DJI 6941565997449

DJI O4 Air Unit Pro User Manual

Digital Transmission System for FPV Drones

1. Introduction

The DJI O4 Air Unit Pro is an advanced digital video transmission system designed for FPV drones, offering superior resolution, reduced latency, and extended range. This unit enhances the FPV experience with its high-quality imaging capabilities and robust transmission.
Key features include:

- 1080p/100fps H.265 Max Video Transmission Quality for crystal-clear feeds.
- 15km Max Video Transmission Range for extended exploration.
- 15ms Lowest Video Transmission Latency for rapid responsiveness.
- 1/1.3-inch CMOS Sensor for high-quality footage and post-production flexibility.
- 4K/120fps, 155° Ultra-Wide FOV Video for professional-grade results.
- Lightweight, Compact, and Easy to Integrate into DIY builds.

2. What's in the Box

Upon unboxing your DJI O4 Air Unit Pro, please verify that all components are present and undamaged:

- DJI O4 Air Unit Pro Camera Module x 1
- DJI O4 Air Unit Pro Transmission Module x 1
- DJI O4 Air Unit Pro Antenna x 2
- DJI O4 Air Unit Pro 3-in-1 Cable x 1

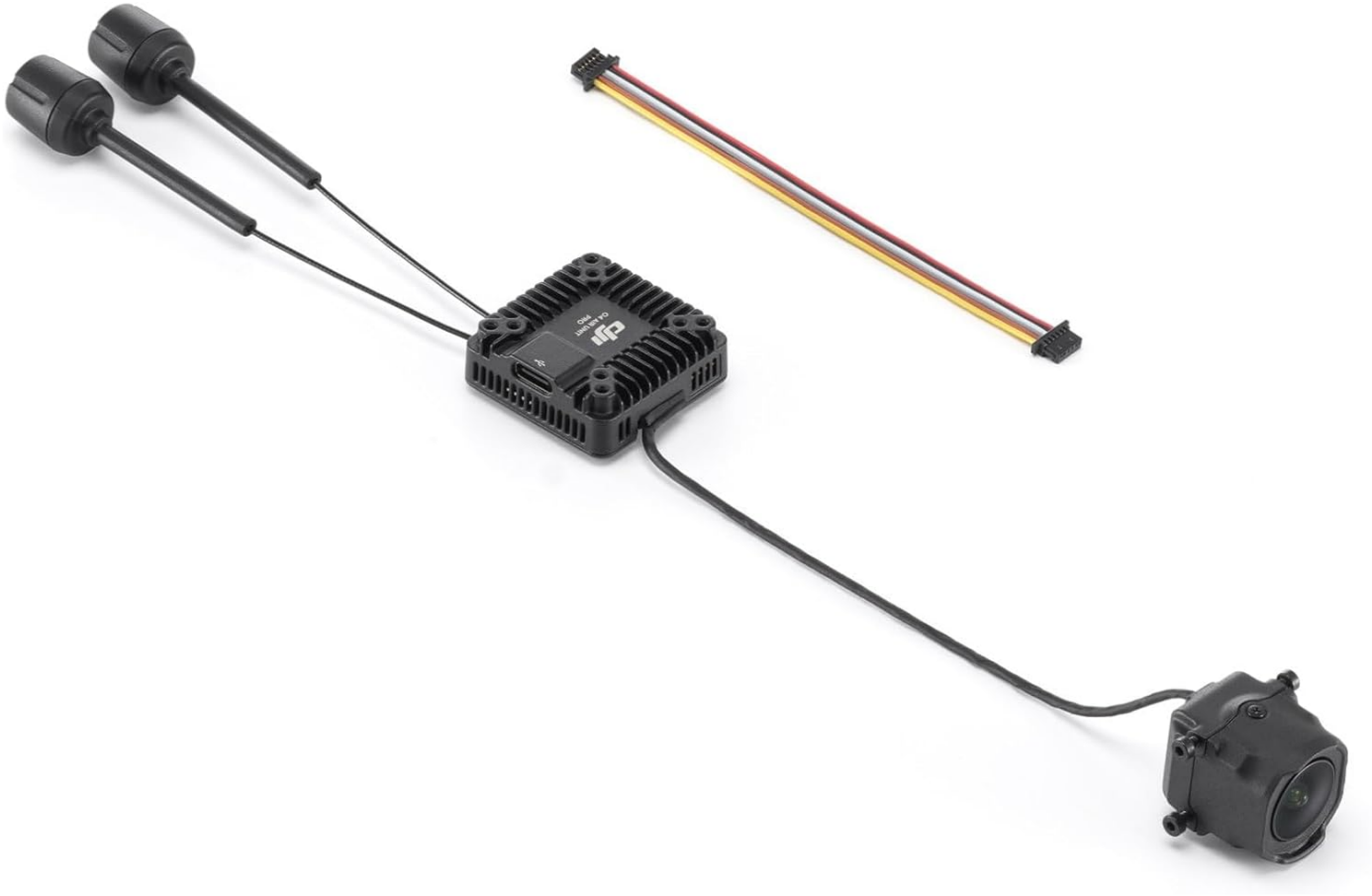


Image: The DJI O4 Air Unit Pro package contents, including the camera module, transmission module, two antennas, and the 3-in-1 cable.

