



**21-50-80**  
**NSN 5985-99-496-6481**

**Multi-Band Satcom,  
Communication & Link 16  
Antenna**

**240 to 400 MHz, 30 to 512 MHz  
& 960 to 2500 MHz**

## FEATURES

- **Aero-dynamic design**
- **Light weight / high strength**
- **Fully environmentally sealed**
- **Hi and Lo angle UHF Satcom coverage plus LINK 16**
- **Full 30-512 MHz LOS communications**
- **AN/ARC-210, AN/ARC-231, MIDS, JTIDS compatible**
- **Designed to MIL-STD-810 Environmental Conditions**



The 21-50-80 is a rugged multifunction VHF/UHF/L-Band Satcom communications and LINK 16 antenna designed for airborne applications. A high strength vertical shell houses 30 - 512 and 960 - 1220 MHz linear elements that can be used for V/UHF line of sight "LOS" communications or UHF Satcom at low angles of elevation plus LINK 16. This vertical shell also supports a pair of horizontal elements containing four horizontal monopoles connected to provide high angle, circularly polarized UHF Satcom coverage.

**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)

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

# SPECIFICATIONS

## Cooper Antennas Model 21-50-80

### Multi-Band Satcom, Communication & Link 16 Antenna

#### ELECTRICAL

<b>Frequency</b>	Hi Angle : 240 - 400 MHz Lo Angle : 30 - 88 MHz, 108 - 174 MHz & 225 - 512 MHz LINK16: 960 - 2500 MHz
<b>Gain</b>	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 LINK16: ≥ +1 dBi Average
<b>VSWR</b>	Hi Angle : ≤ 1.75:1 (240 - 320 MHz) ≤ 2.0:1 (321 - 400 MHz) Lo Angle : ≤ 2.5:1 (30 - 450 MHz) ≤ 3.0:1 (450 - 512 MHz) LINK16: ≤ 2.0:1 (960-1220 MHz), ≤ 2.5:1 (1221-2500 MHz)
<b>Impedance (nominal)</b>	50 Ohms
<b>Power</b>	Hi Angle : 200 Watts (240 - 400 MHz ) Lo Angle : 50 Watts (30 – 88 MHz) 50 Watts (118 - 174 MHz ) 200 Watts (225 - 512 MHz) LINK16: 200 Watts CW: 2kW peak
<b>Polarization</b>	Hi Angle : Right Hand Circular Lo Angle : Vertical, LINK16: Vertical
<b>Antenna RF Connector</b>	Hi Angle : N Female Lo Angle : TNC Female LINK16: N Female

#### MECHANICAL

<b>Height</b>	12.5 inches (318mm)
<b>Wingspan</b>	15 inches max (381mm)
<b>Mounting Hole</b>	8 x Ø 0.200 inches (5mm) holes, counter bore Ø 0.39 inch (9.9mm)
<b>Weight</b>	11 lbs (5 kg)

#### FINISH

<b>Antenna</b>	Urethane lusterless Black
<b>Base Plate</b>	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.