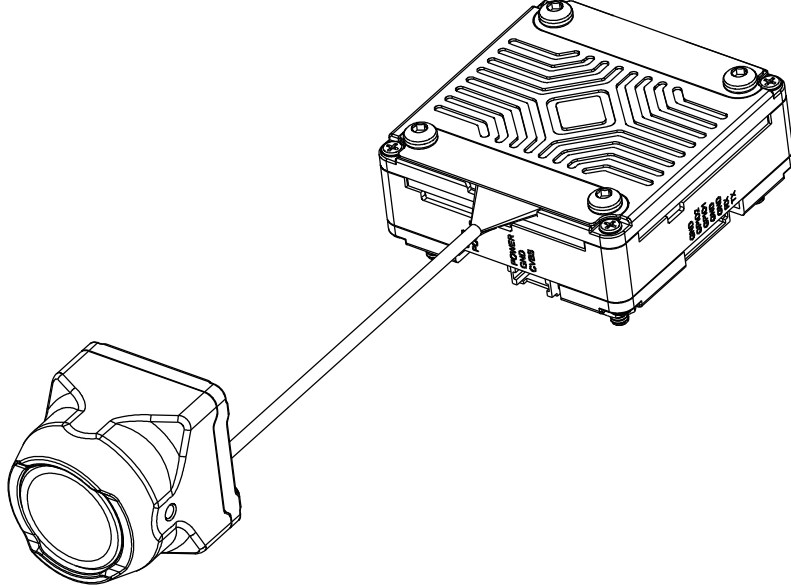


# Caddx Farsight

## Quick Start Guide

V1.0



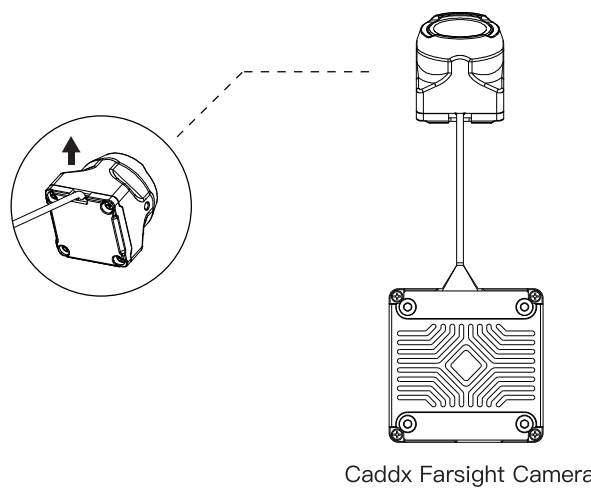
### Product Introduction

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.



### Control Mode

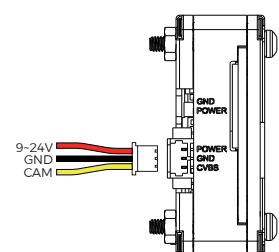
**Zoom Function Control:** The zoom operation is controlled via PWM signals output by the flight controller. For example, when the PWM signal duty cycle is 100%, the image is displayed at 1x magnification; when the duty cycle is 200%, the image is magnified 2x.

**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.

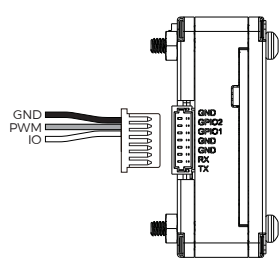
- \* **Recommended Button Settings:**  
The zoom function is controlled via a rotary switch.  
The reset function is controlled via a two-position toggle switch.

### 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

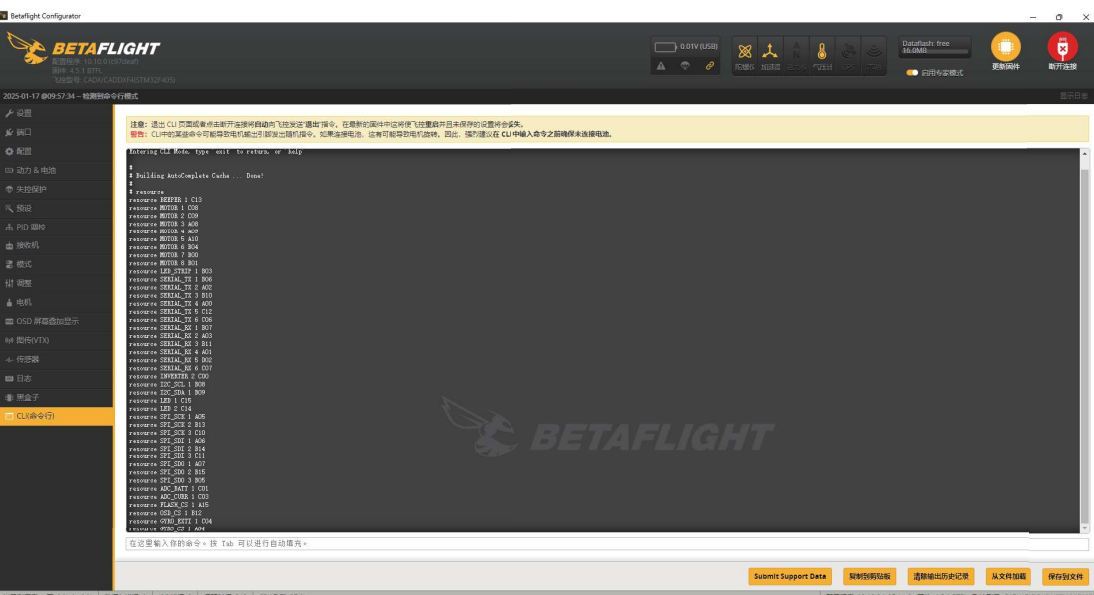


### Debugging Procedure

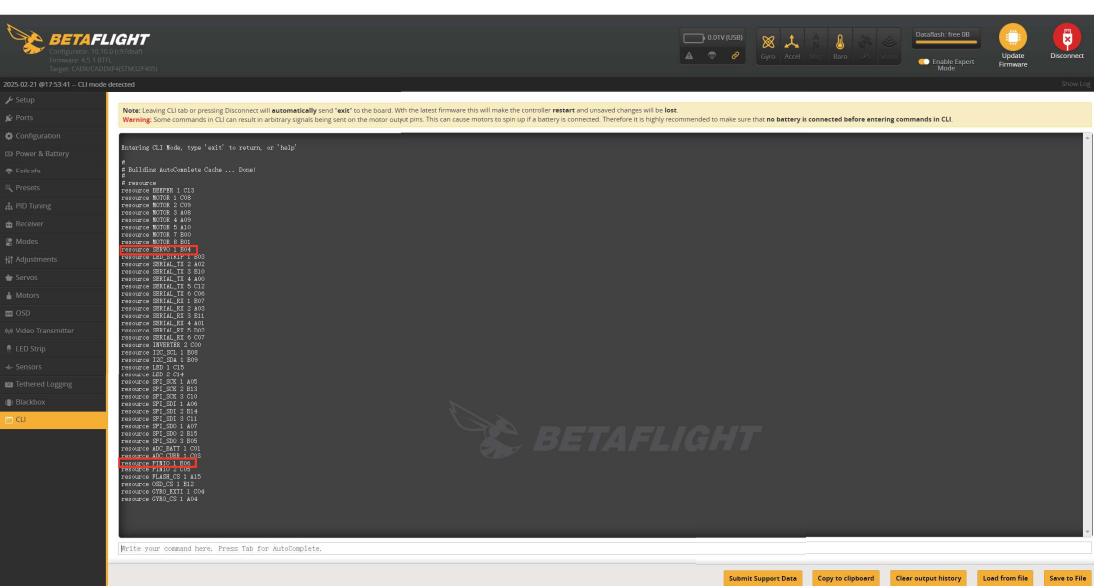
**Example Hardware Connection:**

GPIO1: Connect to flight controller TX1  
GPIO2: Connect to 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.

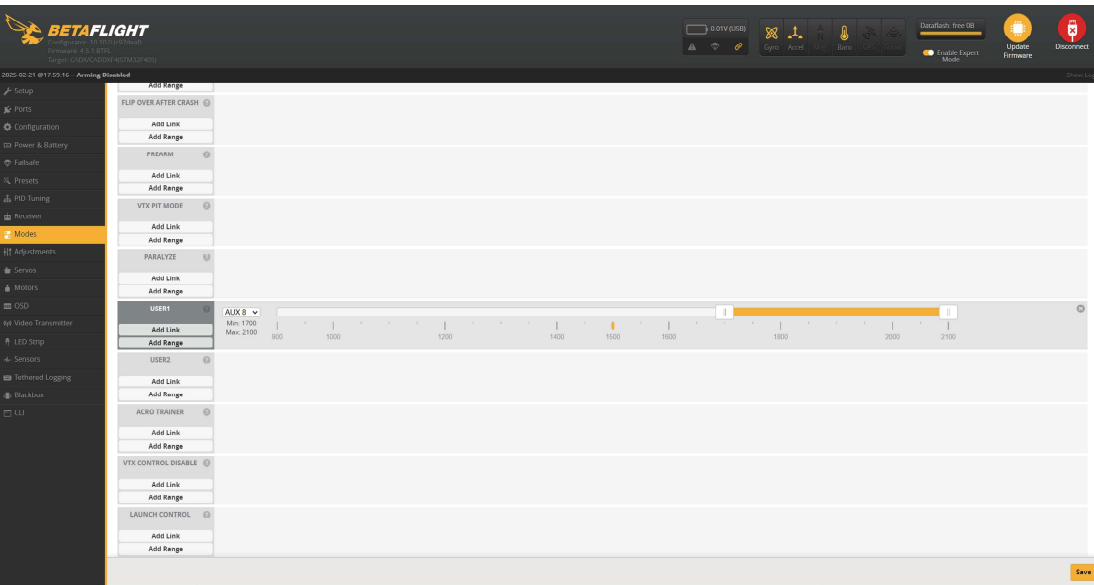


1. Release Occupation Operation: In the text box, enter "resource MOTOR 6 none" and press Enter. Then, enter "resource SERIAL\_TX 1 none" and press Enter to release the resources.
2. Configuration Definition Operation: In the text box, enter "resource SERVO 1 B04" and press Enter. Then, enter "resource PWMIO 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.

