



ISO 9001:2008/FAA Approved Facility

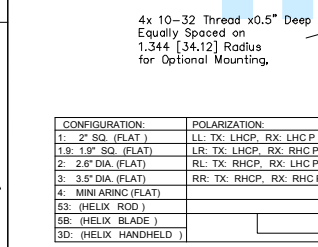
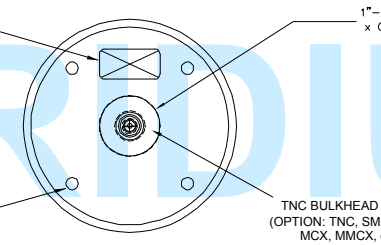
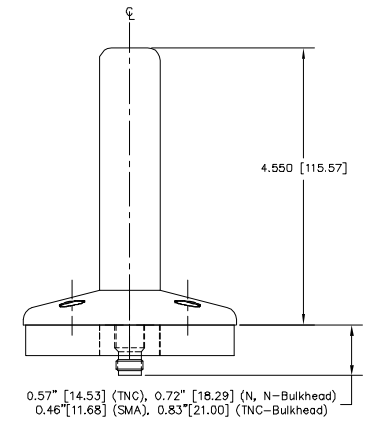
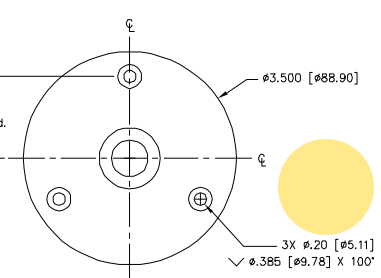
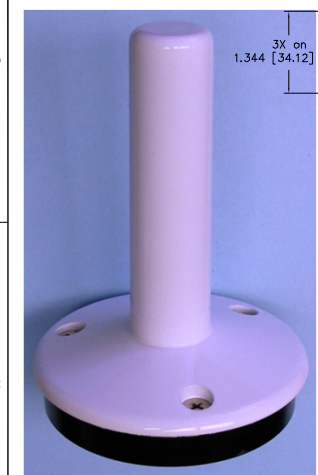
IRIDIUM Antenna, P/N: S53IR16RR-P-M14TB-X

3.5" Diameter x 4.5" Tall, 1"-14 Pipe Mount Configurations



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

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SPECIFICATIONS

| REV | | REVISIONS | | |
|------|-----|-------------|------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| | | | | |

ELECTRICAL:

| FREQUENCY (MHz): | (1575.42±15) | (1542.50±17.5) | (1642.50±17.5) | (1602-1616) | (1610-1626) | (1227.60±15) |
|-------------------------------|----------------------------|----------------|----------------|--------------|--------------|-------------------|
| GAIN (dBi) in FS/4R 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: 11 oz. (314 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDIUM 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 | REF ID |
|----------|-----------------------------------|--------------|--------|--------|
| 4 | MOUNTING SCREW: (10-32, 1") | MS24693C276 | - | 5 |
| 1 | | | | 4 |
| 1 | ADHESIVE GASKET | 12345G-3M-3G | - | 3 |
| 1 | VERTICAL/HORIZONTAL ANTENNA MOUNT | MTR-2 | | 2 |
| 1 | OPTIONAL VERTICAL ANTENNA MOUNT | MTR-1 | | 1 |

| CONFIGURATION: | POLARIZATION: | LNA: | CABLE'S LENGTH: | CONNECTOR: | COLOR: |
|----------------------|------------------------|---------------------|--------------------------|--------------------------|---|
| 1: 2" SQ. (FLAT) | LL: TX: LHCP, RX: LHCP | AT: WITH +34 dB LNA | N14: 1-1/4" Thread Mount | 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 | X: NO CABLE | M: MCX; MM: MMCX | 2: LUSTERLESS GRAY #36320 PER FED-STD-595B |
| 2: 2.6" DIA. (FLAT) | RL: TX: RHCP, RX: LHCP | | M: WITH MAG. MOUNT T | N: N; NB: N-Bulkhead | 3: OLIVE DRAB GREEN #34031 PER FED-STD-595B |
| 3: 3.5" DIA. (FLAT) | RR: TX: RHCP, RX: RHCP | | #: CABLE LENGTH (IN) | T: TNC; TB: TNC-Bulkhead | 4: LUSTERLESS BLACK #37038 PER FED-STD-595B |
| 4: MINI ARINC (FLAT) | | | R: RIGHT ANGLE CON. | | |
| 5S: (HELIX ROD) | | | | | |
| 5B: (HELIX BLADE) | | | | | |
| 5D: (HELIX HANDHELD) | | | | | |

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

P/N: S53IR16RR-P-M14TB-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS DECIMALS ANGLES
± 1/64 ± .005 ± 1°
TOLERANCE SHIP PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILING IS OK PER MIL-STD-8839
DAYS ON A COMMON LOT
MACHINED SURFACES
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

1-14 PIPE MOUNT, IRIDIUM/GPS/GLONASS/INMARSAT HELIX ANTENNA

DESIGNED BY: S. HUYNH
ENGINEER: S. HUYNH
APPROVED: S. HUYNH DEC-03-03
DATE FILED: DEC-03-03

REV: 1
QTY: 30
SCALE: 1/1
SHEET: 1 OF 1

NMO Connector Option is Now Available for Some Antennas