3. Setup and Installation

Proper installation is crucial for optimal performance. The DJI O4 Air Unit Pro is designed for integration into DIY FPV drone builds.

3.1 Physical Installation

1. **Mounting the Transmission Module:** Securely mount the DJI O4 Air Unit Pro Transmission Module to your drone frame. Ensure adequate airflow around the module for heat dissipation.
2. **Mounting the Camera Module:** Attach the DJI O4 Air Unit Pro Camera Module to the designated camera mount on your drone. Note that the camera is wider than some previous models, and some frames may require specific mounts or 3D-printed adapters.
3. **Connecting Antennas:** Connect the two DJI O4 Air Unit Pro Antennas to the transmission module. Position them to ensure optimal signal reception and transmission, typically at a 90-degree angle to each other for diversity.
4. **Wiring:** Use the provided 3-in-1 cable to connect the camera module to the transmission module. Ensure all connections are firm and correctly oriented.



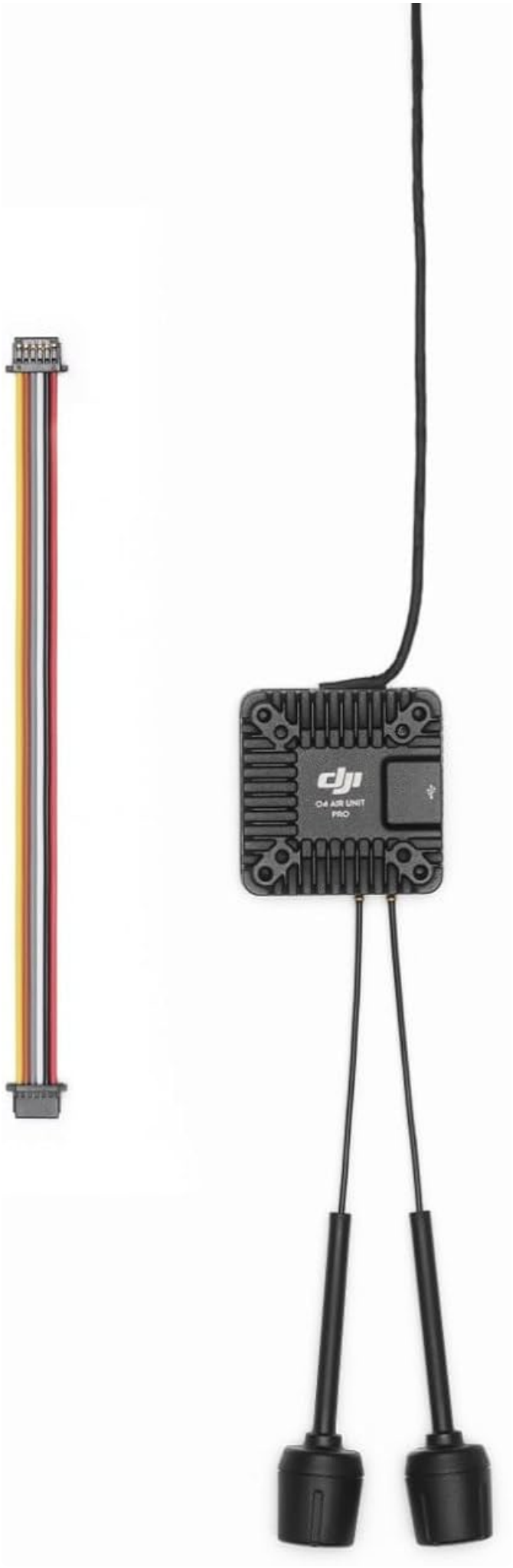

O4 AIR UNIT
PRO

Image: A top-down view of the DJI O4 Air Unit Pro, showing the transmission module, camera, antennas, and connecting cable, illustrating the compact design.

