

Features

- Easy set up with captive parts
- Long telemetry range - 150 km (93.2 mi) using the RS41 series GPS radiosondes



Vaisala Portable Antenna Set CG31 is a portable antenna designed to be used with GPS wind-finding systems.

The antenna set consists of a Helix UHF antenna with antenna amplifier and GPS antenna on a tripod. The antenna set is painted green as standard. One person can handle and assemble the antenna

set. CG31 receives radiosonde signals in 400 MHz meteorological UHF band. The tripod and the antennas fold compactly for transportation. The transport case is made of

polypropylene and equipped with wheels for ease of transportation. The transport case also holds an equipment bag, which contains foot pads, pegs, and a hammer.

Technical Data

Technical Specifications

UHF Antenna

Type	Full-wave Quadrifilar Helix
Frequency	400 ... 406 MHz
Gain (Elevation angle 25°)	3,5 dBic
Polarization	Right-Hand Circular
Horizontal pattern	Omni-directional

Telemetry Range

With RS41 series GPS radiosondes	150 km (93.2 mi)
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Amplifier

Gain	20 dB typical
Noise figure	< 2 dB
Power input	+10 ... 12 VDC, typically 130 mA through RF cable
Output impedance	50 Ω, VSWR < 1.5

GPS Antenna

Primary power	+5 VDC (±10 %)
Power consumption	22 mA, 0.11 W (nominal)
Output impedance	50 Ω
Frequency	L1 (1575 MHz)
Polarization	Right-Hand Circular Polarization (RHCP)
VSWR	2 : 1
Axial ratio	2 dB at zenith, 10 dB above 10° elevation
Gain	35 dB (nominal)
Noise	2.75 dB (nominal)
Pass-band width	50 MHz
Azimuth coverage	360° (omni-directional)
Elevation coverage	0° to 90° elevation (hemispherical)

Mechanical Specifications

Diameter	Footprint 1133 mm (44.61 in)
Total height assembled	1695 mm (66.73 in)
Transportation case dimensions	1380 × 355 × 385 mm (54.33 × 13.98 × 15.16 mm)
Standard cable length	20 m (65 ft)

Connector

UHF Antenna	Coaxial N-type female
GPS Antenna	Coaxial TNC-type female

Weight

With cables	10.5 kg (23.15 lb)
With accessories and transport case	23 kg (50.71 lb)

Operating Environment

Operating temperature range	-40 ... +55 °C (-40 ... +131 °F)
Operating humidity range	0 ... 100 %RH
Operating precipitation	Unlimited
Maximum wind speed	65 m/s (145 mph)
Storage temperature	-50 ... +71 °C (-58 ... +159.8 °F)
Storage humidity	0 ... 100 %RH



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