

## CADDXFPV Walksnail Avatar HD FPV Goggles X

# CADDXFPV Walksnail Avatar HD FPV Goggles X Instruction Manual

Model: Walksnail Avatar HD FPV Goggles X

## INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your CADDXFPV Walksnail Avatar HD FPV Goggles X. Please read this manual thoroughly before using the product to ensure safe and optimal performance.

The Walksnail Avatar HD FPV Goggles X offers an immersive digital FPV experience with high-definition displays and advanced features. When paired with the Moonlight Kit, it enables 4K video recording and superior low-light performance, making it suitable for various FPV applications including drones, RC cars, and fixed-wing aircraft.

## PRODUCT OVERVIEW

The CADDXFPV Walksnail Avatar HD FPV Goggles X is designed for an ultra-clear and immersive flight experience. Key components include the FPV Goggles X unit and the Moonlight Kit.



Figure 1: CADDXFPV Walksnail Avatar HD FPV Goggles X and Moonlight Kit. This image shows the FPV Goggles X unit in the upper part and the Moonlight Kit, consisting of a camera and a video transmitter (VTX) module with antennas, in the lower part.

## Key Features:

- **Ultra-HD FPV Experience:** Dual 1920×1080 HD displays with 50° FOV for vivid colors and immersive visuals.
- **4K Recording Capability:** The Moonlight Kit supports 4K/2.7K/1080P video recording at up to 150Mbps bitrate.
- **Superior Low-Light Performance:** Starlight sensor in the Moonlight Kit captures detailed footage in challenging light conditions.
- **Built-In Head Tracking:** Real-time head tracking for intuitive camera control.
- **Advanced Stabilization:** EIS, gyro support, and silicone vibration dampening for smooth video.
- **Smart Cooling System:** Intelligent fans prevent fogging and ensure optimal performance.
- **Adjustable Optics:** Adjustable IPD (Interpupillary Distance) and diopters for personalized comfort.
- **Universal Compatibility:** Seamless integration within the Walksnail digital FPV system, supporting wide voltage input (7.4V–25.2V) and dual-antenna transmission.

## Components Included:

- FPV Goggles X
- Moonlight Kit (includes camera, VTX module, and antennas)
- Necessary cables and accessories

## SETUP

### 1. Unboxing and Initial Inspection

Carefully remove all components from the packaging. Inspect the FPV Goggles X and Moonlight Kit for any signs of damage. Ensure all listed components are present.

## 2. Charging the Goggles

Connect the provided charging cable to the FPV Goggles X and a compatible power source. The charging indicator will show the charging status. Ensure the goggles are fully charged before first use.

## 3. Attaching Antennas to Goggles

Screw the provided antennas onto the designated SMA/RP-SMA connectors on the FPV Goggles X. Ensure they are securely tightened but do not overtighten.



Figure 2: Front view of the FPV Goggles X, showing the antenna ports and control buttons.

## 4. Moonlight Kit Installation (if applicable)

The Moonlight Kit consists of a camera and a VTX module. Connect the camera to the VTX module. Install the Moonlight Kit onto your drone, RC car, or fixed-wing aircraft according to its specific mounting requirements. Ensure proper power connection to the Moonlight Kit (7.4V–25.2V input).



Figure 3: The Moonlight Kit, showing the camera, video transmitter (VTX) module, and two antennas.

## 5. Initial Power On and Pairing

Power on the FPV Goggles X. Power on your drone/aircraft with the Moonlight Kit installed. Follow the on-screen prompts or refer to the Walksnail system pairing guide to establish a connection between the goggles and the Moonlight Kit. This typically involves pressing a bind button on both devices.

## OPERATING INSTRUCTIONS

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### 1. Adjusting the Goggles for Comfort and Clarity

Once powered on, adjust the IPD (Interpupillary Distance) sliders on the goggles until the image appears as a single, clear picture. Use the diopter adjustment knobs to fine-tune focus for your vision. Ensure the head strap is comfortable and secure.

# 1080p Ultra-Wide Screen

Ultra-Clear, Immersive Experience



**1920x1080**

Screen Resolution



**100Hz**

Max Screen Refresh Rate

Figure 4: The 1080p ultra-wide screen display of the FPV Goggles X, featuring 1920x1080 resolution and 100Hz refresh rate for a clear and immersive experience.

## 2. Using Head Tracking

The FPV Goggles X features built-in head tracking. When enabled, moving your head will control the camera's pan and tilt on compatible systems. This provides a more immersive and intuitive control experience.



