CADDX MICRO F2

CADDX Turbo Micro F2 FPV Camera User Manual

Model: MICRO F2

1. Introduction

This user manual provides comprehensive instructions for the CADDX Turbo Micro F2 FPV Camera. It covers product features, specifications, setup, operation, maintenance, and troubleshooting. Please read this manual thoroughly before using the camera to ensure proper function and longevity.

2. Product Overview

The CADDX Turbo Micro F2 is a compact and high-performance FPV (First Person View) camera designed for various applications, particularly in drones and remote-controlled vehicles. It features a 1/3" CMOS sensor, 1200TVL horizontal resolution, and supports both NTSC and PAL TV systems. A key enhancement over its predecessor, the F1, is the integrated microphone for audio capture.

Figure 2.1: Front view of the CADDX Turbo Micro F2 FPV Camera, showcasing its compact design and lens.

Figure 2.2: Contents of the CADDX Turbo Micro F2 package, including the camera, connection cables, mounting bracket, and OSD control board.

3. Specifications

Feature	Description
Image Sensor	1/3" CMOS Sensor
Horizontal Resolution	1200TVL
TV System	NTSC/PAL (Changeable)
Power Input	4.5-40V DC
Mini Illumination	0.001lux
Dimensions	19mm x 19mm x 19mm
Net Weight	5.5g
Lens	2.1mm
Aspect Ratio	16:9 / 4:3 (Non-changeable, specific model variants)
Microphone	Integrated
Video Capture Resolution	720p (Output)

4. Setup

4.1 Unpacking and Inspection

Carefully unpack all components from the product packaging. Verify that all items listed in the package contents are present and undamaged.

- CADDX Turbo Micro F2 Camera
- Connection Cables (various lengths/connectors)
- Mounting Bracket
- Screws
- OSD Control Board (for menu navigation)
- Hex Key (for mounting)

Figure 4.1: The retail packaging for the CADDX Turbo Micro F2 FPV Camera.

4.2 Wiring Diagram

Connect the camera to your flight controller or video transmitter using the provided cables. Ensure correct polarity for power connections to prevent damage.

- **Red Wire:** Power Input (4.5-40V DC)
- **Black Wire:** Ground
- **Yellow Wire:** Video Output
- **White Wire:** OSD Control (if applicable)

- **Green Wire:** Audio Output (from microphone)

Caution: Incorrect wiring can permanently damage the camera. Refer to your flight controller or video transmitter manual for specific connection points.

4.3 Mounting

The CADDX Turbo Micro F2 camera has dimensions of 19x19x19mm, making it suitable for micro-sized frames. Use the included mounting bracket and screws to securely attach the camera to your desired platform. Ensure the lens is clear of obstructions and pointed in the desired direction.

5. Operating Instructions

5.1 Powering On

Once correctly wired, apply power within the specified voltage range (4.5-40V DC). The camera will power on and begin transmitting video.

5.2 OSD Menu Navigation

The camera features an On-Screen Display (OSD) menu for adjusting settings. Connect the included OSD control board to the camera's OSD port (typically the white wire). Use the joystick on the OSD board to navigate the menu:

- **Press Center:** Enter/Confirm selection
- **Up/Down:** Navigate menu options
- **Left/Right:** Adjust values or navigate sub-menus

Common adjustable settings include:

  - Brightness
  - Contrast
  - Saturation
  - Sharpness
  - Wide Dynamic Range (WDR)
  - TV System (NTSC/PAL - if supported by your specific camera variant)

Note: While the camera supports both NTSC and PAL, some variants may have a non-changeable aspect ratio (16:9 or 4:3). Check your specific product variant for details.

6. Maintenance

To ensure optimal performance and longevity of your CADDX Turbo Micro F2 camera, follow these maintenance guidelines:

- **Lens Cleaning:** Gently clean the camera lens with a soft, lint-free cloth. For stubborn smudges, use a lens cleaning solution designed for optics. Avoid abrasive materials.
- **Dust and Debris:** Keep the camera free from dust and debris, especially around the lens and sensor area. Use compressed air if necessary, but avoid direct high-pressure blasts.
- **Environmental Protection:** While the camera is robust, avoid exposing it to extreme temperatures, direct water immersion, or excessive vibrations beyond its intended use.
- **Cable Inspection:** Periodically check all connected cables for signs of wear, fraying, or damage. Replace damaged cables immediately to prevent electrical issues.
- **Storage:** When not in use, store the camera in a dry, cool place, away from direct sunlight and static electricity.

