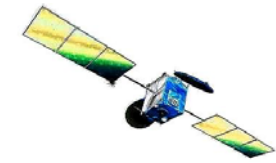




RHCP-Inmarsat/Iridium/GPS & LHCP-Thuraya Antennas: Pictures, Outline Drawings, and Specifications

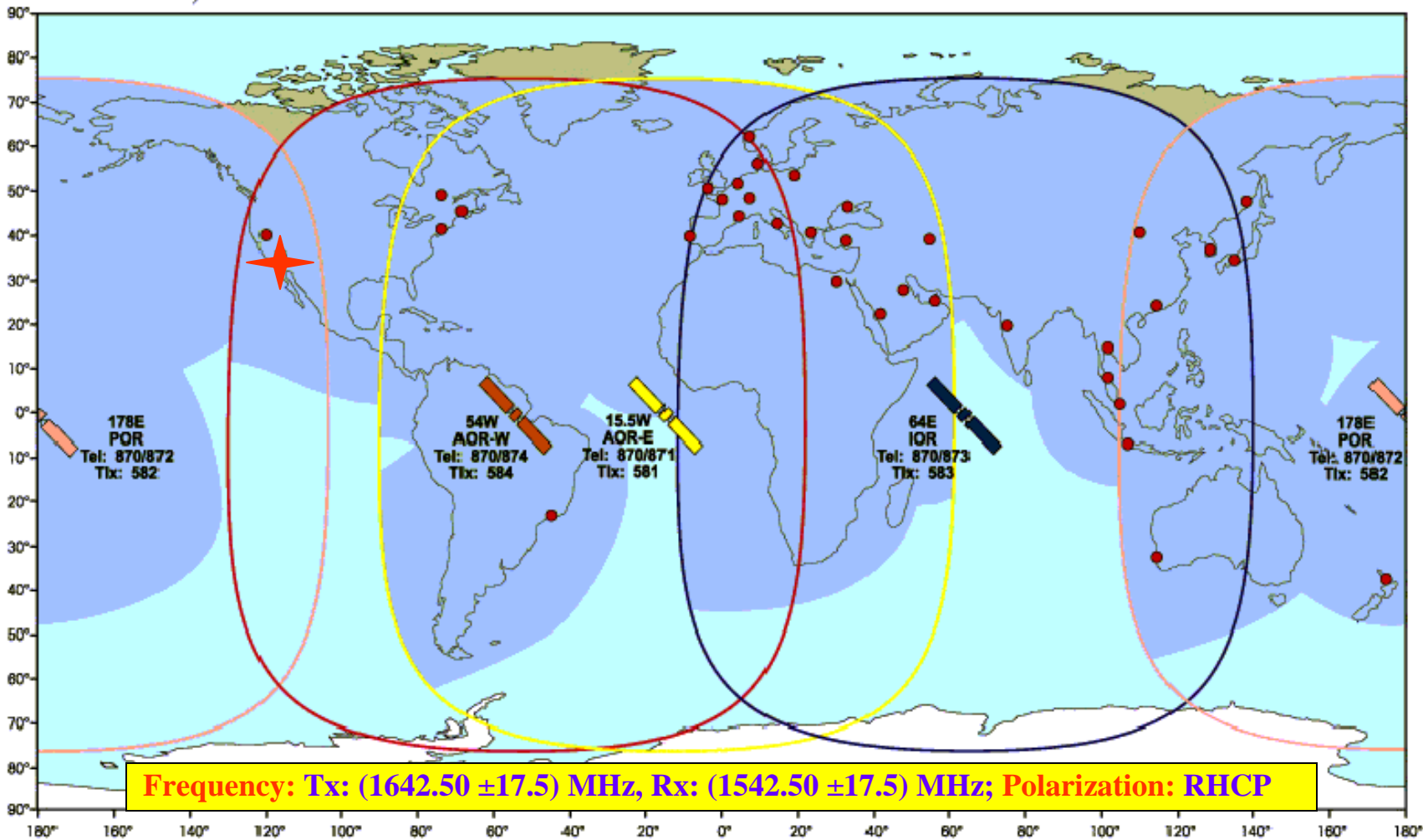
- New Thuraya, or Inmarsat, or Combined Thuraya/Inmarsat/GPS Antennas (Page 4-8)**
- One-Port GPS/RHCP-Inmarsat/Iridium or LHCP-Thuraya L-Band Antennas: (Page 9-64)**
- Two-Port GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya L-Band Antennas: (Page 65-75)**
- Other Two-Port GPS/RHCP-Inmarsat/Iridium or GPS/LHCP-Thuraya Antennas: (Page 76-105)**
- One/Two-Port Switchable L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antennas: (Page 106-112)**
- One-Port (No GPS) RHCP-Inmarsat/Iridium & LHCP-Thuraya Antennas: (Page 113-115)**
- Amplifier, Power Divider/Combiner & Filters: (Page 116-120)**
- Antenna Mounts, Adapters, Covers Ground Planes, Gaskets, O-Rings, & Sealing: (Page 121-129)**



GEO Orbit Altitude:
22,237 miles
(35,786 Km)



Mobile Satellite Communications Worldwide Coverage Map



Limit of global beam coverage for Inmarsat A,B,C,D,E,M

- Pacific Ocean Region
- Atlantic Ocean Region-West
- Atlantic Ocean Region-East
- Indian Ocean Region

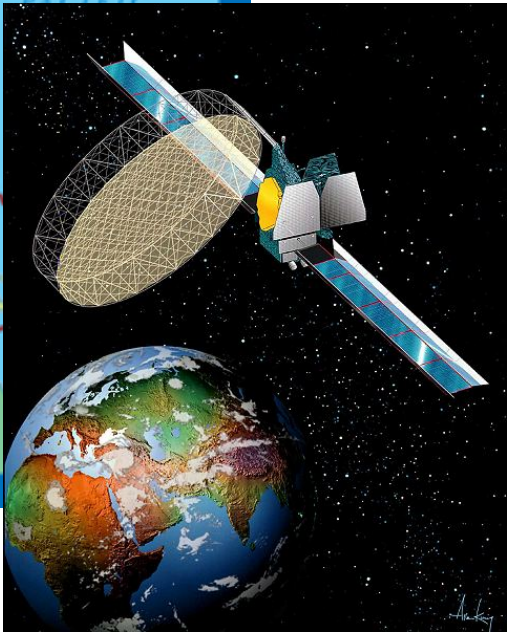
Inmarsat mini-M Phone coverage (for individual coverage areas of each ocean region please see accompanying map)

● Land earth stations

★ : Test Location

The availability of service at the edge of coverage becomes fluctuates depending upon a variety of conditions. The map depicts Inmarsat's expectations of coverage but does not represent a guarantee of service.

© Inmarsat, International Mobile Satellite Organization, 1999
 ISSUE 2



Frequency: Tx: (1642.50 ±17.5) MHz, Rx: (1542.50 ±17.5) MHz; Polarization: LHCP

**GEO Orbit Altitude:
22,237 miles
(35,786 Km)**

New Thuraya or Inmarsat/IRIDIUM/GPS Antenna,
P/N: 3GNSS16X-P-XX-X, with better Gain:
3.5" Diameter, Flat, Front/Back Magnetic Mount Configurations.
2.6in Dia. & Arinc-743 Versions are also available

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP) or Rx-Thuraya (LHCP)	L1 GPS, E1, E2 Galileo, L1 IRNSS (RHCP)	IRIDIUM, L1 GLONASS (RHCP)	Tx Inmarsat (RHCP) or Tx-Thuraya (LHCP)
FREQUENCY:	(1542.5±17.5) MHz	(1575±17) MHz	(1609-1626) MHz	(1642.5±17.5) MHz
RADIATION PATTERN:	HEMISPHERICAL			
VSWR:	< 2.0:1			
IMPEDANCE:	50 ohms			
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90° (ZENITH):	+3.3	+0.8	+5.9	+4.6
@ 10° Elevation:	-3.9	-5.0	-1.0	-1.5
@ 20° Elevation:	-2.3	-1.2	+0.5	+1.4
@ 30° Elevation:	-1.1	+0.4	+1.6	+3.0
@ 60-90° Elevation:	>+2.4	>+1.4	>+4.9	>+3.9
BEAM WIDTH (3dB):	100 Deg.	135 Deg.	100 Deg.	140 Deg.
AXIAL RATIO:	1.0 dB		1.5 dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION

LNA NOISE FIGURE:	33 dB Gain
LNA P1dB Out:	3.0 dB
LNA DC POWER:	+13 dBm
REJECTION@ (-50/+50)MHz	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/-<50mA
@ (-100/+100)MHz	-40 dB / -40 dB
POWERHANDLING	< -65 dB
	200 Watts CW (WITHOUT LNA) ; 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.9 mm]
 HEIGHT: 0.660 in. [16.76 mm]

WEIGHT: 7.1oz. (201g)

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

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

PHYSICAL DIMENSIONS:

- Ø3.500 [Ø88.90]
- .950 [24.13]
- 1.900 [48.26]
- 4X Ø.20 [Ø5.11] Thru. Ø.385 [Ø9.78] X 100° for 10-32 MOUNTING SCREWS
- SPHERICAL R6.000 [R152.40]
- .660 [16.76]
- Ø.148 [3.77]
- 4X 0.190-32UNC-2B 0.250" Deep, Equally Spaced on 1.375" Rad. for Optional Mounting
- .255 [6.48]

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

NOTES:

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

UNLESS OTHERWISE SPECIFIED: TOLERANCE 31M PER ANSI Y14.5

CABLE LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG; N: No Mag.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
F: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Bottom Connector
 THURAYA Or IRIDIUM/GPS
 INMARSAT/GLONASS/ANTENNA

3CVE1 3GNSS16X-P-XX-X

SCALE 1/1 SHEET 1 OF 1

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED



CC#: 3CVE1

New **Thuraya** or **Inmarsat/IRIDIUM/GPS** Antenna, **P/N: 3GNSS16X-P-MX-X, with better Gain:** **3.5" Diameter, Flat, Front/Back Magnetic Mount Configurations** **2.6in Dia. Version is also available**



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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:	Rx Inmarsat	L1 GPS,	IRIDIUM,	Tx Inmarsat
	OmniStar, L6 Galileo, B1 Compass (RHCP) or Rx-Thuraya (LHCP)	E1, E2 Galileo, L1 IRNSS (RHCP)	L1 GLONASS (RHCP)	(RHCP) or Tx-Thuraya (LHCP)
FREQUENCY:	(1542.5 ± 17.5) MHz	(1575 ± 17) MHz	(1609 - 1626) MHz	(1642.5 ± 17.5) MHz
RADIATION PATTERN:	HEMISPHERICAL			
VSWR:	< 2.0:1			
IMPEDANCE:	50 ohms			
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90° (ZENITH):	+3.3	+0.8	+5.9	+4.6
@ 10° Elevation:	-3.9	-5.0	-1.0	-1.5
@ 20° Elevation:	-2.3	-1.2	+0.5	+1.4
@ 30° Elevation:	-1.1	+0.4	+1.6	+3.0
@ 60-90° Elevation:	> +2.4	> +1.4	> +4.9	> +3.9
BEAM WIDTH (3dB):	100 Deg.	135 Deg.	100 Deg.	140 Deg.
AXIAL RATIO:	1.0 dB		1.5 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA OPTION	33 dB Gain			
LNA NOISE FIGURE:	3.0 dB			
LNA P1dB Out:	+13 dBm			
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/ <50mA			
REJECTION @ (-50/+50) MHz	-40 dB / -40 dB			
@ (-100/+100) MHz	< -65 dB			
POWER HANDLING	200 Watts CW (WITHOUT LNA); 1 Watt CW (WITH LNA)			

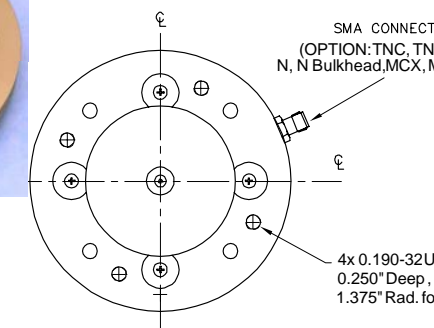
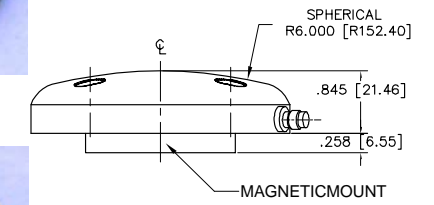
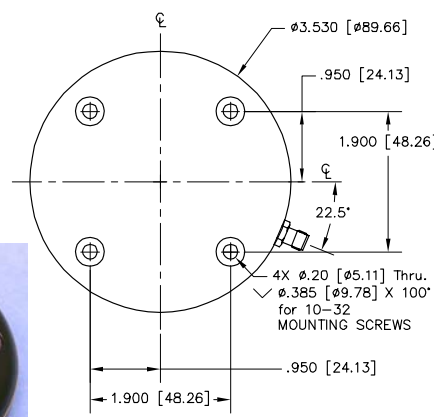
MECHANICAL:

SIZE:	DIAMETER: 3.53 in. [89.7 mm] HEIGHT: 0.845 in. [21.46 mm]
WEIGHT:	10.8 oz. (306g)
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:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100



P/N: 3GNSS16X-P-MT-3

- 2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
 - 1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
- NOTES: UNLESS OTHERWISE SPECIFIED:



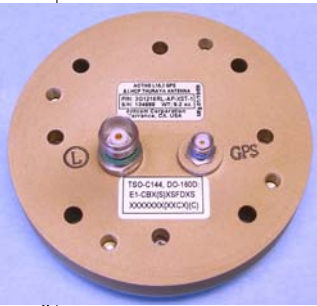
SIZE	POLARIZATION:	LNA:
1: 2" SQ.	R: RHCP	A: WITH LNA
1.9: 1.9" SQ.	L: LHCP	A: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

CABLE LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA, P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: No Mag.	M: MCX, MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
P: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE	T: TNC, TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES ± 1/64 .015 .005 ± 11	DRIVER
TOLERANCE 3MM PER ANSI Y14.5 <td>CHECKED</td>	CHECKED
REMOVE ALL BURRS	ENGINEER
BEVEL EXTERNAL EDGES .005 TO .015	APPROVED
FILED TO .0015 TO .002	S. HUYHVA
SCREW THREADS FOR MIL-S-8879	Feb-17-09
DATE ON A CHANGE OF .005	CAP FILE NO
MACHINED SURFACES	DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA	
3.5" Dia., Magnetic Mount THURAYA Or IRIDIUM/GPS INMARSAT/GLONASS/ANTENNA	
SCALE 1/1	SHEET 1 OF 1

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ELECTRICAL:

	L1/L2 GPS		THURAYA		Tx-Globstar
FREQUENCY(MHz):	L1: (1575.42 ±15)	L2: (1227.60 ±15)	Rx L-BAN D (1542.50 ±17.5)	Tx L-BAN D (1642.50 ±17.5)	(1609-1626)
ANTENNA GAIN @ Fc (dBic):	Free Space 4 ft G.P.	Free Space 4 ft G.P.	Free Space	Free Space	Free Space
@ 90° (ZENITH):	+ 5.5	+ 4.5	+ 3.3	+ 4.9	+ 4.3
@ 10° Elevation:	- 1.2	- 1.4	- 3.8	- 3.6	- 3.7
@ 20° Elevation:	+ 0.3	+ 1.4	- 2.0	- 0.1	- 2.0
@ 30° Elevation:	+ 1.8	+ 2.2	- 0.5	- 1.8	- 1.3
@ 60 - 90° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0
BEAMWIDTH(3dB):	106 Deg	130 Deg	106 Deg	75 Deg	106 Deg
POLARIZATION:	RHCP		LHCP		
RADIATION PATTERN:	HEMISPHERICAL				
VSWR:	< 1.5:1				
IMPEDANCE:	50 ohms				
AXIAL RATIO:	2 dB				
LIGHTNING PROTECTION:	DC GROUNDING				
LNA OPTION					
LNA GAIN:	33 dB				
LNA NOISE FIGURE:	3.0 dB				
LNA P1dB Out:	+13 dBm				
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA				
REJECTION @ (-50/+50) MHz:	-40 dB / -40 dB				
@ (-100/+100) MHz:	< -65 dB				
POWER HANDLING:	200 Watts CW (WITHOUT LNA) , 1 Watt CW (WITH LNA)				

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.888 in. [22.56 mm]

WEIGHT: 9.2 oz. (261g)

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

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.888 in. [22.56 mm]

WEIGHT: 9.2 oz. (261g)

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

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1			

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SIZE	FREQ. BAND:	POLARIZATION:	LNA:
1: 2" SQ.	1216	RR: RHCP/RHCP(L1/L2 GPS/Inmarsat/Iridium)	A: WITH LNA
1.9: 1.9" SQ.	1216	RL: RHCP/LHCP(L1/L2 GPS/Thuraya/Tx-Globalstar)	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1616	LR: LHCP/LHCP(Thuraya/Tx-Globalstar)/(Inmarsat/Iridium)	P: WITHOUT LNA
3: 3.5" DIA.			
4: MINI ARINC			

QUANTITY REQD:

DESCRIPTION	PARTS LIST	PART NO	FINISH	ITEM NO
MOUNTING SCREWS: 10-32, 1", Item 579		J507C1032R16	-	3
WASHER, CUSTOM C'SINK		3G15P1001-6	-	2
GASKET		3G15P1001-3G	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ± 1/64

TOLERANCE SURF PER ANSI Y14.5

FINISH: ALL SURF UNLESS OTHERWISE SPECIFIED

DRILL: ALL DRILL HOLE SURF UNLESS OTHERWISE SPECIFIED

PLATE: IF DIM TO DIMS .005 TO .015

DRIFT: IF DIM TO DIMS .015 TO .030

DRIFT: IF DIM TO DIMS .030 TO .060

DRIFT: IF DIM TO DIMS .060 TO .125

MACHINING SURFACE: V

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., (L1/L2 GPS) & (Thuraya/Tx-Globalstar) ANTENNA

ANTENNA

3G1216RL-AP-XXX-X

SCALE 1/1 SHEET 1 OF 1

CABLE LENGTH

L-Band/GPS Connector:	COLOR
X: NO CABLE	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Mag.	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH(IN)	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

T: TNC, TB: TNC-Bulkhead

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1			

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ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., (L1/L2 GPS) & (Thuraya/Tx-Globalstar) ANTENNA

3G1216RL-AP-XXX-X

SCALE 1/1 SHEET 1 OF 1



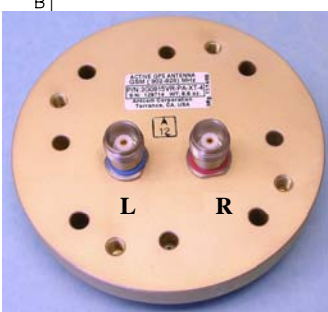


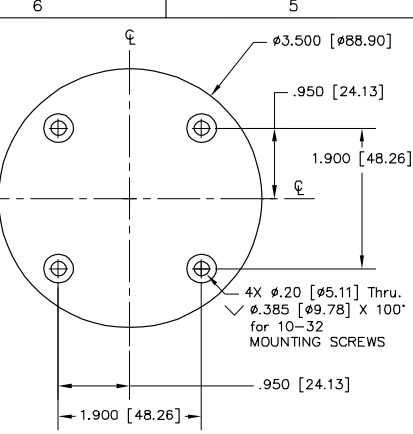
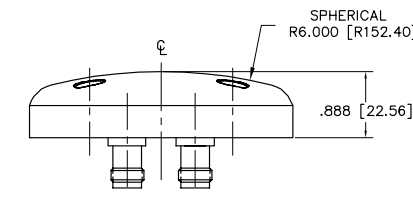
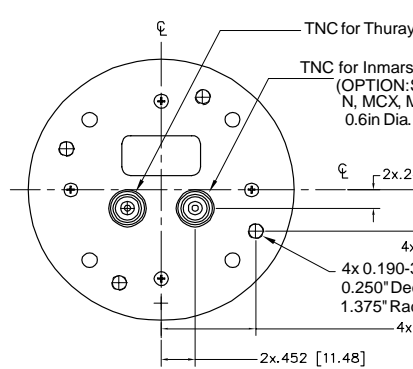
New 2-Ports, (RHCP-Inmarsat/Iridium/GPS) & (LHCP-Thuraya/Tx-Globalstar) Antenna,
P/N: 3GNSS1616RL-PP-XXX-X,
3.5" Diameter, Flat, Back Mount, Bottom Connector Configuration
2.6in Dia. & Arinc-743 Versions are also available



CC#: 3CVE1

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SPECIFICATIONS

	REVISIONS							
	ZONE	REV	DESCRIPTION	DATE	APPROVED			
ELECTRICAL:								
			Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP) & Rx-Thuraya (LHCP)					
			L1 GPS, E1, E2 Galileo, L1 IRNSS (RHCP)					
			IRIDIUM, L1 GLONASS (RHCP) & Tx-Globalstar (LHCP)					
			Tx Inmarsat (RHCP) & Tx-Thuraya (LHCP)					
FREQUENCY:			(1542.5±17.5) MHz	(1575±17) MHz	(1609-1626) MHz	(1642.5±17.5) MHz		
RADIATION PATTERN:	HEMISPHERICAL							
VSWR:	< 2.0:1				< 2.0:1			
IMPEDANCE:	50 ohms				50 ohms			
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90° (ZENITH):	+3.3	+0.8	+5.9	+4.6	+6.4	+3.9	+8.0	+4.1
@ 10° Elevation:	-3.9	-5.0	-1.0	-1.5	-0.7	-2.3	+1.0	-2.4
@ 20° Elevation:	-2.3	-1.2	+0.5	+1.4	+0.7	+0.9	+2.3	+0.7
@ 30° Elevation:	-1.1	+0.4	+1.6	+3.0	+1.9	+2.2	+3.4	+1.7
@ 60-90° Elevation:	>+2.4	>+1.4	>+4.9	>+3.9	>+5.6	>+2.5	>+6.9	>+1.9
BEAM WIDTH (3dB):	100 Deg.	135 Deg.	100 Deg.	140 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	1.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING							
LNA OPTION	33 dB Gain							
LNA NOISE FIGURE:	3.0 dB							
LNA P1dB Out:	+13 dBm							
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA							
REJECTION @ (-50/+50)MHz	-40 dB / -40 dB							
@ (-100/+100)MHz	< -65 dB							
POWER HANDLING	200 Watts CW (WITHOUT LNA), 1 Watt CW (WITH LNA)							
MECHANICAL:								
SIZE	DIAMETER: 3.50 in. [88.9 mm] HEIGHT: 0.888 in. [22.56 mm]							
WEIGHT:	10oz. (283g)							
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:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)							
ENVIRONMENTAL:								
TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]							
ALTITUDE:	70,000ft.							
VIBRATION:	> 30 G's							
LEAKAGE:	HERMETICALLY SEALED							
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							
ACCEPTANCE TEST PROCEDURE	ATP-GPS-L1L2-100							