3.2 Powering On and Activation

The DJI O4 Air Unit Series must be powered by the flight controller or a dedicated battery to activate the transmission module.

3.3 Compatibility

The DJI O4 Air Unit Pro is compatible with specific DJI Goggles and Remote Controllers:

- Pair with DJI Goggles N3 or DJI Goggles 3 with the DJI FPV Remote Controller 3.
- Pair with DJI Goggles 2 or DJI Goggles Integra with the DJI FPV Remote Controller 2.
- Third-party flight goggles are not supported.
- Supports third-party remote controllers with other protocols, but an additional receiver is required.
- To use the DJI FPV Remote Controller, the flight control protocol must be set to S.Bus.

Can the DJI O4 Air Unit Series connect to cameras of other brands?

No.

Does the DJI O4 Air Unit Series support disassembly and replacement?

Yes. Currently, the replaceable accessories include: DJI O4 Air Unit transmission module, camera module, and antenna.
Please purchase related accessories at DJI Store, and follow the tutorial video for replacement.

Which flight controller firmware does the DJI O4 Air Unit Series support?

The DJI O4 Air Unit Series supports Betaflight 4.3.0 and INAV 8.0.1, along with their respective later versions.

How to activate the DJI O4 Air Unit Series?

It must be powered by the flight controller or battery to activate the transmission module.

Image: A visual representation of the compatibility of the DJI O4 Air Unit Series with different DJI Goggles and Remote Controllers, highlighting supported pairings.

4. Operating Instructions

The DJI O4 Air Unit Pro provides a high-performance video transmission and recording solution for FPV flight.

4.1 Video Transmission and Live View

- The system delivers 1080p/100fps H.265 max video transmission quality.
- Experience ultra-low latency of 15ms for responsive control.
- Achieve a maximum video transmission range of up to 15 km in optimal conditions.

4.2 Video Recording

- The 1/1.3-inch CMOS sensor is capable of recording 4K/120fps video.
- Supports 10-bit D-Log M color mode for enhanced post-production flexibility.
- Features a 155° ultra-wide FOV for capturing expansive views.
- The unit has 4GB of built-in storage and supports microSD card expansion for additional recording capacity.



Image: The DJI O4 Air Unit Pro integrated into an FPV drone, illustrating its compact size and how it appears when mounted for flight.

4.3 Racing Mode

The DJI O4 Air Unit Series includes a racing mode feature. When enabled, it sets the recording and video transmission specifications to 1080p/100fps, with the channel mode set to manual. It is compatible with racing frequency points used in analog video transmission, divided by Race Band. To enable racing mode, DJI Goggles 3 or DJI Goggles N3 are required.

5. Maintenance and Care

To ensure the longevity and optimal performance of your DJI O4 Air Unit Pro, follow these maintenance guidelines:

- **Heat Management:** Ensure the transmission module has adequate ventilation during operation to prevent overheating, especially during high-resolution recording or extended flights. Avoid blocking ventilation holes.
- **Cable Care:** The connecting cables are delicate. Handle them with care during installation and removal to prevent damage.
- **Cleaning:** Keep the camera lens clean using a soft, lint-free cloth. Avoid abrasive materials or harsh chemicals.

- **Storage:** Store the unit in a dry, cool environment away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Regularly check the official DJI website for firmware updates to ensure your unit has the latest features and performance enhancements.

6. Troubleshooting and FAQ

6.1 Common Issues and Solutions

- **Overheating during recording:** If the product overheats and stops recording during high-resolution, high frame rate operation, return and land the drone to allow it to cool down. Implement effective heat dissipation measures and ensure ventilation holes are not blocked.
- **Signal Loss:** While the O4 Air Unit Pro offers excellent penetration, in case of signal loss, the image may go static. It is recommended to fly within visual line of sight and be aware of environmental factors that may affect signal strength.
- **Camera Compatibility:** The camera is wider than the O3 unit. If your drone frame does not accommodate it, consider 3D printing new camera mounts or waiting for manufacturer-released compatible frames.
- **Fragile Cables:** Exercise extreme caution when unboxing and installing the unit, as the cables are delicate and prone to damage if mishandled.