7. Troubleshooting

Problem	Possible Cause	Solution
No video output	Incorrect wiring; No power; Damaged cable; Incorrect TV system setting.	Verify all wiring connections (power, ground, video). Check power supply voltage. Inspect cables for damage. Ensure TV system (NTSC/PAL) matches your video receiver.
Flickering or distorted video	Power fluctuations; Interference; Loose connection; Damaged sensor.	Ensure stable power supply. Check for sources of electromagnetic interference. Secure all connections. If problem persists, camera sensor may be damaged.
OSD menu not appearing	OSD board not connected; Faulty OSD board/cable.	Connect the OSD control board correctly. Test with a different OSD board or cable if available.
Poor image quality (blurry/dark)	Dirty lens; Incorrect OSD settings; Low light conditions.	Clean the camera lens. Adjust brightness, contrast, and WDR settings via the OSD menu. Ensure adequate lighting for optimal performance.
No audio from microphone	Audio wire not connected; Receiver not configured for audio.	Ensure the green audio wire is correctly connected to your video transmitter/receiver. Verify your video receiver/goggles support audio input and are configured to receive it.

8. Warranty and Support

For information regarding warranty coverage, technical support, or service, please refer to the official CADDX website or contact the retailer from whom you purchased the product. Keep your proof of purchase for warranty claims.
Manufacturer: Generic (Note: Product is branded CADDX)
Model Name: MICRO F2

Related Documents - MICRO F2

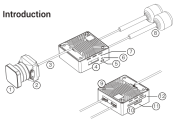
	Caddx Ratel Turbo Micro Camera User Manual User manual for the Caddx Ratel Turbo Micro camera, detailing its specifications, connection, installation, and menu settings for optimal performance.

MOONLIGHT KIT

QUICKSTART GUIDE

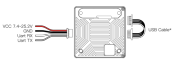
V1.2

Introduction



1、ND Filter
2、Camera
3、Coaxial Cable
4、Power Port
5、Link Button
6、VTX LED
7、REC LED
8、Antenna
9、M2 Mounting Hole
10、Micro SD Card Slot
11、VTX USB Port
12、REC USB Port

Connection



*White line aligns with white circle connection. This cable only needs to be connected when upgrading.

Precautions

⚠
- Power consumption: 12V/81.4A, 8V/82.2A
  Please consider the power supply capability of the power supply.
- When use 6s batteries, it is recommended to solder capacitors at the power input.
- It generates a lot of heat during recording, so please pay attention to airflow for heat dissipation.

Linking

1. Connect the moonlight kit and the power of the goggles.
2. Short press the moonlight kit and goggles linking buttons respectively, when the moonlight kit enters the pairing state The VTX LED turns red, and the goggles end is a DI... DI... DI...
3. After the link is successful, the indicator light on the VTX LED turns solid green, the beeping sound on the goggles stops and the screen is displayed.

Upgrade

Please go to the official website to download the upgrade firmware AvatarMoonlight_Sky_X.X.X.img to the Moonlight camera file, Copy to Micro SD card, be careful not to change the file name.Before upgrading, you need to connect the REC port and VTX port using the USB cable included in the package.

1、The USB cable connecting REC port and VTX port (as shown in the Connection diagram)

2、Copy the upgrade file to the root directory of the microSD card (delete if there are old firmware files), connect the power and wait for the VTX green light to flash.

3、Press and hold the linking button for 8 seconds. When the indicator light turns red and flashes, release the button (it is normal for the indicator light to go out during the upgrade process) . Please do not cut off the power during the upgrade process!

4、The upgrade time is about 50 seconds. After the upgrade is successful, the VTX indicator light will flash green or stay on. The REC indicator light turns solid green.

Solutions to abnormal situations:
- If the REC indicator light turns solid blue during the upgrade process, it means the USB cable connection is abnormal. Please check whether the USB cable is connected properly or replug it.
- If the VTX indicator light changes to green flashing or solid light after long pressing the linking button without red light flashing, please check whether the firmware is correct or whether the SD card is detected.

UART

The UART function enables the VTX communicate with the flight controller, allowing the VTX obtain the flight controller information. Take Betaflight Configurator as an example to introduce the UART setting method.

1. Solder the white and gray wires of the 4 pin cable to the flight controller refer to the Connection page).

2. Connect the flight controller to the Betaflight Configurator, and open the corresponding UART port (Take UART1 as an example in the figure) Check the MSP switch and click Save.

3. Open the CLI command line and enter the content in red font
"set osd_displayport_device = MSP"
"set displayport_msp_serial = Y" (Where Y is one less than the number of the serial port, e.g. Y = 2 for serial 3)
"save"

Betaflight 4.4 version settings：

1.Open the corresponding uart port (Take uart1 as an example in the figure) Check the MSP switch and click Save, Check the VTX (MSP+Displayport)。

3. Open the CLI command line and enter the content in red font,
"set osd_displayport_device = MSP"
"set vtx_cms_system = HD"
"save"

Status indication

REC Indicator Status	
USB cable not connected	Steady blue light
Upgrade firmware	Red light rapidly flashes and Steady red light
Working fine	Steady green light
Recording status	Green light slowly flashes
Camera not detected	Blue light slowly flashes
VTX Indicator Status	
Binding status	Steady red light
Upgrade firmware	Red light rapidly flashes and Steady red light
Works fine, wireless is not connected	Green light rapidly flashes
Works fine, wireless is connected	Steady green light
Device overheated	red and green lights flash alternately quickly
REC board signal not recognized	Green light slowly flashes

Operating channel

Center frequency(MHz)	Channel1	Channel2	Channel3	Channel4	Channel5	Channel6	Channel7	Channel8
FCC	5660	5695	5735	5770	5805	5878	5914	5839
CE/SRRC	5735	5770	5805	-	-	-	-	5839
MIC	5660	5700	-	-	-	-	-	5745

Make sure you fully understand and abide by local laws and regulations before using this product. An amateur radio license may be needed in FCC regions when using channels 1,2,6or 7, as they are amateur frequency bands. Users who use the amateur frequency bands with a modified or cracked version or without a license may be punished for breaking local laws or regulations.

Precautions

1、It generates a lot of heat during recording, so please pay attention to airflow for heat dissipation.
2、When using the built- in EIS or using gyro data, please provide shock-absorption to the camera bracket to avoid anti-shake failure.
3、Automatically stops recording when the chip core temperature exceeds 85 degrees Celsius.
4、The 2.7K/4K 60fps high frame rate does not support 2.7K/4K recording, and the standard frame rate does not support 1080p/120fps recording.
5、Built-in EIS is only supported when the VTX REC resolution is set to 2.7K.
6、Cannot record while in standby mode.
7、Please use high-speed U3 or above Microsd card.
8、Commonly used with Avatar VTX coaxial cable, other lengths can be purchased for replacement.
9、Before powering on, please install all antennas to avoid damage to components.
10、When the standby mode is turned on, the power is limited to 10mW, before taking off, you need to unlock the flight control or turn off the standby mode.
11、If you use it with other 5.8GHz devices at the same time, please choose a different channel.

VTX Specification

Model	Moonlight Kit
Firmware name	AvatarMoonlight_Sky_X.X.X
Communication Frequency	5.725~5.850 GHz
Transmitter Power (EIRP)	FCC: <30dBm, CE: <14dBm; SRRC: <20dBm, MIC: <25dBm
I/O Interface	JST1.0*4(power cable), JST1.0*5(USB) microSD Card Slot, IPEX-1
Sensor	Starlight sensor
FOV	90in 160°
Aperture	F1.6
Shutter	Rolling shutter
ISO	100~25600
Recording resolution	4K@30/60fps; 2.7K@30/60fps; 1080p@100/60fps; 720p@960fps
Max Mbps	150Mbps
Video format	MP4 (H.264)
3D DNR	Support
Gyro flow	Support
Built-in EIS	Support
Wide Power input	7.4V~25.2V
Power consumption	12V/81.4A, 8V/82.2A
Memory card type	US microSD, Max 256G
camera size	19.8mm×19mm×24mm
VTX size	15.3mm×34.5mm×34.5mm
VTX installation hole distance	20×20mm/25×25mm (M2)
Weight	35.5g (Antenna not included)
Latency	Average delay: 22ms
Latency	Average delay: 22ms
Antenna	2 (IPEX)

