



Unify Pro SMA Pigtail 90°

TBS (Team BlackSheep) · MMCX 90° → SMA connector
User manual



Never power on a video transmitter without an antenna connected - it may be permanently damaged.

Rotorama, s.r.o. · www.rotorama.com

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1. Product description

1.1 Purpose

The **TBS Unify Pro SMA Pigtail 90° (MMCX)** is a short antenna extension cable (pigtail) made by TBS (Team BlackSheep). One end has a right-angle **MMCX 90°** connector, the other an **SMA female** connector with a flange for mounting to the frame. It lets you connect an antenna with an SMA connector to a video transmitter (VTX) that has an MMCX antenna output.

The pigtail is intended for video transmitters in the 5.8 GHz band. Thanks to the flange, the SMA connector can be firmly fixed at the rear of the drone frame, so the antenna stays in place and impact forces are not transferred directly to the video transmitter board. The right-angle MMCX connector saves space above the transmitter.



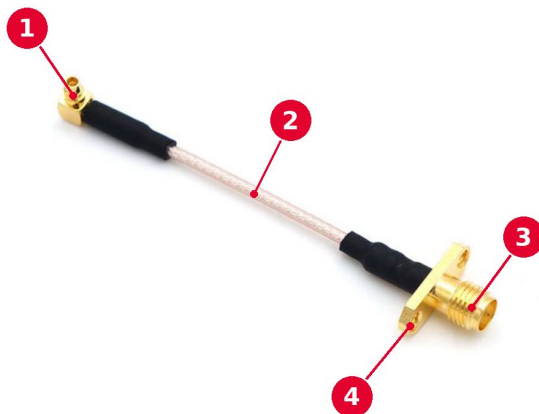
TBS Unify Pro SMA Pigtail 90° (MMCX)

1.2 Specifications and package contents

Product designation	TBS Unify Pro 5G8 SMA Pigtail 90° (MMCX)
Manufacturer	Team BlackSheep (TBS)
Connectors	MMCX 90° (right-angle) → SMA female
Length	60 mm
Weight	3.45 g
Intended use	5.8 GHz video transmitters with an MMCX antenna output
Package contents	1× pigtail
Not included	antenna, video transmitter, screws and nuts for mounting the flange

※ Specifications as stated by the manufacturer on its product page.

1.3 Parts description



Parts of the pigtail

- ① **MMCX 90° connector** – snaps onto the MMCX antenna output of the video transmitter; once attached, it can rotate.
- ② **Coaxial cable** – reinforced with heat-shrink tubing at both connectors.
- ③ **SMA female connector** – external thread for screwing on an antenna with an SMA male connector.
- ④ **Flange with two holes** – used to screw the SMA connector to the frame or to an antenna mount.

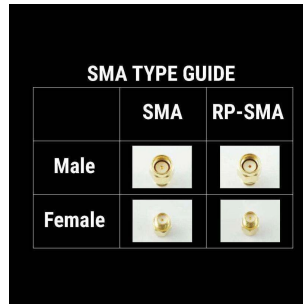
2. Use

2.1 Compatibility check

Before installation, make sure that:

- the video transmitter has an **MMCX** antenna output (not u.FL/IPEX or SMA),
- the antenna has an **SMA male** connector – i.e. a coupling nut with an internal thread and a **centre pin**,
- the antenna is designed for the band in which your video transmitter operates.

SMA and RP-SMA connectors look the same at first glance, but differ in the arrangement of the centre contact. An antenna with an **RP-SMA** connector will screw onto this pigtail, but the centre contact will not connect and no signal will be transmitted.



Identifying SMA and RP-SMA connectors (male / female)

※ The pigtail itself does not transmit, but the connected video transmitter is radio equipment. Its operation (permitted frequency bands, maximum transmit power) is governed by the law of the country in which you operate it; the user is responsible for the transmitter settings.

2.2 Installation

Never power on the video transmitter without an antenna connected. The transmitted power then has nowhere to radiate and the transmitter may be permanently damaged.

- ① Disconnect the battery from the drone. The video transmitter must be unpowered during installation.
- ② Fix the SMA connector with flange ④ at the chosen place on the frame or in an antenna mount. Screws and nuts are not included – use hardware that matches the holes in the flange and frame.
- ③ Route the cable so that it does not run over sharp frame edges, cannot touch the propellers and is not bent sharply right next to the connectors.

- ④ Place the MMCX connector ① squarely onto the antenna output of the video transmitter and press until it clearly clicks into place. Do not push at an angle.
- ⑤ Screw an antenna with an SMA male connector onto the SMA connector ③. Tighten **by hand only**, without tools.
- ⑥ Only then connect the battery and check the image in your goggles or on the monitor.

2.3 Handling and maintenance

- Disconnect the MMCX connector by pulling **the connector body**, never the cable.
- Do not connect or disconnect the connectors while the system is powered.
- When changing the antenna, hold the SMA connector so that it does not turn and twist the cable.
- After a crash, check the cable, the heat-shrink tubing and the flange mounting. Replace a damaged cable (worn jacket, kink, loose connector).
- Keep the connectors clean and dry. Remove dirt from the SMA connector with a dry brush or compressed air.
- Do not expose the product to high temperatures, e.g. when soldering near the cable.

2.4 Troubleshooting

Problem	Possible cause and solution
No image or very weak image	The antenna has an RP-SMA connector instead of SMA – use an antenna with an SMA male connector. Check that the MMCX connector has clicked in properly.
Image drops out when the drone moves	Loose MMCX connector or damaged cable. Reattach the connector; replace a damaged pigtail.
MMCX connector does not hold	Worn or damaged connector on the cable or on the transmitter. Replace the pigtail; if the problem persists, check the transmitter connector.
SMA connector turns when tightening the antenna	Loose flange mounting. Tighten the flange screws.

3. Information for the EU and Czech Market

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@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.com

3.2 Disposal of electrical equipment



- 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.