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2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

P/N: 3GNSS1616RL-PP-XTT-3

SIZE	Frequency:	POLARIZATION:	GPS LNA OPTION
1: 2" SQ	1516: (L1 GPS) & (Thuraya/Tx-Globalstar)	RL: RHCP/LHCP	A: WITH LNA
1.9" 1.9" SQ			A: WITH LNA/LIMITER
2: 2.6" DIA	1616: (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar)	RL: RHCP/LHCP	P: WITHOUT LNA
3: 3.5" DIA			
4: MINI ARINC			

CABLE LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Mag.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	DESCRIPTION	PARTS LIST	PART NO	FINISH	ITEM NO
4	MONTING SCREWS: 10-32, 1", Item 579		J507C1032R16		5
1	GASKET		3G15P1001-3G		1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS NOT DECIMAL ANGLES ± 1/64 .004 .005 ± .1'

TOLERANCE SYM PER ANSI Y14.5

FORME ALL SURFES

BEAM EXTERNAL EDGES .005 TO .015

RELIEF & .015 TO .030

SCREEN THREADS PER MIL-C-8879

DATE OF A CHANGE & REV

MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Bottom Connector (Inmarsat/Iridium/GPS) & (Thuraya/Tx-Globalstar) Antenna

CC# 3CVE1

3GNSS1616RL-PP-XXX-X

SCALE 1/1

SHEET 1 OF 1

New 3-Ports (Active L1/L2 GPS), (RHCP-Inmarsat/Iridium) & (LHCP-Thuraya/Tx-Globalstar) Antenna, P/N: 5G1516RL-AP-XSTT-1 (5.04"x2.2"x0.9"), Flat, Top/Pipe Mount, Bottom Connector Configuration FAA Approved TSO Antennas



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4x ϕ .201 [05.11] for ϕ .385 [09.78] X 100" 10-32 MOUNTING SCREWS

5.040 [128.02]
4.237 [107.63]

2.214 [56.24]
1.600 [40.64]

.900 [22.86]

.784 [19.91]
2x.828 [21.04]

LHCP-Thuraya/Tx-Globalstar:TNC Female (Green)

2x.300 [7.61]

.148 [3.77]

0-RING (2-038)

RHCP-Inmarsat/Iridium:TNC Female (Red) GPS: SMA Female (Blue) (+2.5 to +30) Volts DC

SPECIFICATIONS

ZONE	REVISIONS			
	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	L1/L2 GPS		Rx Inmarsat OmniStar, L6 Galileo, B1 Compass(RHCP)	IRIDIUM L1 GLONASS(RHCP)	Tx Inmarsat (RHCP)					
	L2	L1	& Rx-Thuraya (LHCP)	& Tx-Globalstar(LHCP)	& Tx-Thuraya (LHCP)					
FREQUENCY:	(1227.60±15) MHz	(1575.42±15) MHz	(1542.5 ± 17.5) MHz	(1609 -1626) MHz	(1642.5 ± 17.5) MHz					
RADIATION PATTERN:	HEMISPHERICAL									
VSWR:	< 2.0:1									
IMPEDANCE:	50 ohms									
ANTENNA GAIN (dBi):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.		
@ 90 ° (ZENITH):	+1.8	+5.3	+4.6	+2.9	+3.3	+0.8	+6.4	+3.9	+8.0	+4.1
@ 10 ° Elevation:	- 4.2	- 2.3	- 2.5	- 1.8	- 3.9	- 5.0	- 0.7	- 2.3	+1.0	- 2.4
@ 20 ° Elevation:	- 2.9	+ 0.4	- 1.1	+ 0.7	- 2.3	- 1.2	+ 0.7	+ 0.9	+ 2.3	+ 0.7
@ 30 ° Elevation:	- 2.0	+ 2.3	+ 0.5	+ 1.7	- 1.1	+ 0.4	+ 1.9	+ 2.2	+ 3.4	+ 1.7
@ 60 - 90 ° Elevation:	> +0.9	> +3.2	> +3.6	> +2.1	> +2.4	> +1.4	> +5.6	> +2.5	> +6.9	> +1.9
BEAM WIDTH (3dB):	108 Deg.	120 Deg.	103 Deg.	146 Deg.	100 Deg.	135 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	2.0 dB		2.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING									

LNA OPTION:

LNA NOISE FIGURE:	33 dB Gain
LNA P1dB Out:	3.0 dB
LNA DC POWER:	+13 dBm
REJECTION @ (-50/+50)MHz:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA
@ (-100/+100)MHz:	-40 dB / -40 dB
POWER HANDLING:	< -65 dB
	1 Watt CW (WITH LNA)
	200 Watts CW

MECHANICAL:

SIZE: WIDTH: 2.214 in. [56.24 mm], LENGTH: 5.040 in [128.02 mm], HEIGHT: 0.900in. [22.86 mm]

WEIGHT: 10.4 oz. (295g)

FINISH: SKYDROLRESISTANTPOLYURETHANENAMEL BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6ALUMINUMALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROLRESISTANCE AND FIRE RETARDANT

CONNECTOR: SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

QUANTITY	RECD	DESCRIPTION	PARTS LIST	PART NO	FINISH	ITEM NO.
4		MONTING SCREWS: 10-32, 100" Flat Head, 1"		J507C1032R16		2
1		O-RING		2-038-N756-75		1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS: 1/16, 1/8, 3/16, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3, 3 1/4, 3 1/2, 4, 4 1/4, 4 1/2, 5, 5 1/4, 5 1/2, 6, 6 1/4, 6 1/2, 7, 7 1/4, 7 1/2, 8, 8 1/4, 8 1/2, 9, 9 1/4, 9 1/2, 10, 10 1/4, 10 1/2, 11, 11 1/4, 11 1/2, 12, 12 1/4, 12 1/2, 13, 13 1/4, 13 1/2, 14, 14 1/4, 14 1/2, 15, 15 1/4, 15 1/2, 16, 16 1/4, 16 1/2, 17, 17 1/4, 17 1/2, 18, 18 1/4, 18 1/2, 19, 19 1/4, 19 1/2, 20

ANTCOM CORP. TORRANCE, CALIFORNIA
Combined Avionics
GPS & (RHCP-Inmarsat/Iridium) & (LHCP-Thuraya/Tx-Globalstar) Antenna

DESIGNED BY: S. HELYAN
APPROVED: S. HELYAN
DATE: Feb-17-09

SCALE: 1/1

SHEET 1 OF 1

CONFIGURATION: 1: 2" SQ. (FLAT) 1516: L1 GPS& (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar) 2: 2.6" DIA. (FLAT) 1216: L1/L2 GPS& (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar) 4: MINI ARINC (FLAT) 5B: (HELIXBLADE) 3D: (HELIXHANDHELD)

FREQ. BAND: 1516: L1 GPS& (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar) 1216: L1/L2 GPS& (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar)

GPS LNA: A: WITH LNA P: WITHOUT LNA A2: WITH 20dB LNA

CABLE'S LENGTH: X: NO CABLE M: WITH MAG. MOUNT #: CABLE LENGTH (IN) R: RIGHT ANGLE CON.

GPS Inmarsat/Thuraya Connector: S: SMA M: MCX; MM: MMCX N: N; NB: N-Bulkhead T: TNC; TB: TNC-Bulkhead B: BNC FEMALE

COLOR: -1: GLOSS WHITE #17925 PER FED-STD-595B -2: LUSTERLESS GRAY #36320 PER FED-STD-595B -3: OLIVED RAB GREEN #34031 PER FED-STD-595B -4: LUSTERLESS BLACK #37038 PER FED-STD-595B

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

P/N: 5G1216RL-AP-XSTT-1



1. ONE-PORT
GPS/RHCP-Inmarsat/Iridium Antennas
or LHCP-Thuraya Antennas:
Pictures, Outline Drawings, and Specifications

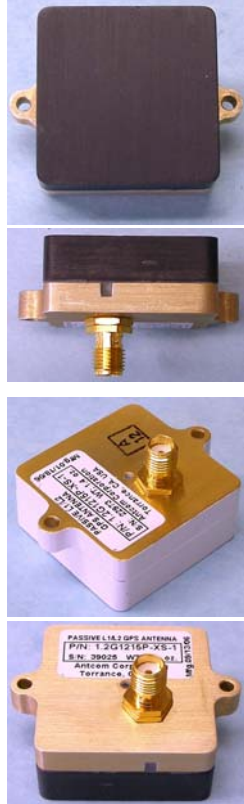
(Page 9 – 64)

GPS/RHCP-Inmarsat/Iridium Antennas or LHCP-Thuraya only Antennas

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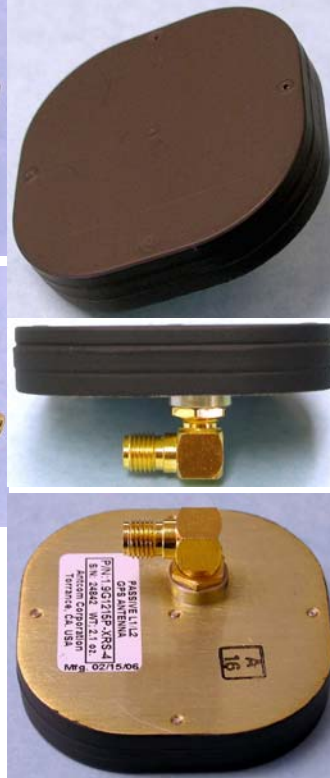
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P/N: 1.2T1516P-XNX-X (LHCP Thuraya)



P/N: 1.2G1216P-XS-X (RHCP Inmarsat)
P/N: 1.2T1516P-XS-X (LHCP Thuraya)
(1.25x0.69) in



P/N: 1.2G1216P-MNS-X (RHCP Inmarsat)
P/N: 1.2T1516P-MNS-X (LHCP Thuraya)
(1.25x0.69) in



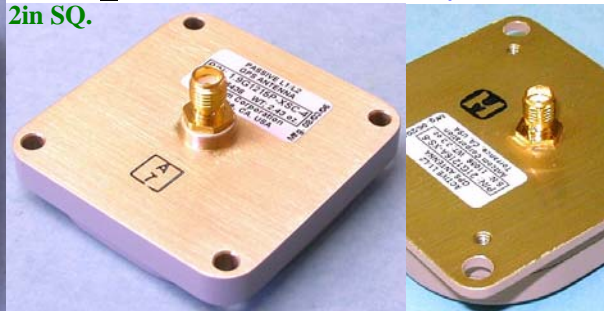
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P/N: 1.9T1516P-XRS-X (LHCP Thuraya)
(1.9x0.36) in



P/N: 2.3G1216P-XRS-X (RHCP Inmarsat)
P/N: 2.3T1516P-XRS-X (LHCP Thuraya)
(2.15x2.07x0.37) in



P/N: 1.9G1216P-XSC-X (RHCP Inmarsat)
P/N: 1.9T1516P-XSC-X (LHCP Thuraya)
2in SQ.



P/N: 21G1216P-XRS-X (RHCP Inmarsat)
P/N: 21T1516P-XRS-X (LHCP Thuraya)
2.3in SQ.

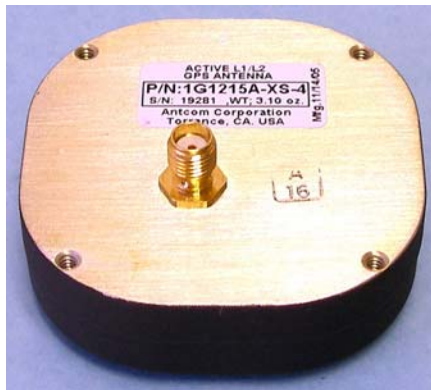


P/N: 1X1X16P-XX-3
(Green)

P/N: 1X1X16P-XX-4
(Black)

P/N: 1X1X16P-XX-5
(Tan)

P/N: 1X1X16P-XX-1
(White)



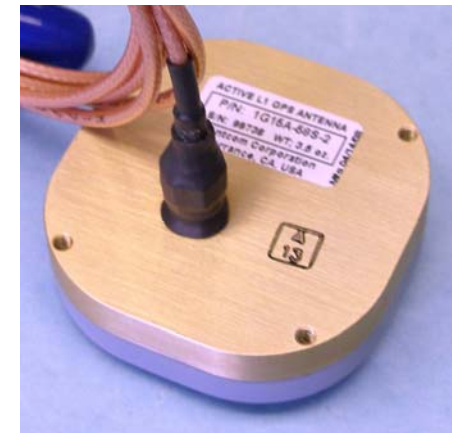
P/N: 1X1X16P-XS-X
(SMA)



P/N: 1X1X16P-XT-X
(TNC)



P/N: 1X1X16P-XSC-X
(SMA Center)



P/N: 1X1X16P-60S-X
(5ft, 60in SMA Cable)

Hermetically Sealed, Designed for Harsh Environment Applications.

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

GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 1G1216P-XX-X or LHCP-Thuraya only Antennas, P/N: 1T1516P-XX-X

2.0" Square, Flat, Back Mount, Bottom Connector Configurations

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	L1/L2 GPS				Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)		
ANTENNA GAIN (dBic):	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	Free Space	3.5" Dia. GP
@ 90 ° (ZENITH):	+ 5.5	+ 4.5	+ 3.3	+ 4.9	+ 3.1	+ 3.4	+ 4.3
@ 10 ° Elevation:	- 1.2	- 1.4	- 3.8	- 3.6	- 3.7	- 3.1	- 2.2
@ 20 ° Elevation:	+ 0.3	+ 1.4	- 2.0	- 0.1	- 2.0	- 1.1	- 0.6
@ 30 ° Elevation:	+ 1.8	+ 2.2	- 0.5	- 1.8	- 1.3	0.0	+ 0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
POWER HANDLING:	200 Watts CW (WITHOUT LNA)						

MECHANICAL:

SIZE: LENGTH: 2.080 in. [52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.657 in. [16.69 mm] , .499 in. [12.67mm] (No Radome option)

WEIGHT: 2.88 oz. (82 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: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead,
MCX, MMCX, 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

SIZE	FREQ. BAND	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1216: L1/L2 &	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSAT GLONASS/IRIDIUM	PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		

P/N: 1G1216P-XS-3

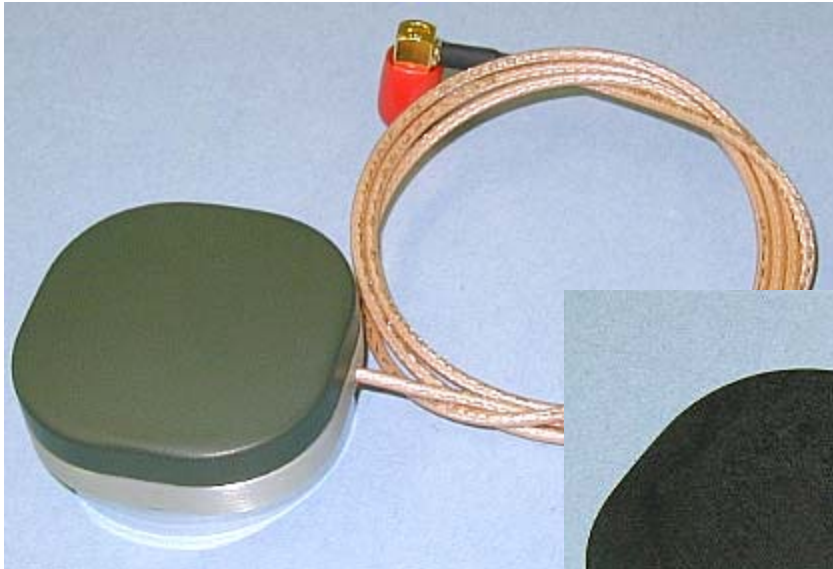
CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA-P PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Radome	M: MCX-MM-MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB: N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ZONE	REV	DESCRIPTION	DATE	APPROVED
1				

QUANTITY	REV	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REQ
1		ADHESIVE GASKET	12345G-3M-1G				5
1							3
1							2
1							1

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS DECIMALS ANGLES
± 1/64 ± .005 ± 1°

ANTCOMCORP. TORRANCE, CALIFORNIA
2in SQ. L1/L2
GPS/INMARSAT/GLONASS/
IRIDIUM ANTENNA
D|3CVE1|1G1216P-XS-3|
SCALE 1/1 SHEET 1 OF 1



P/N: 1X1X16P-24RS-3

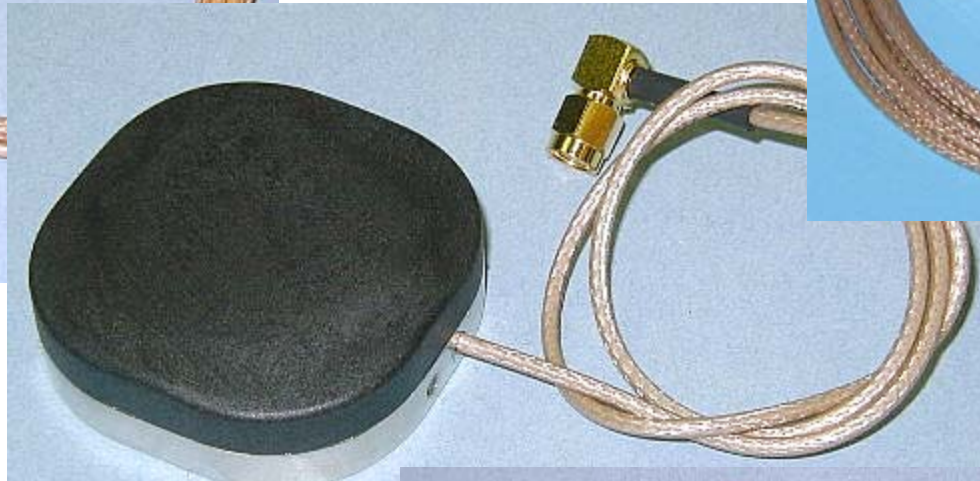
Hermetically Sealed, Designed for Harsh Environment Applications.

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

P/N: 1X1X16P-24NRS-4



P/N: 1X1X16P-36NS-1



P/N: 1X1X16P-24NRS-3 on 3.5" GP



P/N: 1X1X16P-24NRS-4

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SPECIFICATIONS

REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

ELECTRICAL:

FREQUENCY (MHz):	L1/L2 GPS				Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)		
ANTENNA GAIN (dBic):	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	3.5" Dia. GP	3.5" Dia. GP
@ 90 ° (ZENITH):	+ 5.5	+ 4.5	+ 3.3	+ 4.9	+ 3.1	+ 3.4	+ 4.3
@ 10 ° Elevation:	- 1.2	- 1.4	- 3.8	- 3.6	- 3.7	- 3.1	- 2.2
@ 20 ° Elevation:	+ 0.3	+ 1.4	- 2.0	- 0.1	- 2.0	- 1.1	- 0.6
@ 30 ° Elevation:	+ 1.8	+ 2.2	- 0.5	- 1.8	- 1.3	0.0	+ 0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
POWER HANDLING:	200 Watts CW (WITHOUT LNA)						

MECHANICAL:

SIZE: LENGTH: 2.080 in. [52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.657 in. [16.69 mm] , .499 in. [12.67mm] (No Radome option)

WEIGHT: 2.88 oz. (82 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: SMA MALE WITH 36" CABLE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

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

ALTITUDE: 70,000 ft.

