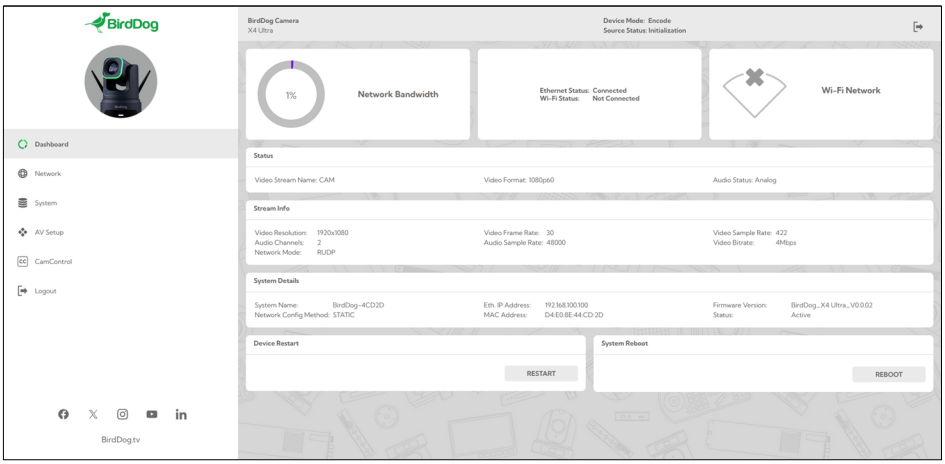
5 WEB Settings

Access the default camera IP (192.168.100.100) in the browser to pop up the login window, then enter the default password (birddog), click “OK” to login to the WEB page.



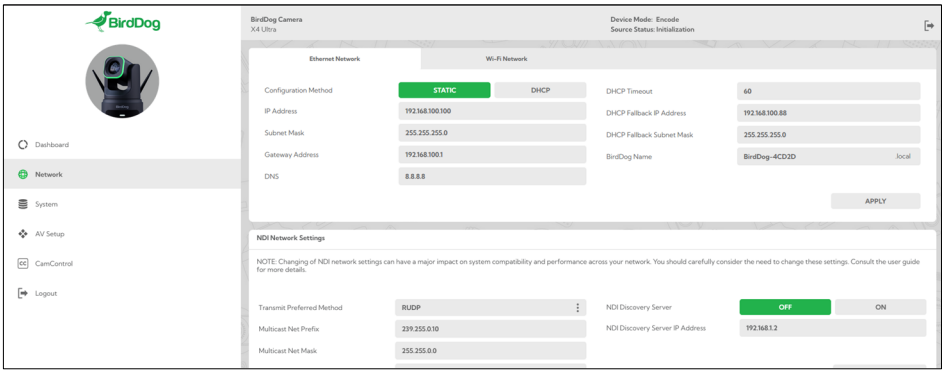
5.1 Dashboard

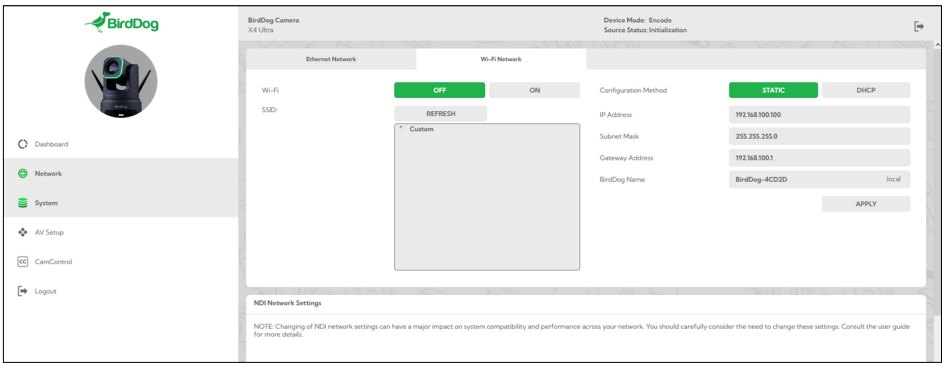
Display Camera Status, Stream Info, System Details. Restart Device or Reboot System.

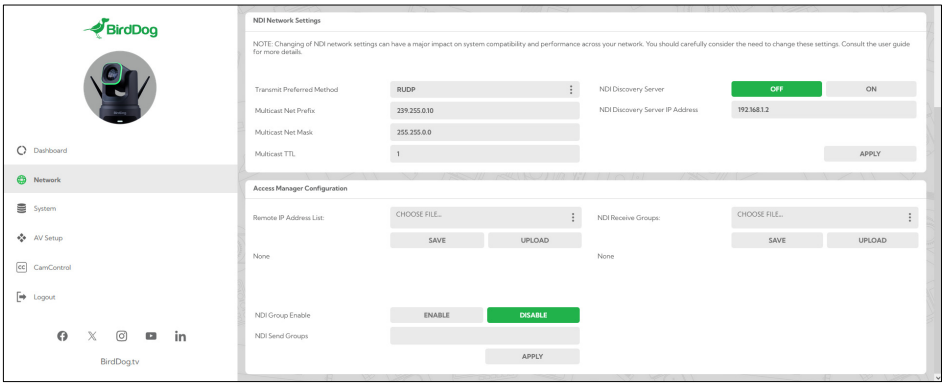


5.2 Network

Set Ethernet Network, Wi-Fi Network or NDI Network.

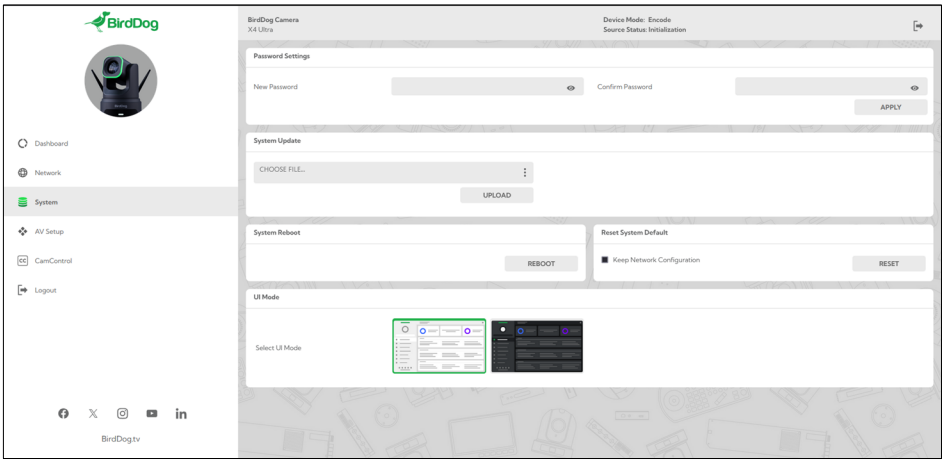






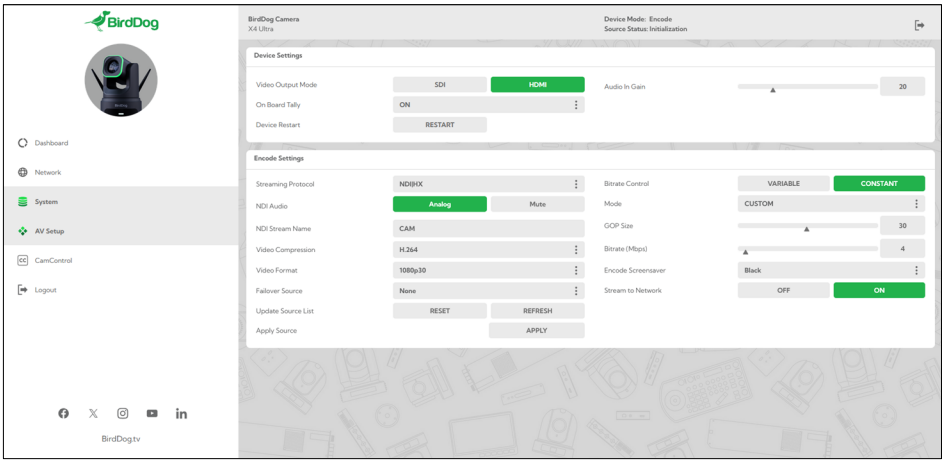
5.3 System

- Set the password of login to the WEB page
- Choose upgrade file to update system
- Reboot system
- Reset system default
- Select UI mode



