

CADDXFPV Ascent Lite Kit

CADDXFPV Walksnail Ascent Lite VTX Kit - User Manual

INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of your CADDXFPV Walksnail Ascent Lite VTX Kit. Please read this manual thoroughly before using the product to ensure proper setup and optimal performance. This kit is designed for FPV drone and RC hobbyists seeking a high-definition digital video transmission system.

WHAT'S IN THE BOX

Verify that all components listed below are included in your package:

- Ascent Lite VTX
- Lite Antenna
- VTX Upgrade Cable
- Lite VTX Power Cable
- Screws & Gasket
- User Manual (this document)

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Figure 1: Included Components of the Ascent Lite VTX Kit.

PRODUCT OVERVIEW

The CADDXFPV Walksnail Ascent Lite VTX Kit is a digital video transmission system designed for FPV applications, offering high-quality video and reliable performance.

Key Features:

- **HD 1080P/60FPS Video:** Captures sharp, detailed footage with a 1/1.8-inch sensor.
- **147° Ultra-Wide Field of View (FOV):** Provides expansive coverage for immersive FPV experiences.
- **Night Vision Capability:** Enhanced visibility in low-light conditions.
- **Stable 3KM Digital Video Transmission:** Ensures consistent, long-range signal reliability.
- **35ms Ultra-Low Latency:** Delivers fast, responsive visuals for precise control.
- **Compact and Lightweight Design:** Weighs only 6g, minimizing impact on drone performance.
- **Wide Compatibility:** Integrates with F4/F7/H7 flight controllers and firmware like Betaflight, INAV, and ArduPilot via a 4-pin UART connection.

Experience Every Detail 1080P/60FPS

Crisp visuals and smooth motion for a truly immersive FPV view.

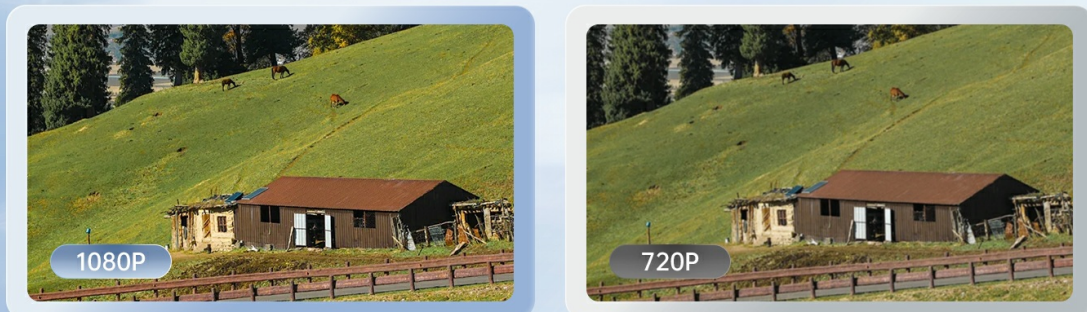


Figure 2: Wide 147° FOV and 1080P/60FPS HD Video Capture.



Figure 3: Enhanced Night Vision Performance.



Figure 4: 3km Range and 35ms Low Latency Transmission.

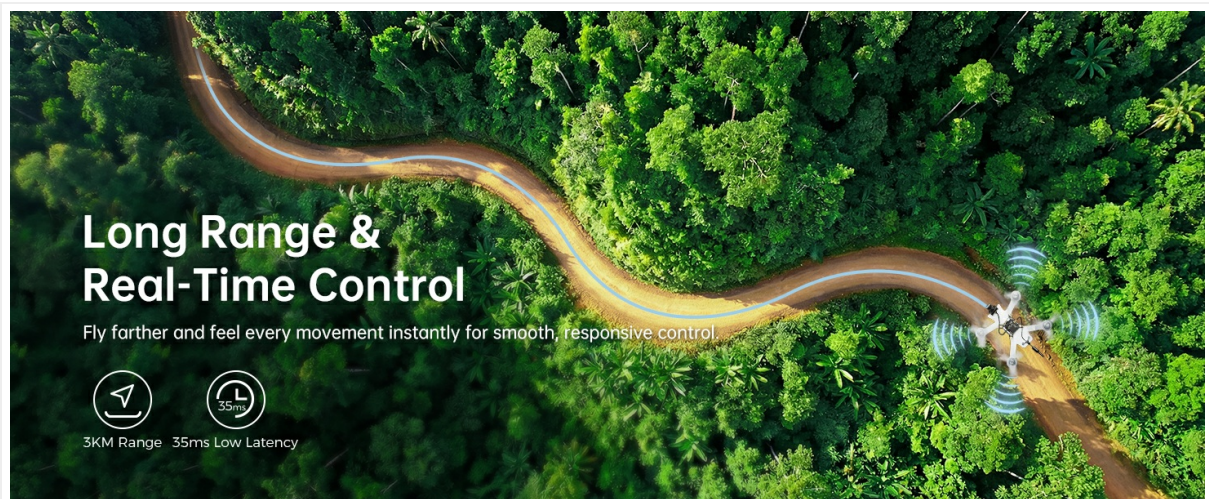


Figure 5: Ultra-Lightweight 6g Design.