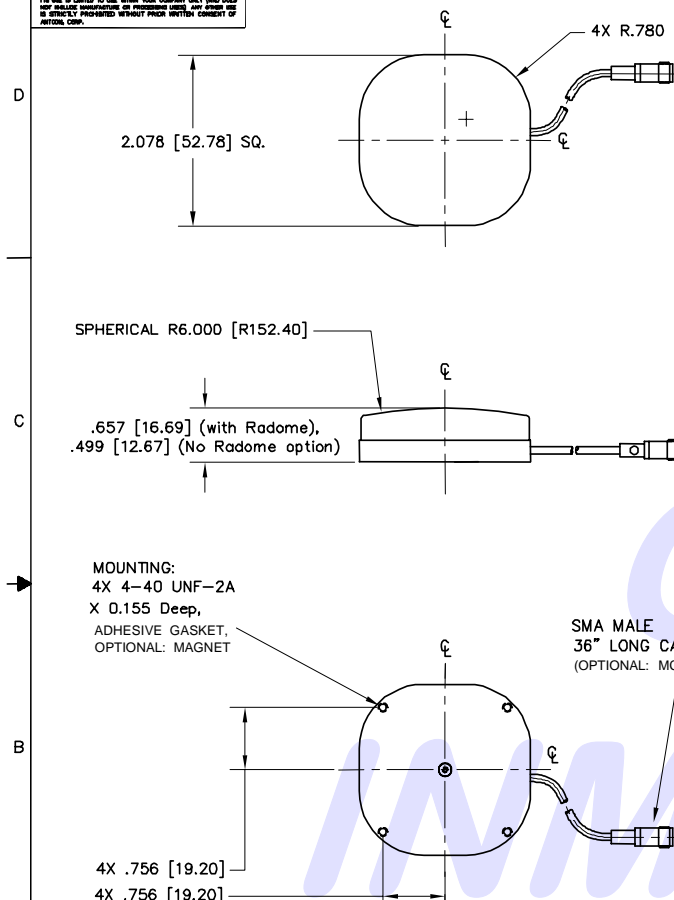
VIBRATION: > 30 G's

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-1L12-100



SIZE:	FREQ. BAND:	LNA:
1: 2" SQ	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1216: L1/L2 &	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSAT	PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC	GLONASS/IRIDIUM	

P/N: 1G1216P-36S-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA-P-PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Radome	M: MCX-MM-MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	100
1	ADHESIVE GASKET	12345G-3M-1G				3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES ± 1/64 ± .005 ± .1°

TOLERANCE DIM PER ANSI Y14.3

REMOVE ALL BURRS

FINISH SURFACES PER MIL-STD-883C METHOD 2009.2

DATE OF A CHANGE 08-01-2009

BACKGROUND SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

2in SQ. L1/L2 GPS/INMARSAT/GLONASS/IRIDIUM ANTENNA

APPROVED: S. HUYNH OCT-30-03

DATE: 08-01-2009

SCALE 1/1

SHEET 1 OF 1

- ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
- DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:



**GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 2G1216P-XX-X or
LHCP-Thuraya only Antennas, P/N: 2T1516P-XX-X**



2.6" Diameter, Flat, Bulkhead/Back Mount, Bottom Connector Configurations

CC#: 3CVEI

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



**P/N: 2X1X16P-XX-1
(White)**



**P/N: 2X1X16P-XX-3
(Green)**



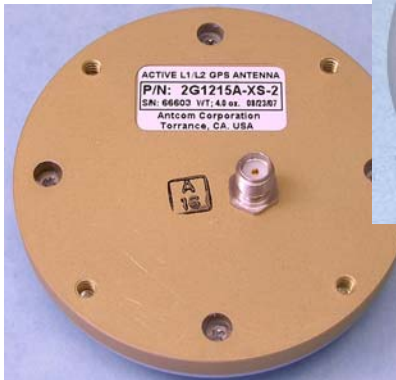
**P/N: 2X1X16P-XX-4
(Black)**



P/N: 2X1X16X-XX-2 (Gray)

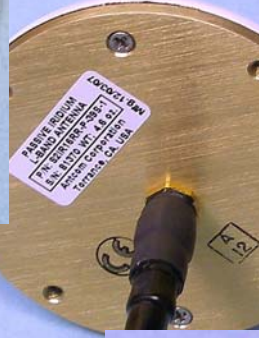


P/N: 2X1X16P-XX-5 (Tan)



P/N: 2X1X16P-XS-X (SMA)

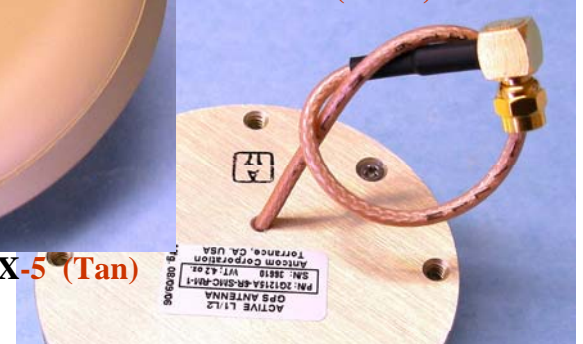
**Hermetically Sealed,
Designed for Harsh
Environment Applications.
Connector is Available in
SMA, MCX, MMCX, TNC,
TNC-B, N, or N-Bulkhead
(See Drawing)**



P/N: 2X1X16P-XT-X (TNC)



P/N: 2X1X16P-XTB-X (TNC-B)



P/N: 2X1X16P-XN-X (N)

2.6" Diameter, Flat, Bulkhead/Back Mount, Bottom Connector Configurations

CC#: 3CVE1

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MECHANICAL:

SIZE: DIAMETER: 2.60 in. [66.04 mm]
HEIGHT: 0.657 in. [16.69 mm] , .499 in. [12.67mm] (No Radome option)

WEIGHT: 4.00 oz. (113 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: TNC-BULKHEAD
(OPTION: TNC, SMA, N, N-Bulkhead, MCX, MMCX, 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

OPTIONAL MOUNTING:
4X 6-32 UNC-2B, 0.160" Deep, & ADHESIVE GASKET

SIZE:
1. 2" SQ 1215: L1/L2 A: WITH LNA
1.9-1.9" SQ 15: L1 ONLY AL: WITH LNA/LIMITER
2. 2.6" DIA. 1216: L1/L2 & P: WITHOUT LNA
3. 3.5" DIA. RX/TX INMARSAT PL: WITHOUT LNA and THINNER (0.58" THICK)
4. MINI ARINC GLONASS/IRIDIUM

CABLE'S LENGTH: X: NO CABLE
M: MAG. N. No Radome
: CABLE LENGTH (IN)
R: RIGHT ANGLE CON.

CONNECTOR: S: SMA-P-PINS
M: MCX-MM-MMCX
N: NB-N-Bulkhead
T: TB, TNC, TNC-Bulkhead

COLOR:
-1: GLOSS WHITE #17925 PER FED-STD-595B
-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS DECIMALS ANGLES
1/64 .000625 30° ± 1°
TOLERANCE DIM PER ANSI Y14.3
HOLE ALL DIMS UNLESS OTHERWISE SPECIFIED
FIT TO HOLE TO H3/D3
MATERIAL PER MIL-STD-883C
DATE OF A CHANGE TO THIS DRAWING
BACKGROUND SHADING
DO NOT SCALE DRAWING

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1			

QUANTITY

QTY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	UNIT
5						
1	ADHESIVE GASKET	12345G-3M-1G				3
1						2
1						1

ANTCOM CORP. TORRANCE, CALIFORNIA
2.6" Dia. L1/L2 GPS/INMARSAT/GLONASS/IRIDIUM ANTENNA
S. HUYNH OCT-30-03
D 3CVE1 2G1216P-XTB-3
SCALE 1/1 SHEET 1 OF 1

SPECIFICATIONS

ELECTRICAL:

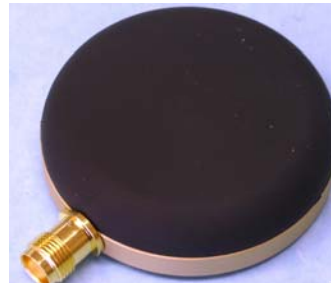
FREQUENCY (MHz):	L1/L2 GPS				Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)		
ANTENNA GAIN (dBic):	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	Free Space	3.5" Dia. GP
@ 90 ° (ZENITH):	+ 5.5	+ 4.5	+ 3.3	+ 4.9	+ 3.1	+ 3.4	+ 4.3
@ 10 ° Elevation:	- 1.2	- 1.4	- 3.8	- 3.6	- 3.7	- 3.1	- 2.2
@ 20 ° Elevation:	+ 0.3	+ 1.4	- 2.0	- 0.1	- 2.0	- 1.1	- 0.6
@ 30 ° Elevation:	+ 1.8	+ 2.2	- 0.5	- 1.8	- 1.3	0.0	+ 0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
POWER HANDLING:	200 Watts CW (WITHOUT LNA)						



P/N: 2X1X16P-MS-5
SMA Connector, Tan,
Magnet



P/N: 2X1X16P-MS-4
SMA Connector, Black,
Magnet



P/N: 2X1X15P-MT-4
TNC Connector, Black,
No Magnet



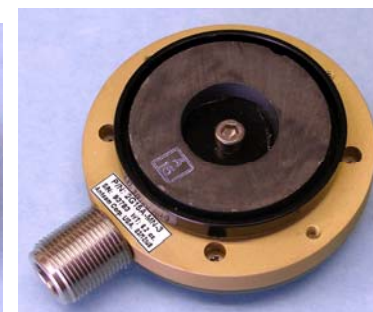
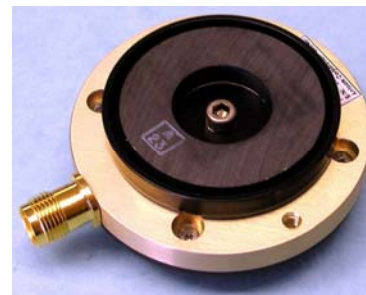
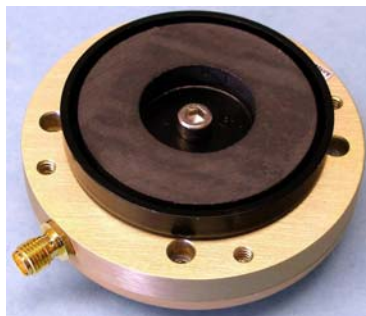
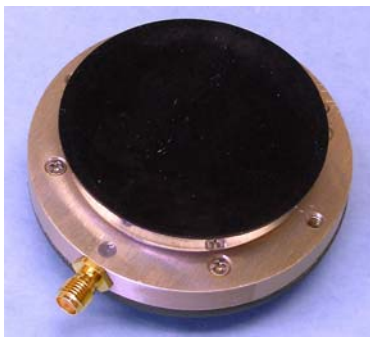
P/N: 2X1X16P-MS-3
SMA Connector, Green,
Magnet



P/N: 2X1X16P-MT-4
TNC Connector, Black,
Magnet



P/N: 2X1X16P-MN-3
N Connector, Green,
Magnet



P/N: 2X1X16P-NT-X
TNC Connector,
No Magnet

Hermetically Sealed, Designed for Harsh Environment Applications.
Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)



CC#: 3CVE1

**GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 2G1216P-MX-X or
LHCP-Thuraya only Antennas, P/N: 2T1516P-MX-X**
2.6" Diameter, Flat, Back, Magnetic Mount, Side Connector Configurations



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	L1/L2 GPS		Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
ANTENNA GAIN (dBic):	3.5" Dia. GP +5.5	4 ft G.P. +4.5	3.5" Dia. GP +3.5	4 ft G.P. +4.9	3.5" Dia. GP +4.3
@ 90° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+4.3
@ 10° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7
@ 20° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0
@ 30° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3
@ 60 - 90° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1				
IMPEDANCE:	50 ohms				
AXIAL RATIO:	2 dB				
LIGHTNING PROTECTION:	DC GROUNDING				
POWER HANDLING:	200 Watts CW (WITHOUT LNA)				

MECHANICAL:

SIZE: DIAMETER: 2.60 in. [66.04 mm]
HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67 mm] (No Radome option)

WEIGHT: 7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)

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: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead,
MCX, MMCX, 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

QTY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REF
1	ADHESIVE GASKET	123456-3M-1G				5
1						3
1						2
1						1
-2						-

SIZE: 1: 2" SQ, 2: 1.9" SQ, 3: 2.2" DIA, 4: 3.5" DIA

FREQ. BAND: 1215: L1/L2, 15: L1 ONLY, 1216: L1/L2 & P, RX/TX INMARSAT, GLONASS/IRIDIUM

LNA: A: WITH LNA, AL: WITH LNA/LIMITER, P: WITHOUT LNA

CABLE'S LENGTH: X: NO CABLE, M: MAG. N: No Radome, R: RIGHT ANGLE CON.

CONNECTOR: S: SMA: P: PINS, N: NB: N: N-Bulkhead, T: TB: TNC, TNC-Bulkhead

COLOR: -1: GLOSS WHITE #17925 PER FED-STD-595B, -2: LUSTERLESS GRAY #36320 PER FED-STD-595B, -3: OILIVE DRAB GREEN #34931 PER FED-STD-595B, -4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FRACTIONS: DECIMALS: ANGLES: ± 1/64, ± .005, ± 1'

TOLERANCE DIM PER ASH V14.5

REMOVE ALL DIMENSIONS FROM THIS DRAWING UNLESS SPECIFIED OTHERWISE

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

2.6" Dia. Magnetic Mount,
L1/L2 GPS/INMARSAT/
GLONASS/IRIDIUM ANTENNA

DRAWN: M. BOAS, OCT-30-03
CHECKED: S. HUYNH, OCT-30-03

SCALE: 1/1

SHEET 1 OF 1

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

P/N: 2G1216P-MS-3



**P/N: 2X1X16P-MNS-3
 SMA, (Green)**



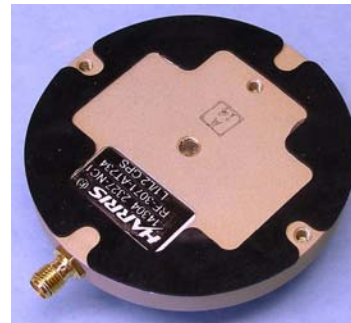
**P/N: 2X1X16P-MNS-4
 SMA, (Black)**



**P/N: 2X1X16P-MNS-5
 SMA, (Tan)**



**P/N: 2X1X16P-MNS-1
 SMA, (White)**



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Front



**26in Low Loss Cable,
 P/N: SMA-M-LMRF-26in-SMA-M**



Antenna/Cable



**Hermetically Sealed,
 Designed for Harsh
 Environment
 Applications.**

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



**GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 2G1216P-NX-X or
LHCP-Thuraya only Antennas, P/N: 2T1516P-NX-X**

2.6" Diameter, Flat, Back or No Magnetic, Side Cable Connector Configurations,

CC#: 3CVE1



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Top view showing diameter of 2.600 [66.04] and mounting holes.

ELECTRICAL:

FREQUENCY (MHz):	L1/L2 GPS				Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)		
ANTENNA GAIN (dBic):	3.5" Dia. GP +5.5	4 ft G.P. +4.5	3.5" Dia. GP +3.3	4 ft G.P. +4.9	3.5" Dia. GP +3.1	Free Space +3.4	3.5" Dia. GP +4.3
@ 90° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+3.1	+3.4	+4.3
@ 10° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7	-3.1	-2.2
@ 20° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0	-1.1	-0.6
@ 30° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3	0.0	+0.8
@ 60 - 90° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
POWER HANDLING:	200 Watts CW (WITHOUT LNA)						

MECHANICAL:

SIZE: DIAMETER: 2.60 in. [66.04 mm]
HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67mm] (No Radome option)

WEIGHT: 7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)

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: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead,
MCX, MMCX, 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

Side view showing height of .657 [16.69] (with Radome) and .499 [12.67] (No Radome option). Includes magnetic mount and optional mounting details.

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1			

Bottom view showing optional mounting with 4x6-32 screws and gasket. Includes female SMA connector details.

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

NOTES: UNLESS OTHERWISE SPECIFIED:

- ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
- DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

P/N: 2G1216P-NS-3

SIZE	FREQ. BAND	LNA
1: 2" SQ	1215: L1/L2	A: WITH LNA
1.8" - 1.9" SQ	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1216: L1/L2 &	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSAT	
4: MINI ARINC	GLONASS/IRIDIUM	

CABLES LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA, P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Magnet	M: MCX, MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
F: CABLE LENGTH (IN)	N, NB, N, N-Bulkhead	-3: OLIVE DRAB GREEN #34931 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION

DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REF NO.
1	ADHESIVE GASKET	12345G-3M-1G				5
1						3
1						2
1						1
-2	-1					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS TO DECIMALS AND ANGLES
± 1/64 DECIMALS ± 1°
TOLERANCE SHIP PER ASH 114.6
BREAK ALL SURFACES TO .015
PLATE 11.02, 11.00
DATE ON A CONFORM 11.00
MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

2.6" Dia. Shoulder Mount,
L1/L2 GPS/INMARSAT/
GLONASS/IRIDIUM ANTENNA

D3CVE1 2G1216P-NS-3

SCALE 1/1

SHEET 1 OF 1

ANTCOM CORP. TORRANCE CALIFORNIA

2.6" Dia. Shoulder Mount,
L1/L2 GPS/INMARSAT/
GLONASS/IRIDIUM ANTENNA

D3CVE1 2G1216P-NS-3

SCALE 1/1

SHEET 1 OF 1



P/N: 2X1X16P-60GMT-1,
(-1: White, -2: Gray, -3: Green, -4: Black, -5: Desert Sand)



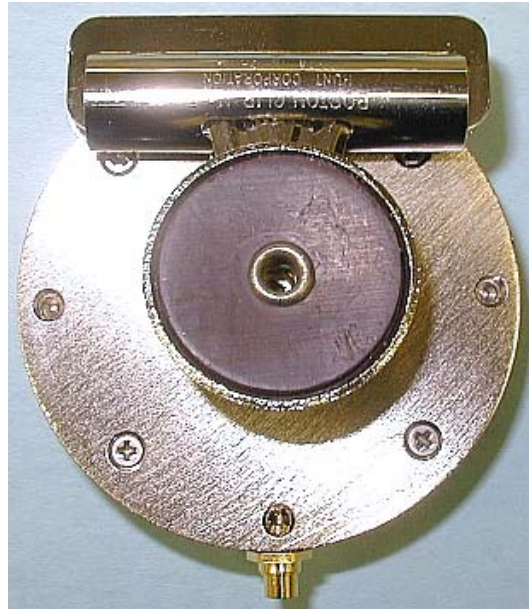
P/N: 2X1X16P-GMS-1,
(-1: White, -2: Gray, -3: Green,
-4: Black, -5: Desert Sand)

Hermetically Sealed, Designed for Harsh Environment Applications.

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



P/N: 2X1X16P-CMM-3



P/N: 2X1X16P-CMM-3



**P/N: 2X1X16P-CMM-3 with MCX
Connector (Quick Connect), Other
Types of Clipped on are Available**

**Hermetically Sealed, Designed for Harsh
Environment Applications.**

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



P/N: 3X1X16P-XX-1 (White) P/N: 3X1X16P-XX-2 (Gray) P/N: 3X1X16P-XX-3 (Green) P/N: 3X1X16P-XX-4 (Black)



P/N: 3X1X16P-XS-X (SMA)

P/N: 3X1X16P-XT-X (TNC)

P/N: 3X1X16P-XN-X (N)

- Hermetically Sealed, Designed for Harsh Environment Applications.
- Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)

MECHANICAL:
 SIZE: DIAMETER: 3.50 in. [88.90 mm]
 HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67mm] (No Radome option)
 WEIGHT: 5.15 oz. (.146 Kg)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
 COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
 CONNECTOR: SMA FEMALE
 (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, 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

SPECIFICATIONS

	L1/L2 GPS		Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space
FREQUENCY (MHz):	L1: (1575.42 ±12)		L2: (1227.60 ±12)		(1542.50 ±17.5) (1642.50 ±17.5) (1602-1626)
ANTENNA GAIN (dBi):	+5.5	+4.5	+3.3	+4.9	+3.1 +3.4 +4.3
@ 90 ° (ZENITH):					
@ 10 ° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7 -3.1 -2.2
@ 20 ° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0 -1.1 -0.6
@ 30 ° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3 0.0 +0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0 >+2.6 >+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg. 106 Deg. 106 Deg.
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1				
IMPEDANCE:	50 ohms				
AXIAL RATIO:	2 dB				
LIGHTNING PROTECTION:	DC GROUNDING				
LNA OPTION:					
LNA GAIN:	35 dB				
LNA NOISE FIGURE:	3.0 dB				
LNA P1dB Out:	+13 dBm				
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA				
REJECTION @ (-50/+50) MHz	-40 dB / -40 dB				
@ (-100/+100) MHz	< -65 dB				
POWER HANDLING:	200 Watts CW (WITHOUT LNA) , 1 Watt CW (WITH LNA)				

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD

QTY	DESCRIPTION	PART NO	FINISH	REV
4	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
1	ADHESIVE GASKET	12345G-3M-3G	-	1
-2	DESCRIPTION			

PARTS LIST

QTY	DESCRIPTION	PART NO	FINISH	REV
1	ADHESIVE GASKET	12345G-3M-3G	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FRACTIONS	DECIMALS	ANGLES
± 1/64	± 0.015	± 1°
± 1/32	± 0.030	± 1°

ANTCOM CORP. TORRANCE, CALIFORNIA

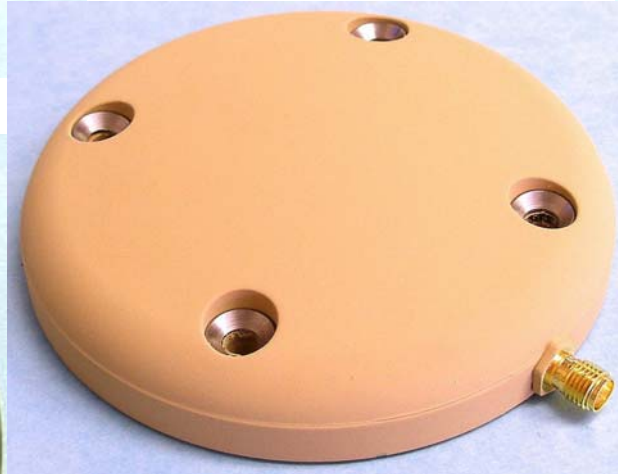
3.5" Dia. L1/L2 GPS/INMARSAT/GLONASS/IRIDIUM ANTENNA

DESIGNED BY: M. BOAS, Oct-29-03
 ENGINEER: S. HUYNH, Oct-29-03
 APPROVED BY: S. HUYNH, Oct-29-03
 DO NOT SCALE DRAWING

SCALE 1/1 SHEET 1 OF 1



**P/N: 3X1X16P-NS-4,
 SMA, Black**



**P/N: 3X1X16P-NS-5,
 SMA, Tan**



Hermetically Sealed, Designed for Harsh Environment Applications.