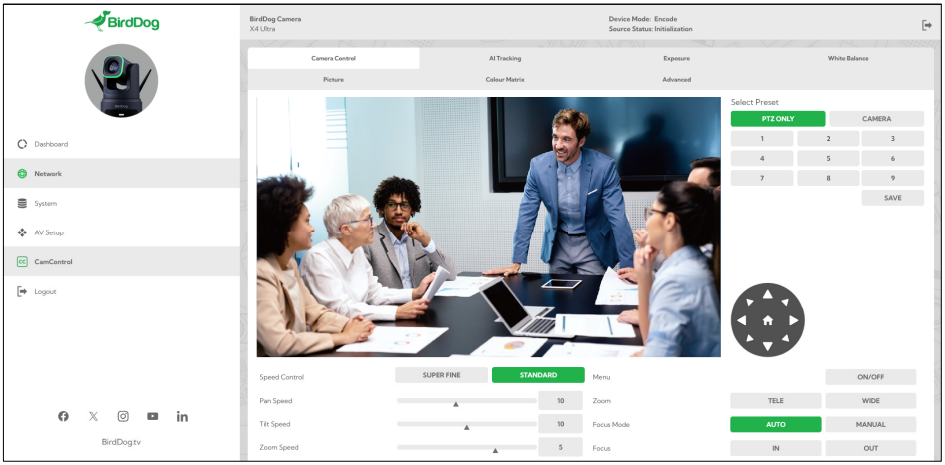
5.4 AV Setup

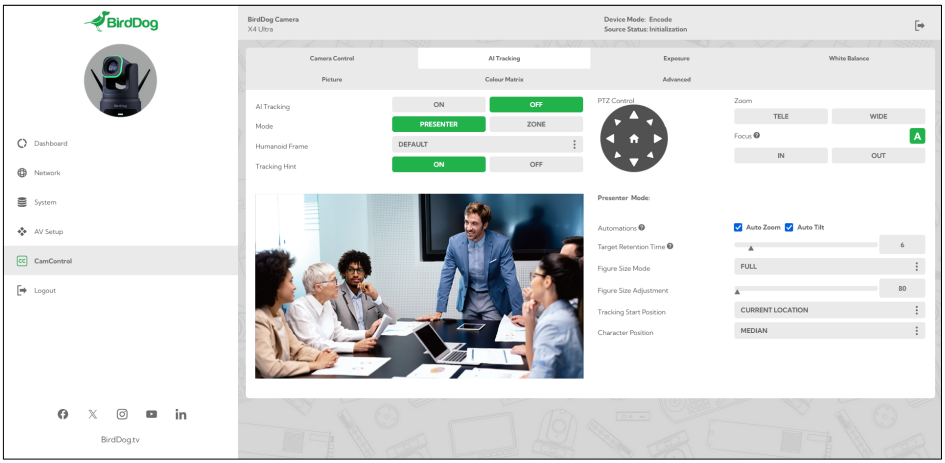
Set device or encode parameters.