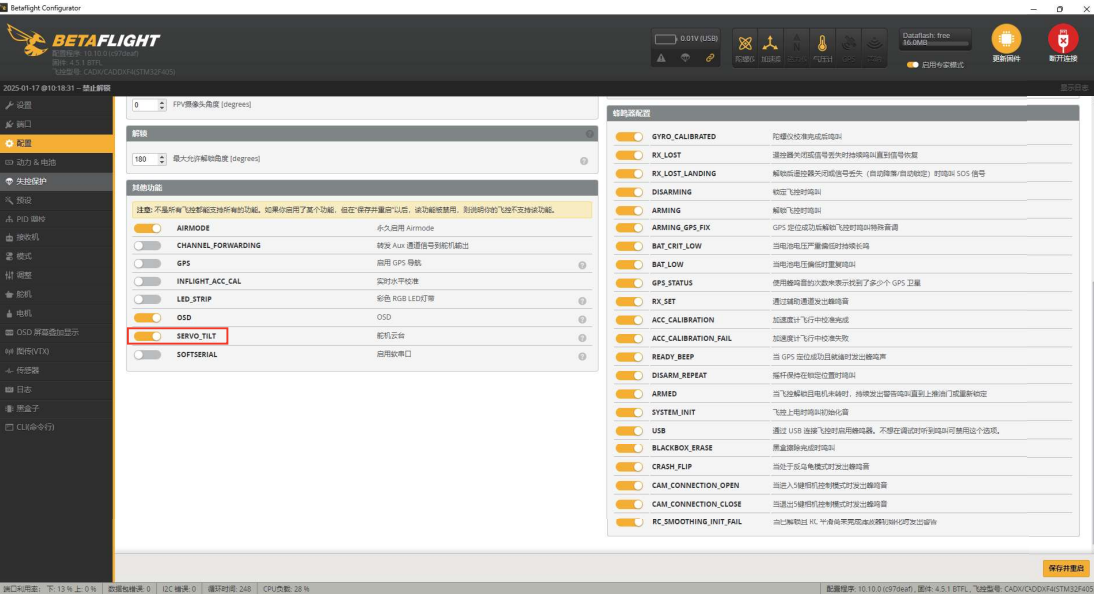


**RC Channel Configuration:**

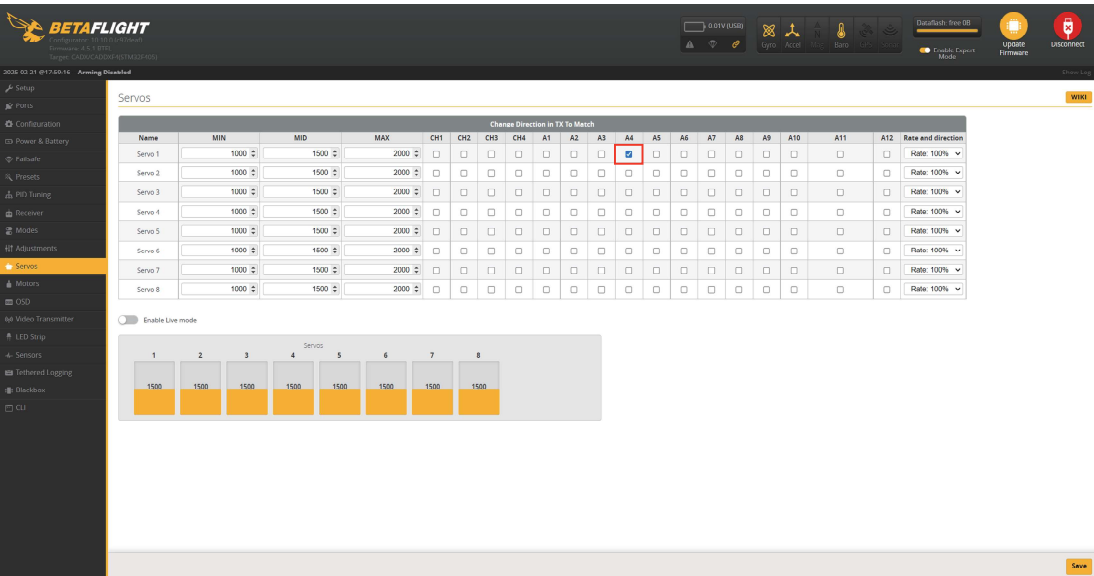
1. In the Betaflight program, select the "Modes" option from the menu bar. Find "USER1" and click to debug. When channel 6 is set to a two-position toggle switch, select the "AUX 6" channel. Click the save button, as shown in the image below.



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 "AUX 6" 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	<2w
Operating Temperature	-20℃~60℃
Dimensions	Camera: 19x19x19.5mm AI Box: 33.5x33.5x12.35mm