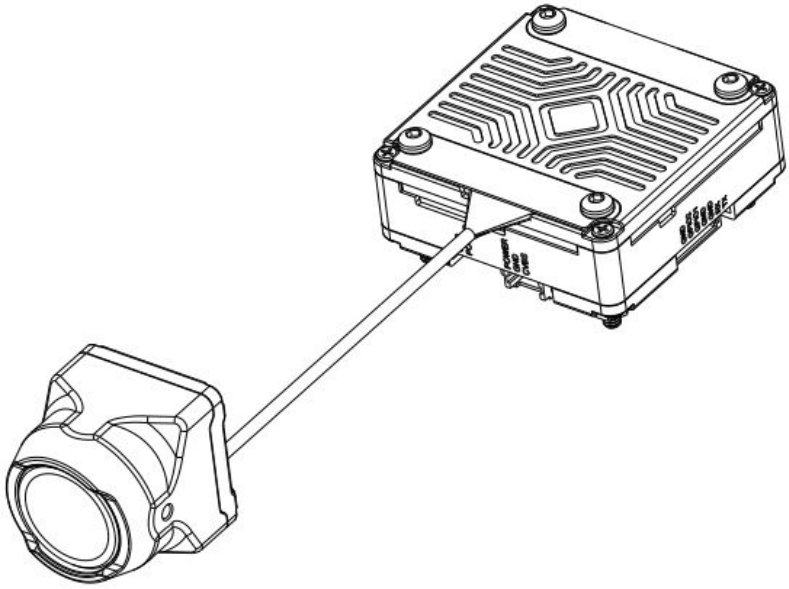
Contents [hide]

Caddx Farsight Analog Camera



Product Introduction

The Caddx Farsight is a camera system designed for remote control applications, offering zoom functionality and reset control.

Installation Direction

During installation, ensure the camera is facing upwards to prevent the image from being displayed upside down.

Control Mode

- **Zoom Function Control:** The zoom operation is controlled via PWM signals from the flight controller. Adjusting the PWM signal duty cycle changes the magnification level.
- **Reset Function Control:** Switch between high magnification and 1x zoom using an IO-defined switch. Turning off the IO switch restores the previous zoom level.

Connection

- **Power / CVBS Connection:**
    1. **POWER:** Connect to FC pad 9~24V
    2. **GND:** Connect to the ground
    3. **CVBS:** Connect to the FC CAM interface
- **Control Line Connection:**
    1. **GND:** Connect to the ground

2. **GPIO2:** Input PWM signal for zoom control
3. **GPIO1:** Input IO signal for reset definition

Debugging Procedure

To configure the hardware connections, follow the steps provided in the user manual, including setting up the PGIO connections and configuring settings in the Betaflight program.

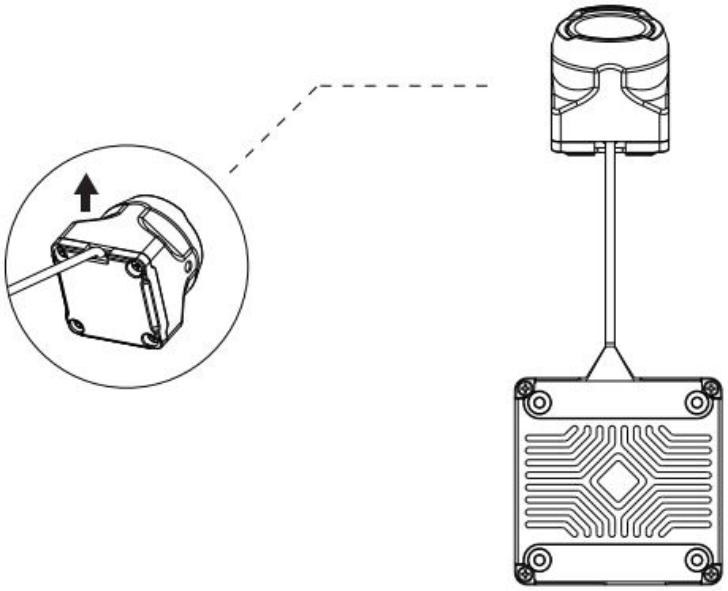
Product Introduction

The main features of the Caddx Farsight are as follows:

- **Fast Zoom:**
  - The Farsight 8x zoom camera features fast zoom capability. During the zooming process, it is quick and smooth, without the need to wait for the focus and zooming process as with traditional zoom lenses.
  - It adopts a hybrid zoom solution combining optical, digital, and AI algorithms.
- **Lightweight Design:**
  - With an ultra-compact size of just 19mm × 19mm, there is no need to carry the large size and volume of optical zoom lenses.
  - Supports analog output functionality.
  - Supports remote control for zoom operations on the camera.