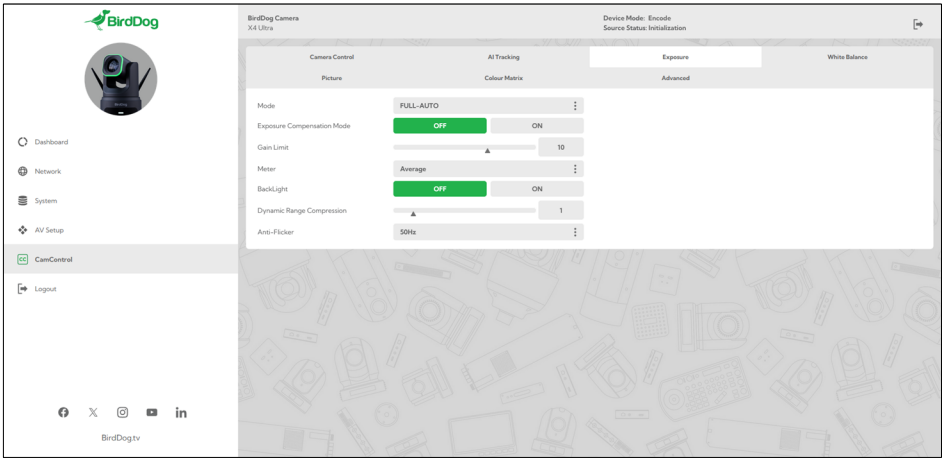


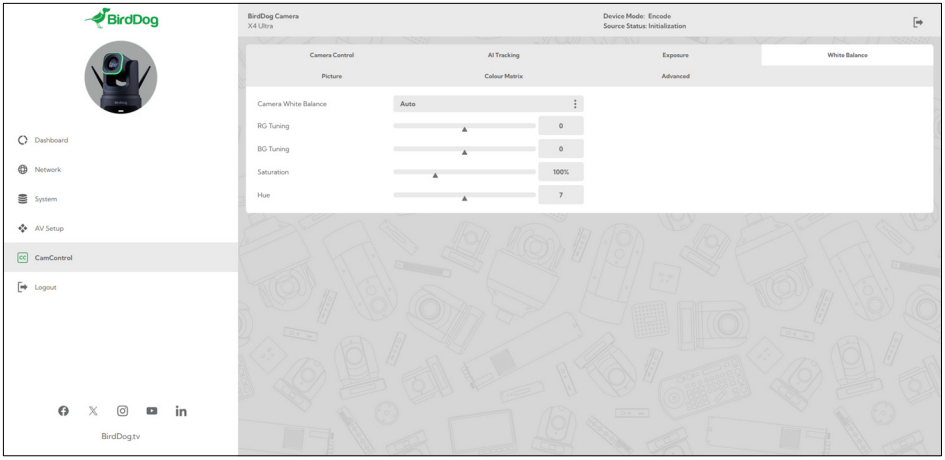
5.5 CamControl

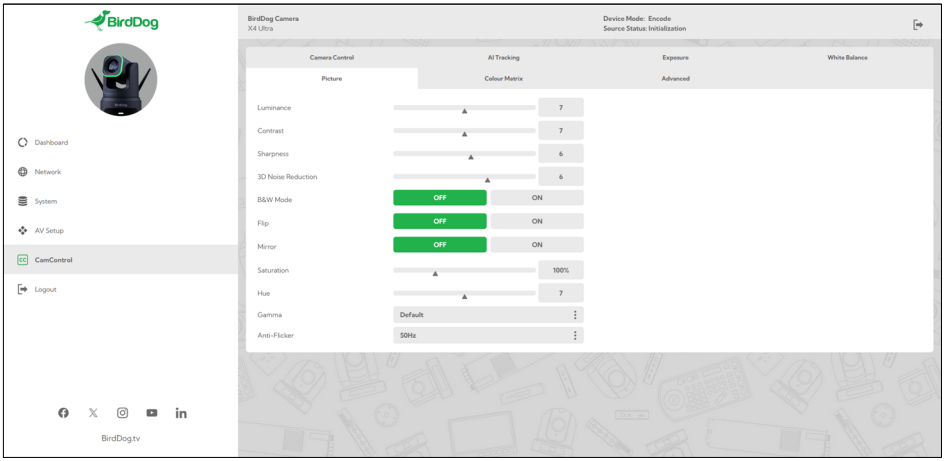
Set Camera Control, AI Tracking, Exposure, White Balance, Picture, Colour Matrix, Advanced.

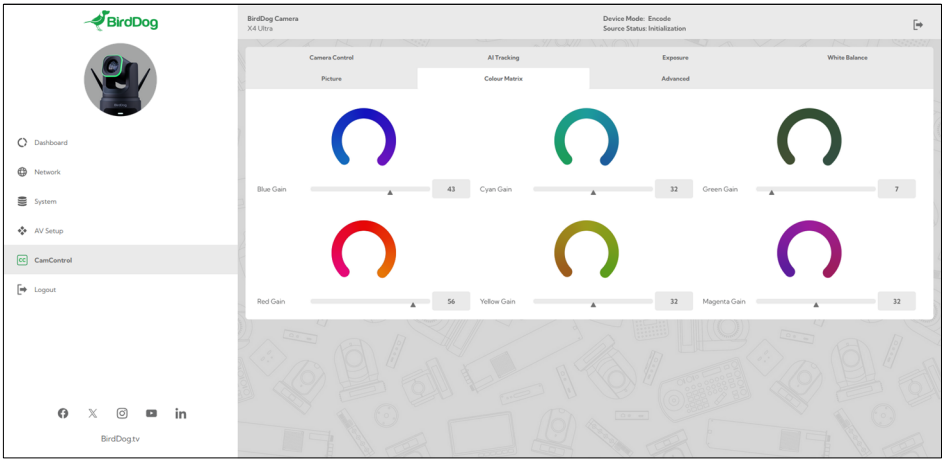


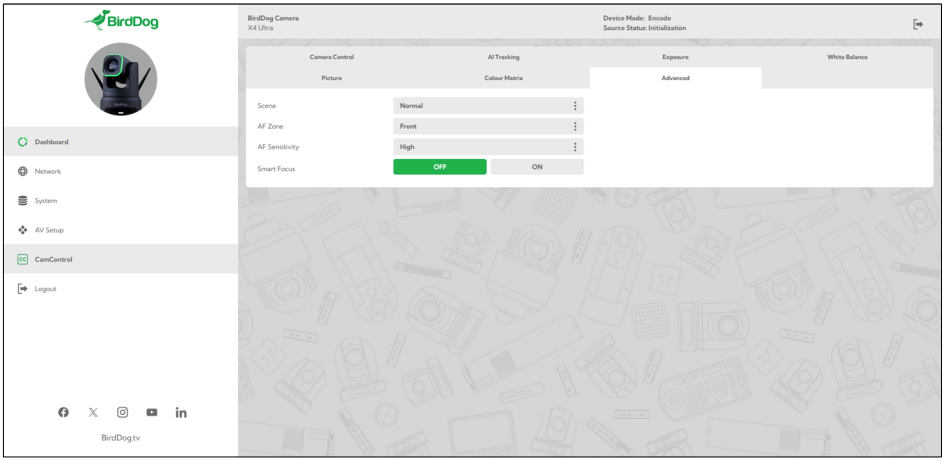



BirdDog
BirdDog Camera
X4 Ultra
Device Mode: Encode
Source Status: Initialization
Camera Control
AI Tracking
Exposure
White Balance
Picture
Colour Matrix
Advanced
Mode
FULL-AUTO
Exposure Compensation Mode
OFF
ON
Gain Limit
10
Meter
Average
BackLight
OFF
ON
Dynamic Range Compression
1
Anti-Flicker
50Hz
Dashboard
Network
System
AV Setup
CamControl
Logout
BirdDog.tv


BirdDog
BirdDog Camera
X4 Ultra
Device Mode: Encode
Source Status: Initialization
Camera Control
AI Tracking
Exposure
White Balance
Picture
Colour Matrix
Advanced
Camera White Balance
Auto
RG Tuning
0
BG Tuning
0
Saturation
100%
Hue
7
Dashboard
Network
System
AV Setup
CamControl
Logout
BirdDog.tv


BirdDog
BirdDog Camera
X4 Ultra
Device Mode: Encode
Source Status: Initialization
Camera Control
AI Tracking
Exposure
White Balance
Picture
Colour Matrix
Advanced
Luminance 7
Contrast 7
Sharpness 6
3D Noise Reduction 6
B&W Mode OFF ON
Flip OFF ON
Mirror OFF ON
Saturation 100%
Hue 7
Gamma Default
Anti-Flicker 50Hz
Dashboard
Network
System
AV Setup
CamControl
Logout
BirdDog.tv


BirdDog
BirdDog Camera
X4 Ultra
Device Mode: Encode
Source Status: Initialization
Camera Control
AI Tracking
Exposure
White Balance
Picture
Colour Matrix
Advanced
Blue Gain 43
Cyan Gain 32
Green Gain 7
Red Gain 56
Yellow Gain 32
Magenta Gain 32
Dashboard
Network
System
AV Setup
CamControl
Logout
BirdDog.tv



5.6 Logout

Enter password (default: birddog), click “OK” to login to the WEB page once again.

6 Troubleshooting

Image

- The monitor shows no image

1) Ensure that the camera power supply is connected, the voltage is normal, and the power indicator is always on.
2) Turn off the power switch to check that the camera is self-testing.
3) Ensure the cable of video platform and TV that in correct connection.

- Image jitters after the camera is properly connected

1) Ensure that the camera installation is in stable position.
2) Check that any vibrating machinery or object near the camera.

- There is no video image in browser

That do not support IE browser and IE core browser, it is recommended to use Google, Firefox and Edge browsers. The camera video image will be displayed normally.

- Unable to access camera through the browser

1) Using PC to access the network to test that the network access can work properly to eliminate the network fault caused by cable and PC virus until the PC and camera can ping each other.
2) Disconnect the network, connect camera with PC separately and reset the IP address of PC if necessary.
3) Ensure that the IP address, subnet mask and gateway settings is correct.
4) Check that the MAC address is conflicts.
5) Check that the web port is modified, the default setting is 80.

- Forget the IP address or login password

The default IP address: 192.168.100.100; the default password: birddog. If you forget the camera IP address or password, press the [*] + [#] + [Manual] keys in sequence to restore default settings. After restoring the defaults, you will need to set a strong password again when login to the web page.

Control

- Remote control does not work

1) Check and replace with new batteries.
2) Ensure that the camera working mode is correct.
3) Ensure that the address key of remote control can match the camera.

- Serial port cannot control

1) Ensure that the protocol, address and bit rate of the camera are consistent.
2) Ensure that the control cable is properly connected.

This device is restricted to indoor use when operating in the 5150 to 5350 MHz frequency range.