VTX Antenna

Model	Avatar V2 antenna
Polarization	LHCP
Frequency range	5600MHz~6000MHz
Average Gain	1.8dBi
VSWR	≤1.5
Interface	IPEX-1
Dimension	R15 X 45mm （without cable)
Weight	2g

CADDXFPV Support
email: support@caddxfpv.com
This content is subject to change.Download the latest version from https://www.caddxfpv.com

[Caddx Avatar Moonlight Kit FPV System Manual]

Comprehensive user manual for the Caddx Avatar Moonlight Kit, a digital FPV system. This guide provides detailed information on setup, operation, specifications, and troubleshooting for FPV enthusiasts. Supports English and Chinese languages.

 Software interface / Main interface-1 / Menu Channel-2 / Menu Settings-3 / Menu Playback-4 / Specifications	[Caddx Avatar HD Goggles X Software Interface and Specifications Guide](#) Comprehensive guide to the Caddx Avatar HD Goggles X software interface, detailing main interface elements, channel selection logic, comprehensive settings (camera, display, recording, device), playback features, and technical specifications. Includes details on voltage monitoring, bit rate, latency, transmission range, and Wi-Fi capabilities.
 DIGITAL CAMERAS / Quick Start Guide / 快速入门指南 / Polar cam / Nebula pro cam / Nebula nano cam / Nebula micro cam / V1.2	[Caddx Digital Cameras Quick Start Guide: Polar, Nebula Pro, Nano, and Micro](#) A quick start guide for Caddx digital cameras including Polar cam, Nebula pro cam, Nebula nano cam, and Nebula micro cam. Covers introduction, menu board setup, and camera parameters.

Caddx Gazer

Quick Start Guide

V1.0

■ Product Introduction

The main features of the Caddx Gazer full-color night vision analog camera are as follows:

● Ultra-Low Light Full-Color Night Vision
Still provides color images in extremely dark environments, breaking through the limitations of nighttime.

● Detachable Filter
The filter can be freely removed or attached, preserving image quality during the day and enhancing brightness at night, suitable for all-weather use.

● AI Image Enhancement
Intelligent processing for day & night, maintaining clarity and high-color reproduction.

● Adjustable Zoom Function
Supports 3x magnification with stable image quality.

■ Installation Direction

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

Caddx Gazer Camera

■ Control Mode

Zoom Function:
Use one FC solder pad to output a PWM signal for control (use a knob switch for control). The FC outputs a PWM signal to perform zoom operations.
For example, when the PWM signal duty cycle is 100%, the image effect is 1x zoom; when the PWM signal duty cycle is 200%, the image effect is 3x zoom.

Filter Switching:
Use one FC solder pad with a TX-defined IO to trigger the switch. This allows direct switching from high magnification to 1x, and restores the zoom focus when turned off.
Day/Night Mode Switching Function:
Use one FC solder pad with a TX-defined IO to trigger the day/night mode switch each time. (Day mode requires the use of a filter; while night mode does not require a filter.)

■ Connection

Power / CVBS Connection:
1.VIN: Connect to the VIN of 5V
2.GND: Connect to the GND
3.CVBS: Connect to the FC CAM interface

Control Line Connection:
1. GND: Connect to the GND
2. CAS: Zoom main switch
3. FIL: Filter switch for 3x zoom control
4. SET: Input 5V signal for controlling the day/night mode switch

■ Debugging Procedure

*The following is a method to define solder pad definitions can be configured as needed.
The control lines are soldered as follows:
1.SET: Connect to flight controller TX
2.CAS: Connect to flight controller RX
3.FIL: Connect to flight controller TX6
4.GND: Connect to the GND

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 Encryption Operation: In the text box, input the following commands one by one and press Enter to execute:
resource MOTOR 7 none" and press Enter
resource SERIAL_TX 1 none" and press Enter
resource SERIAL_TX 6 none" and press Enter to undefine.
2.Configuration Definition Operation: In the text box, input the following commands one by one and press Enter to execute:
resource MOTOR 7 B06" and press Enter
resource PPM 1 B06" and press Enter
resource PPM2 C08" and press Enter to configure.
After completing the configuration, input "save" in the text box and press Enter to save, as shown in the image below.