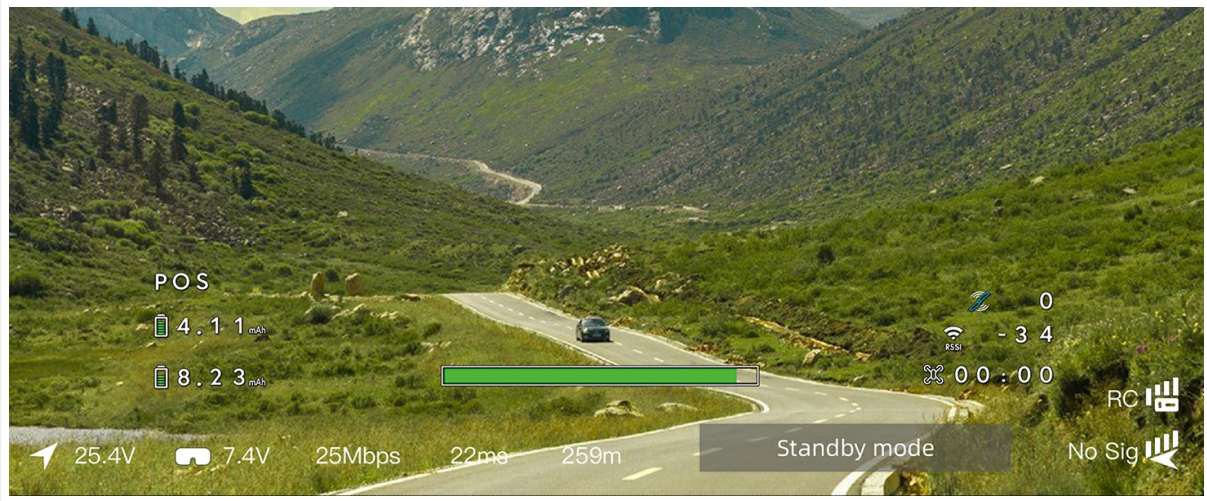


Figure 6: Versatile FPV Applications.

SETUP INSTRUCTIONS

1. Wiring the VTX

Connect the Ascent Lite VTX to your flight controller using the provided VTX Power Cable and VTX Upgrade Cable. Ensure correct polarity and pin assignments as shown in the wiring diagram below.

- **Power (3V~12.6V):** Connect to a suitable power source on your flight controller.
- **Power GND:** Connect to ground on your flight controller.
- **UART RX (Connects to Flight Controller TX):** For data communication.
- **UART TX (Connects to Flight Controller RX):** For data communication.
- **USB-DP, USB-DN, USB-GND, USB-5V:** For VTX upgrades and configuration via USB.



Figure 7: Ascent Lite VTX Wiring Diagram.

2. Antenna Installation

Securely attach the Lite Antenna to the VTX. Ensure the connection is firm to prevent signal loss during flight.

3. Mounting

Mount the VTX and camera securely on your FPV drone or RC vehicle using the provided screws and gasket. Ensure the camera has a clear line of sight and is protected from impacts.

OPERATING INSTRUCTIONS

1. Power On

After completing the wiring and mounting, connect the battery to your drone. The VTX will power on, and the indicator light will show its status.

2. Pairing with Goggles

To establish a video link, you need to pair the Ascent Lite VTX with compatible FPV goggles (e.g., Walksnail Ascent Goggles).

1. Connect the VTX and goggles to their respective power supplies.
2. Press the linking button on the VTX. The VTX indicator light will flash green, and a status icon will appear on the goggle screen.
3. Press the linking button on the goggles. The goggle indicator light will flash green.
4. Once pairing is successful, the VTX indicator turns solid green, and the goggle screen will display the video feed.

MAINTENANCE

To ensure the longevity and optimal performance of your Ascent Lite VTX Kit, follow these maintenance guidelines:

- **Cleaning:** Keep the VTX and camera lens clean from dust and debris. Use a soft, dry cloth for cleaning. Avoid harsh chemicals.
- **Inspections:** Regularly check all cable connections for wear or damage. Ensure the antenna is securely attached.
- **Firmware Updates:** Periodically check the CADDXFPV official website for firmware updates. Keeping your VTX firmware current can improve performance and add new features. Use the provided VTX Upgrade Cable for updates.
- **Storage:** Store the kit in a dry, cool environment away from direct sunlight and extreme temperatures when not in use.

