



L1 or L1L2 GPS & Inmarsat/Iridium/Glonass Antenna, P/N: S53IR16RR-A-XX-X:

3.5" Diameter x 4.5" Tall, Pipe/Flat Mount Configurations: **Pictures**

ANTCOM CORPORATION . 367 Van Ness Way, Suite 602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com



S53IR16RR-A-XS-1
(White)



S53IR16RR-A-XS-4
(Black)



S53IR16RR-A-XTB-3
(Green)

Hermetically Sealed, Designed for Harsh Environment Applications.

Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)



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3.5" Diameter x 4.5" Tall, Pipe/Flat Mount Configurations: *Drawing*

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3X on 1.344 [34.12] Rad.

3X #.20 [#5.11] \checkmark ϕ .385 [#9.78] X 100"

4.550 [115.57]

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

NAMEPLATE

TNC BULKHEAD CONNECTOR (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

Back Mounting: 3x 10-32 Screws 0.250" Deep Equally Space on 1.375 [34.94] Radius

SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42±15)	(1542.50±17.5)	(1642.50±17.5)	(1602-1616)	(1610-1626)	(1227.60±15)
GAIN (dBic) 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: DIAMETER = 3.50 in. [88.90 mm]
HEIGHT = 4.690 in. [119.13 mm]

WEIGHT: 5.15 oz. (146 g)

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

COLOR: GLOSS WHITE #17925 PER FED-STD-595B
LUSTERLESS GRAY #36320 PER FED-STD-595B
OLIVE DRAB GREEN #34031 PER FED-STD-595B
LUSTERLESS BLACK #37038 PER FED-STD-595B

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

CONNECTOR: TNC BULKHEAD CONNECTOR, (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: FLAT, OR FIXED PIPE (3/4"-1.0" Dia.) MOUNT (PROVIDED)

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

QUANTITY	DESCRIPTION	PART NO	FINISH	REV
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	5
1				4
1	ADHESIVE GASKET	123456-3M-3G	-	3
1	VERTICAL/HORIZONTAL ANTENNA MOUNT	MTR-2		2
1	OPTIONAL VERTICAL ANTENNA MOUNT	MTR-1		1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ANGLES	FRAC TIONS	TOLERANCES ARE DECIMALS	± 1/64	± .010	± .005	± .1°
REWORK ALL SURFACES						
BRAC KET INTERNAL EDGES .015						
FACE .010 TO .020						
CHAMFERED WITH 45°						
DATE ON A COMMON & 20,000						
MACHINED SURFACES						
DO NOT SCALE DRAWING						

ANTCOM CORP. TORRANCE, CALIFORNIA

PIPE/FLAT MOUNT, IRIDIUM/GPS/GLONASS/INMARSAT HELIX ANTENNA

OWNER: S. HUYNH
APPROVED: DEC-03-03

REV: D
SCALE: 1/1

SHEET 1 OF 1

P/N: S53IR16RR-P-XTB-1

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



L1 or L1L2 GPS & Inmarsat/Iridium/Glonass Antenna, P/N: S52IR16RR-P-MT-X: 2.6" Diameter x 4.5" Tall, Magnetic Mount Antenna Configurations

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

Optional Top Mounting:
4x10-32 Screws
4x #20 [45.11] Thru.
✓ #385 [99.78] x 100"

REMOVABLE MAGNETIC MOUNT

TNC CONNECTOR (OPTION: SMA, N, N Bulkhead, MCX, MMCX, or Cable)

NAMEPLATE

SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42±15)	(1542.50±17.5)	(1642.50±17.5)	(1602-1616)	(1610-1626)	(1227.60±15)
GAIN (dBic) 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: DIAMETER = 2.653 in. [67.38 mm]
HEIGHT = 4.618 in. [117.29 mm]

WEIGHT: 5.15 oz. (146 g)

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

COLOR: GLOSS WHITE #17925 PER FED-STD-595B
LUSTERLESS GRAY #36320 PER FED-STD-595B
OLIVE DRAB GREEN #34031 PER FED-STD-595B
LUSTERLESS BLACK #37038 PER FED-STD-595B

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

CONNECTOR: TNC CONNECTOR,
(OPTION: SMA, N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: MAGNETIC, FLAT, FIXED, OR PIPE MOUNT

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

QUANTITY	DESCRIPTION	PART NO	FINISH	ITEM NO.
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	5
1				4
1				3
1				
1				1

CONFIGURATION: POLARIZATION: LNA: CABLE'S LENGTH: CONNECTOR: COLOR:

1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	A1: 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	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	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)		N: NO MAG. MOUNT T			
52 OR 53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ANGLES DECIMALS ARE ± 1/64 .002 .005 ± 1° TOLERANCE 5/16 PER ANSI Y14.5 REMOVE ALL BURRS BREAK INTERNAL EDGES .005 TO .015 FILE TO .000 TO .005 .005 MINIMUM FOR .005 .005 MINIMUM FOR .005 .005 MINIMUM FOR .005 MACHINED SURFACES ✓ DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

MAGNETIC MOUNT IRIDIUM/GPS/GLONASS/INMARSAT HELIX ANTENNA

OWNER: S. HUYNH
APPROVED: FEB-23-05

DATE: 3CVE1
SCALE: 1/1

SHEET 1 OF 1

P/N: S52IR16RR-P-MT-4

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