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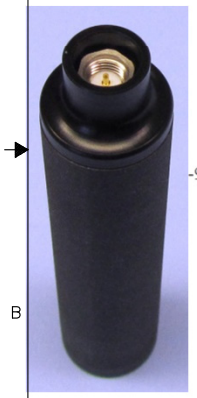
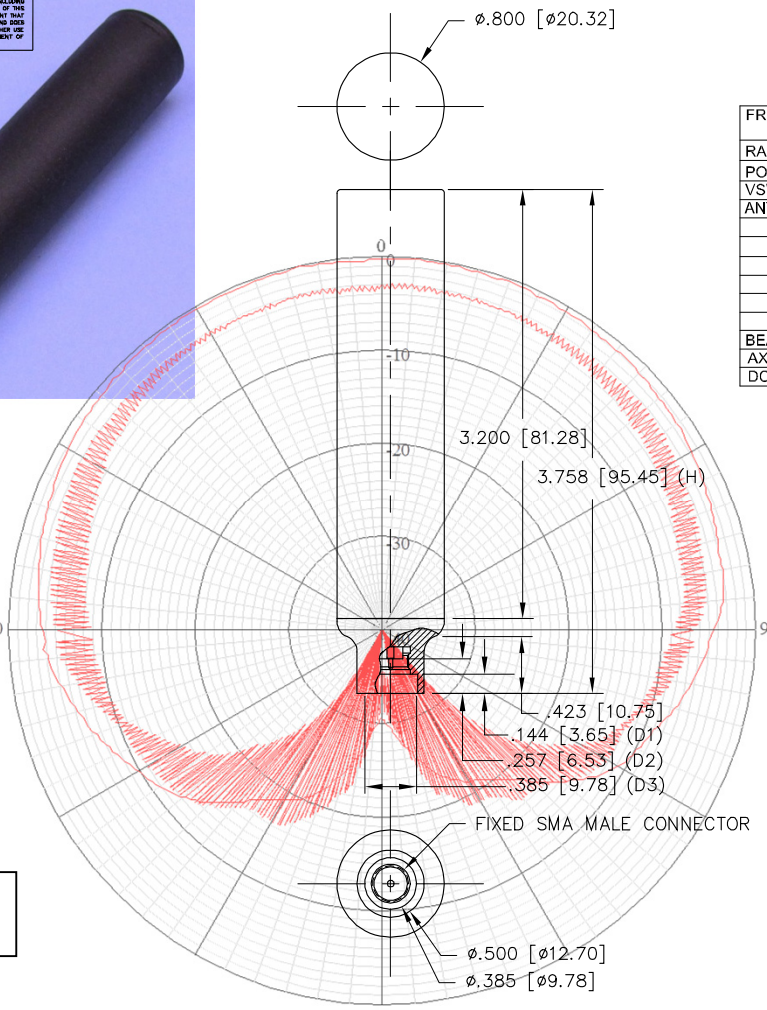


D1, D2, D3, and H Dimensions can be Customized.



SPECIFICATIONS

ELECTRICAL:

	Omnistar/L-Band Rx INMARSAT	L1 GPS	L1 GLONASS	IRIDIUM	Tx INMARSAT
FREQUENCY (MHz):	(1542.50 ±17.5)	(1575.42 ±15)	(1598 - 1609)	(1610-1626)	(1642.50 ±17.5)
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1				
ANTENNA GAIN (dBic):					
@ 90° (Zenith):	+0.3	+1.1	+1.9	+2.3	+1.2
@ 10° Elevation:	-3.2	-2.1	-1.3	-0.8	-1.8
@ 20° Elevation:	-2.2	-1.1	-0.4	+0.1	-1.0
@ 30° Elevation:	-1.6	-0.4	+0.2	+0.6	-0.5
@ 45° Elevation:	-0.7	+0.4	+0.9	+1.3	+0.3
@ 70° Elevation:	+0.1	+1.1	+1.5	+1.9	+0.9
BEAM WIDTH (3dB):	155°	155°	155°	155°	155°
AXIAL RATIO:	1dB	1dB	1dB	1dB	1dB
DC GROUNDING:	YES (LIGHTNING PROTECTION)				

LNA OPTION:

LNA GAIN:	27 dB (-A), 33 dB (-A3), 44 dB (-A4)
LNA NOISE FIGURE:	1.5 dB
LNA P 1dB Out:	+13 dBm
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	DIAMETER: 0.80 in. [20.32 mm] HEIGHT: 3.758 in. [95.45 mm]
WEIGHT:	0.705 oz (20 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	FIXED STAINLESS SMA MALE (OPTION: MCX, SMA, MCX, MMCX, QMA, BNC or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

FREQUENCY:	POLARIZATION:	LNA:	CONNECTOR:	COLOR:
L1: L1/Glonass	R: RHCP	A: WITH 27 dB Gain LNA	S: SMA; SM: SMA MALE	-1: GLOSS WHITE #17925 PER FED-STD-595B
L1L2: L1L2/Glonass	L: LHCP	A3: WITH 33 dB Gain LNA	Q: QMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
IR: Iridium		A4: WITH 44 dB Gain LNA	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
IN: Inmarsat/Iridium		P: WITHOUT LNA	N: N; NB: N-Bulkhead	-4: NATURAL MOLDED BLACK WITH GLASS FILL
T: Thuraya			T: TNC; TB: TNC- Bulkhead	-5: TAN #: FS 23446 or 33446, FED-STD-595 PAINT
L1/IR: L1 GPS/Glonass/Iridium				
L1L2/IR: L1L2 GPS/Glonass/Iridium				
L1IN: L1 GPS/Glonass/Inmarsat/Iridium				
L1L2IN: L1L2 GPS Glonass/Inmarsat/Iridium				
SXR: S-BAND (RHCP)	X = 1 (2.4 - 2.5)GHz, X = 2 (2.3 - 2.4)GHz			
SXL: S-BAND (LHCP)	X = 3 (2.0 - 2.3)GHz			

P/N: HL1IRA1-XSM-4-2

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	MATERIAL	FINISH
-2	-1	PARTS LIST			
	1				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.015, .XXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø ±.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	May-25-11
ORIGINALLY DESIGNED	S. HUYNH	May-25-11
UPDATED	S. HUYNH	Feb-21-14
UPDATE DRAWN	P. TRAN	Feb-21-14
APPROVED	S. HUYNH	Feb-21-14

ANTCOM CORP. TORRANCE, CALIFORNIA

GPS/INMARSAT/GLONASS/ IRIDIUM HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO HL1IRA1-XSM-4-2 | REV A

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf