



**21-54-49**  
**GPS/UHF/MUOS SATCOM**  
**and VHF/UHF LOS Antenna**  
**240 to 380 and 30 to 520 MHz**  
**L1**

## FEATURES

- **Suitable for helicopter, vehicular, fixed and mobile applications**
- **Covers UHF Satcom and MUOS as well as VHF/ UHF Line of Sight (LOS) and Active GPS**
- **All Weather operation**
- **Wide Angle pattern coverage without Hi-Lo switching**
- **200 Watts CW Power handling for Satcom**
- **Designed to MIL-STD-810**
- **SINGARS performance exceeds AS-3191 per MIL-DTL-85670C**



Combining highly efficient “droopy dipoles” with a wide band, line-of-sight linear element, the 21-54-49 provides Hi-Lo angle UHF Satcom from a single connector plus a separate VHF/UHF/EPLRS element in a single airborne antenna. In addition, this antenna includes an L1 stacked patch active GPS element.

Element shaping and matching of the circularly polarized dipoles provides UHF Satcom coverage right through the UHF and MUOS band with useable radiation and gain typically from zenith down to 20 degrees or less above the horizon.

The robust design is suitable for helicopter and fixed wing aircraft operating up to 450 knots.

**Cooper Antennas Ltd for non-USA customers**  
Thames Industrial Estate, Unit K, Fieldhouse Lane,  
Buckinghamshire SL7 1TB, UK  
Tel: +44 (0) 1628 482 360  
Email: [sales@cooperantennas.com](mailto:sales@cooperantennas.com)  
[www.cooperantennas.com](http://www.cooperantennas.com)



**Australian Representatives**  
**ROJONE, PTY LTD.**  
Tel: 02 9829 1555  
E: [sales@rojone.com.au](mailto:sales@rojone.com.au)  
[www.rojone.com.au](http://www.rojone.com.au)

# SPECIFICATIONS

## Cooper Antennas Model 21-54-49 GPS/UHF/MUOS SATCOM and VHF/UHF LOS Antenna

### ELECTRICAL

Frequency	Line of Sight (LOS) :	30 - 520 MHz
	Satcom :	240- 380 MHz
	GPS :	L1
Gain (typical)	LOS:	≥ -22 dBi @ 30 MHz
		≥ -9 dBi @ 88 MHz
		≥ -3 dBi (average) 118 - 174 MHz
		≥ 0 dBi to +3 dBi 225 - 520 MHz
	Satcom:	≥ +6.5 dBiC @ Zenith
		≥ 0 dBiC @ elevation angles above +25°.
	GPS :	+3 dBiC @ Zenith (antenna)
		+33 dB (pre-amp)
VSWR	LOS :	30-449 MHz ≤ 2.5:1, 450-520 MHz ≤ 3:1
	Satcom :	≤ 1.75:1
	GPS :	≤ 1.5:1 (antenna)
Impedance (nominal)		50 Ohms
Power	LOS :	50 Watts VHF, 200 Watts UHF
	Satcom :	200 Watts
	GPS :	1 Watt
Polarization	LOS :	Linear
	Satcom and GPS :	Right Hand Circular (maximum at zenith)
Antenna RF Connector	LOS :	TNC Female
	Satcom :	N Female
	GPS :	TNC Female
DC Power for GPS Pre-Amp		2.5 - 24 V <50 milliamps Typical

### MECHANICAL

Overall Height (max)	12 inches
Weight (max)	6.1 lbs max

### FINISH

Standard	Urethane Matt Black
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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.