



21-50-82

**Multi-Band Satcom, Communications &
Active GPS Antenna**

**240 to 400 MHz, 30 to 512 MHz
& L1/L2 GPS**

FEATURES

- **Aero-dynamic design**
- **Light weight / high strength**
- **Fully environmentally sealed**
- **Hi and Lo angle UHF Satcom coverage plus Active GPS**
- **Full 30-512 MHz LOS communications**
- **AN/ARC-210, AN/ARC-231, DAGR compatible**
- **Designed to MIL-STD-810 Environmental Conditions**



The 21-50-82 is a rugged multifunction VHF/UHF Satcom and GPS antenna designed for airborne applications. A high strength vertical shell houses 30 - 512MHz linear elements that can be used for V/UHF line of sight "LOS" communications or UHF Satcom at low angles of elevation. An active GPS element, DC powered through the coaxial connector provides circular polarization for both L1 & L2 frequency bands. This vertical shell also supports a pair of horizontal elements containing crossed dipoles connected to provide high angle, circularly polarized UHF Satcom coverage.

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Cooper Antennas Ltd is Accredited to: ISO9001, AS9100, ISO14001 and MAA Approved

SPECIFICATIONS

Cooper Antennas Model 21-50-82

Multi-Band Satcom, Communication & GPS Antenna

ELECTRICAL

Frequency	Hi Angle : 240 - 400 MHz Lo Angle : 30 - 88 MHz, 108 - 174 MHz & 225 - 512MHz GPS: 1565-1586 / 1217-1238 MHz
Gain	Hi Angle : +6 dBiC @ zenith Lo Angle : ≥ -19 dBi @30 MHz ≥ -9 dBi @88 MHz ≥ -1 dBi (average) over 118 -174 MHz ≥ 0 dBi to +3 dBi over 225 - 512 MHz GPS: ≥ 26.5 dB ±3 dB (pre-amp) ≥ +3dBiC (Antenna) @ Zenith
VSWR	Hi Angle : ≤ 1.75:1 (240 - 320 MHz) 2.0:1 max (320 - 400 MHz) Lo Angle : ≤ 2.5:1 (30 - 450 MHz) ≤ 3.0:1 (450 - 512 MHz) GPS: ≤ 1.5:1
Impedance (nominal)	50 Ohms
Power	Hi Angle : 200 Watts (240 - 400 MHz) Lo Angle : 50 Watts (30 – 88 MHz) 50 Watts (118 - 174 MHz) 200 Watts (225 - 512 MHz) GPS: 1 watt
Polarization	Hi Angle : Right Hand Circular Lo Angle : Vertical, GPS: Right hand Circular
Antenna RF Connector	Hi Angle : N Female Lo Angle : TNC Female GPS: TNC Female
DC Power for GPS pre-amp	2.5 - 24V < 50 mA typical

MECHANICAL

Height	12.5 inches max (317.5mm)
Wingspan	15 inches max (381mm)
Mounting Hole	8 x Ø 0.205 inches (5mm) holes, counter bore Ø 0.43 inch (10.9mm)
Weight	9 lbs (4.09 kg)

FINISH

Antenna	Urethane Lusterless Black
Base Plate	Unpainted

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.