Installation Direction

*During installation, please ensure this side is facing upwards to prevent the image from being upside down.



Caddx Farsight Camera

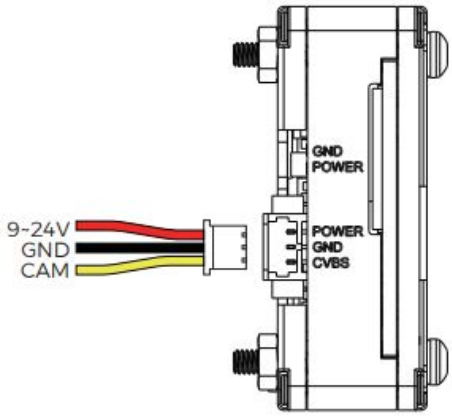
Control Mode

- **Zoom Function Control:** The zoom operation is controlled via PWM signals output by the flight controller. For example, when the PWM signal duty cycle is 100%, the image is displayed at 1x magnification; when the duty cycle is 200%, the image is magnified 2x.
- **Reset Function Control:** To ensure a quick switch from high magnification to 1x zoom, an IO-defined switch is used for reset operations. For example, if the current zoom magnification is 8x, triggering the reset switch will restore the image to 1x magnification. When the IO switch is turned off, the zoom will return to the previous magnification level.

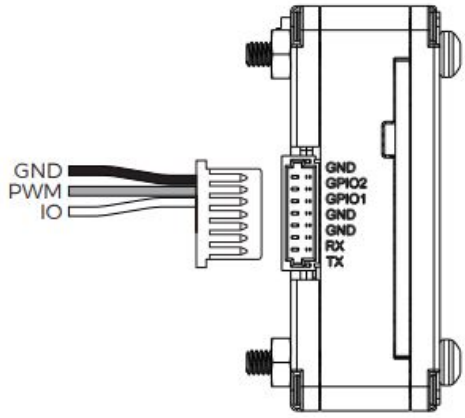
  *** Recommended Button Settings:**
  - The zoom function is controlled via a rotary switch.
  - The reset function is controlled via a two-position toggle switch.

Connection

- **Power / CVBS Connection:**
  1. **POWER:** FC pad 9~24V
  2. **GND:** Connect to the GND
  3. **CVBS:** Connect to the FC CAM interface



- **Control Line Connection:**
  1. **GND:** Connect to the GND
  2. **GPIO2:** Input PWM signal for zoom control
  3. **GPIO1:** Input IO signal for reset definition