# Built-in Head Tracking

Turn Your Head, Control Your View



Figure 5: Illustration of the built-in head tracking feature, showing how head movements (left, forward, right) translate to camera control.

## 3. DVR Recording

The goggles support DVR recording. Insert a compatible microSD card into the SD card slot. Use the dedicated DVR button to start and stop recordings. The playback button allows you to review recorded footage directly on the goggles.

# One-Touch DVR Recording

Easy to use | Clear to see | Ready to record



Figure 6: Diagram highlighting the DVR and Playback buttons on the FPV Goggles X for one-touch recording and review of flight footage.

## 4. Connectivity and External Devices

The FPV Goggles X offers various ports for connectivity:

- **HDMI IN Port:** Connect external video sources (e.g., game consoles, PCs, smartphones, tablets, televisions) to use the goggles as a display.
- **HDMI OUT Port:** Output the goggles' display to an external monitor for spectator viewing.
- **AV IN Interface:** For analog video input.
- **SD Card Slot:** For DVR recording and firmware updates.

# Universal Interface Compatibility

AV IN Interface

SD Card Slot

HDMI OUT Port

HDMI IN Port

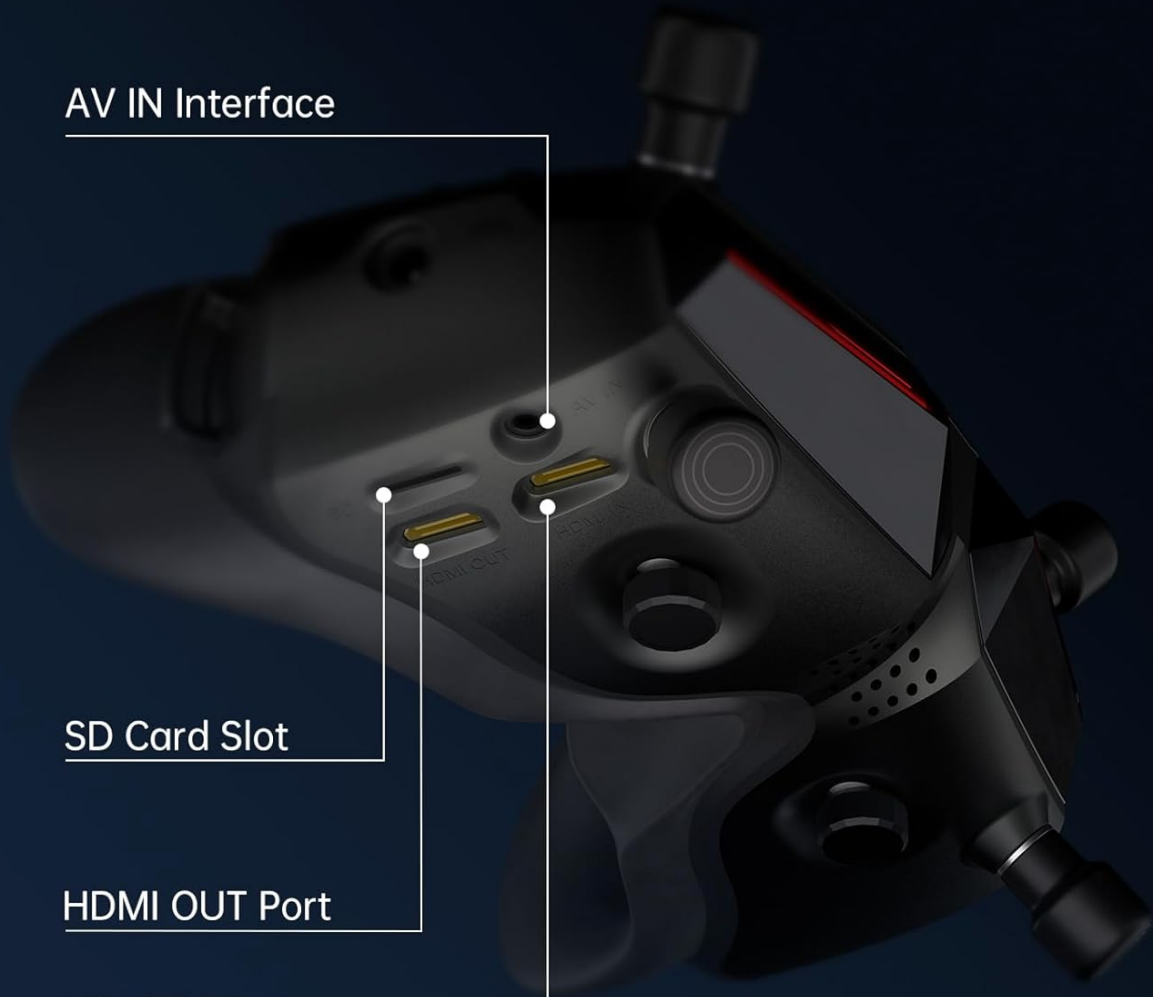


Figure 7: Detailed view of the universal interface ports on the FPV Goggles X, including AV In, SD Card Slot, HDMI OUT, and HDMI IN ports.

## 5. Signal Transmission and Latency

The Walksnail system is designed for ultra-low latency HD transmission, providing a responsive and clear video feed. Dual antennas on the Moonlight Kit enhance signal strength and range.



# Ultra-Low Latency HD Transmission



**22ms**

**Ultra-Low  
Latency**



**Up to 10km**

**Max Video  
Transmission Distance  
(Depends on the flight environment)**



**50 Mbps**

**Max Video  
Transmission Bitrate**

Figure 8: Visual representation of ultra-low latency HD transmission, highlighting 22ms latency, up to 10km max video transmission distance, and 50 Mbps max video transmission bitrate.

# Long-Range, Stable Signal

Dual antennas boost signal strength in flight, delivering stable long-range video transmission to your FPV goggles.

🕒 22ms Latency

📶 4KM Range

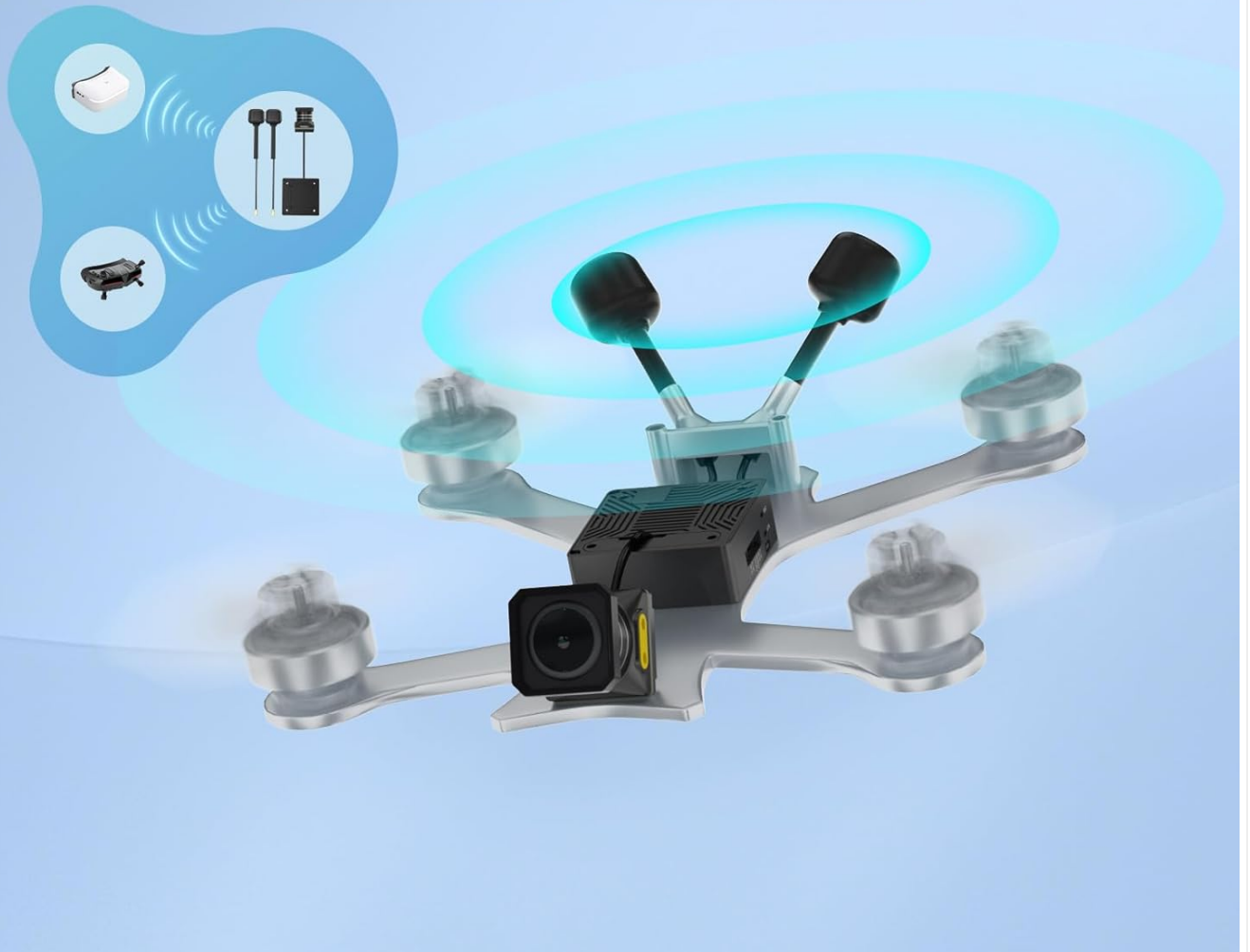


Figure 9: Diagram illustrating the long-range, stable signal transmission capabilities, showing dual antennas boosting signal strength for stable video transmission to the FPV goggles.

## MAINTENANCE

### 1. Cleaning

- **Goggle Lenses:** Use a soft, lint-free cloth specifically designed for optical lenses. Do not use abrasive materials or harsh chemicals.
- **Exterior:** Wipe the exterior surfaces of the goggles and Moonlight Kit with a clean, damp cloth. Avoid getting moisture into ports or vents.

### 2. Storage

Store the goggles and Moonlight Kit in a cool, dry place away from direct sunlight and extreme temperatures. Use the original packaging or a protective case to prevent dust accumulation and physical damage.

### 3. Firmware Updates

Periodically check the CADDXFPV official website for firmware updates. Keeping your devices updated ensures optimal performance, new features, and bug fixes. Follow the instructions provided with the firmware update files carefully.

### TROUBLESHOOTING

Problem	Possible Cause	Solution
No image in goggles	Goggles not powered on. Moonlight Kit not powered on. Not paired correctly. Antennas not connected.	Ensure goggles are charged and powered on. Verify Moonlight Kit is powered and connected to drone. Re-initiate pairing process. Check antenna connections on both goggles and Moonlight Kit.
Fuzzy or distorted image	Incorrect IPD/diopter settings. Weak signal. Interference.	Adjust IPD and diopter settings. Ensure line of sight, reduce distance to VTX. Change VTX channel if possible, avoid areas with strong Wi-Fi/RF interference.
