



FEATURES

- Hi angle UHF Satcom & MUOS coverage
- Lo Angle VHF/UHF LOS communications
- Isolated Outputs
- EPLRS compatible
- Suitable for TACAN/IFF/LINK 16
- Low wingspan minimizes loading on aircraft structure
- Fixing holes compatible with 437S1-H
- Designed to MIL-STD-810 Environmental Requirements
- Erosion protection over all leading edge surfaces



The 21-50-74 is a rugged, multifunction VHF/UHF LOS, UHF Satcom and L-Band antenna designed for airborne applications. A high strength aerodynamic vertical shell houses a 30 to 600 MHz linear element that can be used for VHF/UHF line of sight “LOS” communications or UHF Satcom at low angles of elevation as well as TACAN/IFF/LINK16 (L-band). This vertical shell also supports a “Bat-Wing” shape horizontal element containing a pair of cross dipoles, connected to provide high angle, right hand circularly polarized UHF Satcom coverage.

The antenna is completely sealed and filled with closed cell foam for long term environmental protection and reliability.

Internal filtering allows the antenna to operate simultaneously with Satcom or LOS and L-band (see over).

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
www.cooperantennas.com



Australian Representatives
ROJONE, PTY LTD.
Tel: 02 9829 1555
E: sales@rojone.com.au
www.rojone.com.au

SPECIFICATIONS

Cooper Antennas Model 21-50-74

Multi-function VHF/UHF LOS/Satcom & L-Band Antenna

ELECTRICAL

Frequency	UHF Hi Angle :	240 - 400 MHz
	VHF/UHF Lo Angle :	30 - 600 MHz
	L-Band :	960 to 1220 MHz
Gain (typical)	Hi Angle :	+6.5 dBiC
	Lo Angle :	30-88 MHz -18.5 dBi to - 8 dBi
		108-174 MHz -1 dBi average
		225-600 MHz +1 dBi average
		960-1220 MHz +1 dBi average
VSWR	Hi Angle :	≤ 2.0:1
	Lo Angle VHF/UHF :	≤ 2.5:1
	L-Band :	≤ 2.0:1
Impedance (nominal)	50 Ohms for all ports	
Power	VHF:	50 Watts CW
	UHF :	200 Watts CW (LOS and Satcom)
	L-Band :	2 KW Peak, 200 Watts CW
Isolation	VHF/UHF to L-band : 40 dB min	
	L-band to Satcom : 30 dB min	
	Note : depending upon system architecture, it may be necessary to provide increased isolation for simultaneous operation which can be adhered by 2 x 21-80-04-1 Low pass and 1 x 21-80-03-1 High pass external, in-line filters - see separate datasheets	
Polarization	UHF Hi Angle :	Right Hand Circular
	VHF/UHF Lo Angle and L-Band :	Vertical
Antenna RF Connector	UHF Hi Angle :	N Female
	UHF Lo Angle :	TNC Female
	L-Band :	N Female

MECHANICAL

Height	12 inches (305mm)
Wingspan	13 inches (330mm) max
Mounting Hole Configuration	8 holes each 0.208 - 0.234 dia. Inches (5.28 - 5.94mm)
Weight	9.7lbs (4.4Kg)

ENVIRONMENTAL

Designed to Environmental	MIL-E-5400 Class 2 / MIL-STD-810
---------------------------	----------------------------------

FINISH

Antenna: Urethane Lusterless Black Baseplate: Unpainted, Alocrom

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.