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> Infinite DVR VTX 25mW/200mW/600mW/1000mW MMCX Transmitter Support OSD Configuring Upgraded Long Range Version

AKK Infinite DVR

Infinite DVR VTX Instruction Manual

Brand: AKK

PRODUCT OVERVIEW

The AKK Infinite DVR VTX is a versatile video transmitter with integrated Digital Video Recorder (DVR) functionality, designed for FPV (First Person View) applications. It supports multiple power output levels and OSD (On-Screen Display) configuration via Smart Audio. Its compact design allows for flexible mounting options within your drone or other RC models.

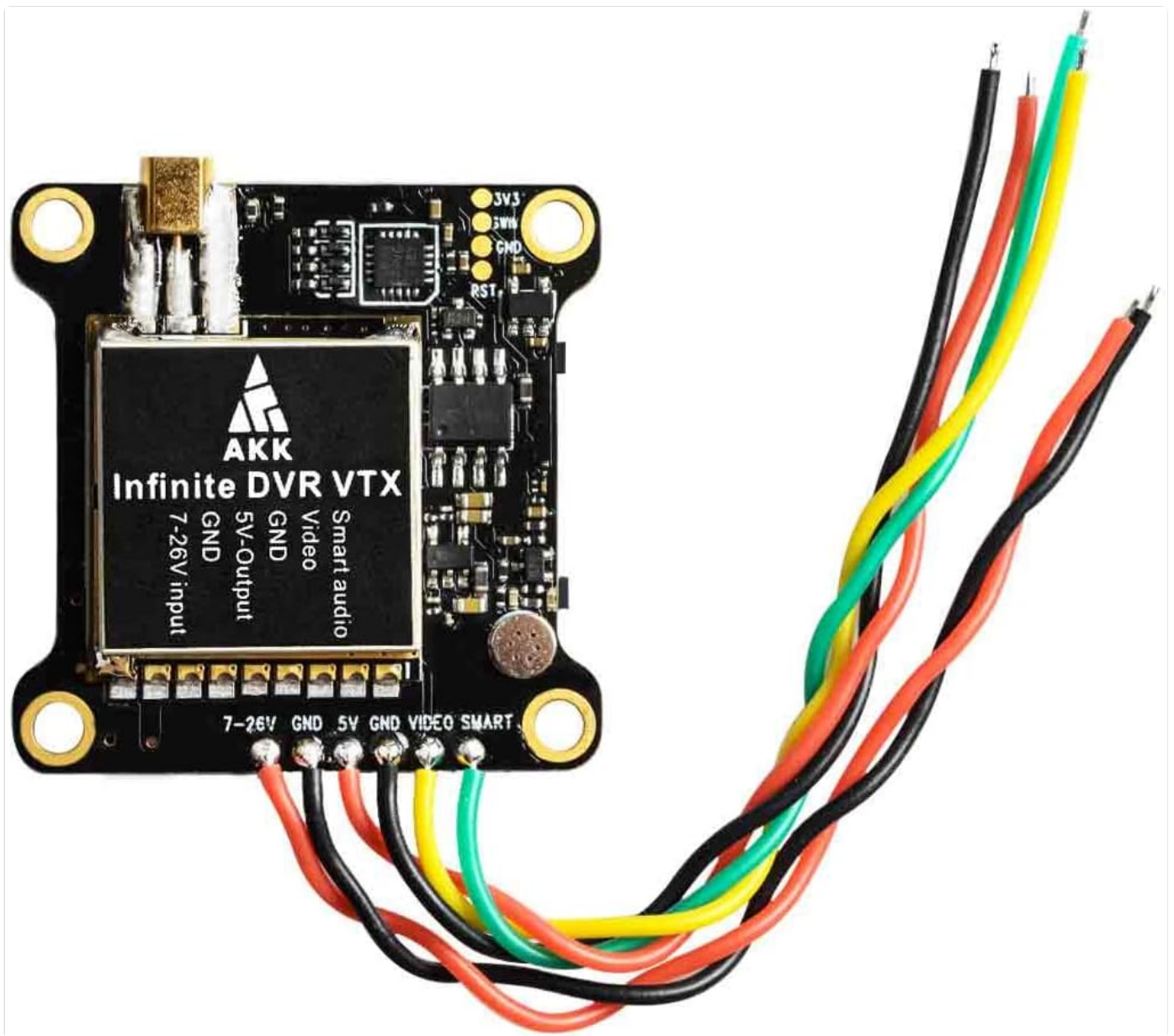


Figure 1: Front view of the AKK Infinite DVR VTX module with pre-soldered power and signal wires. This image highlights the compact size and the main chip with the 'Infinite DVR VTX' label.

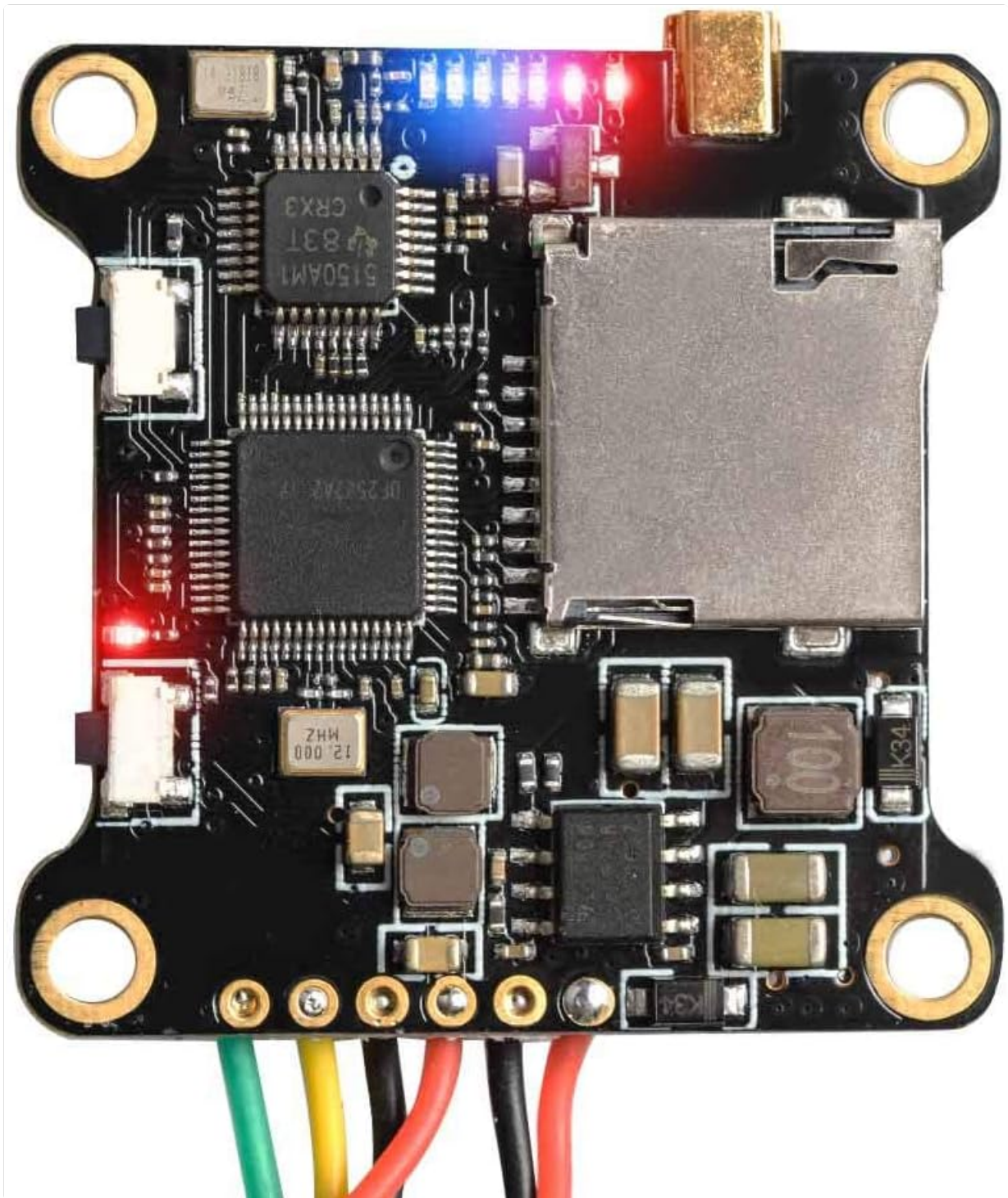


Figure 2: Back view of the AKK Infinite DVR VTX module. This view clearly shows the MicroSD card slot for DVR functionality and various electronic components.

