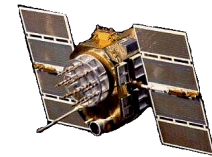




# L1 or L1L2 GPS & Inmarsat/Iridium/Glonass Antennas, P/N: S5BIR16RR-P-XX-X

## 4.6" Tall Blade Configurations



ISO 9001:2008/FAA Approved Facility

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

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REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

4X  $\phi$ .20 [ $\phi$ 5.11]  
 $\checkmark$   $\phi$ .385 [ $\phi$ 9.78] X 100"

1.750 [44.45]

5.250 [133.35]

1.24 [31.60]

4.625 [117.48]

0.57" [14.53] (TNC), 0.72" [18.29] (N, N-Bulkhead)  
0.46" [11.68] (SMA), 0.83" [21.00] (TNC-Bulkhead)

DATE STAMP

.98 [24.89]

0-RING GROOVE MS28775-024

1.80 [45.72]

2x3.60 [91.44]

**SPECIFICATIONS**

**ELECTRICAL:**

FREQUENCY (MHz):	(1575.42 $\pm$ 15)	(1542.50 $\pm$ 17.5)	(1642.50 $\pm$ 17.5)	(1602-1616)	(1610-1626)	(1227.60 $\pm$ 15)
<b>GAIN (dBi) in FS/4ft GP</b>	<b>L1 GPS</b>	<b>Rx INMARSAT</b>	<b>Tx INMARSAT</b>	<b>GLONASS</b>	<b>IRIDIUM</b>	<b>L2 GPS</b>
@ 90° (Zenith):	+1.1/+3.7	+0.7/+1.5	-0.3/0.0	+0.5/+2.9	+0.1/+1.1	-5.0
@ 10° Elevation:	-0.9/+0.0	-1.6/-1.3	-1.9/-1.0	-1.3/+0.2	-1.6/-0.8	-6.5 to -11.5
@ 20° Elevation:	-0.2/+2.0	-0.8/+1.0	-1.1/+1.2	-0.5/+2.4	-0.8/+1.2	-6.2 to -9.2
@ 30° Elevation:	+0.3/+2.0	-0.2/+1.0	-0.8/+0.4	+0.1/+2.1	-0.7/+1.1	-5.7 to -7.7
@ 45° Elevation:	+0.6/+1.5	+0.3/+0.6	-0.7/-0.8	-0.1/+1.0	-0.3/-0.3	-4.6 to -6.0
@ 70° Elevation:	+0.3/+1.3	+0.3/+0.4	-1.6/0.0	-0.3/+1.1	-0.7/0.0	-4.0
<b>BEAM WIDTH (3dB)</b>	173/155 Deg.	173/155 Deg.	180/162 Deg.	180/162 Deg.	180/162 Deg.	(107 to 170) Deg.
<b>AXIAL RATIO (dB)</b>	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5
<b>RADIATION PATTERN:</b>	HEMISPHERICAL					
<b>POLARIZATION:</b>	RHCP					
<b>VSWR:</b>	< 1.5:1					
<b>DC GROUNDING:</b>	YES (LIGHTNING PROTECTION)					

**MECHANICAL:**

**SIZE:** LENGTH = 5.25 in.[ 133.35 mm], WIDTH = 1.75 in.[ 44.45 mm]  
HEIGHT = 4.630 in. [117.48 mm]

**WEIGHT:** 5.15 oz. (146 g)

**FINISH:** SKYDROL RESISTANT POLYURETHANE ENAMEL  
BASE IRIDITE PER MIL-C-5441

**MATERIAL:** 6061-T6 ALUMINUM ALLOY BASE  
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,  
AND SKYDROL RESISTANCE, FIRE RETARDANT

**CONNECTOR:** FEMALE TNC CONNECTOR  
(SMA, TNC, N, BULKHEAD, & OTHER CONNECTOR, CABLE)

**ENVIRONMENTAL:**

**TEMPERATURE:** -67 °F TO +185 °F [-55 °C TO +85 °C]

**ALTITUDE:** 70,000 ft.

**VIBRATION:** > 30 G's

**LEAKAGE:** HERMETICALLY SEAL

**FEDERAL & MILITARY SPECIFICATIONS:**

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

CONFIGURATION:	POLARIZATION:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	AT: WITH +34 dB LNA	X: NO CABLE	S: SMA; P: PINS	1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	LR: TX: LHCP, RX: RHCP	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	RL: TX: RHCP, RX: LHCP		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
5: (HELIX ROD)					
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	REF
4	MOUNTING SCREWS (10-32, 3/4")	MS24693C274		2
1	O-RING	MS28775-024		1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
FRACTIONS TO BE SHOWN AS DECIMALS  
 $\pm$  1/64 DECIMALS TO BE SHOWN AS DECIMALS  
REMOVE ALL BURRS  
BREAK EXTERNAL EDGES .005 TO .015  
FILING IS OK FOR .015 TO .020  
SOFTENED EDGES PER MIL-STD-8839  
DATA ON A COMMON TO ALL PARTS  
MAGNIFIED SURFACES

ANTCOM CORP. TORRANCE, CALIFORNIA  
AIRBORNE, IRIDIUM/GPS/GLONASS/  
INMARSAT HELIX ANTENNA

DESIGNED: \_\_\_\_\_  
DRAWN: \_\_\_\_\_  
CHECKED: \_\_\_\_\_  
ENGINEER: \_\_\_\_\_  
APPROVED: S. HUYNH OCT-30-03  
DATE FILED: \_\_\_\_\_

DO NOT SCALE DRAWING

SCALE 1/1

SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

P/N: S5BIR16RR-P-XT-1

NOTES: UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]  
ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION