



IRIDIUM/Inmarsat/GPS Antennas, P/N: S5BIR16RR-P-XX-X:

4.6" Tall Blade Configurations



ISO 9001:2008/FAA Approved Facility Antenna Mounts/Adapters: <http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf>

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4X ϕ .20 [ϕ 5.11]
 \checkmark ϕ .385 [ϕ 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

0.98 [24.89]

0-RING GROOVE
MS28775-024

1.80 [45.72]

2x3.60 [91.44]

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

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)
GAIN (dBi) in FS/4ft GP	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 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
BEAM WIDTH (3dB)	173/155 Deg.	173/155 Deg.	180/162 Deg.	180/162 Deg.	180/162 Deg.	(107 to 170) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
DC GROUNDING:	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 IRIDIUM 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

IRIDIUM

1 2 3 4

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 T	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)					
5S: (HELIX ROD)					
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					

QUANTITY REQD. PARTS LIST

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS TOLERANCES AND ANGLES
 \pm 1/64 DECIMALS
TOLERANCE SURF PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FALLS IN .002 TO .005
SHOW METRIC PER MIL-STD-883B
DATA ON A COMMON BASIS
MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CA

AIRBORNE,
IRIDIUM/GPS/GLONASS/
INMARSAT HELIX ANTENNA

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

REV. 1

SCALE 1/1

SHEET 1 OF 1

P/N: S5BIR16RR-P-XT-1

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