KEY FEATURES

- **Power Output:** Switchable power output levels including 25mW, 200mW, 600mW, and 1000mW for varied range requirements.
- **Integrated DVR:** Records video at VGA (640x480) resolution at 30 frames per second with loop recording support. Max support for 32GB TF (MicroSD) cards.
- **Smart Audio Support:** Allows OSD configuration of VTX settings (power, channels) directly through your flight controller.
- **Audio Recording:** Features a built-in microphone for audio recording alongside video.
- **Input Voltage:** Wide input voltage range of 7V-26V (2S-6S LiPo compatible).
- **Camera Power Output:** Provides a stable 5V output for powering an FPV camera.

- **Antenna Connector:** Utilizes a robust MMCX antenna connector.
- **Compact Design:** Dimensions of 36x36mm with 30.5mm stackable mounting holes, weighing 8.8g (excluding antenna).
- **Solder Pads:** Features solder pads for secure cable connections.

PACKAGE CONTENTS

Upon opening the package, verify that all components are present:

- 1x AKK Infinite DVR VTX Module
- 1x Connection Cable (pre-soldered)
- 1x MMCX Antenna (pigtail adapter)
- 1x Product Manual (this document)

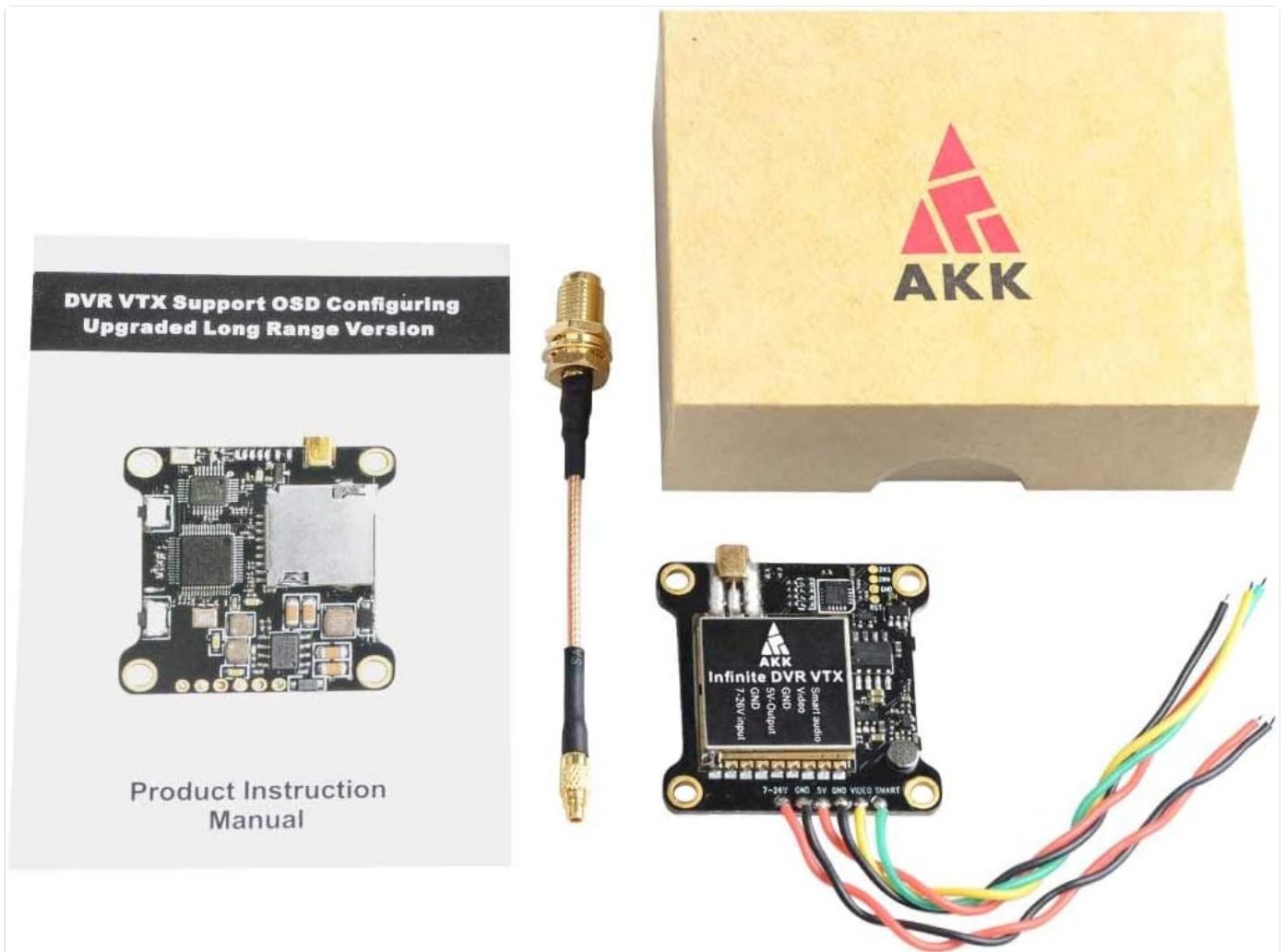


Figure 3: Contents of the AKK Infinite DVR VTX package, including the VTX module, connection cable, MMCX antenna, and product manual.

