



PlaneTRack^(tm)

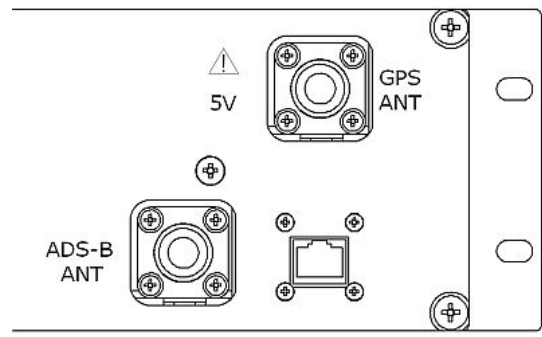

Operating Manual

Annex B

Antenna information

(c) Planevision Systems GmbH 2016

B.1 Important installation instructions

 <p>The diagram shows the rear panel of the receiver with three main components labeled: a 5V power input (indicated by a triangle symbol), an ADS-B ANT connector, and a GPS ANT connector. Each component is shown with its respective cable connector and the four screws used for mounting.</p>	<p>CAUTION!</p> <p>When connecting the ADS-B and GPS antennas be careful to make correct cable connections according to the signage only!</p> <p><u>Misconnecting may damage the ADS-B Receiver.</u></p>	
--	--	---

For further details on installation instructions refer to Application Note AN-101
Commissioning of a PlaneTRack ADSB Receiving Station at
<http://appnotes.planevision.systems>

B.2 ADS-B antenna SCO-1090



Declaration of Conformity (DoC)

We, Planevision Systems GmbH
Grellkamp 6b
22113 Oststeinbek, Germany

declare under our sole responsibility that the product:

Type of equipment: ADS-B Antenna

Brand name: Planevision Systems

Model names: SCO-1.09-5 N-f/ 10M-SMA / 3M-MCX / N-f-MO

to which this declaration relates, is in compliance with all the applicable essential requirements and other provisions of the European Council Directives:

2006/96/EC Waste Electrical and Electronic Equipment (WEEE)

2011/65/EC Restrictions of Hazardous Substances (RoHS)

Product compliance has been demonstrated on the basis of:

- n/a -

The technical documentation file is kept available at:

Sirio SL, via Liguria 15, 46049 Volta Mantovana (MN), Italy

Issued on: 20.12.2015

Signed by the manufacturer:

(Company name) Planevision Systems

(Signature)

(Printed name) Dr.-Ing. Gunther Kruse

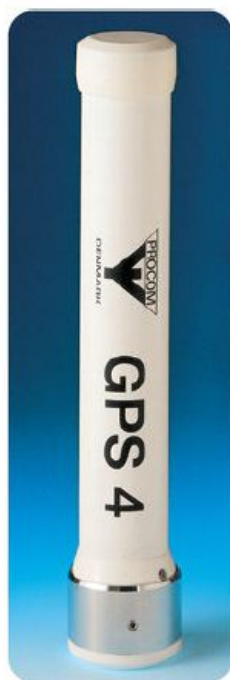
B.3 GPS antenna

GPS 4/...

Active Receiving Antenna for the 1575 MHz NAVSTAR GPS Satellite Navigational System

DESCRIPTION

- Full hemispherical coverage due to quadrifilar helix antenna element.
- Built-in high gain, low noise amplifier.
- Input filter for thorough RF-overload protection.
- Right-hand circular polarisation (RHCP).
- High rejection of cross-polarised reflections prevents fading caused by multipath propagation.
- 5 V supply voltage (3 V respectively 12 V available on request).
- DC supply via RF-connector.
- EMC tested to IEC 801 and IEC 255.
- Total design carried out to make the antenna withstand tough environments.
- Comprehensive range of accessory mounting brackets available.



