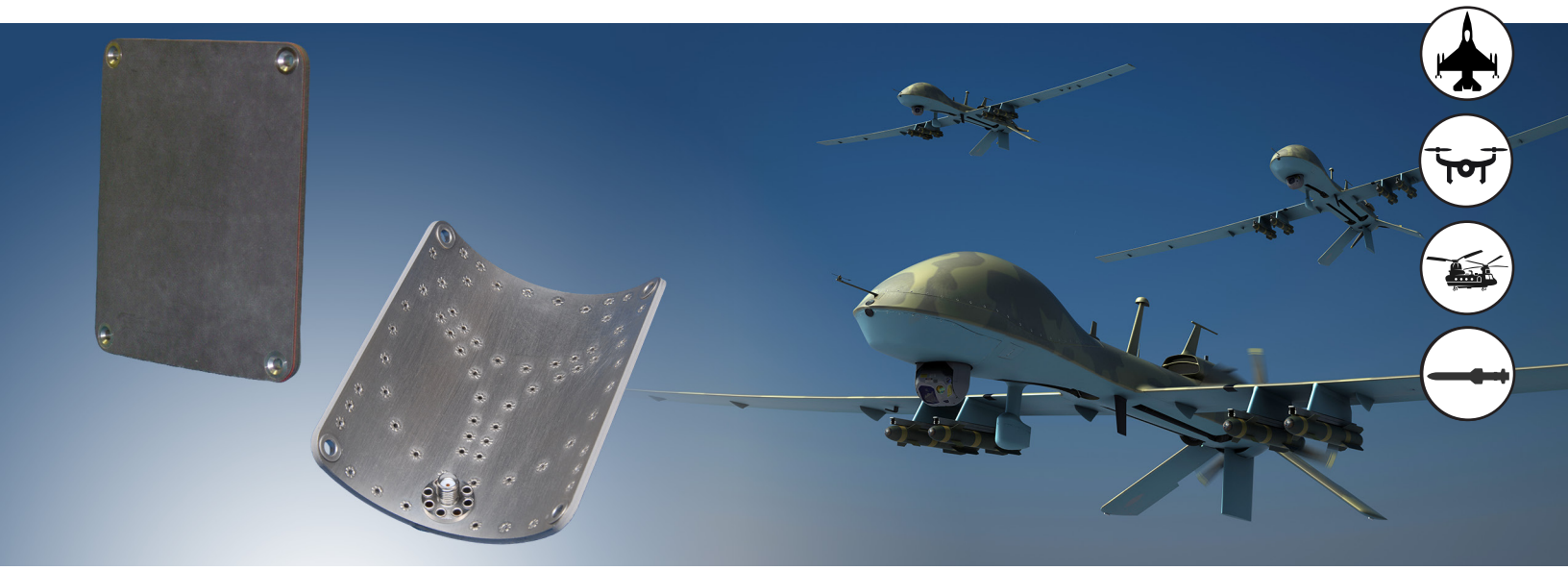
Omnislot™ Antennas



OMNISLOT™ ANTENNAS:

Haigh-Farr's Omnislot™ antennas provide the same radiation pattern characteristics as a stub or blade antenna in a thin, conformal, aerodynamic package. Omnislot™ antennas are preferable for use in applications where blade antennas may get damaged, such as net retrieval of RPV's and high aero-heating environments. Custom shape requirements are common.

Typical applications include data links for high-rate imaging and communications, as well as transponder signals. Designs are available from 300 MHz to 13 GHz.

The Omnislot™ antenna may be either flush mounted, or mounted directly to the exterior of the vehicle. The antenna may be secured to the vehicle using mechanical fasteners and/or adhesive bonding agents.

The antenna may be mounted inside a radome for enhanced ruggedization. For high aero-heating applications an ablative heat shield may be added.