SETUP INSTRUCTIONS

1. Wiring Diagram

Refer to the following diagram for proper wiring connections. Ensure correct polarity to prevent damage to the VTX or connected components.

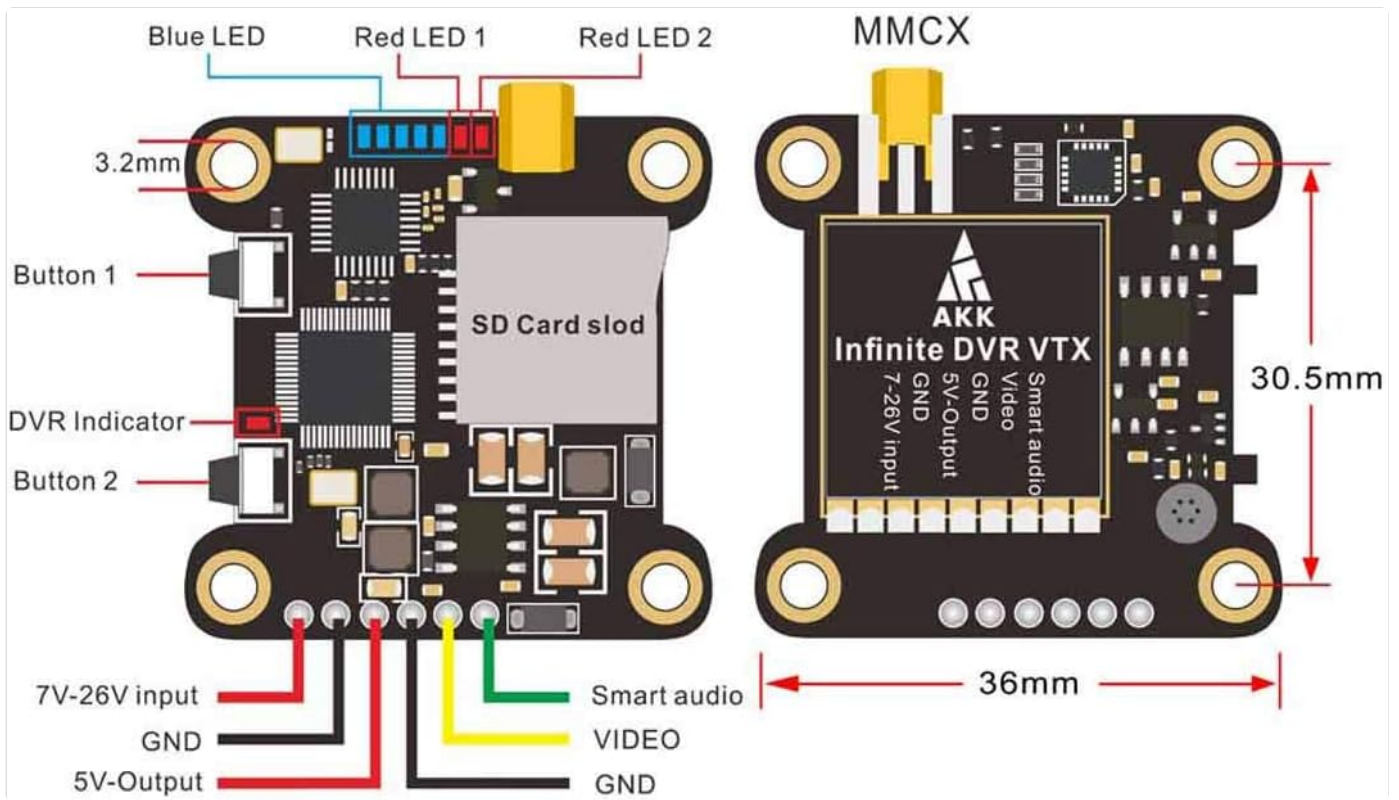


Figure 4: Detailed wiring diagram and physical dimensions of the AKK Infinite DVR VTX. This diagram shows the solder pads for 7-26V input, GND, 5V output, Video, and Smart Audio connections.

- **7V-26V Input:** Connect your main battery voltage (2S-6S LiPo) to these pads.
- **GND:** Connect to common ground.
- **5V Output:** Provides regulated 5V power for your FPV camera.
- **Video:** Connect to the video output of your FPV camera.
- **Smart Audio:** Connect to a UART TX pad on your flight controller for OSD control.

2. Antenna Connection

The VTX uses an MMCX connector. Carefully align and push the MMCX antenna pigtail onto the connector until it clicks into place. You can then attach your preferred 5.8GHz antenna (e.g., Pagoda, Stubby) to the SMA/RP-SMA end of the pigtail.

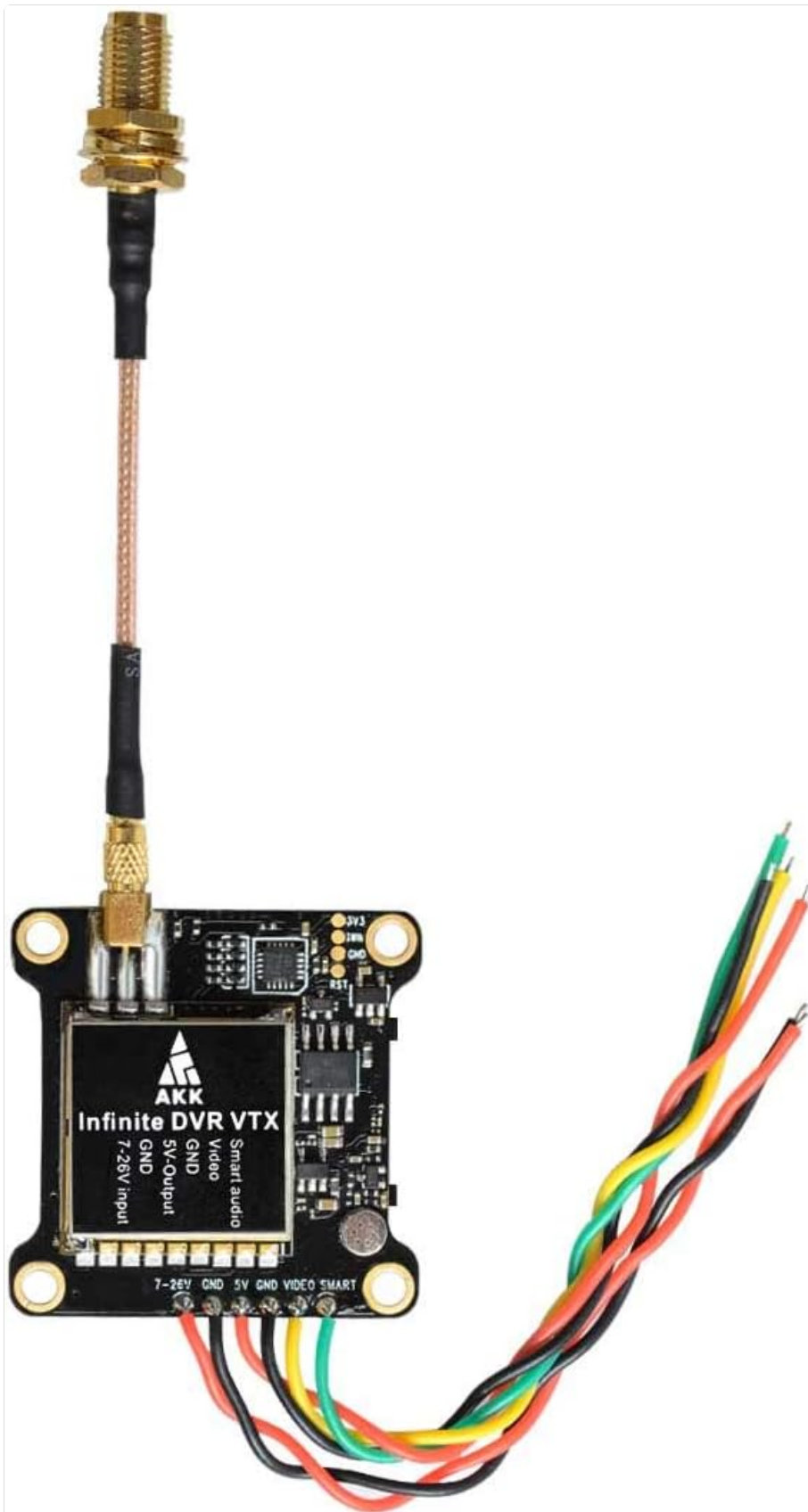


Figure 5: The AKK Infinite DVR VTX with the included MMCX antenna pigtail attached. This demonstrates how the flexible pigtail allows for various antenna orientations.