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

GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 3G1216P-NX-X or LHCP-Thuraya only Antennas, P/N: 3T1516P-NX-X

3.5" Diameter, Flat, Front/Back Mount, Side Connector Configuration

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

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: 5.15 oz. (.146 Kg)

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

ENVIRONMENTAL:

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

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

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

SPECIFICATIONS		REVISIONS			
ZONE	REV	DESCRIPTION	DATE	APPROVED	

ELECTRICAL:

FREQUENCY (MHz):	L1/L2 GPS				Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1602-1626)	(1602-1626)	(1602-1626)	(1602-1626)
ANTENNA GAIN (dBi):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	Free Space	Free Space
@ 90° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+3.1	+3.4	+4.3
@ 10° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7	-3.1	-2.2
@ 20° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0	-1.1	-0.6
@ 30° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3	0.0	+0.8
@ 60 - 90° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	> +2.6	> +3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						

LNA OPTION

LNA GAIN:	35 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA
REJECTION @ (-50/+50) MHz:	-40 dB / -40 dB
@ (-100/+100) MHz:	< -65 dB
POWER HANDLING:	200 Watts CW (WITHOUT LNA), 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: 5.15 oz. (.146 Kg)

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

ENVIRONMENTAL:

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

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

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

QUANTITY	DESCRIPTION	PARTS LIST	PART NO	FINISH	ITEM NO
4	MOUNTING SCREWS: 10-32, 3/4"		MS24693C274	-	5
1	ADHESIVE GASKET		123456-3M-3G	-	1

SIZE

SIZE	FREQ. BAND	LNA
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1216: L1/L2 & 8	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSAT	
4: MINI ARINC	GLONASS/IRIDIUM	

NAMEPLATE APPROXIMATE LOCATION

4x 0.190-32UNC-2B
0.250" Deep, Equally Spaced on
1.375" Rad. for Optional Mounting

(ø.157 [ø3.99]) 8-32,
FOR MAGNETIC MOUNT OPTION

SPHERICAL R6.000 [R152.40]

MAGNETIC MOUNT IS AVAILABLE

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

4X ø.20 [ø5.11] Thru.
✓ ø.385 [ø9.78] X 100"
for 10-32 MOUNTING SCREWS

1.900 [48.26]

.950 [24.13]

ø3.500 [88.90]

.950 [24.13]

1.900 [48.26]

.845 [21.46]

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

CABLE LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Mag.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TB: TNC; Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

P/N: 3G1216P-NS-3

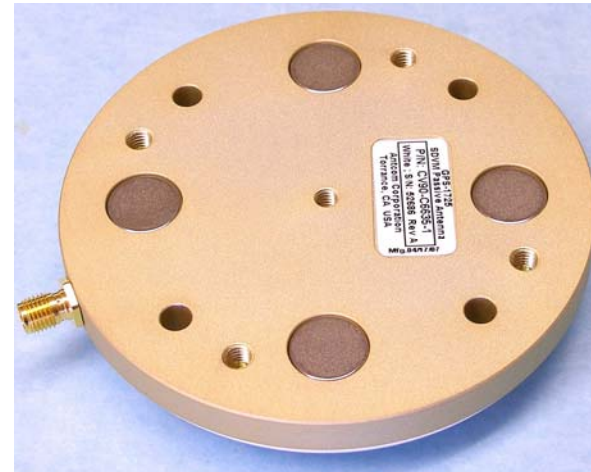
ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Side Con. L1/L2
GPS/INMARSAT/GLONASS/
IRIDIUM ANTENNA

D 3CVE1 3G1216P-NX-X

SCALE 1/1

SHEET 1 OF 1





P/N: 4X1X16P-XX-2 (Gray)



P/N: 4X1X16P-XX-3 (Green)



P/N: 4X1X16P-XX-4 (Black)



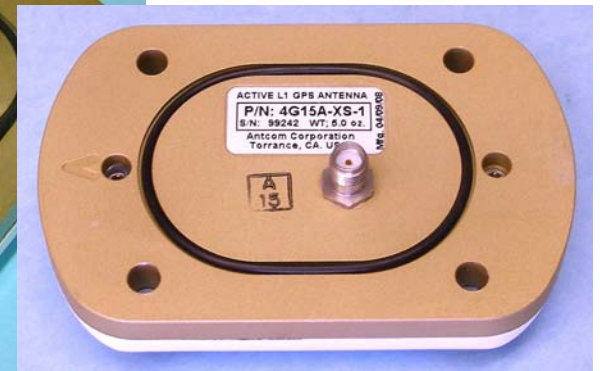
P/N: 4X1X16P-XX-1 (White)



P/N: 4X1X16P-XT-X
(TNC)



P/N: 4X1X16P-XN-X (N)



P/N: 4X1X16P-XS-X (SMA)

Hermetically Sealed, Designed for Harsh Environment Applications. Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)



CC#: 3CVE1

**L1/L2 GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 4G1216P-XX-X or
LHCP-Thuraya only Antennas, P/N: 4T1516P-XX-X
(3.4"x2.2") Mini Arinc, Flat, Front Mount, Bottom Connector Configurations**



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4X #.20 [Ø5.11] Thru.
✓Ø.385 [Ø9.78] X 100°
for 10-32 MOUNTING SCREWS

.657 [16.69] (with Radome),
.499 [12.67] (No Radome option)

R6.000 [R152.40]

R.375 [R9.52] (BLEND)

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

NAMEPLATE APPROXIMATE LOCATION

DATE STAMP APPROXIMATE LOCATION AS SHOWN

O-Ring Gasket

.255 [6.48]

.15 [3.77]

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

SIZE: FREQ. BAND: LNA:
1: 2" SQ 1215: L1/L2 A: WITH LNA
1.9: 1.9" SQ 15: L1 ONLY AL: WITH LNA/LIMITER
2: 2.6" DIA. 1216: L1/L2 & P: WITHOUT LNA
3: 3.5" DIA. RX/TX INMARSAT/IRIDIUM WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC GLONASS/IRIDIUM

P/N: 4G1216P-XT-3

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
J: MAG. N; No Radome	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: T; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

SPECIFICATIONS

ZONE	REV		DESCRIPTION		DATE	APPROVED
	1	2	3	4		

ELECTRICAL:

	L1/L2 GPS		Rx/Tx INMARSAT/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
FREQUENCY (MHz):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space
ANTENNA GAIN (dBic):	+5.5	+4.5	+3.3	+4.9	+3.4
@ 90° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+3.4
@ 10° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7
@ 20° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0
@ 30° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3
@ 60-90° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1				
IMPEDANCE:	50 ohms				
AXIAL RATIO:	2 dB				
LIGHTNING PROTECTION:	DC GROUNDING				

LNA OPTION:

LNA GAIN:	35 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/-50mA
REJECTION @ (-50/+50) MHz	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB
POWER HANDLING:	200 Watts CW (WITHOUT LNA) , 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67mm] (No Radome option)

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, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QTY	DESCRIPTION	PART NO	FINISH	REQ
4	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
1	ADHESIVE GASKET	12345G-3M-3G	-	1
-2	-1			



P/N: 42X1X16P-XT-1 (White)



P/N: 42X1X16P-XT-X (TNC)



P/N: 42X1X16P-XT-3 (Green)



P/N: 42G1215A-24MM-3

Hermetically Sealed,
Designed for Harsh
Environment
Applications.

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

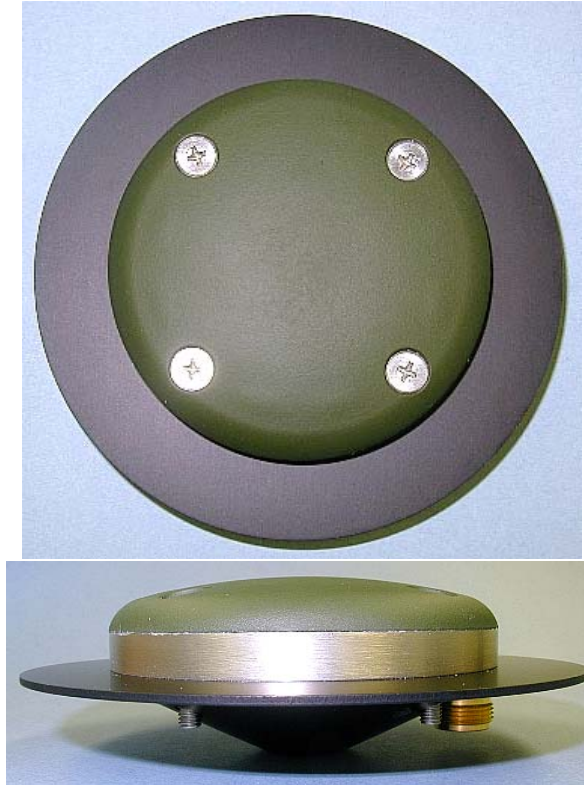


CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 5G1216P-XX-X or
LHCP-Thuraya only Antennas, P/N: 5T1516P-XX-X
3.5" Diameter, Survey/Pipe Mount, Bottom Connector Configurations



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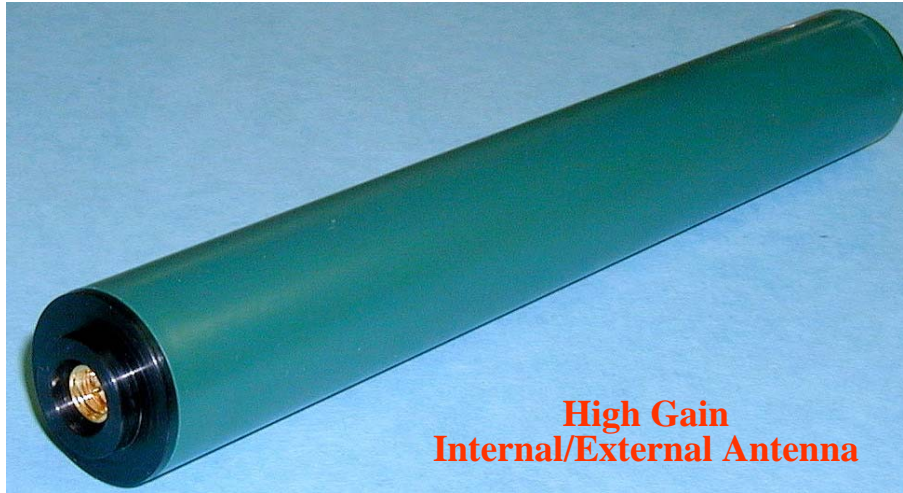


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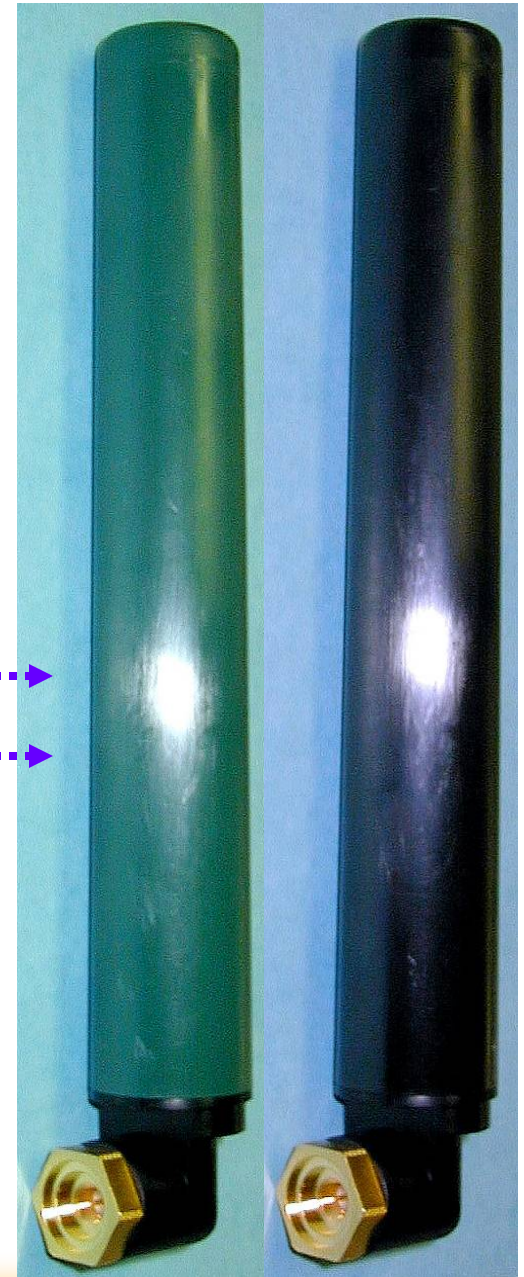
High Gain GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 7D1216P-XSS-X,
or High Gain LHCP-Thuraya only Antennas, P/N: 7TD1516P-XSS-X,
1" Diameter x 6.5" Tall, Swivel, Side Mount, Quick Connect SMA Configuration



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High Gain
Internal/External Antenna



Magnetic Mount Adapter
with 5ft cable



Swivel Mount
Handheld Adapter



CC#: 3CVE1

High Gain GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 7D1216P-XSS-X, or High Gain LHCP-Thuraya only Antennas, P/N: 7TD1516P-XSS-X, 1" Diameter x 6.5" Tall, Swivel, Side Mount, Quick Connect SMA Configuration



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SPECIFICATIONS		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 in FS/3in GP (dBic): L1 GPS Rx INMARSAT Tx INMARSAT GLONASS IRIDIUM L2 GPS @ 90° (Zenith): ★ @ 10° Elevation: @ 20° Elevation: TBD (A FEW dB MORE GAIN THAN P/N: 3D1216P-XSS-3) @ 30° Elevation: ☉ 15 DEG TO 70 DEG ELEVATION X 360 DEG AZIMUTH) @ 45° Elevation: @ 70° Elevation: BEAM WIDTH (3dB) AXIAL RATIO (dB) RADIATION PATTERN: HEMISPHERICAL POLARIZATION: RHCP VSWR: < 1.5:1				
DC GROUNDING:		YES (LIGHTNING PROTECTION)		
LNA OPTION:				
LNA GAIN:		(22.0+/-2.0) dB		
LNA NOISE FIGURE:		2.0 dB		
LNA P 1dB Out:		+13 dBm		
VOLTAGE/CURRENT:		(+2.4 TO +5) Volts DC / (15 TO 30) mA		
MECHANICAL:				
SIZE:		DIAMETER: 1.00 in. [25.40 mm] HEIGHT: 4.4 in. [111.76 mm]		
WEIGHT:		3.3 oz (93.55 g)		
FINISH:		SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441		
COLOR:		OLIVE DRAB GREEN #34031 PER FED-STD-595B		
MATERIAL:		6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT		
CONNECTOR:		SMA MALE CONNECTOR, 360° SWIVELS (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, 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		

P/N: XD1216P-XSS-5ft

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT
1	O-Ring	MS20775-012 (McMaster P/N: 94118K012)			
1	5in SMA Bulkhead Jack to MMCX Right Angle Plug RF Cable	RG316-IMCX-RM-5.00-SMA-F-B			1
-2					
PARTS LIST					

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS TO 1/64 DECIMALS TO .010 ANGLES
± 1/64 .001 .005 ± 1°
TOLERANCE 5th PER ASH 174-S
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .000 TO .010
FLAT TO .001 TO .002
DATE ON A DRAWING PER MIL-STD-883C
MACHINED SURFACES

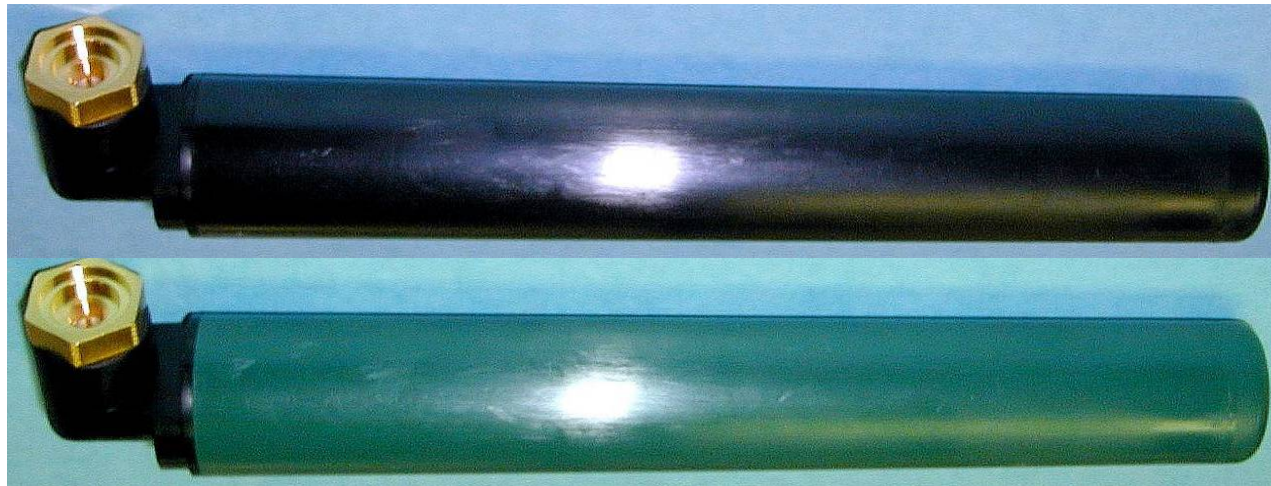
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

1 PORT HANDHELD
HIGH GAIN RHCP INMARSAT
& L1/L2 GPS ANTENNA

DESIGNED BY: S. HUYTH
APPROVED: S. HUYTH
DATE: Nov-02-05
DWG NO: D3CVE1
SCALE: 1/1
SHEET: 1 OF 1

**High Gain L1/L2 GPS/RHCP-Inmarsat/Iridium L-Band Antenna, P/N: 7D1216P-XS-X-1/-2,
1" Diameter x 6.5" Tall, Swivel, Side Mount, Side SMA Connector Configuration**



**2-Port L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya L-Band Antenna,
P/N: 7D1216RL-XM-X-1/-2,
1" Diameter x 6.5" Tall, Swivel, Side Mount, Side MCX Connector Configuration**





CC#: 3CVE1

High Gain GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 7D1216P-XS-1/-2 or High Gain LHCP-Thuraya only Antennas, P/N: 7TD1516P-XS-1/-2, 1" Diameter x 6.5" Tall, Swivel, Side Mount, Side SMA Connector Configuration



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SPECIFICATIONS		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 in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	★ +3dB Peak @ 45 Deg. EL for -1 +5dB Peak @ Zenith for -2					
@ 10° Elevation:						
@ 20° Elevation:						
@ 30° Elevation:						
@ 45° Elevation:						
@ 70° Elevation:						
AXIAL RATIO (dB)	1 to 3					
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
DC GROUNDING:		YES (LIGHTNING PROTECTION)				
LNA OPTION:						
LNA GAIN:	(22.0+/-2.0) dB					
LNA NOISE FIGURE:	2.0 dB					
LNA P 1dB Out:	+13 dBm					
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 30) mA					
MECHANICAL:						
SIZE:	DIAMETER: 1.00 in. [25.40 mm]					
	HEIGHT: 4.4 in. [111.76 mm]					
WEIGHT:	3.3 oz (93.55 g)					
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441					
COLOR:	OLIVE DRAB GREEN #34031 PER FED-STD-595B					
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT					
CONNECTOR:	SMA MALE CONNECTOR, 360° SWIVELS (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, 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					

CONFIGURATION	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; O: QMA; P: PINS	-1: GLOSS WHITE #17625 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1215: L1/L2		M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #3632C PER FED-STD-595B
2: 2.6" DIA. (FLAT)	15: L1	P: WITHOUT LNA	#: 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)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					
7D: (HELIX HANDHELD)					

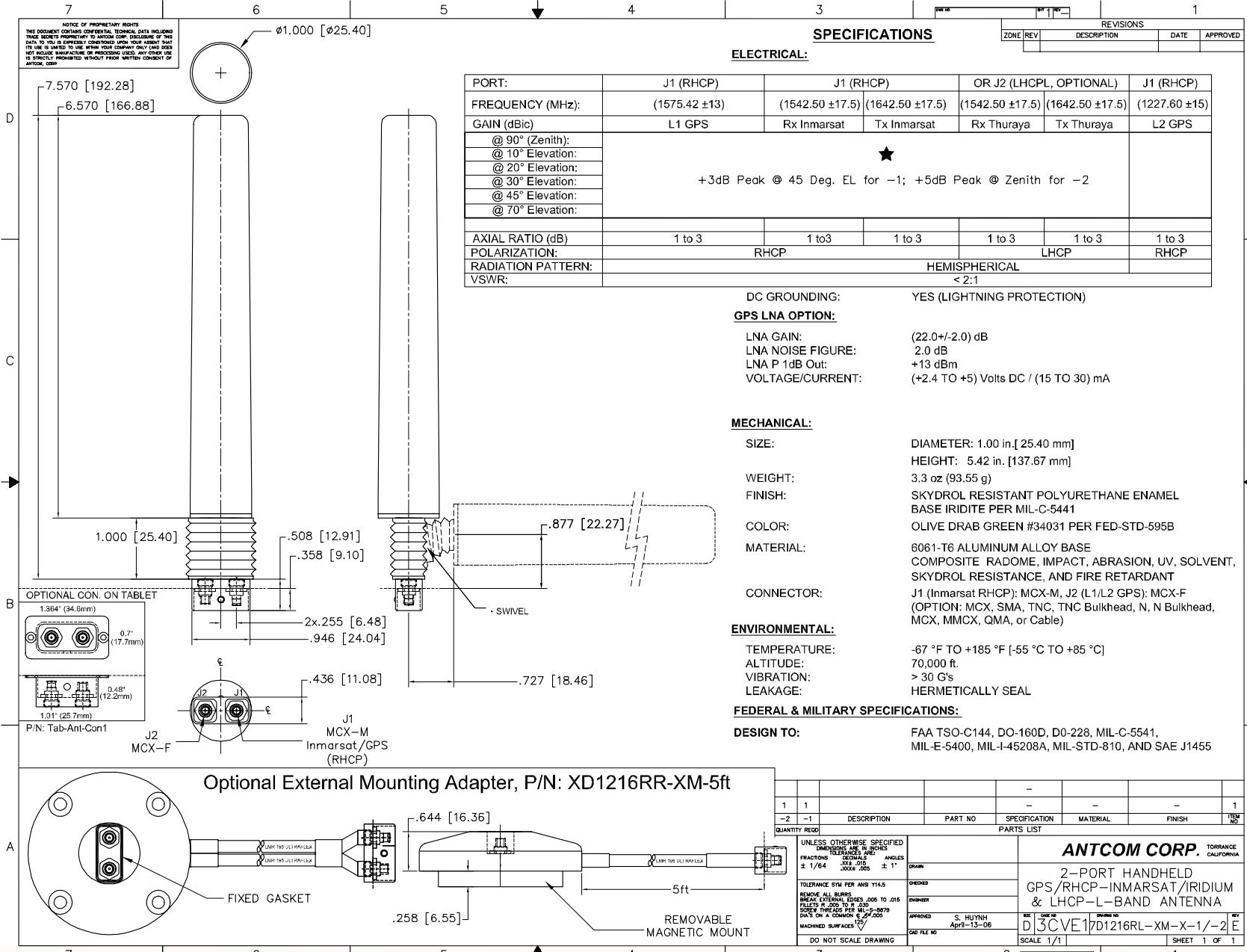
P/N: 7D1216P-XS-3-X

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT
1	O-Ring	MS28775-012 (McMaster P/N: 94115K012)			1
1	5in SMA Bulkhead Jack to				1
-2	MMCX Right Angle Plug RF Cable	RG316-MMCX-RM-5.00-SMA-F-B			