TYPE NO.	SUPPLY VOLTAGE
GPS 4	5 V DC (4.5 - 5.5 V)
GPS 4/3 V	3 V DC (3 - 3.5 V)
GPS 4/12 V	12 V DC (9 - 15 V)

SPECIFICATIONS

ELECTRICAL General Specifications	
MODEL	GPS 4/...
ANTENNA TYPE	Quadrifilar helix active antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
POLARISATION	Circular right-hand
COVERAGE	Hemispherical
GAIN (in axial direction)	> 32 dBi
CROSSPOLARISATION ATT.	> 10 dB
Built-in Amplifier	
GAIN	> 30 dB
NOISE FIGURE	< 3 dB (incl. input filter). Typ. approx. 3 dB
1 dB COMPRESSION POINT	> 10 dBm
SELECTIVITY	> 20 dB down @ ± 100 MHz
OUT OF BAND ATTENUATION	0.03 – 1 GHz : > 40 dB down 2 – 10 GHz : > 40 dB down
SWR (output)	< 2.0
SUPPLY VOLTAGE	GPS 4: 5 \pm 0.5 V DC GPS 4/3 V: 3-3.5 V DC GPS 4/12V: 9-15 V DC
CURRENT CONSUMPTION	Approx. 44 mA
EMC	Full protection (IEC 801, IEC 255)
MECHANICAL	
MATERIALS	Antenna dome: Weather-resistant low-loss plastic
ANTENNA COLOUR	Marine white
INSULATION	Connector ground terminal galvanically insulated from the mounting hardware
WIND SURFACE	Approx. 0.0072 m ²
MAX. WIND SPEED	200 km/h
WIND LOAD	Approx. 9.6 N @ 150 km/h
TEMP. RANGE	-50° C \rightarrow +70° C
CONNECTOR	FME-male (pin) (can be supplied with TNC upon request)
SUGGESTED DOWNLEAD CABLE	< 10 m: RG 58 10 - 30 m: RG 213
TOTAL HEIGHT	Approx. 23 cm
ANTENNA DIA.	33 mm
WEIGHT	Approx. 150 g
MOUNTING	Vertical on 1" water pipe or on PROCOM 1" mounting brackets (see accessories below)



CERTIFICATE OF CONFORMITY

Regarding RoHS directive 2011/65/EC and WEEE directive 2006/96/EC

We, PROCOM A/S, Smedetofte 12, DK-3600 Frederikssund, Denmark, hereby guarantee that the below listed product(s), supplied against PROCOM Deutschland GmbH purchase order:

Description	Type
PROCOM antennas	GPS 4

are manufactured / delivered by our company either direct or through any third parties (including subsidiaries and affiliated companies) are in conformity with the below mentioned directives:

EU-Directive 2011/65/EC
(Restriction on use of certain Hazardous Substances, "RoHS")

The above listed products do not contain the chemical substances listed below, including cases where their content is below the legal limit.

Hazardous substances subject to the RoHS Directive:

1. Cadmium and its compounds
2. Lead and its compounds
3. Hexavalent chromium compounds
4. Mercury and its compounds
5. Polybrominated biphenyls (PBB)
6. Polybrominated diphenyl ethers (PBDE)

EU-Directive 2006/96/EC (Waste Electrical and Electronic Equipment, "WEEE")

Procom A/S is a member of the Danish electronic waste collection and treatment association called "Elretur". Please see www.elretur.dk Procom member no. is 87 92 82 17.

Frederikssund, 09 December 2015

Jens Jørgensen
Technical Director

PROCOM A/S • Smedetofte 12 • DK-3600 Frederikssund • Denmark
Phone: (+45) 48 27 84 84 • E-mail: info@procom.dk • Website: www.procom.dk • VAT/CVR No. 87928217

B.4 Active Antenna AA

<p>This antenna type MUST NOT be operated on receivers without OPTION ACTIVE ANTENNA and a marked antenna connector ADS-B ANT.</p>	
---	---

Data sheet available on request.

Record of Revisions

2.0	2016-06-03	Reissue