1.Release Encryption Operation 2. Configuration Definition Operation 3. Save

Bit Channel Configuration:
In the BetaFlight program, select the "Modes" option from the menu bar. Enter "ARM" and click to add debugging 5. If Channel 5 is set to a 2-position switch, select the "AUX 1" channel. Then find "LEVEL" and click to start debugging 6.If Channel 5 is set to a 3-position switch, select the "AUX 5" channel, 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", as shown in the image below.

3.In the BetaFlight program, select the "Servos" option from the menu bar. If the remote control channel 5 is set to a rotary switch, check the box for "Servo 1," and enable the "CT" remote control channel 5 to configure the set up, as shown in the image below.

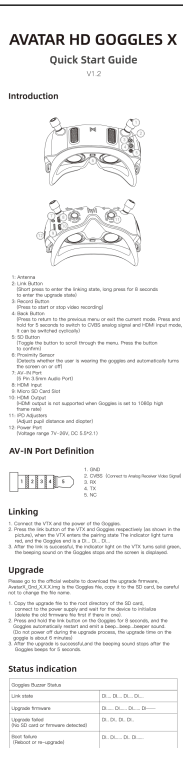
■ Specifications

Model	Caddx Gazer
Image sensor	1/2.8 inch
Resolution	1920x1080 (2MP)
Horizontal resolution	1200TVL
Focal length	2.09MM
Aperture	F1.0
FOV	131.6°
Filter	Manually removable
Output format	CVBS
Frame rate	60fps
Magnification	3x (zoomed in by FC)
Image quality	30% (switched by FC) It is recommended to install the filter and use it mode during the day, and remove the filter and use it mode at night.
Aspect ratio	4:3
Video interface	1.4Pin
Working voltage	5V
Typical Power Consumption	1.6W
Operating temperature	-20 ℃ -60 ℃
Dimensions	Camera: 20x20x28.3mm/m W Box: 35x35x60mm

CADDXFPV Support
Email：support@caddxfpv.com

Caddx Gazer Quick Start Guide - Full-Color Night Vision Analog Camera

Quick start guide for the Caddx Gazer analog camera, featuring ultra-low light full-color night vision, detachable filter, AI image enhancement, and adjustable 3x zoom. Includes installation, control mode, connection, debugging, and specifications.



AVATAR HD GOGGLES X

Quick Start Guide

V1.2

Introduction

1. Antenna
2. Link Button
[Short press to enter the linking state, long press for 8 seconds to enter the upgrade state]
3. Record Button
[Press to start or stop video recording]
4. Back Button
[Short press to return to the previous menu or exit the current mode. Press and hold for 5 seconds to switch to CVBS analog signal and HDMI input mode, it can be switched cyclically]
5. SD Button
[Toggle the button to scroll through the menu. Press the button to confirm]
6. Thumbscrew
7. Proximity Sensor
[Detects whether the user is wearing the goggles and automatically turns the screen on or off]
8. AV-IN Port
[5 Pin 3.5mm Audio Port]
9. HDMI Input
10. Micro SD Card Slot
11. HDMI Output
[Note: HDMI output is not supported when Goggles is set to 1080p high frame rate]
12. IPD Adjusters
[Adjust pupil distance and diopter]
13. Power Port
[Voltage range 7V~26V, DC 5.5*2.1]

AV-IN Port Definition

1. GND
2. CVBS [Connect to Analog Receiver Video Signal]
3. RX
4. TX
5. NC

Linking

1. Connect the VTX and the power of the Goggles.
2. Press the Link button of the VTX and Goggles respectively (as shown in the picture), when the VTX enters the pairing state The indicator light turns red, and the Goggles end is a Di... Di... Di.....
3. After the link is successful, the indicator light on the VTX turns solid green, the beeping sound on the Goggles stops and the screen is displayed.

Upgrade

Please go to the official website to download the upgrade firmware, Avatar5_Dvd_X.X.X.img is the Goggles file, copy it to the SD card, be careful not to change the file name.

1. Copy the upgrade file to the root directory of the SD card, connect to the power supply and wait for the device to initialize and enter the main screen (Di... Di... Di.....)
2. Press and hold the link button on the Goggles for 8 seconds, and the Goggles automatically restart and emit a beep...beep...beeper sound (Do not power off during the upgrade process, the upgrade time on the goggle is about 6 minutes)
3. After the upgrade is successful,and the beeping sound stops after the Goggles beeps for 5 seconds.