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMAL ANGLES ± 1/64 .0005 .005 ± 1°</p> <p>TOLERANCE SURF PER ANSI Y14.5</p> <p>BREAK ALL SURF BREAK EXTERNAL EDGES .006 TO .016</p> <p>FINISHES SURF PER MIL-C-26000</p> <p>SOFTEN THREADED PER MIL-C-26000</p> <p>DRY'S ON A DIMENSION < 25.000</p> <p>MACHINED SURFACES</p> <p>DO NOT SCALE DRAWING</p>	<p>ANTCOM CORP. TORRANCE CALIFORNIA</p> <p>1 PORT HANDHELD HIGH GAIN RHCP INMARSAT & L1/L2 GPS ANTENNA</p> <p>DATE: 04/13/06</p> <p>APPROVED: S. HUTHIN Apr-13-06</p> <p>SCALE: 1/1</p> <p>SHEET 1 OF 1</p>
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2-Port L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, P/N: 7D1216RL-XM-X-1/-2, 1" Diameter x 6.5" Tall, Swivel, Side Mount, Side MCX Connector Configuration

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SPECIFICATIONS

REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

ELECTRICAL:

PORT:	J1 (RHCP)	J1 (RHCP)	OR J2 (LHCPL, OPTIONAL)	J1 (RHCP)
FREQUENCY (MHz):	(1575.42 ±13)	(1542.50 ±17.5)	(1542.50 ±17.5)	(1227.60 ±15)
GAIN (dBi):	L1 GPS	Rx Inmarsat	Tx Inmarsat	Rx Thuraya Tx Thuraya L2 GPS
@ 90° (Zenith):	★ +3dB Peak @ 45 Deg. EL for -1; +5dB Peak @ Zenith for -2			
@ 10° Elevation:				
@ 20° Elevation:				
@ 30° Elevation:				
@ 45° Elevation:				
@ 70° Elevation:				
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3
POLARIZATION:	RHCP		LHCP	
RADIATION PATTERN:	HEMISPHERICAL			
VSWR:	< 2:1			

DC GROUNDING: YES (LIGHTNING PROTECTION)

GPS LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
 LNA NOISE FIGURE: 2.0 dB
 LNA P 1dB Out: +13 dBm
 VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
 HEIGHT: 5.42 in. [137.67 mm]

WEIGHT: 3.3 oz (93.55 g)

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

COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B

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

CONNECTOR: J1 (Inmarsat RHCP): MCX-M, J2 (L1/L2 GPS): MCX-F (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, or 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, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY	REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	1						1
-2	-1						

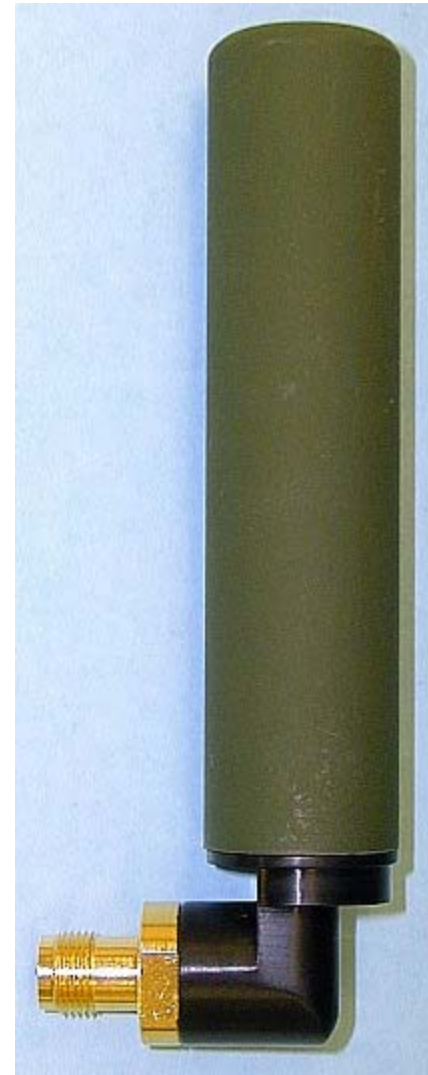
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES ± 1/64 ± .015 ± .010 ± .1°		ANTCOM CORP. TORRANCE CALIFORNIA	
TOLERANCE 5TH PER ANSI Y14.5		DRAWN	
BREAK ALL SHARP		CHECKED	
BREAK EXTERNAL EDGES .005 TO .015		DRAWN	
FILLET .030 TO .015		APPROVED S. HUYNH April-13-06	
SCREW THREADS PER MIL-P-8879		DATE FILE NO	
DATA IS ON A COMMON 1/2" GRID		SCALE 1/1	
MAGNIFIED SURFACES		SHEET 1 OF 1	
DO NOT SCALE DRAWING			



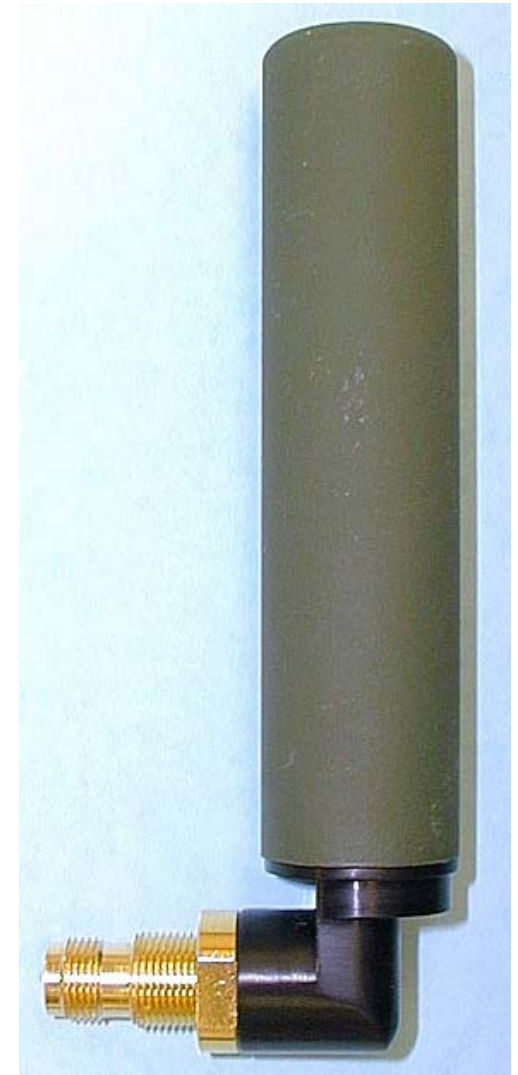
**P/N: 3X1X16P-XS-4,
 Black, SMA**



**P/N: 3X1X16P-XS-3,
 Green, SMA**



**P/N: 3X1X16P-XT-3,
 Green, TNC**



**P/N: 3X1X16P-XTB-3,
 Green, TNC-B**



CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antennas, P/N: 3D1216P-XS-X or LHCP-Thuraya Antennas, P/N: 3TD1516P-XS-X, 1" Diameter x 4.2" Tall, Swivel, Side Mount Configuration



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Technical drawing showing top, side, and detail views of the antenna. Dimensions include: 1.316 [33.43], 1.996 [25.31], 1.966 [24.54], 4.200 [106.68], 0.816 [20.73], 0.200 [5.08], 0.735 [18.67], 0.316 [8.03], 0.034 [0.86], 0.650 [16.51], 4.835 [122.81], and 0.816 [20.73]. Labels include SMA MALE CONNECTOR 360° SWIVELS, O-Ring, and various diameters (ϕ).

SPECIFICATIONS						
ELECTRICAL:						
FREQUENCY (MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)	(1227.60 ±15)
GAIN in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+1.0/+0.5	+0.5/+0.1	-5.0
@ 10° Elevation:	-1.5/-0.9	-2.0/-1.6	-2.1/-1.9	-1.7/-1.3	-2.0/-1.6	-6.5 to -11.5
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.6/-0.5	-0.9/-0.8	-6.2 to -9.2
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	0.0/+0.1	-0.3/-0.7	-5.7 to -7.7
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.5/-0.1	+0.3/-0.3	-4.6 to -6.0
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.7/-0.3	+0.2/-0.7	-4.0
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 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)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
 LNA NOISE FIGURE: 2.0 dB
 LNA P 1dB Out: +13 dBm
 VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
 HEIGHT: 4.2 in. [106.68 mm]
 WEIGHT: 1.6 oz (45.35 g)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
 BASE IRIDITE PER MIL-C-5441
 COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
 COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
 SKYDROL RESISTANCE, AND FIRE RETARDANT
 CONNECTOR: SMA MALE CONNECTOR, 360° SWIVELS
 (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
 MCX, MMCX, QMA, 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

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1215: L1/L2	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)	15: L1		F: 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)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REV
1	O-Ring	AS568A-12 (McMaster P/N: 94115K012)			
1	5in SMA Bulkhead Jack to MMX Right Angle Plug RF Cable	RG316-MMCX-RM-5.00-SMA-F-B			1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES TOLERANCE 5/16 PER ANSI Y14.5 BREAK EXTERNAL EDGES .010 TO .015 FILLER IS .002 TO .010 COU LONG THERMOC SET #16-3-8879 SAYS ON A COMMON & 22000 MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA
 HANDHELD L1/L2 GPS/INMARSAT/GLONASS/IRIDIUM ANTENNA

APPROVED: S. HUYNH Mar15-05
 D3CVE1
 SCALE 1/1
 SHEET 1 OF 1

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

P/N: 3D1216P-XS-3

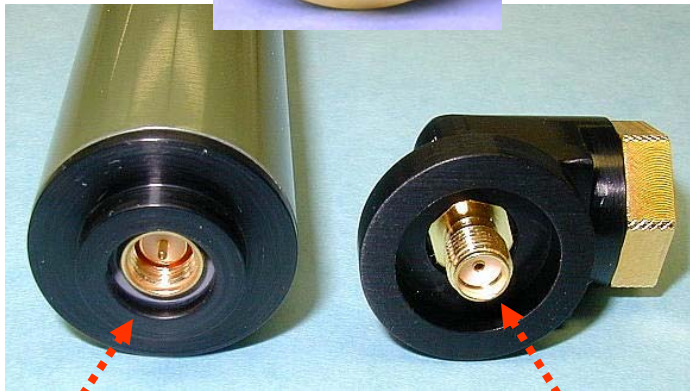


CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XSS-X or
Thuraya Antenna, P/N: 3TD1516P-XSS-X,
1" Diameter x 4.2" Tall, Swivel, Side Mount, Quick Connect SMA Configuration

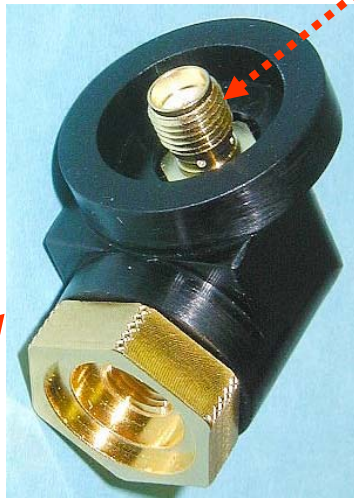


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SMA MALE

SMA FEMALE





GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XSS-X or Thuraya Antenna, P/N: 3TD1516P-XSS-X, 1" Diameter x 4.2" Tall, Swivel, Side Mount, Quick Connect SMA Configuration

CC#: 3CVE1



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Dimensions:
 1.316 [33.43]
 .034 [0.86]
 .316 [8.03]
 .816 [20.73]
 4.835 [122.81]
 .932 [23.69]
 .200 [5.08]
 .816 [20.73]
 .966 [24.54]
 .034 [0.86]
 .650 [16.51]

Labels:
 SMA MALE
 SMA FEMALE
 SMA MALE CONNECTOR 360° SWIVELS
 O-Ring

SPECIFICATIONS						
		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 in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.2/+0.9	+0.9/+0.5	-0.1/-0.5	+0.8/+0.3	+0.3/-0.1	-5.2
@ 10° Elevation:	-1.7/-1.1	-2.2/-1.8	-2.3/-2.1	-1.9/-1.5	-2.2/-1.8	-6.7 to -11.7
@ 20° Elevation:	-0.7/-0.4	-1.2/-1.0	-1.3/-1.3	-0.8/-0.7	-1.1/-1.0	-6.4 to -9.6
@ 30° Elevation:	+0.0/+0.1	-0.4/-0.4	-0.9/-1.0	-0.2/-0.1	-0.5/-0.9	-5.9 to -7.9
@ 45° Elevation:	+0.5/+0.4	+0.3/+0.1	-0.4/-0.9	+0.1/-0.5	+0.1/-0.5	-4.8 to -6.2
@ 70° Elevation:	+1.0/+0.1	+0.8/+0.1	-0.6/-1.8	+0.5/-0.5	+0.0/-0.9	-4.2
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 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)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
 LNA NOISE FIGURE: 2.0 dB
 LNA P 1dB Out: +13 dBm
 VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
 HEIGHT: 4.4 in. [111.76 mm]
 WEIGHT: 3.3 oz (93.55 g)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
 BASE IRIDITE PER MIL-C-5441
 COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
 COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
 SKYDROL RESISTANCE, AND FIRE RETARDANT
 CONNECTOR: SMA MALE CONNECTOR, 360° SWIVELS
 (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
 MCX, MMCX, QMA, 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-1-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	ANTENNA SWIVEL CONNECTOR	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1215: L1/L2	M: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	15: L1	P: WITHOUT LNA	F: 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: RHC P	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)					
3D: (HELIX HANDHELD)					

P/N: 3D1216P-XSS-3

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

QUANTITY	REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
1	1	O-Ring	ASS568A-12 (McMaster P/N: 94115K012)			
1	1	Sn SMA Bulkhead Jack to MMCX Right Angle Plug RF Cable	RG316-MMCX-RM-5.00-SMA-F-B			1

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 FRACTIONS: 1/16, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1
 DECIMALS: .01, .02, .03, .04, .05, .06, .07, .08, .09, .10, .15, .20, .25, .30, .35, .40, .45, .50, .55, .60, .65, .70, .75, .80, .85, .90, .95, 1.00
 TOLERANCE SIZE PER ANSI Y14.5
 BREAK EXTERNAL EDGES .000 TO .015
 FLATS .002 TO .005
 HOLES .002 TO .005
 DATE ON A COINCH & .000
 MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

QUICK CONNECT HANDHELD
GPS/INMARSAT/GLONASS/
IRIDIUM ANTENNA

APPROVED: S. HUYNH
 JUN-24-04

SCALE 1/1

SHEET 1 OF 1

S.H, 2/25/2009

Antcom's Proprietary

41 of 129



**GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XSS-X or
LHCP-Thuraya Antenna, P/N: 3TD1516P-XSS-X,
1" Diameter x 4.2" Tall, Swivel, Side Mount, Quick Connect SMA Configuration**

CC#: 3CVE1



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SPECIFICATIONS						
		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 in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.2/+0.9	+0.9/+0.5	-0.1/-0.5	+0.8/+0.3	+0.3/-0.1	-5.2
@ 10° Elevation:	-1.7/-1.1	-2.2/-1.8	-2.3/-2.1	-1.9/-1.5	-2.2/-1.8	-6.7 to -11.7
@ 20° Elevation:	-0.7/-0.4	-1.2/-1.0	-1.3/-1.3	-0.8/-0.7	-1.1/-1.0	-6.4 to -9.6
@ 30° Elevation:	+0.0/+0.1	-0.4/-0.4	-0.9/-1.0	-0.2/-0.1	-0.5/-0.9	-5.9 to -7.9
@ 45° Elevation:	+0.5/+0.4	+0.3/+0.1	-0.4/-0.9	+0.1/-0.5	+0.1/-0.5	-4.8 to -6.2
@ 70° Elevation:	+1.0/+0.1	+0.8/+0.1	-0.6/-1.8	+0.5/-0.5	+0.0/-0.9	-4.2
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 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)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
 LNA NOISE FIGURE: 2.0 dB
 LNA P 1dB Out: +13 dBm
 VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
 HEIGHT: 4.4 in. [111.76 mm]
 WEIGHT: 3.3 oz (93.55 g)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
 BASE IRIDITE PER MIL-C-5441
 COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
 COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
 SKYDROL RESISTANCE, AND FIRE RETARDANT
 CONNECTOR: SMA MALE CONNECTOR, 360° SWIVELS
 (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
 MCX, MMCX, QMA, 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

Optional External Mounting Adapter

P/N: XD1216P-XSS-5ft

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT
1	O-Ring	MS28775-012 (McMaster P/N: 94116K012)			
1	5in SMA Bulkhead Jack to MMCX Right Angle Plug RF Cable	RG316-MMCX-RM-5.00-SMA-F-B			1
-2	-1-				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS TO DECIMALS ANGLES ± 1/64 .001 .010 ± 1° SURFACE FINISH PER AMS 774-B REMOVE ALL BURRS BREAK EXTERNAL EDGES AND TO .015 FINISH & POL TO .010 DATE ON A COMMON 8 OF 05 MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

1 PORT HANDHELD
RHCP INMARSAT &
L1/L2 GPS ANTENNA

D3CVE1 3D1216P-XSS-3

SCALE 1/1 SHEET 1 OF 1



GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XQ-X or LHCP-Thuraya Antenna, P/N: 3TD1516P-XQ-X, 1" Diameter x 4.2" Tall, Swivel, Side Mount, Quick Connect QMA Configuration

CC#: 3CVE1



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SPECIFICATIONS

	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 in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+1.0/+0.5	+0.5/+0.1	-5.0
@ 10° Elevation:	-1.5/-0.9	-2.0/-1.6	-2.1/-1.9	-1.7/-1.3	-2.0/-1.6	-6.5 to -11.5
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.6/-0.5	-0.9/-0.8	-6.2 to -9.2
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	0.0/+0.1	-0.3/-0.7	-5.7 to -7.7
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.5/-0.1	+0.3/-0.3	-4.6 to -6.0
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.7/-0.3	+0.2/-0.7	-4.0
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 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)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
 LNA NOISE FIGURE: 2.0 dB
 LNA P 1dB Out: +13 dBm
 VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
 HEIGHT: 4.4 in. [111.76 mm]
 WEIGHT: 3.3 oz (93.55 g)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
 BASE IRIDITE PER MIL-C-5441
 COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
 COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
 SKYDROL RESISTANCE, AND FIRE RETARDANT
 CONNECTOR: QMA MALE (Quick Connect SMA), 360° SWIVELS
 (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
 MCX, MMCX, 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-1L12-100

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1215: L1/L2	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)	1S: L1		F: 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)				Q: Quick Connect SMA	
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	REV
1					1
-2					

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

P/N: 3D1216P-XQ-3

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 FRACTIONS SHALL BE IN 16ths AND ANGLES
 ± 1/64 DECIMAL ± 1°
 TOLERANCE SIZE PER ANSI Y14.5
 REMOVE ALL BURRS
 BREAK EXTERNAL EDGES .010 TO .015
 FALTS IN .002 TO .010
 DIMS THERMOC FIP HCS-8879
 DITS ON A COMMON S. 25000
 MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

Quick Connect Handheld
GPS/INMARSAT/GLONASS/
IRIDIUM HELIX ANTENNA

DRAWN: _____
 CHECKED: _____
 ENGINEER: _____
 APPROVED: S. HUYNH
 Mar-11-05

DATE FILED: _____
 SCALE 1/1

SHEET 1 OF 1

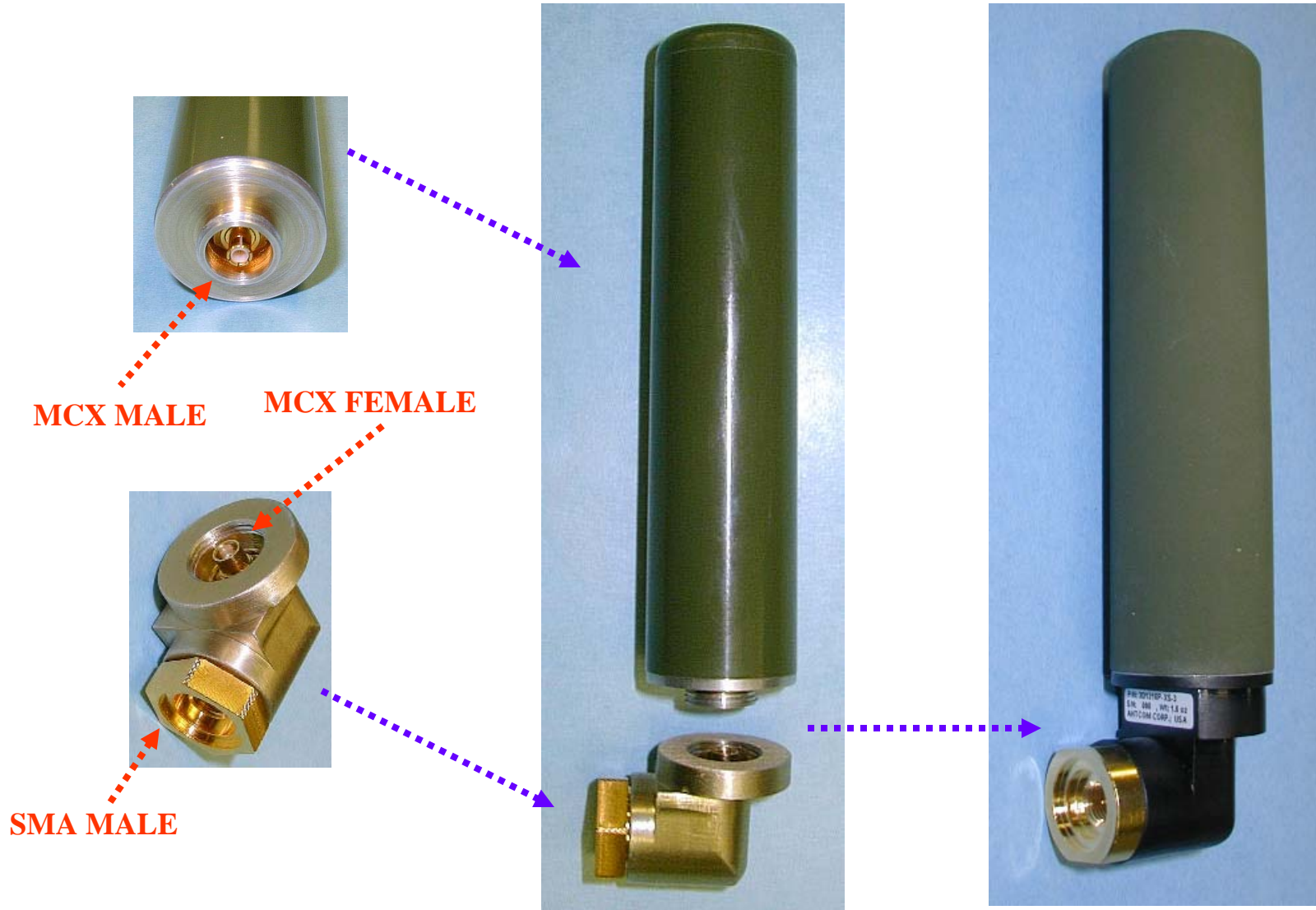


CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XMS-X or
LHCP-Thuraya Antenna, P/N: 3TD1516P-XMS-X,
1" Diameter x 4.2" Tall, Swivel, Side Mount, Quick Connect MCX Configuration