DVR recording not working	No SD card inserted. SD card full or corrupted. Incorrect SD card format.	Insert a compatible microSD card. Format the SD card (refer to goggles menu) or use a new one. Ensure SD card is formatted to FAT32.
Goggles overheating	Prolonged use in hot environment. Cooling fans obstructed.	Allow goggles to cool down. Ensure cooling vents are clear of obstructions. The intelligent cooling fans should activate automatically.

### SPECIFICATIONS

Feature	Detail
Model	Walksnail Avatar HD FPV Goggles X
Display Resolution	Dual 1920×1080 HD
Field of View (FOV)	50 Degrees
Video Recording (Moonlight Kit)	4K/2.7K/1080P up to 150Mbps bitrate
Low-Light Sensor	Starlight Sensor (Moonlight Kit)
Head Tracking	Built-in, Real-time
Stabilization	EIS, Gyro Support, Silicone Vibration Dampening (Moonlight Kit)
Cooling	Intelligent Cooling Fans
Adjustments	Adjustable IPD and Diopters
Connectivity	HDMI IN, HDMI OUT, AV IN, SD Card Slot

Feature	Detail
Input Voltage	7.4V–25.2V (Goggles and Moonlight Kit)
Compatible Devices	Game Console, Personal Computer, Smartphone, Tablet, Television (via HDMI IN)
Specific Uses	FPV Flying/Racing

## WARRANTY AND SUPPORT

### Warranty Information

The CADDXFPV Walksnail Avatar HD FPV Goggles X comes with a standard manufacturer's warranty. Please refer to the warranty card included in your product packaging or visit the official CADDXFPV website for detailed warranty terms and conditions. Keep your proof of purchase for warranty claims.

### Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact CADDXFPV customer support through their official website or the contact information provided with your product. You can also visit the [CADDXFPV Store on Amazon](#) for additional resources and product information.

## SAFETY INFORMATION

- Always operate FPV equipment responsibly and in accordance with local laws and regulations.
- Do not operate FPV equipment in areas where it may interfere with other electronic devices or critical systems.
- Ensure proper ventilation for the goggles during use to prevent overheating.
- Avoid direct exposure of the goggle lenses to sunlight, as this can damage the internal displays.
- Keep the product away from water and moisture.
- Do not attempt to disassemble or modify the product, as this will void the warranty and may cause damage.
- This product is intended for adult use.

