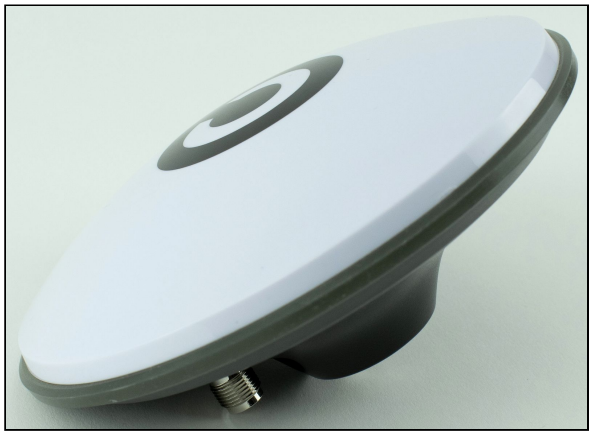
DA910 Antenna

Drotek GPS/GLONASS/BeiDou/Galileo multi-band GNSS active antenna

Datasheet - In Production



Features

- Multiband L1/L2 active antenna
- High LNA gain (40dB)
- 3.0 to 5.5V/45mA power supply
- ⅝-11UNC threaded magnetic pod
- 1m long TNC to SMA cable

Applications

- RTK Base
- GPS
- Precise navigation
- Vehicle mounted GPS

Description

The DA910 is an affordable and highly efficient multi-band GNSS active antenna.

The device allows concurrent reception of GPS / GLONASS / BeiDou & Galileo signals to improve signal availability.

The minimum 5dBi peak gain is amplified using a 40dB LNA gain to ensure the best signal quality in any situation.

The TNC connector makes it robust and waterproof.

A magnetic threaded pod is included for easy placement onto any metallic surface like car or house roofs, structures, rovers, etc…

Table 1. Device summary

Order ref code	Temperature range [°C]	Product size [mm]
0910	-40 to +85	146.5 x 146.5 x 62.5

Contents

1. Specifications

Table 2. DA910 mechanical and electrical specifications

Item		Specifications
Antenna	GNSS bands	GPS L1/L2 GLONASS L1/L2 BeiDou B1/B2/B3 Galileo E5b/E6
	Polarization	RHCP
	Axial Ratio	≤3.0dB
	V.S.W.R.	≤1.5dB
	Peak Gain	≥5.0dBi
	Impedance	50Ω
	Phase Center Error	±1.0dB
	Horizontal Coverage Angle	360°
LNA	Gain	40.0 ± 2.0dB
	Noise Figure	≤1.5dB
	Passband Fluctuation	±1.0dB
	Supply Voltage	3~5.5V DC
	Current Consumption	≤45mA
	V.S.W.R.	≤2.0dB
Mechanical	Connector	TNC-K
	Radome Material	ABS
	Mounting Method	Screw
Environnemental	Operating Temperature	-40°C/+85°C
	Relative Humidity	Up to 95%
	Ingress Protection	IP67 (exclude air vent in screw hole)
	Environmentally Friendly	ROHS Compliant

2. Absolute maximum ratings

Stresses above those listed as “absolute maximum ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device under these conditions is not implied. Exposure to maximum rating conditions for extended periods may affect device reliability.