Status indication

Goggles Buzzer Status	
Link state	Di..., Di..., Di..., Di...
Upgrade firmware	Di....., Di....., Di....., Di------
Upgrade failed (No SD card or firmware detected)	Di., Di., Di., Di..
Boot failure (Reboot or re-upgrade)	Di., Di....., Di., Di.....

Operating channel

Central frequency(MHz)	Channel1	Channel2	Channel3	Channel4	Channel5	Channel6	Channel7	Channel8
FCC	5660	5695	5735	5770	5805	5878	5914	5839
CE/SRRC	5735	5770	5805	-	-	-	-	5839
MIC	5665	5705	-	-	-	-	-	5750

Make sure you fully understand and abide by local laws and regulations before using this product. An amateur radio license may be needed in FCC regions when using channels 1,2,6or 7, as they are amateur frequency bands. Users who use the amateur frequency bands with a modified or cracked version or without a license may be punished for breaking local laws or regulations.

Installation of third-party antennas

1、 Turn counterclockwise to remove the antenna.

2、 Turn counterclockwise to remove the nut and remove the circular washer.

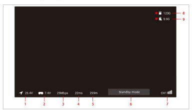
3、 Turn mounting nut clockwise. Install a third-party antenna.

Precautions

1. This is a sophisticated product. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. It must be operated with caution and common sense and requires some basic mechanical knowledge.
2. Before powering on, please install all antennas to avoid damage to components.
3. When using HDMI output, Please make sure the monitor supports the set resolution and frame rate, otherwise it will cause abnormal display.
4. HDMI output is not supported when goggles are set to 1080p high frame rate
5. The transmit power of VTX and Goggles is only 10mW when the standby mode is on.
6. There are up to eight channels for the goggles depending on the region (FCC: eight, CE/SRRC: four, MIC: three). Each channel has a bandwidth of 20 MHz. The public channel is 8, which is the default channel when the equipment is powered on. The channel can be changed manually to avoid interference from other devices.
7. It is recommended to upgrade VTX and Goggles to the latest firmware before first use.

Software interface

Main interface-1



1-VTX input voltage:
Detect VTX voltage, intelligently identify the voltage of 2, 3, 4, 6 string LiPo batteries, alarm when a single battery is lower than 3.5V, and alarm in red font when the voltage is too low.

2-Goggles input voltage:
Detect Goggles low battery alarm, intelligently identify the voltage of 2, 3, 4, 6 string LiPo batteries, alarm when a single battery is lower than 3.5V, red font and buzzer alarm when the voltage is too low.

3-Real-time bit rate
Display real-time transmission code rate, two display modes of 25.0Mbps and 50.0Mbps.

4-Time delay:
Displays the total delay from the transmission of images captured by the VTX camera to the ground end.

5-Ranging mode:
The function of calculating the transmission distance from Goggles to VTX according to the wireless transmission delay, the signal is interfered will lead to error amplification。

6-Status prompt:
The text prompts information that needs attention in the current state.

7-Current channel:
Display the current setting channel, the signal grid has 5 states, 4 grids, 3 grids, 2 grids, 1 grid, and blank.

8-Goggles SD card status:
Display the status and remaining capacity of the Goggles SD card. When recording, the red circle flashes to prompt, the status of the SD card not detected is displayed as NO SD, and the status of the memory is full is displayed as –.

9-VTX storage status:
Display the status and remaining capacity of the VTX storage, When recording, the red circle flashes to prompt, the status of the storage not detected is displayed as NO SD, and the status of the memory is full is displayed as –.

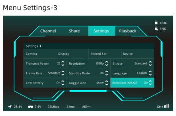
Menu Channel-2

1、Display the interference situation of each channel. The signal strength is divided into 4 grids, 3 grids, 2 grids, 1 grid, and a space. The signal display space is occupied and cannot be selected. The white stroke is the selection box. Press the middle button to confirm the current channel and highlight it.

2、 Channel working logic: When switching between standard bit rate and high bit rate, the current channel will be set to CHP, and the channel needs to be reselected. CHP is a public channel, which is easy to be interfered and is not recommended for flight work; Auto is a channel that automatically refreshes the signal interference situation of all channels; Refresh is the channel of manual refresh.

