

# AERONAUTICAL SATCOM - ANTENNA

## SPECIFICATIONS



**eNfusion<sup>®</sup> Helicom**  
HSD solution for helicopters

### Function

The eNfusion™ Helicom is a high-gain antenna used to receive and transmit voice and data from rotor wing aircraft via the Inmarsat satellite network. The antenna is Inmarsat **SwiftBroadband Class 6 assessed** and compatible with all ARINC 741 compliant satellite communications avionics.

### Form Factor

The antenna receives and transmits signals to and from Inmarsat satellites—**from up to 10 degrees below horizon**. This allows the helicopter to maintain a connection while maneuvering and near geographical obstacles.

An ARINC Type F Diplexer/Low Noise Amplifier (DLNA) provides an RF interface between the avionics and the antenna.

An Antenna Control Unit (ACU) steers the antenna using ARINC 741 antenna-pointing vectors received from avionics.

### Interfaces

Antenna Power/Control to ACU	EMS SATCOM Proprietary
Antenna RF interface to DLNA	ARINC 741
DLNA Power/Control Interface	ARINC 741
Rx interface to/from avionics	ARINC 741
Tx interface from avionics	ARINC 741
ACU Power/Control Interface	EMS SATCOM Proprietary
Transmit Multi-Control (avionics)	ARINC 429
Receive BITE (avionics)	ARINC 429

### Certification and Approvals

FAA Technical STD Order	TSO-C132
	Several aircraft specific STCs
RTCA	DO-160 Version C
	DO-160E (Environmental)
	DO-178B Level D (Software)
Inmarsat	SwiftBroadband Class 6 assessed
	Aero H/H+, Swift 64

### Operation

Receive Frequency	1525.0 – 1559.0MHz
Transmit Frequency	1626.5 – 1660.5MHz
Power Supply	+28 Vdc
Low Angle RF Coverage	12 dBic min gain, 100% of coverage

### Durability, Environmental Characteristics (DO-160)

Maximum Altitude	Cat. F2 (70,000 Ft 21,336 M)
Minimum Altitude	none
Operational Temperature	Cat. F2 (-63°C to +71°C)
Cooling Requirements	none
Temperature Variation	Cat. B
Operational Shock	Cat. G
Vibration	Cat. E
Explosion Proofness	Cat. E1
RF Susceptibility	Cat. W
Lightning	Cat. A3 E3
Icing	Cat. B

### Dimensions

Antenna Length	17.1"	43.43 cm
Antenna Height	13.5"	34.29 cm
Antenna Width	10.0"	25.40 cm
Antenna Weight	5.1 lbs.	2.31 kg
ACU Length	14.0"	35.56 cm
ACU Height	2.5"	6.35 cm
ACU Width	7.5"	19.05 cm
ACU Weight	6.8 lbs.	3.10 kg
Diplexer Length	11.1"	28.2 cm
Diplexer Height	2.0"	5.1 cm
Diplexer Width	7.8"	19.8 cm
Diplexer Weight	6.0 lbs.	2.7 kg

### Mounting

The antenna is typically installed on the port forward side of the helicopter, however it may be installed in several other locations.

# ORDER

Call or email for prices and details regarding system capabilities and installations.

**+1 800.600.9759 or +1 613.591.1043**

or [getbroadband@emssatcom.com](mailto:getbroadband@emssatcom.com)



*Mounting kits and radomes specific to the helicopter being outfitted*

## Part Numbers

Antenna Assembly	0476-A-00377
Antenna Control Unit (ACU)	0811-A-0001
Diplexer	0476-A-00364
Antenna Assembly	0476-A-00377
Installation Kit, Radome (CH-47)	0811-K-0047
Installation Kit, Radome (H-60)	0811-K-0081
Installation Kit, Radome (H-53)	0811-K-0080

# LEARN MORE

## Additional Documents

Additional documents related to installation, maintenance, satellite network hardware and software—can be requested via email ([getbroadband@emssatcom.com](mailto:getbroadband@emssatcom.com)) or by phone.

+1 800.600.9759 or +1 613.591.1043



*ARINC Type F control and interface to and from helicopter communication avionics*



*Steered antenna capable of maintaining connection at 10° below horizon*



ISO AS-9100

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