GEPRC Momoda2 5.8G

Antenna for 5.8 GHz FPV video transmission
120 mm · SMA · RHCP / LHCP



Read this manual before use. Never power on a video transmitter without an antenna connected.

Rotorama, s.r.o. · www.rotorama.com

Contents

1. Product description

1.1 Purpose

1.2 Technical data and package contents

2. Use

2.1 Choosing the polarisation

2.2 Checking the connector

2.3 Mounting

2.4 Placement and operation

2.5 Care and troubleshooting

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

3.2 Disposal

4. Warranty and rights arising from defective performance

1. Product description

1.1 Purpose

The **GEPRC Momoda2 5.8G** is a compact omnidirectional, circularly polarised antenna for analogue and digital FPV video transmission in the 5.8 GHz band. It connects via an **SMA** connector to the video transmitter (VTX) on a drone or to the video receiver in FPV goggles or a monitor. The variant sold under this designation is **120 mm** long; the radiating element is protected by an ABS plastic housing.

According to the manufacturer, the radiating element combines a printed circuit board (PCB) with a flexible printed circuit (FPC), which is intended to provide consistent performance across the entire band and low losses. The manufacturer tests every unit with a spectrum analyser before shipment (SWR check). The antenna is available in two polarisation variants – **RHCP** (right-hand) and **LHCP** (left-hand); both are covered by this manual.



GEPRC Momoda2 5.8G antenna (left: side with polarisation marking, right: side with GEPRC logo)

1.2 Technical data and package contents

Parameter	Value
Product designation	GEPRC Momoda2 5.8G antenna
Frequency band	5.3–6 GHz
Polarisation	RHCP or LHCP (depending on the selected variant)
Gain	2.45 dBi
Standing wave ratio (SWR)	≤ 1.43
Axial ratio	≤ 3
Radiation efficiency	85 %

Parameter	Value
Cross-polarisation suppression	−25 dB
Radiating element design	PCB + FPC
Housing material	ABS
Connector	SMA (male)
Length	120 mm
Package contents	1× antenna

Not included: video transmitter or receiver, a second antenna for the other end of the link, an SMA/RP-SMA adapter or a mounting holder.

The polarisation is marked directly on the antenna head as **5.8G RHCP MOMODA 2** or **5.8G LHCP MOMODA 2**; the opposite side of the head carries the GEPRC logo.

2. Use

2.1 Choosing the polarisation

Circularly polarised antennas only work together properly if **the transmitting and receiving sides use the same sense of polarisation** – RHCP with RHCP, LHCP with LHCP. Combining RHCP and LHCP weakens the signal considerably and dramatically reduces the range.

- Before buying and mounting, check which polarisation the antennas on the other end use – in the FPV goggles, on the monitor or on the drone's video transmitter.
- Analogue video systems usually use RHCP polarisation, while LHCP is common with digital systems. What matters, however, is always the polarisation actually used on the other end.
- You can identify the antenna's polarisation by the marking on its head (see the figure below).



Polarisation marking on the antenna head: LHCP (left), RHCP (centre), side with GEPRC logo (right)

2.2 Checking the connector

The antenna has an **SMA male** connector – a coupling nut with an internal thread and a **centre pin**. It therefore fits devices with an SMA female connector (external thread, hole in the centre). An **RP-SMA** connector looks the same at first glance, but its centre contact is reversed; SMA and RP-SMA cannot be connected without an adapter.



Left: RP-SMA connector (hole in the centre), right: SMA (pin in the centre) – this antenna has SMA

❊ Never force connectors together. If the thread or the centre contact does not fit, it is a different connector type – use a suitable adapter (not included).

2.3 Mounting

Never power on a video transmitter without an antenna connected. Transmitting without an antenna can permanently damage the video transmitter.

① Disconnect power from the drone or device on which you are mounting the antenna.

② Place the antenna connector straight onto its counterpart and screw the coupling nut on by hand until it stops.

③ Tighten the nut only gently. Do not use pliers and do not turn the whole antenna – this could damage the connector or the cable.

④ On a drone, fix the antenna in a holder so that the antenna head is not covered by the frame, battery or carbon parts and cannot get into the propellers.

⑤ Only then connect power and check the video image.

2.4 Placement and operation

- The antenna radiates in all directions; reception is best when the antenna head is not shadowed by metal or carbon parts or by the battery.
- On FPV goggles or a monitor, orient the antennas so that there are no obstacles between them and the drone. The range is also affected by the polarisation and quality of the antenna on the other end.
- Do not bend the antenna cable sharply at the connector or at the head and do not let it hang loose near the propellers.
- The radiated power e.i.r.p. includes the antenna gain. In the Czech Republic, a maximum of **25 mW e.i.r.p.** is permitted for general use in the 5.8 GHz band under ČTÚ general authorisation No. VO-R/10. The law of the country in which you operate the equipment always prevails – permitted bands and power levels differ from country to country.

2.5 Care and troubleshooting

Problem	Possible cause and solution
Short range, noise in the image	Different antenna polarisation on each side – use the same one (RHCP with RHCP, LHCP with LHCP). Check that the antenna head is not covered.
Antenna cannot be screwed on	Different connector type (RP-SMA, MMCX, u.FL) – use an adapter or an antenna with a matching connector.
Image drops out when the cable moves	Cable or connector damaged after a crash – replace the antenna.
Cracked or loose housing	Mechanical damage – replace the antenna; a damaged antenna can reduce the range.

After a crash, always check the housing, cable and connector. Wipe off dirt with a dry cloth, protect the antenna from moisture and store it in a dry place.

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@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.