6.2 Frequently Asked Questions

Q: Can the DJI O4 Air Unit Series share accessories with the DJI O3 Air Unit?
A: The DJI O4 Air Unit Series and DJI O3 Air Unit only support partial accessory compatibility. Shared accessories include the 3-in-1 cable (only for DJI O4 Air Unit Pro) and video transmission antenna. Non-shared accessories include the camera module, image transmission module, ND filter set, camera coaxial cable. Note that DJI O4 Air Unit Series and DJI O3 Air Unit transmission wiring sequence are consistent.

Q: Does the DJI O4 Air Unit Series support photo taking?
A: No, the DJI O4 Air Unit Series does not support photo taking.

Q: Does the DJI O4 Air Unit Series support adjusting flight controller parameters?
A: Yes, DJI O4 Air Unit supports adjusting flight controller parameters, but the flight controller should support Canvas mode.

Q: Can the DJI O4 Air Unit Series connect to cameras of other brands?
A: No, the DJI O4 Air Unit Series does not support connecting to cameras of other brands.

Q: Which flight controller firmware does the DJI O4 Air Unit Series support?
A: The DJI O4 Air Unit Series supports Betaflight 4.3.0 and iNAV 8.0.1, along with their respective later versions.

Q: How to activate the DJI O4 Air Unit Series?
A: It must be powered by the flight controller or battery to activate the transmission module.

Q: Can I fly a racing drone using the DJI O4 Air Unit Series at the same time as other racing drones using analog video transmission?
A: Yes. The DJI O4 Air Unit Series has introduced a racing mode feature, which can fix the recording and video transmission specifications at 1080p/100fps, set the channel mode to manual mode, and is compatible with the racing frequency points used in analog video transmission, divided by Race Band. When using with other racing drones that use analog video transmission, it is recommended to keep the goggles at least one meter apart and manually select the distribution frequency and adjust the appropriate video transmission power. (Note: Enable racing mode requires DJI Goggles 3 or DJI Goggles N3.)

Which is the Best for You?





O4 Air Unit Pro		O4 Air Unit
1/1.3-inch CMOS 4K/60fps, **4K/120fps** Video **155°** Ultra-Wide FOV **10-bit D-Log M** Color Mode	Imaging	1/2-inch CMOS 4K/60fps Video 117.6° Wide FOV /
DJI O4, **Dual-Antenna** Design	Video Transmission	DJI O4, Single-Antenna Design
1080p/100fps H.265	Live View Quality	1080p/100fps H.265
15 ms	Lowest Transmission Latency	20 ms
15 km (49212 ft.)	Max Transmission Range	10 km (32808 ft.)
4 GB Supports microSD card expansion	Built-in Storage	23 GB Does not support microSD card expansion
32 g	Weight	8.2 g
3 inches and above [8]	Compatible Drone Frames	2 inches and below [8]

Image: A detailed comparison table outlining the differences between the DJI O4 Air Unit Pro and the standard O4 Air Unit, covering imaging, video transmission, live view quality, latency, range, storage, weight, and compatible drone frames.

7. Specifications

Feature	Detail
Product Dimensions	1.32 x 0.51 x 1.32 inches
Item Weight	1.09 ounces
Model Number	6941565997449
Manufacturer	DJI
Batteries Required	1 12V batteries (not included)
Image Sensor	1/1.3-inch CMOS

Feature	Detail
Video Recording	Up to 4K/120fps
FOV	155° Ultra-Wide
Color Mode	10-bit D-Log M
Video Transmission Quality	1080p/100fps H.265
Lowest Transmission Latency	15ms
Max Transmission Range	15 km
Built-in Storage	4 GB (supports microSD card expansion)

8. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the official DJI website or contact DJI customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.
Important Note: Any physical damage from flying will typically not be covered under warranty. Be careful when handling and operating the unit.
For replacement parts, including the transmission module, camera module, and antenna, these can be purchased from the DJI Store. Tutorial videos for replacement are also available from DJI.

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Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question