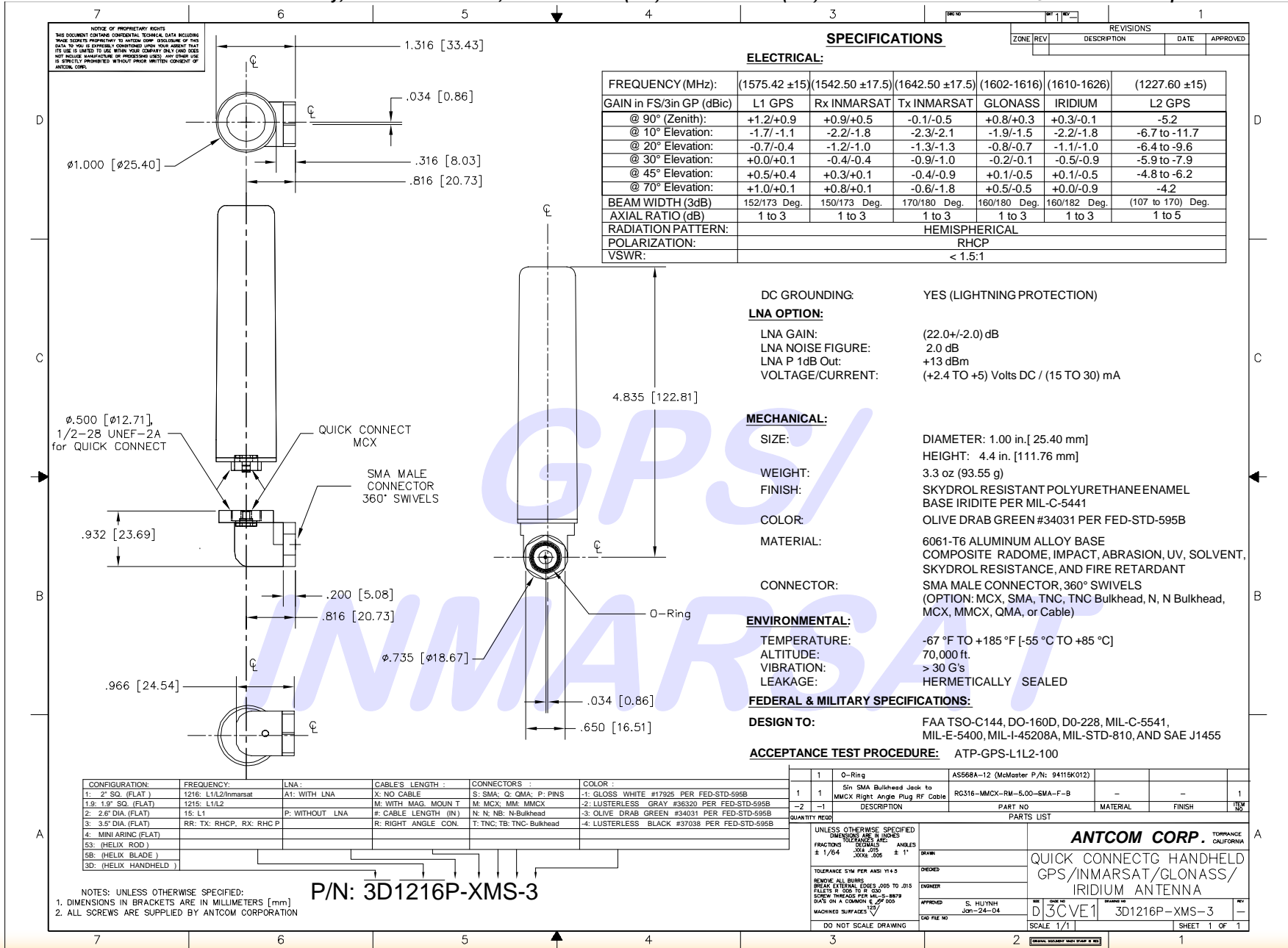
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**GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XMS-X or
LHCP-Thuraya Antenna, P/N: 3TD1516P-XMS-X,
1" Diameter x 4.2" Tall, Swivel, Side Mount, Quick Connect MCX Configuration**

CC#: 3CVE1

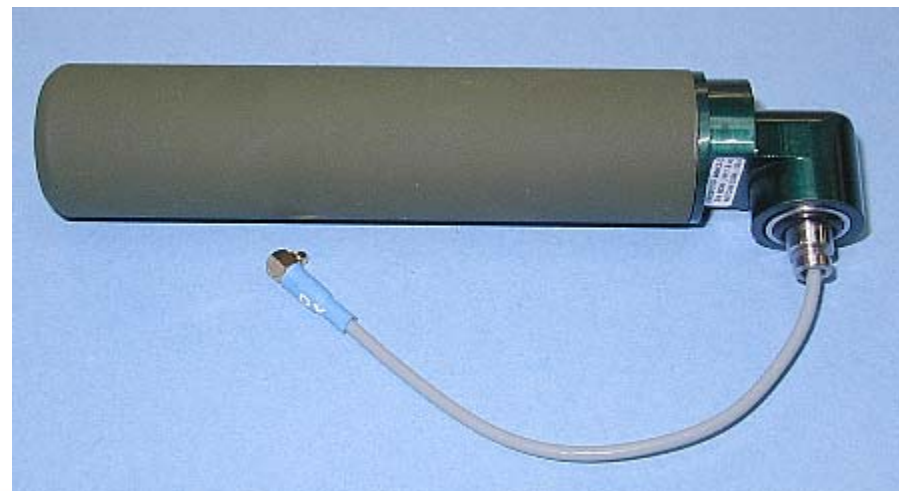
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**Hermetically Sealed,
Designed for Harsh
Environment
Applications.**

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





CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-4.5MM-3 or LHCP-Thuraya Antenna, P/N: 3TD1516P-4.5MM-3, 1" Diameter x 4.2" Tall, Swivel, Side Mount Configuration



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

SPECIFICATIONS		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 in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+1.0/+0.5	+0.5/+0.1	-5.0
@ 10° Elevation:	-1.5/-0.9	-2.0/-1.6	-2.1/-1.9	-1.7/-1.3	-2.0/-1.6	-6.5 to -11.5
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.6/-0.5	-0.9/-0.8	-6.2 to -9.2
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	0.0/+0.1	-0.3/-0.7	-5.7 to -7.7
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.5/-0.1	+0.3/-0.3	-4.6 to -6.0
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.7/-0.3	+0.2/-0.7	-4.0
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 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)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.0 dB
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
HEIGHT: 4.2 in. [106.68 mm]

WEIGHT: 3.3 oz (93.55 g)

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

COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B

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

CONNECTOR: 4.5" Long Flexible Cable with Right Angle MMCX Connector (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA 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

FREQ. BAND:	LNA:	1	1						
1216: L1/L2	A: WITH LNA								1
15: L1 ONLY	P: WITHOUT LNA								
1216: L1/L2/INMARSAT/IRIDIUM									
0416: UHF/L1/L2/INMARSAT (2 Connectors)									

P/N: 3D1216X-4.5MM-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAC; N: No MAG.	M: MCX; M: MMCX	-2: LUSTERLESS GRAY #38320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TB; TNC; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED	ANTCOM CORP.
TOLERANCE PER ASH TR & 0	TORRANCE, CALIFORNIA
± 1/64 DECIMAL ANGLES ± 1'	
REMOVE ALL BURRS	
BEAK EXTERNAL EDGES 0.00 TO 0.05	
FLAT TO 0.015 IF 0.00	
DATE ON A COACH & 2000	
MACHINED SURFACES	
DO NOT SCALE DRAWING	

QUANTITY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	1
1						1
-2						

ANTCOM CORP. HANDHELD L1/L2 GPS/INMARSAT/GLONASS/IRIDIUM HELIX ANTENNA

3CVE1 3D1216X-4.5MM-3

SCALE 1/1 SHEET 1 OF 1



CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium, & Wi-Fi Antenna, P/N: 3D121625RV-4.5MM-3 or LHCP-Thuraya & Wi-Fi Antenna, P/N: 3D151625LV-4.5MM-3, 1" Diameter x 4.2" Tall, Swivel, Side Mount Configuration



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P/N: 3D121625RV-4.5MM-3

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

CABLES LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; C: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAC; N: No MAG;	NX: MMCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TB; TNC; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

SPECIFICATIONS

ELECTRICAL:

PORT:	J1					J2
FREQUENCY (MHz):	(1575.42±15)	(1542.50±17.5)	(1642.50±17.5)	(1610-1626)	(1227.60±15)	(2400-2500)
GAIN in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	IRIDIUM	L2 GPS	Wi-Fi
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+0.5/+0.1	-5.0	>2.5 dB
@ 10° Elevation:	-1.5/-0.9	-2.0/-1.6	-2.1/-1.9	-2.0/-1.6	-6.5 to -11.5	
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.9/-0.8	-6.2 to -9.2	
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	-0.3/-0.7	-5.7 to -7.7	
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.3/-0.3	-4.6 to -6.0	
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.2/-0.7	-4.0	
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/182 Deg.	(107 to 170) Deg.	50 ° x360 °
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5	
RADIATION PATTERN:	HEMISPHERICAL					Omni
POLARIZATION:	RHCP					Vertical
VSWR:	< 1.5:1					

DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.0 dB
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
HEIGHT: 4.2 in. [106.68 mm]
WEIGHT: 3.3 oz (93.55 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: 4.5" Long Flexible Cable with Right Angle MMCX Connector (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, or 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, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	1	1							
1215: L1/L2									
15: L1 ONLY									
1216: L1/L2 GPS/Inmarsat/Iridium									
121625: L1/L2 GPS/Inmarsat/Iridium and Wi-Fi									

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	NEW
1						1
-2						

ANTCOM CORP. TORRANCE, CALIFORNIA

HANDHELD L1/L2
GPS/INMARSAT/IRIDIUM/
Wi-Fi ANTENNA

D3CVE1 3D121625RV-4.5MM-3

SCALE 1/1 SHEET 1 OF 1



CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 3D1216P-XX-X-X or
LHCP-Thuraya Antenna, P/N: 3TD1516P-XX-X-X,
1" Diameter x 4.2" Tall, Bottom Mount, Bottom Connector Configurations



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



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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SPECIFICATIONS		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 IN FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+1.0/+0.5	+0.5/+0.1	-5.0
@ 10° Elevation:	-1.5/-0.9	-2.0/-1.6	-2.1/-1.9	-1.7/-1.3	-2.0/-1.6	-6.5 to -11.5
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.6/-0.5	-0.9/-0.8	-6.2 to -9.2
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	0.0/+0.1	-0.3/-0.7	-5.7 to -7.7
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.5/-0.1	+0.3/-0.3	-4.6 to -6.0
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.7/-0.3	+0.2/-0.7	-4.0
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 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)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
 LNA NOISE FIGURE: 2.0 dB
 LNA P 1dB Out: +13 dBm
 VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in. [25.40 mm]
 HEIGHT: 4.4 in. [111.76 mm]
 WEIGHT: 3.3 oz (93.55 g)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
 BASE IRIDITE PER MIL-C-5441
 COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
 COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
 SKYDROL RESISTANCE, AND FIRE RETARDANT
 CONNECTOR: MMCX RIGHT ANGLE MALE WITH 10" LONG CABLE
 (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
 MCX, MMCX, QMA, 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

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1215: L1/L2	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)	15: L1		F: 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; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

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

P/N: 3D1216P-10MM-3-3

QUANTITY REQD	PART NO	MATERIAL	FINISH	REV
1	5in SMA Bulkhead Jack to MMCX Right Angle Plug RF Cable	RG316-MMCX-RM-5.00-SMA-F-B	-	1
-2	-1	DESCRIPTION	PART NO	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 FRACTIONS: DECIMALS AND ANGLES
 ± 1/64 .001 .005 ± 1°
 TOLERANCE 5/16 PER ANSI Y14.5
 REMOVE ALL BURRS
 BREAK EXTERNAL EDGES .010 TO .015
 FILED TO .002 TO .004
 DIMS THEREON PER Y14.5-88
 DIMS ON A COMMON & 25000
 MACHINED SURFACES

ANTCOM CORP. TORRANCE CALIFORNIA
 0.5-28 Threaded Base Helix GPS/INMARSAT/GLONASS/IRIDIUM ANTENNA
 DRAWN: DECKED: ENGINEER: APPROVED: S. HUYNH Feb-23-04
 D3CVE1 3D1216P-10MM-3-3
 DO NOT SCALE DRAWING SCALE 1/1 SHEET 1 OF 1



CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: XR1216P-XX-X,
LHCP-Thuraya Antenna, P/N: XTR1516P-XX-X,
0.5"-0.8" Diameter x 4.4" Tall, Bottom Mount, Bottom Connector Configurations



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Connector:
TNC-F



Connector:
SMA-F



0.7X1X16P-XX-X
4.4" Tall Rod
Configurations
with Different
Connectors



Connector:
TNC-M

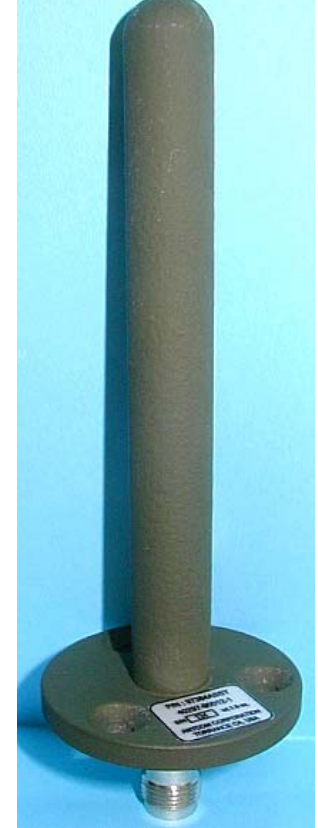


Connector:
TNC-F



Connector:
SMA-F

0.5X1X16P-XX-X
4.4" Tall Rod
Configurations
with Different
Connectors



0.52X1X16P-XTB-4
4.4" Tall Rod
Configurations

Hermetically Sealed,
Designed for Harsh
Environment Applications.

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



0.8X1X16P-3.5RMM-4,
0.8" Dia. x 4.1" Tall Rod
Configurations with Different
Connectors

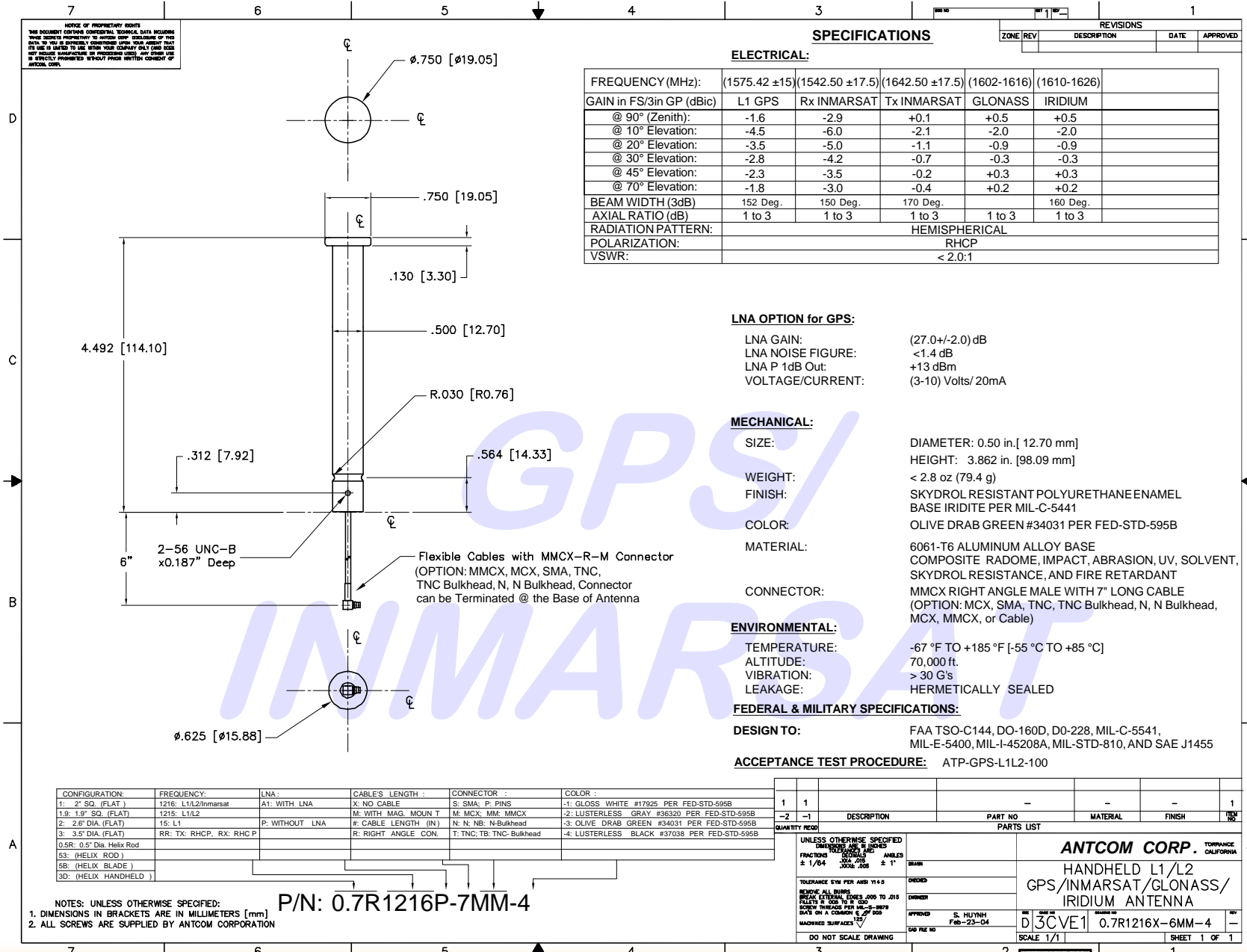


CC#: 3CVE1

**GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 0.7R1216P-6MM-4 or
LHCP-Thuraya Antenna, P/N: 0.7TR1516P-6MM-4,
0.5" Diameter x 4.4" Tall, Bottom Mount, Bottom MMCX Cable Configuration**



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SPECIFICATIONS		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)
GAIN in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM
@ 90° (Zenith):	-1.6	-2.9	+0.1	+0.5	+0.5
@ 10° Elevation:	-4.5	-6.0	-2.1	-2.0	-2.0
@ 20° Elevation:	-3.5	-5.0	-1.1	-0.9	-0.9
@ 30° Elevation:	-2.8	-4.2	-0.7	-0.3	-0.3
@ 45° Elevation:	-2.3	-3.5	-0.2	+0.3	+0.3
@ 70° Elevation:	-1.8	-3.0	-0.4	+0.2	+0.2
BEAM WIDTH (3dB)	152 Deg.	150 Deg.	170 Deg.	1 to 3	160 Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 2.0:1				

LNA OPTION for GPS:
LNA GAIN: (27.0+/-2.0) dB
LNA NOISE FIGURE: <1.4 dB
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (3-10) Volts/ 20mA

MECHANICAL:
SIZE: DIAMETER: 0.50 in. [12.70 mm]
HEIGHT: 3.862 in. [98.09 mm]
WEIGHT: < 2.8 oz (79.4 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: MMCX RIGHT ANGLE MALE WITH 7" LONG CABLE
(OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
MCX, MMCX, 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

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1215: L1/L2	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)	15: L1		F: 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: RHC P		R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
0.5R: 0.5" Dia. Helix Rod					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

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

P/N: 0.7R1216P-7MM-4

QUANTITY	REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
1	1					1
-2	-1					

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS TO 1/64 DECIMALS TO 0.001 ANGLES
± 1/64 DIA. DIMS ± 1°
TOLERANCE SIZE PER ASH T14.9
REMOVE ALL BURRS
BREAK EXTERNAL EDGES 0.010 TO .015
FLATTEN TO 0.010 TO 0.020
DATE ON A COMBINATION OF 200
MACHINED SURFACES

ANTCOM CORP. TORRANCE CALIFORNIA
HANDHELD L1/L2
GPS/INMARSAT/GLONASS/
IRIDIUM ANTENNA

APPROVED: S. HUYNH Feb-23-04
D3CVE1 0.7R1216X-6MM-4
SCALE 1/1 SHEET 1 OF 1



S53IR16XX-P-XTB-1
(White)



S53IR16XX-P-XTB-4
(Black)



S53IR16XX-P-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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3X on 1.344 [34.12] Rad.

3X #20 [#5.11]
∇ ø.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)

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

QTY	DESCRIPTION	PART NO	FINISH	REF
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
-1	DESCRIPTION			

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS TOLERANCES ARE DECIMALS ANGLES ± 1/64 DECIMALS ± 1'

REWORK ALL BLUES BREAK EXTERNAL EDGES .005 TO .015 FILE ALL .005 TO .010 SMOOTH INTERIOR SURFACES .0005 RAYS ON A COMPASS R.25005 MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA
PIPE/FLAT MOUNT, IRIDIUM/GPS/GLONASS/INMARSAT HELIX ANTENNA

DESIGNED: S. HUYNH
DRAWN: S. HUYNH
CHECKED: S. HUYNH
APPROVED: S. HUYNH
DATE: DEC-03-03

REV: D
QTY: 3CVE1
DRAWING NO: S53IR16RR-P-XTB-X
SCALE: 1/1
SHEET: 1 OF 1

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

1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	A1: WITH #34 #B 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	M: WITH MAG. MOUNT	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	P: WITHOUT LNA	#: 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)					
53: (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-XTB-1



**P/N: S53IR16XX-P-M14TB-1 (White),
 S53IR16XX-P-M14TB-4 (Black),
 S53IR16XX-P-M14TB-3 (Green)
 3.5" Diameter x 4.5" Tall**



**P/N: S52IR16XX-P-MT-1 (White),
 S52IR16XX-P-MT-4 (Black),
 S52IR16XX-P-MT-3 (Green)
 2.6" Diameter x 4.5" Tall**

Hermetically Sealed, Designed for Harsh Environment Applications.

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



CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: S53IR16RR-P-M14TB-X or LHCP-Thuraya Antenna, P/N: S53IR16LL-P-M14TB-X, 3.5" Diameter x 4.5" Tall, 1"-14 Pipe Mount Configuration



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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/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: 11 oz. (314 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, DO-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
-1	DESCRIPTION			

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES TOLERANCES ARE DECIMALS	DRAWN	CHECKED	ENGINEER	APPROVED	DATE	SCALE	SHEET	OF
± 1/64				S. HUYNH	DEC-03-03	1/1	1	1

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

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

P/N: S53IR16RR-P-M14TB-1

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

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

1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	A1: WITH +34 dB LNA	M14: 1.14" 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" DIA. (FLAT)	RL: TX: RHCP, RX: LHCP	M: WITH MAG. MOUN T	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	#: CABLE LENGTH (IN)	T: TNC; TB: TNC-Bulkhead	T: TNC; TB: TNC-Bulkhead	4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)		R: RIGHT ANGLE CON.			
53: (HELIX ROD)					
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					

4x 10-32 Thread x 0.5" Deep Equally Spaced on 1.344 [34.12] Radius for Optional Mounting.

NAMEPLATE

1"-14 Thread x 0.5" Deep

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

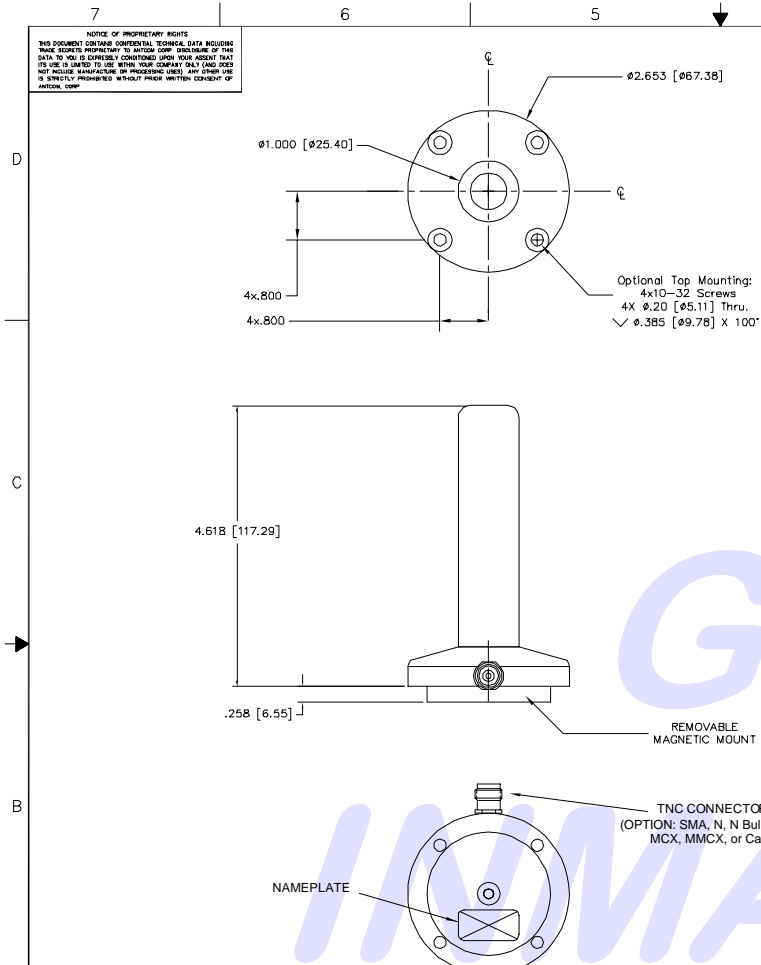


CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: S52IR16RR-P-MT-X or LHCP-Thuraya Antenna, P/N: S52IR16LL-P-MT-X, 2.6" Diameter x 4.5" Tall, Magnetic Mount, Side Connector Configuration



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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	REF ID
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	5
1				4
1				3
1				
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	M: WITHOUT LNA	M: WITH MAG. MOUN T	M: MCX; MM: MMCX	2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	#: 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)			N: NO MAG. MOUN T		
52 OR 53: (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: S52IR16RR-P-MT-4

ANTCOM CORP. TORRANCE CALIFORNIA

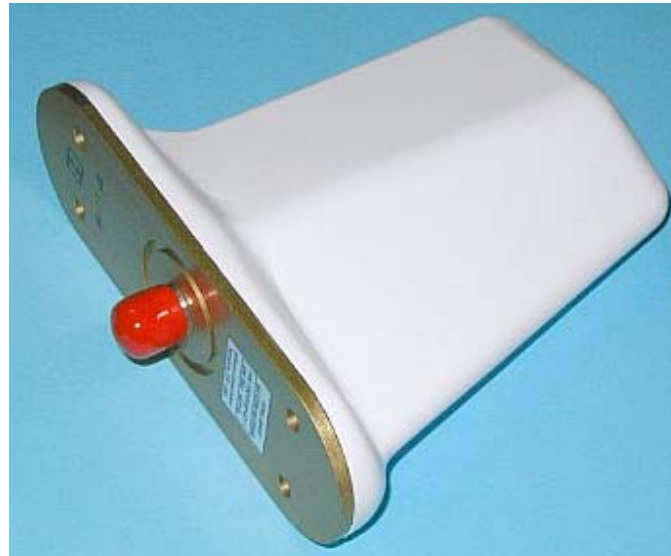
MAGNETIC MOUNT
 IRIDIUM/GPS/GLONASS/
 INMARSAT HELIX ANTENNA

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 FRACTIONS TOLERANCES ARE DECIMALS ANGLES
 ± 1/64 DECIMALS ± 1°
 BREAK ALL EDGES .005 TO .015
 FILE ALL CORNERS TO R .005
 DIMENSIONS PER MIL-C-27005
 MACHINED SURFACES

DO NOT SCALE DRAWING

DATE: FEB-23-05
 DRAWN: S. HUYNH
 CHECKED: S. HUYNH

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



Hermetically Sealed, Designed for Harsh Environment Applications.

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

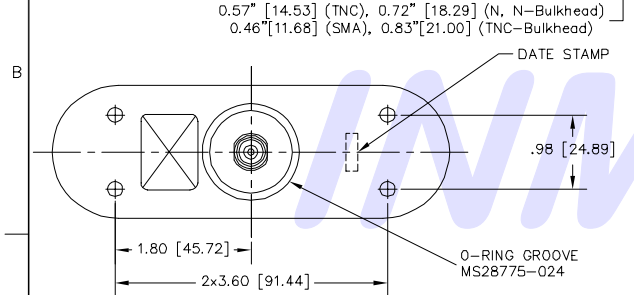
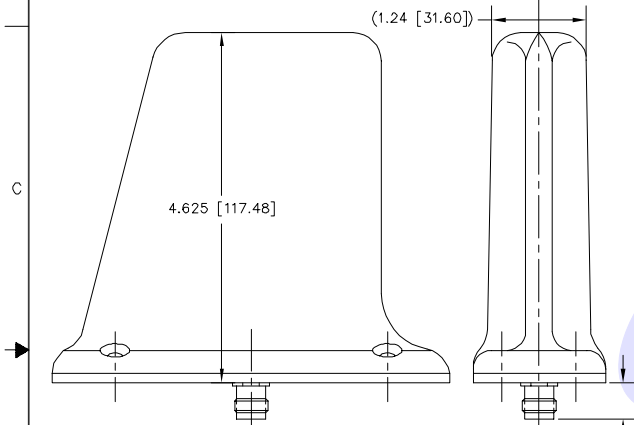
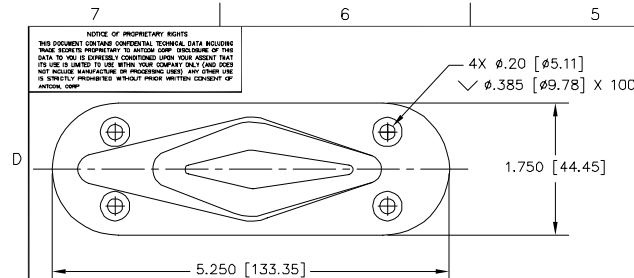


CC#: 3CVE1

GPS/RHCP-Inmarsat/Iridium Antenna, P/N: S5BIR16RR-P-XX-X or LHCP-Thuraya Antenna, P/N: S5BIR16LL-P-XX-X 4.6" Tall Blade, Top Mount, Bottom Connector Configurations



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REV		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

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/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, D0-228, 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	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	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)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					

P/N: S5BIR16RR-P-XT-1

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

4	MOUNTING SCREWS (10-32, 3/4")	MS24693C274	2
1	O-RING	MS28775-024	1
DESCRIPTION		PART NO	FINISH
QUANTITY REQD		PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
FRACTIONS TO BE DECIMALS AND ANGLES ± 1/64			
TOLERANCE S/H PER ASH 174.5			
REMOVE ALL BURRS			
BREAK EXTERNAL EDGES .005 TO .015			
FILL IN .002 TO .004			
SOB'S THEREOF TO .002 TO .004			
DAYS ON A COMMON S. 27005			
MAGNIFIED SURFACES			
DO NOT SCALE DRAWING			
DRAWN		ANTCOM CORP. TORRANCE, CA	
CHECKED		AIRBORNE, IRIDIUM/GPS/GLONASS/INMARSAT HELIX ANTENNA	
ENGINEER		S. HUYNH	
APPROVED		D 3CVE1	
DATE		OCT-30-03	
SCALE		1/1	
SHEET		1 OF 1	



CC#: 3CVE1

**L1/L2 GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 5G1216RR-PP-MS-X or
LHCP-Thuraya Antenna, P/N: 5G1516LL-PP-MS-X,
(4.15" x 2.20" x 0.85"), Flat/Magnetic Mount, Side Connector Configuration**



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SPECIFICATIONS

ZONE	REV	REVISIONS		
		DESCRIPTION	DATE	APPROVED

4.156 [105.56]

2.200 [55.88]

R.850 [R21.59]

ELECTRICAL:

	L1/L2 GPS	Rx/Tx L-BAND INMARSAT/IRIDIUM
FREQUENCY (MHz):	L1: (1575.42 ±12) L2: (1227.60 ±12)	(1542.50 ±17.5) (1642.50 ±17.5) (1602-1626)
POLARIZATION :	RHC P	RHC P ★
ANTENNA GAIN (dBic):		★ ~ 6 dBic
BEAM WIDTH (3dB):		~ 87 Deg.
RADIATION PATTERN :		HEMISPHERICAL
VSWR:		< 1.5: 1
IMPEDANCE:		50 ohm s
AXIAL RATIO :		2 dB
LIGHTNING PROTECTION :		DC GROU NDING

0.845 [21.46]

0.157 [4.00]

0.259 [6.58]

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 4.156in [105.56 mm], HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: XX oz. (XX g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEM FILM

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

CONNECTOR: SMA-Female
(OPTION: MMCX, MCX, R-SMA, TNC, N, OR CABLE)

MOUNTING: 4X 4-40 SCREWS, OR ADHESIVE GASKET

4x.756 [19.20]

4x1.795 [45.59]

SMA-Female
(OPTION: MMCX, MCX, R-SMA, TNC, N, 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

REMOVABLE MAGNETIC MOUNT

REMOVABLE MAGNETIC MOUNT

MOUNTING:
4X 4-40 UNF-2A
X 0.155 DEEP, OR
ADHESIVE GASKET

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

RX/TX FREQUENCY MHZ:	INMARSAT POLARIZATION:	GPS LNA:	MOUNTING OPTION	GPS/ INMARSAT CON.	COLOR :
1516: RX/TX L-BAND	RR: RHCP ONLY	A: ACTIVE (WITH LNA)	X: BOTTOM CON	S: SMA; RS: R-SMA; P: PIN S	1: GLOSS WHITE #17925 PER FED-STD-595B
1216: L1/L2 GPS/L-BAND	RL: RHCP/LHCP LL: LHCP ONLY	P: PASSIVE (NO LNA)	M: WITH MAG. MOUN T N: NO MAG. MOUN T	M: MCX; MM: MMCX N: N; NB: N-Bulkhead T: TNC; TB: TNC-Bulkhead	2: LUSTERLESS GRAY #36320 PER FED-STD-595B 3: OLIVE DRAB GREEN #34031 PER FED-STD-595B 4: LUSTERLESS BLACK #37038 PER FED-STD-595B
1223: L1/L2 GPS & XM					

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	QTY
1	ADHESIVE GASKET	123456-3M-1G	-	-	1

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS TO DECIMALS IN INCHES
± 1/64 0.0005 0.001 ± 1'

TOLEANCE 0.004 PER ANSI Y14.5
BREAK EXTERNAL EDGES AND TO .015
FLATS TO .005 TO 1.0
SCREWS THROUGH HOLES TO BE DRIVEN
DATE ON A COMMON SENSE OF JOBS
MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

1 PORT MAGNETIC MOUNT
HIGH GAIN RHCP INMARSAT &
L1/L2 GPS ANTENNA

DESIGNED BY: S. HUYNH
DRAWN BY: S. HUYNH
DATE: Nov-02-05

APPROVED BY: S. HUYNH
DATE: Nov-02-05

SCALE 1/1

SHEET 1 OF 1

P/N: 5G1216RR-PP-MS-X

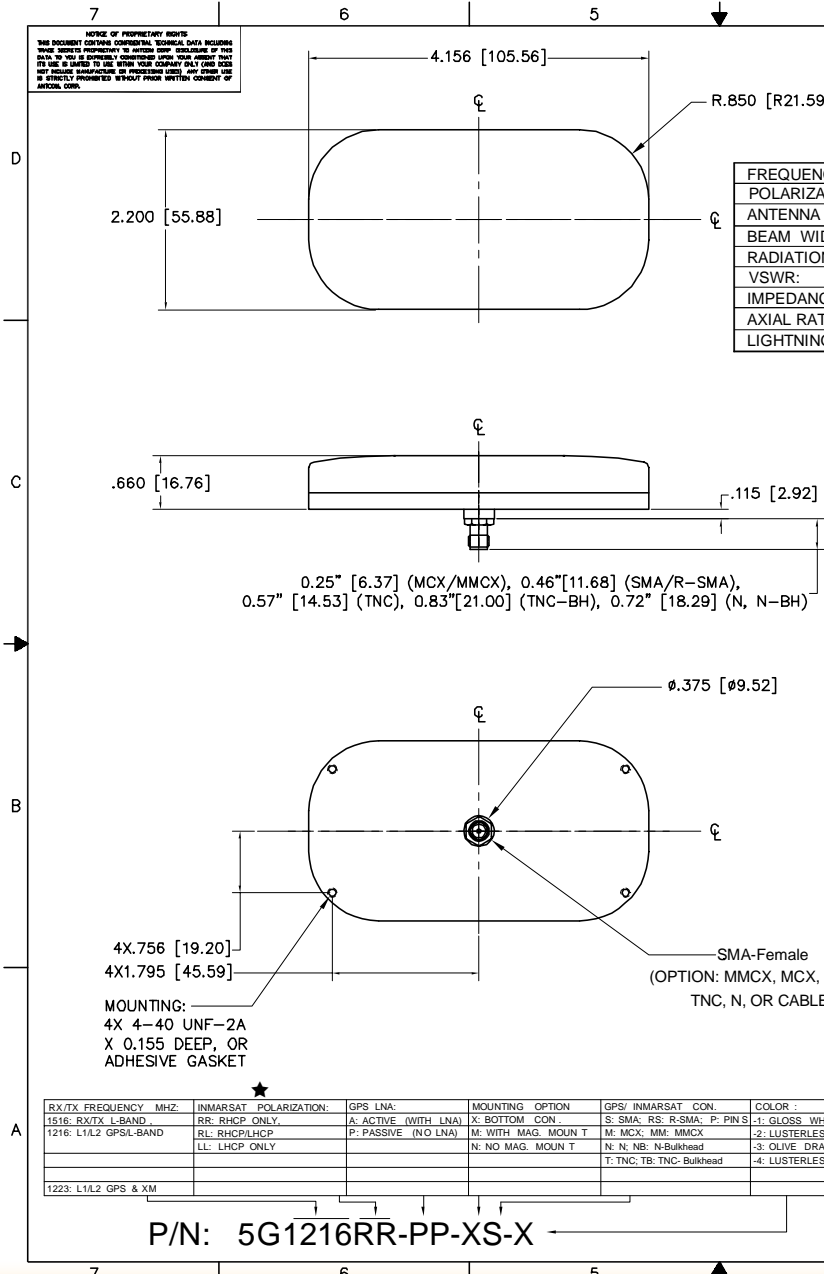


CC#: 3CVE1

L1/L2 GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 5G1216RR-PP-XS-X or LHCP-Thuraya Antenna, P/N: 5G1516LL-PP-XS-X, (4.15" x 2.20" x 0.85"), Back Mount, Bottom Connector Configuration



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SPECIFICATIONS		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	L1/L2 GPS	Rx/Tx L-BAND INMARSAT/IRIDIUM		
FREQUENCY (MHz):	L1: (1575.42 ±12) L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
POLARIZATION :	RHC P			
ANTENNA GAIN (dBic):	★ ~ 6 dBic			
BEAM WIDTH (3dB):	~ 87 Deg.			
RADIATION PATTERN :	HEMISPHERICAL			
VSWR:	< 1.5: 1			
IMPEDANCE:	50 ohm s			
AXIAL RATIO :	2 dB			
LIGHTNING PROTECTION :	DC GROU NDING			

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 4.156in [105.56 mm], HEIGHT: 0.655 in. [16.64 mm]

WEIGHT: XX oz. (XX g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEM FILM

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

CONNECTOR: SMA-Female
 (OPTION: MMCX, MCX, R-SMA, TNC, N, OR CABLE)

MOUNTING: 4X 4-40 SCREWS, OR ADHESIVE GASKET

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

RX/TX FREQUENCY MHz:	INMARSAT POLARIZATION:	GPS LNA:	MOUNTING OPTION	GPS/ INMARSAT CON.	COLOR :
1516: RX/TX L-BAND	RR: RHCP ONLY	A: ACTIVE (WITH LNA)	X: BOTTOM CON.	S: SMA RS: R-SMA; P: PIN S	1: GLOSS WHITE #17925 PER FED-STD-595B
1216: L1/L2 GPS/L-BAND	RL: RHCP/LHCP	P: PASSIVE (NO LNA)	M: WITH MAG. MOUN T	M: MCX; MM: MMCX	2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	LL: LHCP ONLY		N: NO MAG. MOUN T	N: N; NB: N-Bulkhead	3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
				T: TNC; TB: TNC-Bulkhead	4: LUSTERLESS BLACK #37038 PER FED-STD-595B
1223: L1/L2 GPS & XM					

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT
1	ADHESIVE GASKET	123456-3M-1G	-	-	1

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 FRACTIONS TO 1/64 DECIMALS TO 0.001 ANGLES TO 1°
 TOLERANCE ENDS PER ANSI Y14.5
 BREAK EXTERNAL EDGES AND TO .015
 UNLESS SHOWN OTHERWISE
 DATE ON A COMBINATION OF DIM
 MACHINED SURFACES