TROUBLESHOOTING

If you encounter issues with your Ascent Lite VTX Kit, refer to the following common problems and solutions:

- **No Video Signal:**
 - Check all power connections to the VTX and goggles.
 - Ensure the VTX and goggles are properly paired.
 - Verify the antenna is securely connected to the VTX.
 - Confirm that the camera cable is correctly attached to the VTX.
- **Poor Video Quality/Interference:**
 - Check for physical obstructions between the VTX and goggles.
 - Ensure the antenna is not damaged or bent.
 - Avoid operating near strong electromagnetic interference sources.
 - Consider changing the channel if available and supported by your goggles.
- **VTX Not Powering On:**
 - Verify the power input voltage is within the specified range (3V~12.6V).

- Check for any short circuits or incorrect wiring.

SPECIFICATIONS

Feature	Detail
Brand	CADDFPV
Model Name	Ascent Lite Kit
Model Number	WN13-4S09B-1-US
Video Resolution	1080P/60FPS
Field of View (FOV)	147°
Sensor Size	1/1.8-inch
Latency	35ms
Transmission Range	Up to 3km
Item Weight	9.07 g (Total kit, VTX is 6g)
Item Dimensions (VTX)	0.93 x 0.93 x 0.59 inches (approx. 23.6 x 23.6 x 15 mm)
Enclosure Material	Plastic
Compatible Devices	Walksnail Ascent systems



Figure 8: Physical Dimensions of the Ascent Lite VTX Components.

COMPATIBILITY

The Ascent Lite Kit is designed for specific compatibility to ensure optimal performance:

- **Directly Compatible:** Walksnail Ascent Goggles, FPV Monitors (requires HDMI input).
- **System Compatibility:** Designed exclusively for use with Ascent systems.
- **Flight Controller Compatibility:** Integrates with F4/F7/H7 flight controllers and firmware such as Betaflight, INAV, and ArduPilot via a 4-pin UART connection.
- **Not Directly Compatible:** Avatar Goggles L. It does not directly support Avatar or other third-party

FPV systems, but can be used with them when paired with the Ascent VRX.

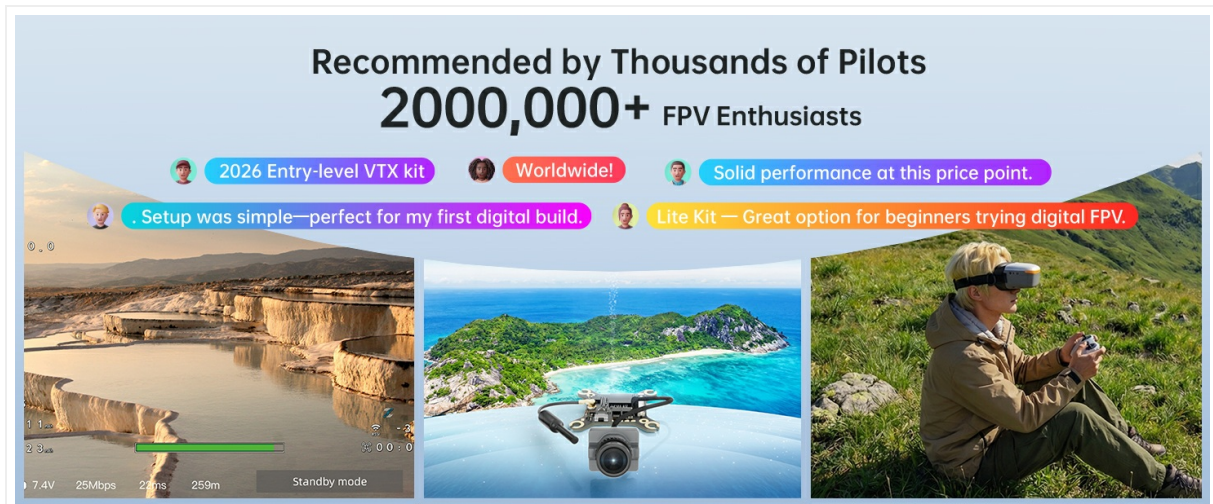


Figure 9: Ascent Lite VTX Kit Compatibility Overview.

WARRANTY AND SUPPORT

Warranty Information:

The CADDXFPV Walksnail Ascent Lite VTX Kit comes with a **1-Year Warranty** from the date of purchase. This warranty covers manufacturing defects under normal use. Please retain your proof of purchase for warranty claims.

Customer Support:

For technical assistance, troubleshooting, or warranty inquiries, please visit the official CADDXFPV website or contact their customer support. You can often find FAQs, firmware downloads, and contact information on their support pages.

Online Resources: [CADDXFPV Official Website](#)