



21-66-16
NSN 5985-01-575-6252
Special-to-Type VHF/UHF LOS
And
UHF Satcom Antenna



The 21-66-16 is a Special-to-Type multifunction antenna designed to fit conformally into a supersonic military aircraft. The concept is to provide a dielectric “window” (P/N 21-60-16) in the upper surface of the aircraft, through which a combined Line-of-Sight “LOS” and UHF Satcom antenna radiate, using the aircraft structure as a ground plane and reflective surface.

This antenna provides LOS frequency coverage from 30 to 512MHz in a vertical element with specially shaped, top-mounted crossed dipoles providing UHF Satcom coverage. These dipoles are decoupled at UHF but provide RF top-loading at VHF to give enhanced gain in the SINCGARS 30-88MHz band.

The vertical LOS element can also be used to provide a linear polarized low-angle Satcom for Satellite capture down to horizon.

Mechanical design is such as to provide minimal airframe modifications, thus making the 21-66-16 suitable for retrofit applications.

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

SPECIFICATIONS

Cooper Antennas Model 21-66-16

Special-To-Type VHF/UHF LOS and UHF Satcom Antenna

ELECTRICAL

Frequency	LOS: 30 - 88 MHz, 108 - 174 MHz and 225 - 512 MHz Satcom: 240 - 400MHz
Gain (typical)	LOS: 30 MHz -22 dBi 88 MHz -8 dBi 108 - 174MHz -5 dBi (average) 225 - 512MHz 0 dBi (average) Satcom: 240-320MHz +6dBiC 320-400MHz +4dBiC
VSWR	≤ 2.5:1 (30 - 512MHz) ≤ 2.0:1 (240 - 400MHz)
Impedance (nominal)	50 Ohms
Power	50 Watts (LOS) , 200 Watts (Satcom)
Polarization	LOS: Vertical Satcom: RH Circular
Antenna RF Connector	LOS: TNC Female Satcom: N Female

MECHANICAL

Overall Height of Antenna	11.2 inches (284.5mm)
Weight	4.4 lbs (2kg) max

FINISH

Antenna	Primer protection coat
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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.