APPLICATIONS:

Data Links, Telemetry, Transponder
Image Downlinks
Aircraft
Helicopters
Drones
Missed Distance Targets
Missiles

FEATURES:

Omnidirectional in Azimuth
Designs from 300 MHz to 13 GHz
Conformal - Flush or External Mounting
Thin Fabrication .085" to .300"
High Aero-Heating Protection Available
Rugged Construction - Designed for Tactical Missile Environments
Fastened or Bonded to Vehicle

CUSTOM ANTENNA DESIGN

Haigh-Farr designs custom antennas to meet customer specifications.

LEVERAGE EXISTING DESIGNS

Haigh-Farr can take an existing design and customize it to meet your application, saving NRE dollars and design time.

IN-HOUSE CAPABILITIES

Manufacturing & testing is done in-house.

Haigh-Farr, Inc. 43 Harvey Rd, Bedford, NH 03110
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TYPICAL SPECIFICATIONS

ELECTRICAL:

Operating Band:	300 MHz to 13 GHz
Input Imedance:	50 Ohms
Bandwidth:	Design parameter, 1% - 5%
VSWR Across Band:	2:1 Max across Band
Polarization:	Linear vertical
Power:	40 W cw, 5 kW peak
Radiation Pattern:	See plots

MECHANICAL:

Connector:	SMA standard, other connector options available such as direct cable feeds
Weight:	Design parameter - Function of electrical requirements 2.2 ounces (62g), basic S-Band antenna

Dimensions:	• Design parameter
	• Basic S-Band antenna dimensions:
	  • Width: 3.7" (94 mm)
	  • Length: 3.0" (76 mm)
	  • Thickness: .16" (4 mm)

Mounting Surface:	Design parameter - Antenna is flexible and designed to naturally mate with specified cylindrical, conical, or flat surface
Securing:	Screw and/or Bond
Altitude:	Any
Environment:	Design parameter - typical for supersonic tactical missiles and kinetic kill weapons

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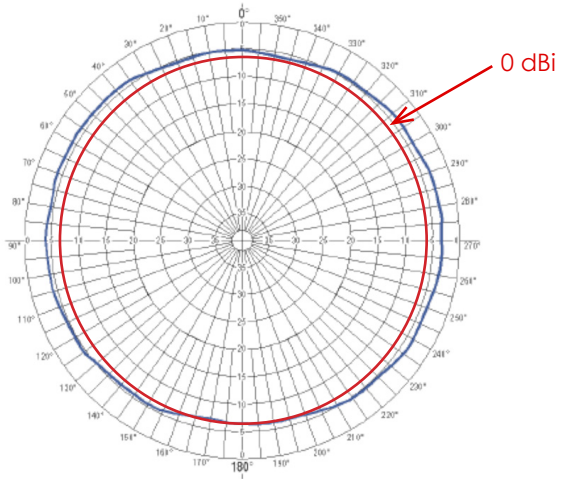
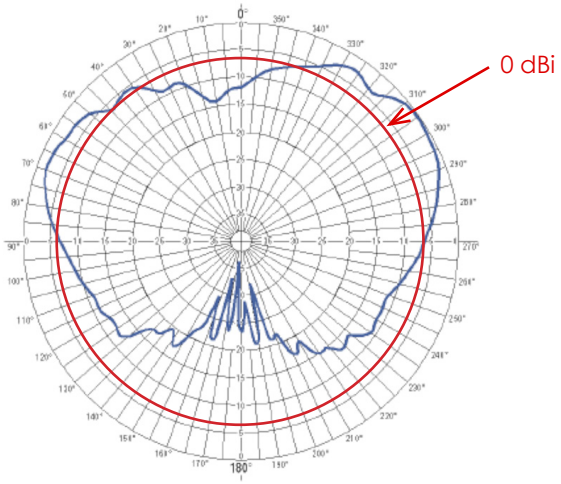
REPRESENTATIVE RADIATION PATTERNS

Omnidirectional in Aziumuth



AZIMUTH (YAW) - 2300 MHz
ISOTROPIC - 6 dB



ELEVATION (PITCH) - 2300 MHz
ISOTROPIC - 6 dB

1Radiation patterns are a function of the vehicle shape and size since the vehicle serves as the ground plane for the antenna. The patterns shown were measured on a typical smooth cylindrical ground plane.

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