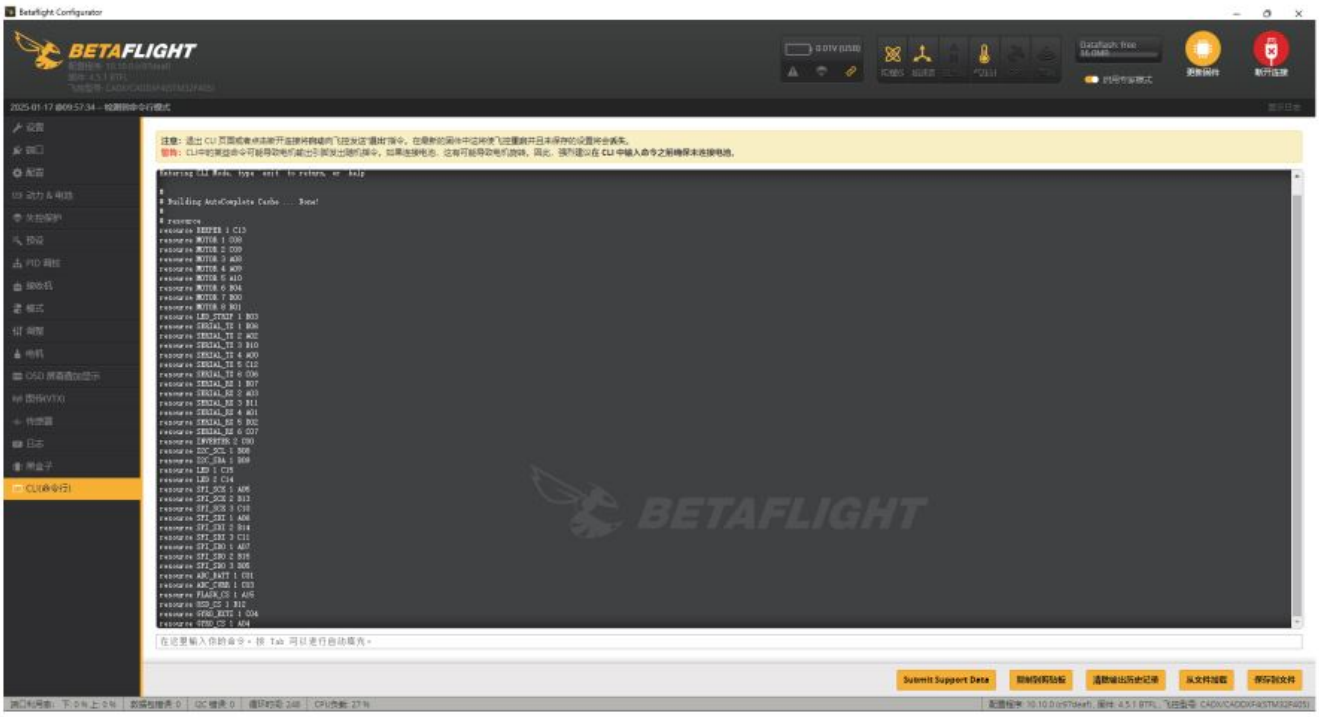


Debugging Procedure

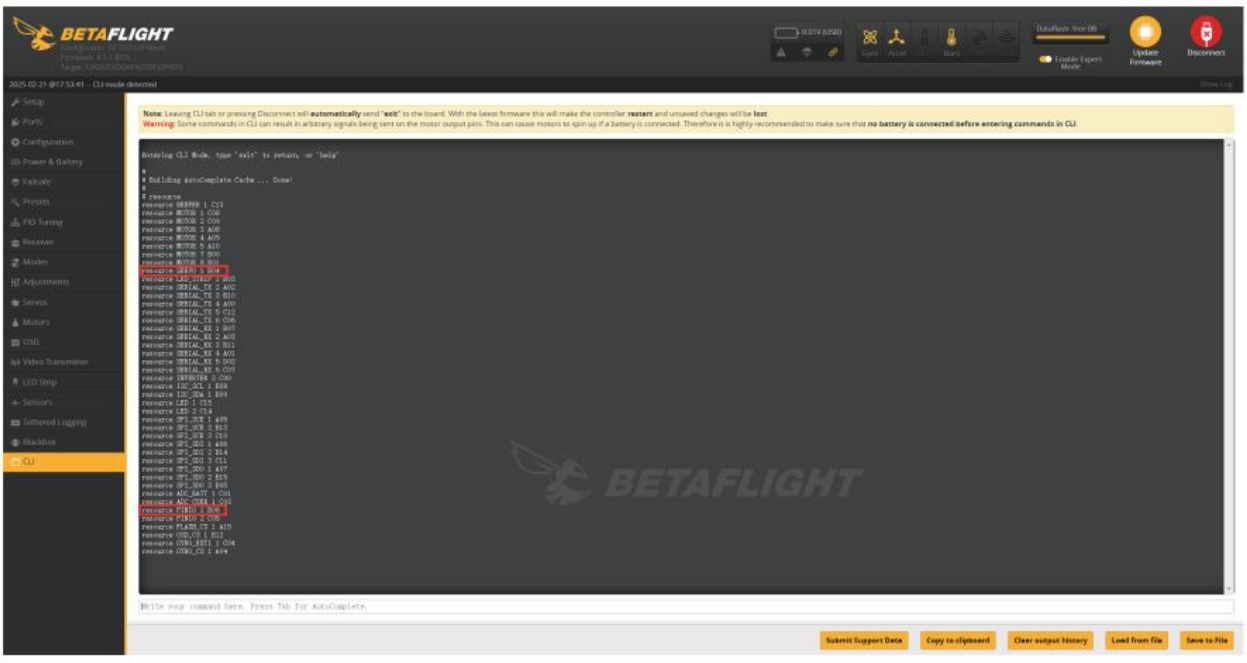
Example Hardware Connection:

- **PGIO1:** Connect to the flight controller TX1
- **PGIO2:** Connect to the flight controller M6

  In the Betaflight program, select the “CLI” option from the menu bar. In the text box, enter the command “resource” to load and view the pin definitions, as shown in the image below:

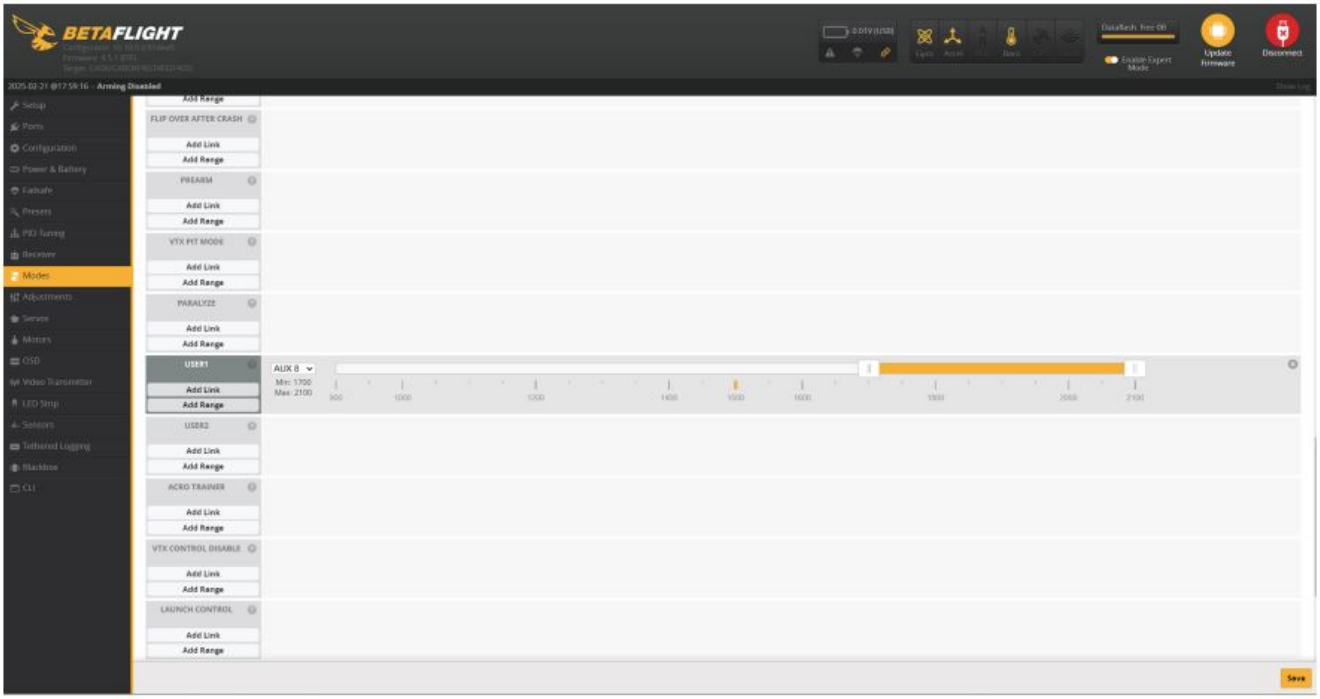


1. Release Occupation Operation: In the text box, enter “resource MOTOR 6 none” and press Enter. Then, enter “resource SERIAL_TX 1 none” and press Enter to release the resources.
2. Configuration Definition Operation: In the text box, enter “resource SERVO 1 B04” and press Enter. Then, enter “resource PINIO 1 B06” and press Enter to configure. Once completed, type “Save” in the text box and press Enter to save, as shown in the image below:

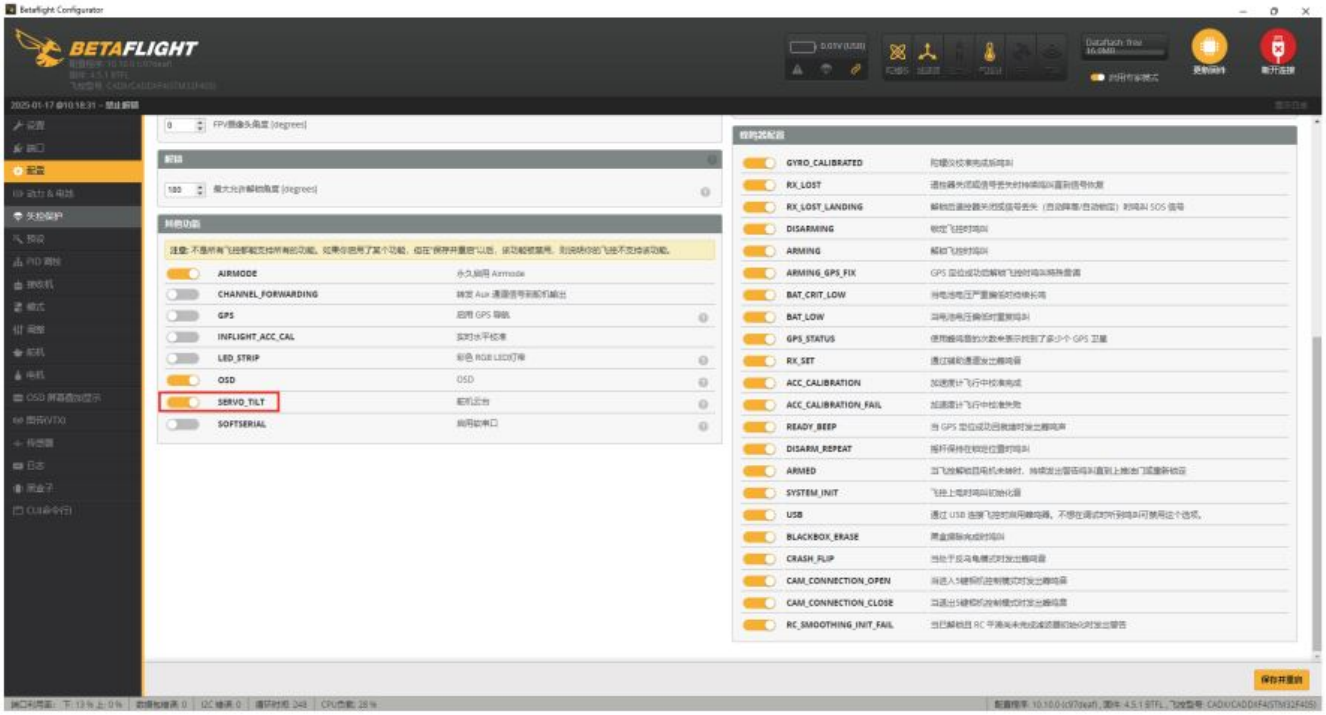


RC Channel Configuration:

1. In the Betaflight program, select the “Modes” option from the menu bar. Find “USER1” and click to debug. When channel 8 is set to a two-position toggle switch, select the “AUX 8” channel. Click the save button, as shown in the image below:

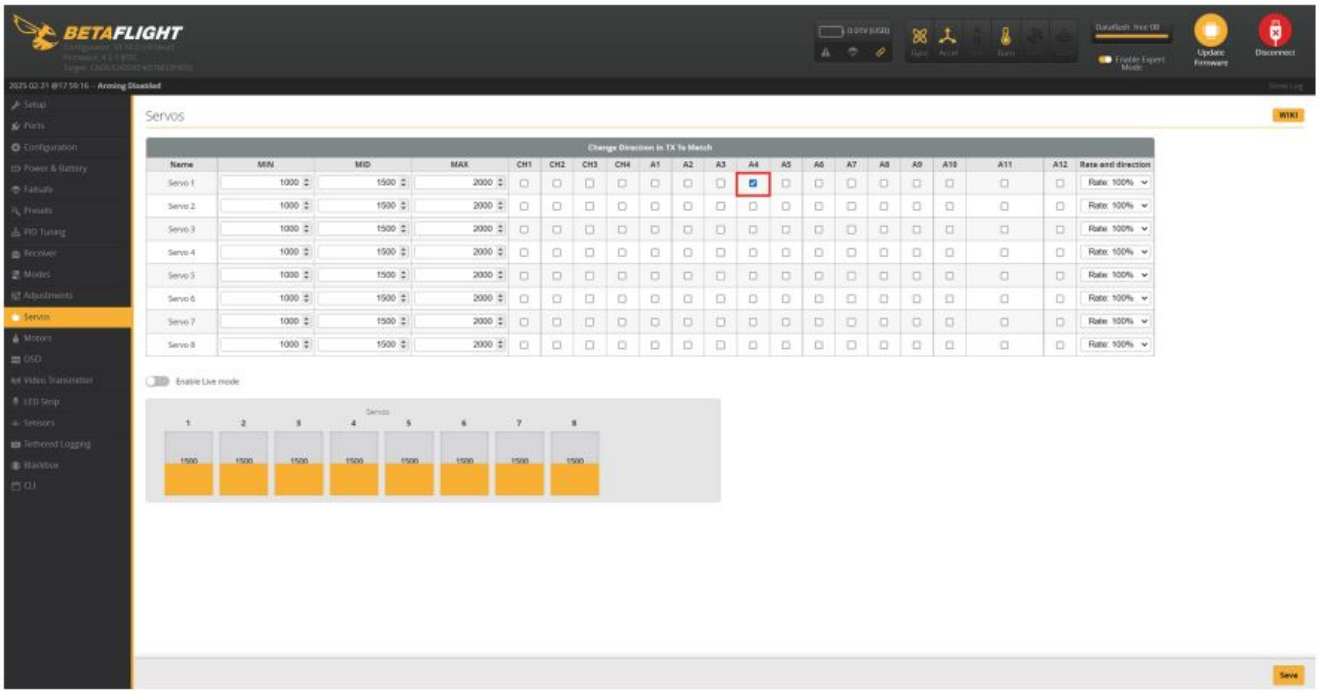


2. In the Betaflight program, select the “Configuration” option from the menu bar. In the “Other Features” section, check the box to enable “SERVO_TILT”, click the Save and Restart button, as shown in the image below:



3. In the Betaflight program, select the “Servos” option from the menu bar. If the remote control channel A4 is set to a rotary switch, check the box for “Servo 1” and enable

the “A4” remote control channel to complete the setup. Click the save button, as shown in the image below:



Specifications

- **Model** Caddx Farsight
- **Image Sensor** 1/2 inch
- **Illuminance** 0.01Lux
- **Focal Length** 2.2mm
- **FOV** 122.5°(H) x 92.2°(V) x 155°(D)
- **Horizontal Resolution** 1500TVL
- **Aspect Ratio** 4:3
- **Zoom Ratio 1- 8X**
- **Zoom Mode** Connect to FC, PWM Control
- **Video Interface** CVBS
- **Power Supply Range** 9~24V
- **Power Consumption 2Ww**
- **Operating Temperature** -20℃~60℃
- **Dimensions**
  - **Camera:** 19x19x19.5mm
  - **AI Box:** 33.5×33.5×12.35mm

CADDXFPV Support

Email: support@caddxfpv.com

FAQ

- **How do I adjust the zoom level of the camera?**
  Use PWM signals from the flight controller to control the zoom function. Adjust the duty cycle to change magnification levels.
- **How can I reset the zoom level quickly?**
  Use an IO-defined switch for reset operations. Triggering the switch will restore the image to 1x magnification.

Documents / Resources

	Caddx Farsight Analog Camera [pdf] User Guide Farsight Analog Camera, Analog Camera, Camera

References

- User Manual

Analog Camera, Caddx, camera, Farsight Analog Camera

Caddx

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