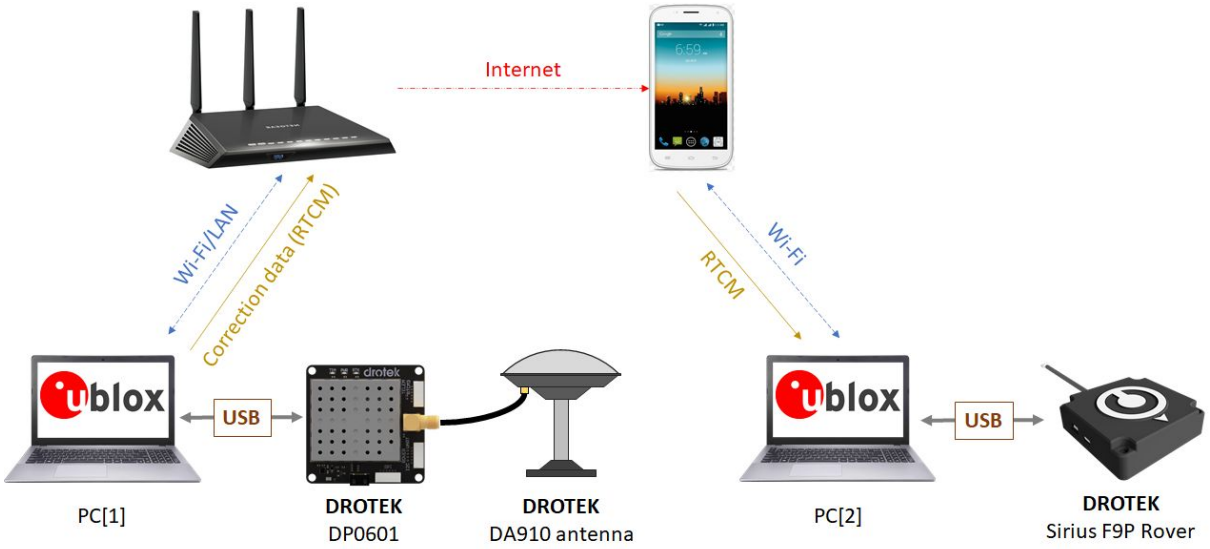
Table 3. DA910 absolute maximum ratings

Symbol	Parameter	Maximum value	Unit
Vant	Antenna voltage supply	3.0 to +5.5	V
Iant	Antenna current supply	45	mA
Hant	Relative humidity	95	%
Tant	Operating temperature	-40 to +85	°C

3. Applications

3.1 Standalone Base/Rover configuration

Figure 1. DA910 antenna connected to a Drotek DP0601, then sending RTCM data to a Rover via the internet network



DROTEK DP0601 : https://store.drotek.com/rtk-zed-f9p-gnss
DROTEK Sirius F9P Rover: https://store.drotek.com/u-blox-ann-mb-multi-band-antenna

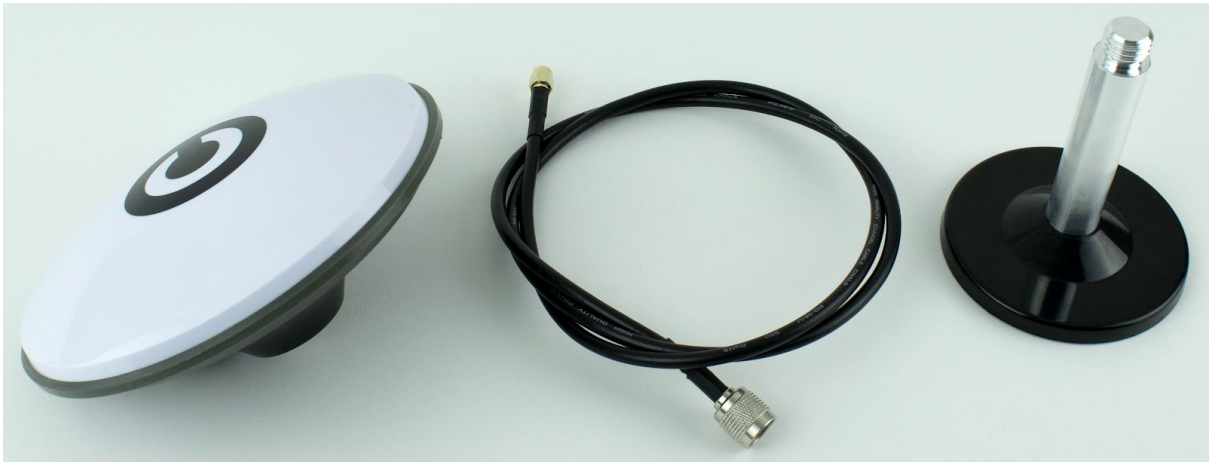
3.2 Autopilot Base/Rover configuration

Figure 2. DA910 antenna connected to a Drotek DP0601 and a Drotek Pixhawk3Pro

DROTEK DP0601 : https://store.drotek.com/rtk-zed-f9p-gnss
DROTEK Pixhawk3Pro : https://store.drotek.com/pixhawk-3-pro-autopilot-aluminum-case

