



21-50-16-1
UHF / L-Band
Airborne Blade Antenna
225 to 450 MHz & 960 to 1220 MHz

FEATURES

- **Covers EPLRS/UHF Com and TACAN/IFF/LINK16**
- **High Isolation provided by external diplexer**
- **High Strength Composite Blade with Aluminum Alloy Base**
- **Low Side Area, Low Drag**
- **Polyurethane leading edge protection**
- **Single 'N' Type Connector**
- **Drop-on replacement for AT-256, NSN's 5985-01-418-6105 and 5985-01-331-8710**
- **Environmental Performance to MIL-STD-810**



The 21-50-16-1 is a high performance combined UHF/L-band airborne blade antenna suitable for subsonic and supersonic aircraft. It also is ideal for use on aircraft subjected to rough-runway operation where both a metal leading edge capping and the solid aluminum alloy base block protect against debris impact.

Construction is from a one piece glass loaded thermoplastic blade molding intimately bonded into an aluminum alloy base block which houses the matching circuits and provides for very solid attachment to airframe via 6 fixing holes drilled to the same pattern as the AT-256 UHF antenna.

Integral radiating elements are shaped in such a way as to produce minimum VSWR in both UHF and L-band and also to optimize radiation pattern at L-band where the antenna would otherwise be electrically too long.

The antenna assembly is sealed by closed cell foam and finished in lusterless grey urethane paint.

The 21-50-16-1 can be used with CAL diplexer P/N 21-80-16-1.

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SPECIFICATIONS

Cooper Antennas Model 21-50-16-1 Airborne Blade Antenna

ELECTRICAL

Frequency	UHF :	225 to 450 MHz
Gain (typical)	UHF :	≥ 0 dBi
	L-Band :	≥ 0 dBi
VSWR	225-240 MHz	≤ 2.5:1
	240-450 MHz	≤ 2.0:1
	960-1220 MHz	≤ 1.8:1
Impedance (nominal)	50 Ohms	
Power	UHF :	100 Watts CW
Polarization	Vertical	
Radiation	Omni directional in azimuth	
Antenna RF Connector	N Female	

MECHANICAL

Antenna Shell Type	Glass loaded thermoplastic blade in aluminum alloy base collar
Height	7.95 inches (202mm)
Weight	1 lb (0.45kg)
Side Loading	≥ 8 psi ultimate
Base Plate Shape	Diamond shape
Fixing Holes	6 x Ø 0.205inch (5.2mm) holes, counter bored Ø 0.39 inches (9.9mm)

FINISH

Antenna	Urethane Lusterless Grey
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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.