3、Channel display of each country: FCC standard displays 8 channels (CH1/2/3/4/5/6/7/P), CE/SRRC standard displays 4 channels (CH1/2/3/P), MIC standard displays 3 channels (CH1/2/P). Only in FCC mode, the high bit rate mode can be turned on, and the 8 channels become 4 channels CH1, CH2, CH3, CHP.

Menu Settings-3



1-Camera:
The adjustable contents of the camera are scene preset, EV value, saturation, sharpness, white balance, rotate, ratio, 3D DNR, Shutter, and Max ISOsettings.

2-Display:
Display adjustable content is Debug, brightness, focalization mode, custom OSD, OSD position, font upgrade, custom font, viewfinder, viewfinder edit settings.

3-Record set:
The recording can be adjusted as VTX REC resolution, REC device, takeoff REC, REC loop, format SD card, format VTX, Built-in EIS, REC Time, REC Format, Color, Saturation, Sharpness.

4-Device:
The adjustable contents of the device are buzzer volume, Ranging mode, Weak signal, Reset all, Device information, Instruction, and Switch mode.

5-Transmit Power:
The default transmit power can be 25mW, 200mW, 500mW, 700mW.

6-Resolution:
The resolution can choose 720P and 1080P.

7-Bitrate:
Standard bit rate and high bit rate can be selected to obtain different image quality, and high bit rate can only be enabled in FCC mode.

8-Frame Rate:
Standard frame rate and high frame rate can be selected to obtain different time-lapse experiences.

9-Standby Mode:
When in standby mode, the transmission power of VTX terminal and Goggles terminal is 10dbm, and the current set transmission power will be output only after exiting standby mode or turning off the standby mode switch. Turning on the standby mode requires the air unit serial port to be correctly connected to the flight controller. When the goggles receive the drone's unlock signal, it will automatically exit the standby mode. If there is no flight controller support, you can choose to turn off this function.

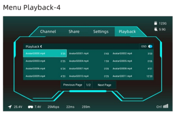
10-Language:
Language switching English/中文.

11-Low Battery:
Detect Goggles low battery alarm, intelligently identify the voltage of 2, 3, 4, 6 string LiPo batteries, alarm when a single battery is lower than 3.5V, red font and buzzer alarm when the voltage is too low.

12-Goggle icon:
You can choose to display or hide the icons on the main menu interface.

13-Broadcast:
After turning on the broadcast switch, others can receive your video transmission through the Avatar system, The 6 characters in brackets are the unique identification number of VTX.

Menu Playback-4



1、The OSD switch can be turned on or off. When it is turned on, the flight control OSD information (if any) and the flight information of the main interface will be superimposed on the playing video interface. When the selection box stays in the video list, press and hold the VRX confirmation key to open the multi-selection function, and the menu box will display function settings (delete, select all) , cancel), press the return key again to exit the multi-selection mode.

2、On the playback interface, click the middle button to pause/play, and the left and right arrow keys to adjust rewind/fast forward

Specifications

Model	Avatar HD Goggles X
Communication Frequency	5.725–5.850GHz
Transmitter Power(EIRP)	FCC:<30dBm; CE:<14dBm; SRRC:<20dBm; MIC:<25dBm
I/O Interface	HDMI Out, HDMI Input, 5Pin 3.5mm Audio Port, DC5.5*2.1mm Port, Micro SD Card Slot,
Transmission Resolution	1080p100fps, 1080p60fps, 720p100fps, 720p60fps
Code Rate	Max 50 Mbps
Min. Latency	Average 22ms
Average Gain	1.5dBi
Polarization	LHCP
Transmission Distance	>4km
Channel	8
Screen Resolution	1920*1080/100Hz
Screen Material	OLED
IPD Mechanical Range	57mm–72mm
Adjustable Focus Range	+2.0 to −6.0 Diopter
FOV	50°
Power Input	7V–26V(2S–6S)
SD card	Support 256G
System	Avatar HD system
WIFI	
Protocol	IEEE 802.11b/g/n/ax
Communication Frequency	2.4GHz
Transmitter Power(EIRP)	<20dBm
Bluetooth	
Protocol	BLE 5.2
Transmitter Power(EIRP)	<8dBm

CADDXFPV SUPPORT
email: support@caddxfpv.com

Caddx Avatar HD Goggles X Quick Start Guide

A comprehensive quick start guide for the Caddx Avatar HD Goggles X, covering setup, linking, firmware upgrades, status indications, software interface, playback, and specifications.