



21-50-29
NSN 5985-99-415-5299
Multi-band Satcom &
Communication Antenna
225 to 400 MHz & 30 to 512 MHz

FEATURES

- **Suitable for helicopter, vehicular, shipborne and shelter installations**
- **Robust Construction**
- **Hemispherical radiation pattern coverage with separate Hi and Lo angle elements**
- **All Weather operation**
- **200 Watts CW Power handling**
- **Designed to MIL-STD-810 environmental requirements**
- **4 hole mounting plate**



The 21-50-29 is a combined Hi-Lo angle UHF Satcom Antenna plus VHF/UHF Line-of-Sight, "LOS" antenna designed for installation on military helicopters, vehicles, shelters or housings via a 4 hole mounting plate.

The antenna comprises two co-located elements; a circularly polarized cross-dipole and a linearly polarized broadband monopole. The two elements have separate RF feeds and by manual selection of either, full hemispheric pattern coverage is provided for UHF Satcom and omnidirectional azimuthal coverage for LOS.

The low angle satcom is intended for elevation angles up to about 45° and the high angle for approximately 45° to zenith.

Mast construction is from rugged aluminium and fiberglass, foam-filled for structural integrity and prevention of moisture ingress with aluminium alloy dipole elements and base housing.

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SPECIFICATIONS

Cooper Antennas Model 21-50-29

Multi-band Satcom & Communication Antenna

ELECTRICAL

Frequency	Low Angle : 30 - 512 MHz
	High Angle : 225 - 400 MHz
Gain (typical)	Low Angle: ≥ -23 dBi @ 30 MHz
	≥ -7 dBi @ 88 MHz
	≥ -2.5 dBi a@ 118 - 174 MHz
	≥ 0 dBi to +3 dBi @ 225 - 512 MHz
	High Angle: +6.5 dBiC a@ 318 MHz
VSWR	Low Angle: ≤ 2.75:1 30 - 450 MHz,
	≤ 3.0:1 450 - 512 MHz
	High Angle: ≤ 1.75:1
Impedance (nominal)	50 Ohms
Power	Low Angle : 75 Watts VHF, 200 Watts UHF
	High Angle : 200 Watts
Polarization	Low Angle: Linear
	High Angle: Right Hand Circular (maximum at zenith)
Antenna RF Connector	Low Angle: TNC Female
	High Angle: N Female
Operational Temperature	-54°C to +71°C

MECHANICAL

Dipole span	20 inches (508mm)
Overall Height	12 inches (305mm)
Weight	4.5 lbs (2kg)

FINISH

Standard	Urethane lusterless 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.**