TrueRC Core u.FL 45mm

5.8 GHz omnidirectional circularly polarised antenna
User manual



Never power on the video transmitter without an antenna connected – it may be permanently damaged.

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1. Product description

1.1 What it is for

TrueRC Core u.FL is an omnidirectional circularly polarised antenna for video transmission in the 5.8 GHz band. It connects with a **u.FL** connector directly to the video transmitter (VTX) on the drone. The manufacturer, the Canadian company TrueRC, lists it as compatible with Caddx Vista / RunCam Link, DJI O3 Air Unit, DJI O4 Air Unit and Walksnail Avatar HD VTX.

The radiating element is protected by a durable polycarbonate housing which, according to the manufacturer, survives inevitable crashes. The **u.FL 45mm** version with a short cable is intended for smaller drones where the antenna is placed close to the video transmitter.



Colour versions of the antenna (photo: TrueRC)

1.2 Specifications and package contents

Parameter	Value
Manufacturer	TrueRC Canada, truerc.com
Product designation	TrueRC CORE 5.8 – U.FL, version U.FL 45mm
Operating band	5.5–6.7 GHz
Gain	1.9 dBic
Polarisation	circular, RHCP (right-hand)
Cross-polar rejection	−10 to −20 dB
Radiation efficiency	98 %
SWR	≤ 1.2 : 1
Head dimensions	diameter 16.9 mm × height 13.1 mm
Cable length	45 mm (version U.FL 45mm)
Connector	u.FL
Colour	depending on version (grey, red or teal)

Package contents: 1× TrueRC Core u.FL 45mm antenna.

Not included: video transmitter, antenna mount, cable ties or glue for securing the connector.

2. Use

2.1 Polarisation and compatibility

The antenna has right-hand circular polarisation (**RHCP**). The transmitting and the receiving side (the drone and the FPV goggles or receiver) must use antennas with the **same polarisation**. According to the manufacturer, combining RHCP and LHCP leaves only about 3 % of the signal – you will still have video, but with noticeably worse quality and shorter range.

- Use the antenna only with a video transmitter that has a **u.FL** connector and operates in the 5.8 GHz band.
- The manufacturer lists compatibility with Caddx Vista / RunCam Link, DJI O3 Air Unit, DJI O4 Air Unit and Walksnail Avatar HD VTX.
- The antenna gain adds to the transmitter output power. The user is responsible for complying with the radiated power limit (e.i.r.p.) and the permitted frequencies in the country of operation.

2.2 Connecting the u.FL connector

The u.FL connector is very small and sensitive to mechanical stress. Proceed carefully:

① Disconnect the drone battery – the video transmitter must be unpowered.

② Hold the antenna connector perpendicularly above the mating connector on the video transmitter and align it so that it sits straight.

③ Press it straight down, ideally with a fingertip or a flat tool, until it clicks into place.

④ Check that the connector sits straight and does not rotate freely.

⑤ To disconnect, lift the connector straight up by its body (e.g. with a flat tool); never pull on the cable.

※ The u.FL connector withstands only a limited number of mating cycles. Do not disconnect it unnecessarily.

2.3 Mounting on the drone

- Place the antenna head as clear as possible – away from the carbon frame, the battery and other parts that shield the signal.
- Secure the cable (with an antenna mount, a cable tie or heat-shrink tubing) so that it cannot get into the propellers in flight or in a crash.
- Do not bend the cable at a sharp angle and do not pinch it between frame parts.
- The u.FL connector should not carry the weight of the antenna or the pull of the cable – secure the cable so that antenna movement is not transferred to the connector.

2.4 Safety and maintenance

- **Never power on the video transmitter without an antenna connected.** The transmitter may be permanently damaged.
- Before every flight, check that the antenna is connected, the connector is seated and the cable is not damaged.
- After a crash, inspect the housing, the cable and the connector. A damaged cable or a loose connector degrades video transmission.
- Clean the antenna with a dry or slightly damp cloth; do not use solvents.
- This product is not a toy. Keep it out of the reach of small children – it contains small parts that could be swallowed.

3. Information for the EU and Czech Market

※ The information in Chapters 3 and 4 reflects the law of the European Union and the Czech Republic. The law of the country in which the product is operated always prevails.

3.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

3.2 Disposal



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

4. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 3.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.