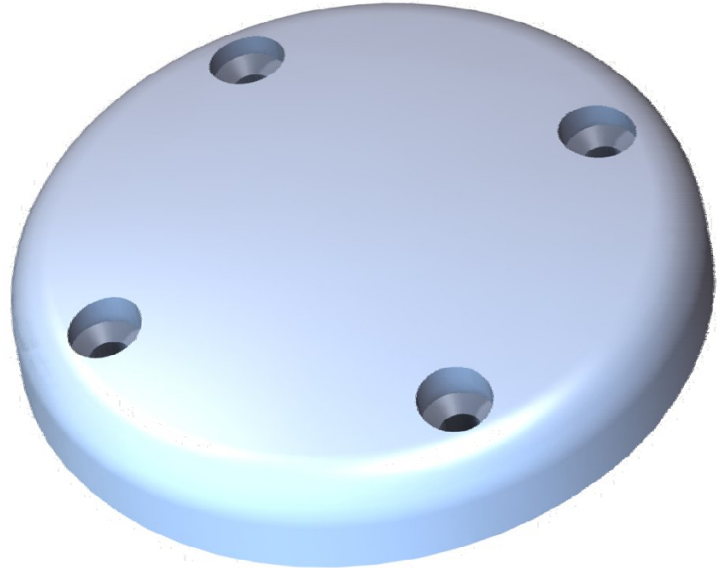




**21-45-02**  
**L1 Active GPS Antenna**  
**1575.42 ± 12 MHz**

## FEATURES

- **DC grounded for Lightning Protection**
- **33 dB LNA**
- **Fully sealed construction for environmental reliability**
- **Designed to MIL-STD-810 Environmental conditions**
- **Low Profile**
- **Covers L1 Frequency Band**
- **Right Hand Circular Polarized**



The 21-45-02 antenna is designed to provide operation at the L1 frequency. It is of low profile construction and is supplied in a composite cover with an aluminium alloy baseplate on to which are attached the antenna radiating elements. Within the enclosure is a low noise amplifier (LNA) with a gain of + 33 dB. The antenna is designed for use on groundplanes of typically 300 mm diameter or more.

The antenna operates with nominal Hemispherical coverage in GPS L1 band to allow reception of microwave signals from a number of satellites.

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# SPECIFICATIONS

## Cooper Antennas Model 21-45-02

### L1 GPS Antenna

#### ELECTRICAL

Frequency	1575.42 ± 12 MHz
Radiation Pattern	Nominally Hemispherical
Polarization	Right hand circular
VSWR	≤ 1.5:1
Impedance	50 ohms
Gain (nominal at Zenith)	Between 3 - 5 dBic depending upon groundplane
Power Handling	1 Watt CW
Connector	TNC Female
LNA Gain	Nominally 33 dB
LNA Noise Figure	2.2 dB
LNA DC Power	2.5 V / 20 mA

#### MECHANICAL

Height	0.75 inches (18.97 mm)
Element diameter	3.50 inches (88.90mm)
Weight	0.49 lbs (0.22 kg) max
Fixing Holes	4 x Ø 0.20 inches (Ø 5.11mm) thru Ø .385 (Ø 9.78) 100° countersunk

#### FINISH

Antenna	Matt Grey
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Other finish options are available. Please specify finish required when ordering.

Note: Cooper Antennas Ltd has a policy of continuous product improvement and data herein is therefore subject to change.  
Please check with Cooper Antennas Ltd that this data sheet is at latest issue before initiating contract activity.