3. MicroSD Card Installation

Insert a MicroSD card (up to 32GB, Class 10 recommended) into the dedicated slot on the VTX. Ensure the VTX is NOT powered on when inserting or removing the MicroSD card to prevent data corruption or damage to the card/module.

OPERATING INSTRUCTIONS

1. Powering On

Once all connections are secure, apply power to the VTX. The status LEDs will illuminate.

2. VTX Settings (Smart Audio)

The primary method for configuring VTX settings (band, channel, power) is via Smart Audio through your flight controller's OSD. Refer to your flight controller's manual for specific Smart Audio setup instructions.

Alternatively, the VTX features two buttons for manual control:

- **Button 1:** Used to cycle through power output levels (25mW/200mW/600mW/1000mW) and channels.
- **Button 2:** Used to control DVR recording (start/stop).

3. DVR Operation

To start recording, press and hold Button 2 for approximately 2 seconds. The DVR indicator LED will begin blinking, indicating active recording. To stop recording, press and hold Button 2 again for 2 seconds. The LED will stop blinking.

Important: Always stop recording via Button 2 before disconnecting power from the VTX. Failure to do so may result in corrupted video files on the MicroSD card.

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Video 1: Demonstration of the AKK Infinite DVR VTX, including unboxing, physical features, wiring, and a live demonstration of the DVR recording function. This video highlights the ease of antenna connection and MicroSD card usage.

MAINTENANCE

- Keep the VTX clean and free from dust or debris.
- Regularly inspect solder joints and cable connections for any signs of wear or damage.
- Ensure adequate airflow around the VTX, especially when operating at higher power levels, as it can generate heat.
- Format the MicroSD card periodically to maintain optimal recording performance and prevent fragmentation.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No video signal.	Incorrect wiring; loose antenna; VTX not powered; incorrect channel/band.	Check all wiring connections (power, video); ensure antenna is securely attached; verify VTX is receiving power; confirm VTX and receiver are on the same band/channel.
Poor video quality/interference.	Nearby electrical noise; antenna issues; VTX overheating; low power setting.	Ensure VTX is away from noisy components (ESCs, motors); check antenna for damage; improve VTX cooling; increase VTX power output (if legally permissible).
DVR not recording/corrupted files.	MicroSD card full/corrupted; card inserted/removed while powered; recording stopped improperly.	Format MicroSD card; ensure VTX is unpowered when inserting/removing card; always stop recording via button before powering off.
Cannot change VTX settings via Smart Audio.	Incorrect Smart Audio wiring; flight controller not configured for Smart Audio.	Verify Smart Audio wire is connected to correct UART TX pad; ensure Smart Audio is enabled and configured in flight controller firmware (e.g., Betaflight).

SPECIFICATIONS

Feature	Specification
Input Voltage	7V-26V (2S-6S LiPo)
Camera Power Output	5V
Output Power	25mW/200mW/600mW/1000mW switchable
Antenna Connector	MMCX
Cable Connector	Solder pads
Video Recording Size	VGA (640x480) @ 30fps
Max TF Card Support	32GB
Dimensions	36x36mm, 30.5mm stackable hole
Weight	8.8g (excluding antenna)
Special Features	OSD configuration via Smart Audio, Built-in MIC, One-button frequency and power setup, Loop recording

IMPORTANT REGULATORY NOTICE (FCC)

Please read the following information carefully before operating this device in the United States:

- Channels 5645, 5925, and 5945 (E4, E7, E8) are not available due to FCC regulations. Attempting to select these channels will be an invalid action.
- This product is sold under the FCC's amateur radio rules.
- Operation of this equipment in the US requires an amateur radio license.
- Operators must abide by all applicable laws and hold an amateur license to operate this equipment.
- Use of amateur equipment without a license could subject the operator to significant fines by the FCC.

WARRANTY AND SUPPORT

AKK products are designed for reliability and performance. For warranty claims, technical support, or further assistance, please contact AKK customer service through the retailer where the product was purchased or visit the official AKK website.

Please retain your proof of purchase for warranty validation.