4. Accessories included

Figure 3. DA910 accessories included



1. DA910 antenna
2. 1m long TNC to SMA cable
3. ⅝-11UNC threaded magnetic aluminium pod

5. Mechanical drawings

Figure 4. DA910 mechanical drawings

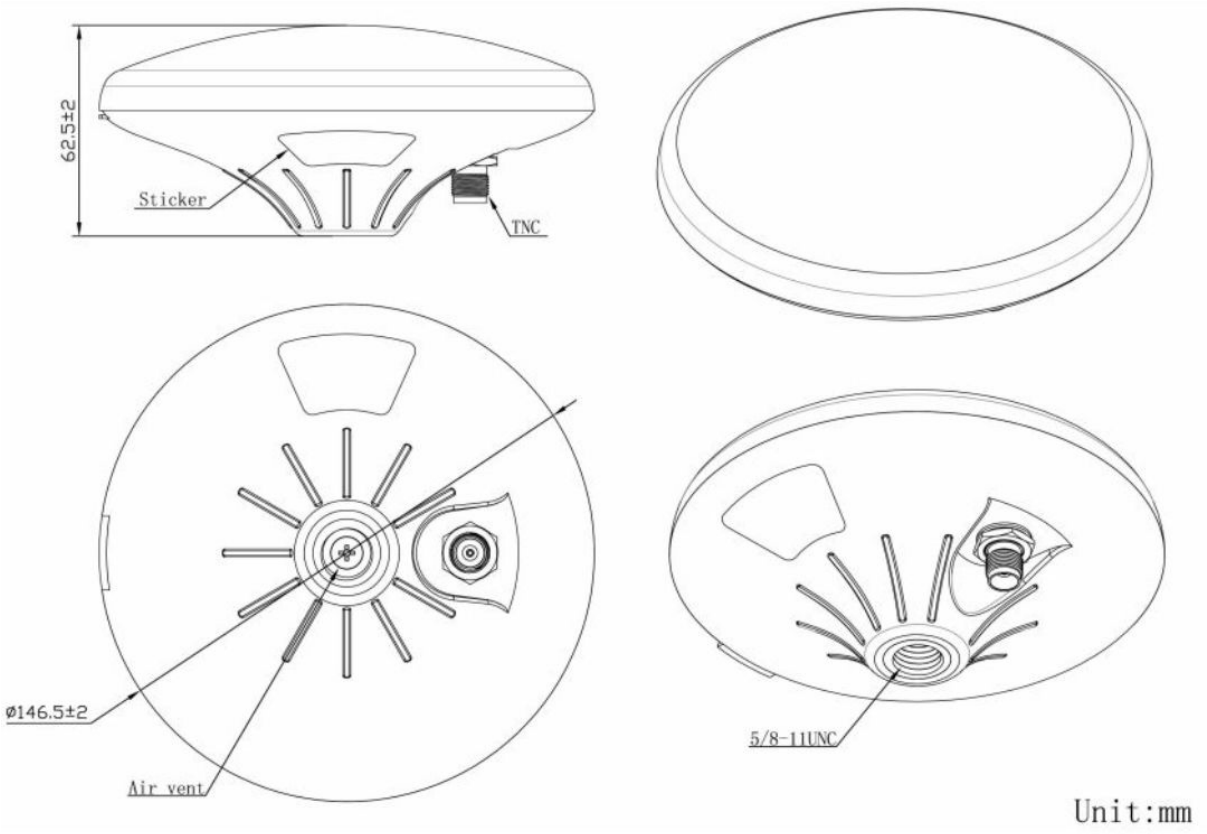
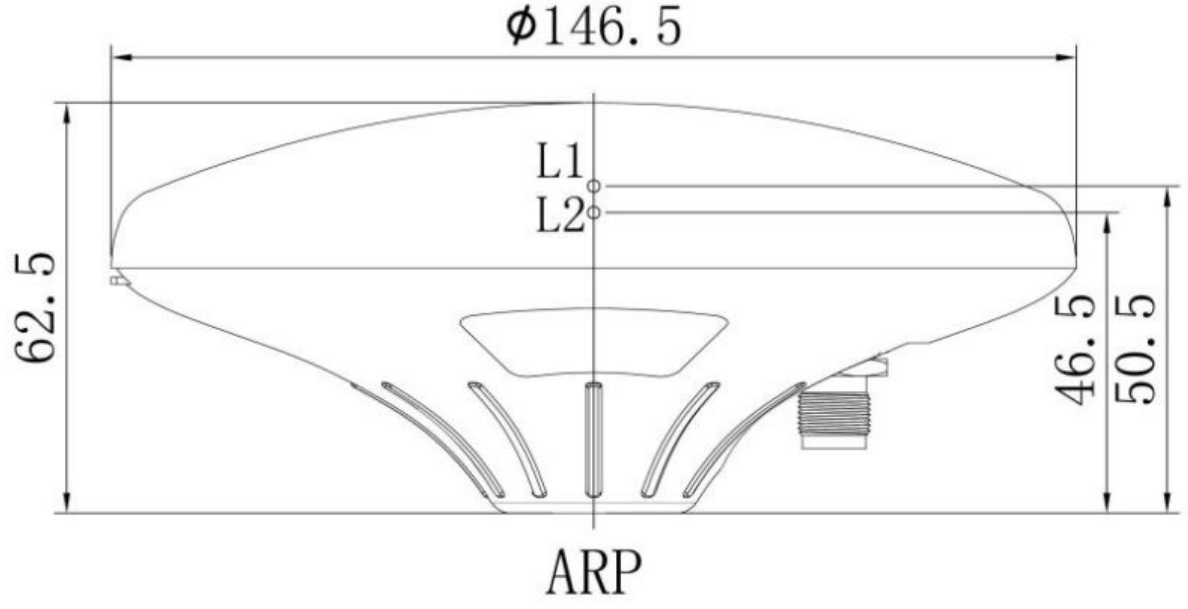


Figure 5. DA910 antenna L1/L2 reference point & phase center



6. Revision history

Table 4. Document revision history

Date	Revision	Changes
04-Nov-2019	1.0	DrotekDoc_0910 / Initial release

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