ANTCOM CORP. TORRANCE, CALIFORNIA

1 PORT
 HIGH GAIN RHCP INMARSAT &
 L1/L2 GPS ANTENNA

DESIGNED BY: S. HUYNH
 DRAWN BY: S. HUYNH
 APPROVED BY: S. HUYNH
 DATE: Nov-02-05

DO NOT SCALE DRAWING

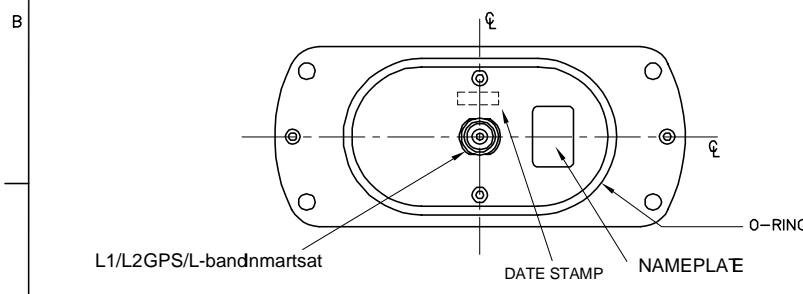
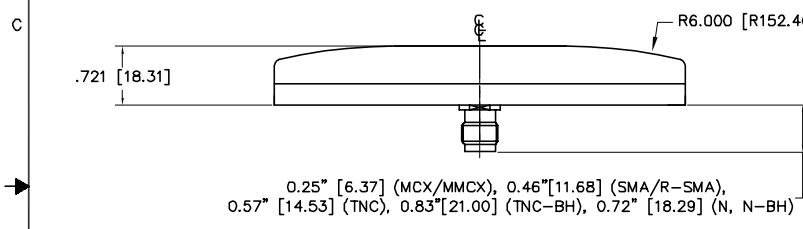
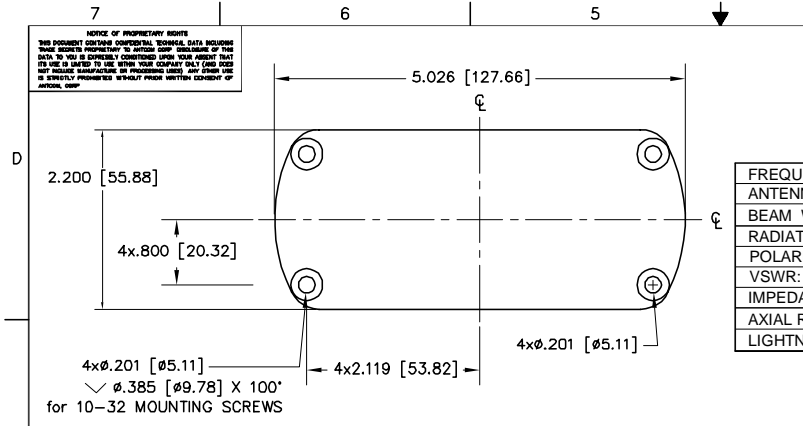
SCALE 1/1

SHEET 1 OF 1

P/N: 5G1216RR-PP-XS-X

L1/L2 GPS/RHCP-Inmarsat/Iridium Antenna, P/N: 5G1216RR-PP-XT-X or LHCP-Thuraya Antenna, P/N: 5G1516LL-PP-XT-X (5.03"x2.08"x0.69"), Top Mount, Bottom Connector Configuration

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RX/TX FREQUENCY (MHz)	RX/TX POLARIZATION	Rx/Tx LNA:	CABLE'S LENGTH :	Rx/Tx CONNECTOR :	COLOR :
1518: RX:TX L-BAND	RR: RX: RHCP, TX: RHCP	A: WITH LNA	X: NO CABLE	S: SMA, RS: R-SMA, P: P-N S	1: GLOSS WHITE #17925 PER FED-STD-595B
1216: L1/L2 GPS/RX L-BAND & TX L-BAND	RL: RX: RHCP, TX: LHCP	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX, MM: MMCX	2: LUSTERLESS GRAY #38320 PER FED-STD-595B
	LL: RX: LHCP, TX: LHCP		F: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	LR: RX: LHCP, TX: RHCP			T: TNC, TB: TNC-Bulkhead	4: LUSTERLESS BLACK #37038 PER FED-STD-595B
1223: L1/L2 GPS & XM					

P/N: 5G1516RR-PP-XT-X

SPECIFICATIONS

ELECTRICAL:

	L1/L2 GPS	Rx/Tx INMARSAT/GLO NASS/IRIDIUM
FREQUENCY (MHz):	L1: (1575.42 ±12)	L2: (1227.60 ±12) (1542.50 ±17.5) (1642.50 ±17.5) (1602-1626)
ANTENNA GAIN (dBic):	~ 6 dBic	
BEAM WIDTH (3dB):	~ 87 Deg.	
RADIATION PATTERN:	HEMISPHERICAL	
POLARIZATION:	RHCP	
VSWR:	< 1.5:1	
IMPEDANCE:	50 ohms	
AXIAL RATIO:	2 dB	
LIGHTNING PROTECTION:	DC GROUNDING	

MECHANICAL:

- SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
- WEIGHT: 7.84 oz. (222 g)
- FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING
- MATERIAL: 6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
- CONNECTOR: TNC-Female (OPTION: MMCX, MCX, SMA, R-SMA, N, OR CABLE)
- MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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	MATERIAL	FINISH	REF ID
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 TOLERANCES UNLESS OTHERWISE SPECIFIED:
 FRACTIONS DECIMALS ANGLES
 ± 1/64 ± .005 ± 1°
 TOLERANCE 5/16 PER ASME Y14.5
 BREAK ALL SHARP EDGES EXTERNAL EDGES TO .015
 FINISH: 1: 250 TO 320 RA
 2: 125 TO 150 RA
 3: 63 TO 80 RA
 4: 32 TO 50 RA
 MARKED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT
2 Element L1/L2 GPS & L-band
INMARSAT ANTENNA

APPROVED: S. HUYNH
Nov-12-03

REV: 1
DATE: 03-01-03
SCALE: 1/1
SHEET: 1 OF 1

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(9 x 18 x 0.6)in



(9 x 9 x 0.6)in



RHCP-Inmarsat Antenna Array, P/N: 9x18A-1.6R-P-XS-1 or LHCP-Thuraya Antenna Array, P/N: 9x18A-1.6L-P-XS-1, (9 x 18 x 0.6)in, Flat Panel, Back Mount Configurations

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SPECIFICATIONS

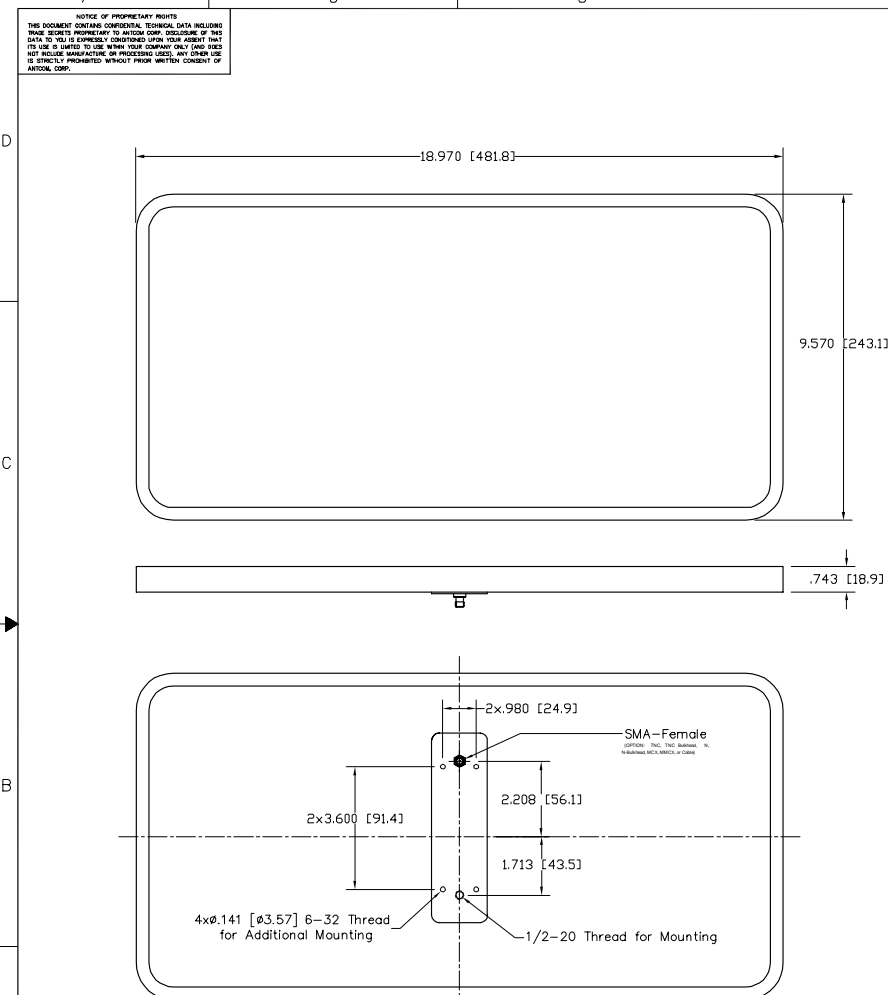
ELECTRICAL:
 FREQUENCY : L-BAND
 (1.5250 -1.6605) GHz
 PATTERN: DIRECTIONAL
 POLARIZATION: LHCP
 ANTENNA GAIN : >15 dBic
 BEAM WIDTH (deg): 35
 VSWR: 1.5:1
 OUTPUT IMPEDANCE: 50 ohms
 POWER HANDLING: 100 watts
 DC GROUNDING: YES

AUTO TRACK OPTION:
 TRACKING: 360 Deg Azimuth @ (0.04 to 0.9) Deg/Sec
 TRACKING MODE: Sum/Different Mode,
 or Beacon Signal Level: >100 mV Demodulated DC
 ACQUISITION TIME: <35 sec @ (10 deg/sec)
 DC POWER SUPPLY: +24 Vdc/3 Amp.

MECHANICAL:
 SIZE: 9.6in x 18.9in x 0.75in
 WEIGHT: 1.35 lb (612 grams)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND BLACK ANODIZED
 MATERIAL: 6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
 CONNECTOR: SMA FEMALE CONNECTING TO 10m COMBINER SMB CABLE (OPTION: SMB, SMA, N, MCX, MMCX OR CABLES)

ENVIRONMENTAL:
 TEMPERATURE : -67 °F TO +185 °F [-55 °C TO +85 °C]
 ALTITUDE: 30,000 ft.
 VIBRATION: > 20 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



9X18A-1516L-P-XS-1

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

SIZE	NUMBER OF ELEMENT	FREQUENCY BAND	S/C BAND POL	CONNECTOR	COLOR
9X18:9X18in		1516:1525 to 1660 MHz	V: VERTICAL R: RHCP L: LHVP	S: SMA; P: PINS M: MCX; MM: MMCX N: N; NB: N-Bulkhead T: TNC; TB: TNC- Bulkhead	-X: WITHOUT RADOME -1: GLOSS WHITE #17925 PER FED-STD-595B -2: LUSTERLESS GRAY #36320 PER FED-STD-595B -3: OLIVEDRAB GREEN #34031 PER FED-STD-595B -4: LUSTERLESS BLACK #37038 PER FED-STD-595B -5: TAN # FS 23446 or 33446, FED-STD-595

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	REF NO
1	OPTIONAL Xft RF CABLE	SMA-M-LRM200-Xft-SMB-M		3
1	1/3-20 ANTENNA MOUNT	HGX-PMT03		1

UNLESS OTHERWISE SPECIFIED		ANTCOM CORP. TORRANCE CALIFORNIA	
FRACTIONS	DECIMALS	ANTCOM CORP. (1.525 -1.660) GHz L-BAND LHCP THURAYA ANTENNA ARRAY	
± 1/64	± 0.015		
TOLERANCE SIM PER ANSI Y14.5	CHECKED	DRAWN BY: S. HUYNH DATE: JUN-08-08 SCALE: 1/1	
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS # 200 TO # 300 SPRUE THROAT PER MIL-C-8879 DIA'S ON A COMMON 6.25-.006 MACHINED SURFACES	APPROVED		
DO NOT SCALE DRAWING	CAD FILE NO	SHEET 1 OF 1	



2. TWO-PORTS

GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antennas:

Pictures, Outline Drawings, and Specifications

(Page 62 to 73)

**2-Port L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna,
 P/N: 1G1216RL-XSS-X,
 2" Square, Back Mount, Bottom Connector Configuration**

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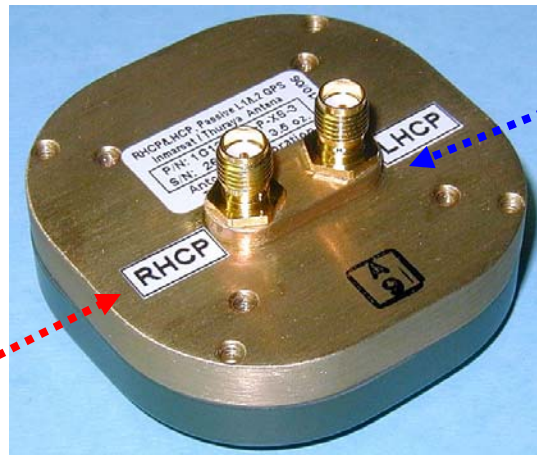
**P/N: 1G1216RL-P-XSS-3
 (Green)**



**P/N: 1G1216RL-P-XSS-4
 (Black)**



**P/N: 1G1216RL-P-XSS-2
 (Gray)**



**L1/L2 GPS/
 RHCP-Inmarsat/Iridium**

LHCP-Thuraya

P/N: 1G1216RL-P-XSS-3 (2" Square White with SMA Connector)

Hermetically Sealed, Designed for Harsh Environment Applications.

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



CC#: 3CVE1

2-Port L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna,

P/N: 1G1216RL-XSS-X,

2" Square, Back Mount, Bottom Connector Configuration



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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

	L1/L2 GPS		Rx L-BAND	Tx L-BAND	IRIDIUM
FREQUENCY(MHz):	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
ANTENNA GAIN (dBic):	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP
@ 90° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+3.1
@ 10° Elevation	-1.2	-1.4	-3.8	-3.6	-3.1
@ 20° Elevation	+0.3	+1.4	-2.0	-0.1	-1.1
@ 30° Elevation	+1.8	+2.2	-0.5	-1.8	0.0
@ 60 - 90° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.6
BEAMWIDTH(3dB):	106 Deg.	130 Deg	106 Deg	75 Deg.	106 Deg.
POLARIZATION:	RHCP		RHCP/LHCP		RHCP
RADIATION PATTERN:	HEMISPHERICAL				
VSWR:	< 1.5:1				
IMPEDANCE:	50 ohms				
AXIAL RATIO:	2 dB				
LIGHTNING PROTECTION:	DC GROUNDING				
POWER HANDLING:	200 Watts CW				

MECHANICAL:

SIZE: LENGTH: 2.080 in. [52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67mm] (No Radome option)

WEIGHT: 2.88 oz. (82 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: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead,
MCX, MMCX, 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

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REV
1	ADHESIVE GASKET	12345G-3M-1G	-	-	-	5
1						3
1						2
1						1
-2	-1					

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

SIZE	FREQ. BAND	POLARIZATION:	LNA:
1: 2" SQ	1215: L1/L2	RR: RHCP/RHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	RL: RHCP/LHCP	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1216: L1/L2 &	LL: LHCP/LHCP	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSAT		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINIARINC	GLONASS/IRIDIUM		

ANTCOM CORP. TORRANCE, CALIFORNIA

2.0" SQ., Bottom Con. L1/L2 GPS/RHCP-INMARSAT/IRIDIUM & LHCP-L-BAND ANTENNA

APPROVED: S. HUYNH OCT-30-03

SCALE 1/1

SHEET 1 OF 1



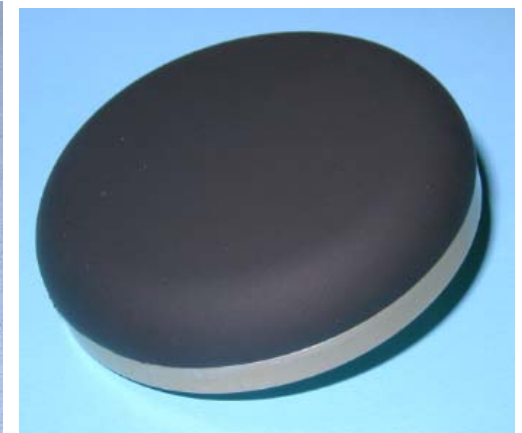
**P/N: 2G1216RL-P-XSS-1
 (White)**



**P/N: 2G1216RL-P-XSS-2
 (Gray)**



**P/N: 2G1216RL-P-XSS-3
 (Green)**



**P/N: 2G1216RL-P-XSS-4
 (Black)**



LHCP-Thuraya

**L1/L2 GPS/
 RHCP-Inmarsat/Iridium**

P/N: 2G1216RL-P-XSS-1 (2.6" Dia. White with SMA Connector)

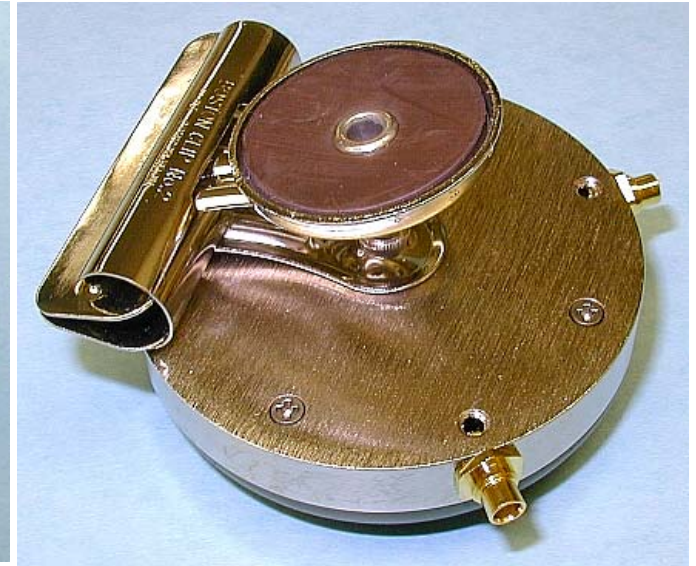
Hermetically Sealed, Designed for Harsh Environment Applications.

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



MCX Connector
 (Quick Connect)

LHCP-Thuraya



Other Types of Clips are available

L1/L2 GPS/
 RHCP-Inmarsat/Iridium



- Hermetically Sealed, Designed for Harsh Environment Applications.
- Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)
- Other Configurations are also available

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THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA INCLUDING TRADE SECRETS PROPRIETARY TO ANTCOM CORP. DISCLOSURE OF THIS DATA TO YOU IS EXPRESSLY CONDITIONED UPON YOUR AGREEMENT THAT ITS USE IS LIMITED TO THE WORK YOUR COMPANY ONLY (THIS DOES NOT INCLUDE MANUFACTURE OR PROCESSING USES), ANY OTHER USE IS EXPRESSLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF ANTCOM CORP.

SPECIFICATIONS

ELECTRICAL:

FREQUENCY(MHz):	L1/L2 GPS				Rx/Tx INMARSAT/THURAYA/GLONASS/IRIDIUM		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)		
ANTENNA GAIN (dBic):	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	Free Space	3.5" Dia. GP
@ 90° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+3.1	+3.4	+4.3
@ 10° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7	-3.1	-2.2
@ 20° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0	-1.1	-0.6
@ 30° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3	0.0	+0.8
@ 60 - 90° Elevation:	>4.8	>3.8	>2.7	>3.0	>2.0	>+2.6	>+3.5
BEAMWIDTH(3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		
POLARIZATION:	RHCP				RHCP/LHCP		
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
POWER HANDLING:	200 Watts CW (WITHOUT LNA)						

MECHANICAL:

SIZE: DIAMETER: 2.60 in. [66.04 mm]
HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67 mm] (No Radome option)

WEIGHT: 7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)

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: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

Optional Mounting:
4x6-32 SCREWS, 0.160" Deep & GASKET (No Mag. Option) 90° Apart on 1.153" Radius.

NAMEPLATE APPROXIMATE LOCATION

REMOVABLE MAGNETIC MOUNT

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

SIZE	FREQ. BAND	POLARIZATION	LNA
1: 2" SQ.	1215: L1/L2	RR: RHCP/RHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	RL: RHCP/LHCP	AL: WITH LNA/LIMITTER
2: 2.6" DIA.	1216: L1/L2 &	LL: LHCP/LHCP	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSAT/		PL: WITHOUT LNA AND THINNER (0.58" THICK)
4: MINI ARINC	GLONASS/IRIDIUM		

P/N: 2G1216RL-P-MSS-3

CABLE LENGTH	RHCP/LHCP COIN.	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: No Radome	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: NB; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE COIN.	T: TB; TNC; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	NEW NO
1	ADHESIVE GASKET	12345G-3M-1G				3
1						2
1						1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS ANGLES FRACTIONS ± 1/64 ± .015 ± .001 ± .005

TOLERANCE 5TH PER ANSI Y14.5 REMOVE ALL BURRS BREAK OFF EXCESS EDGES .006 TO .016 SOLDER THICKNESS PER MIL-C-8878 DIA'S OF A CONDUCTOR ± .002 MACHINED SURFACES .02

DO NOT SCALE DRAWING

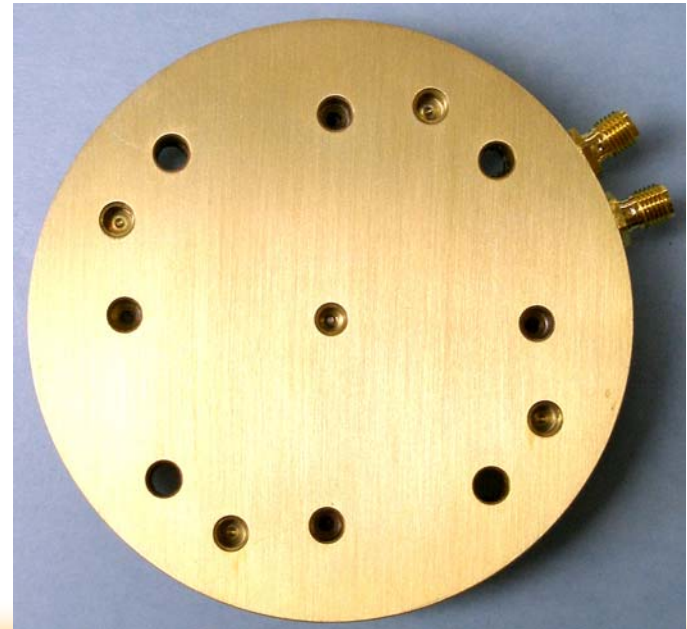
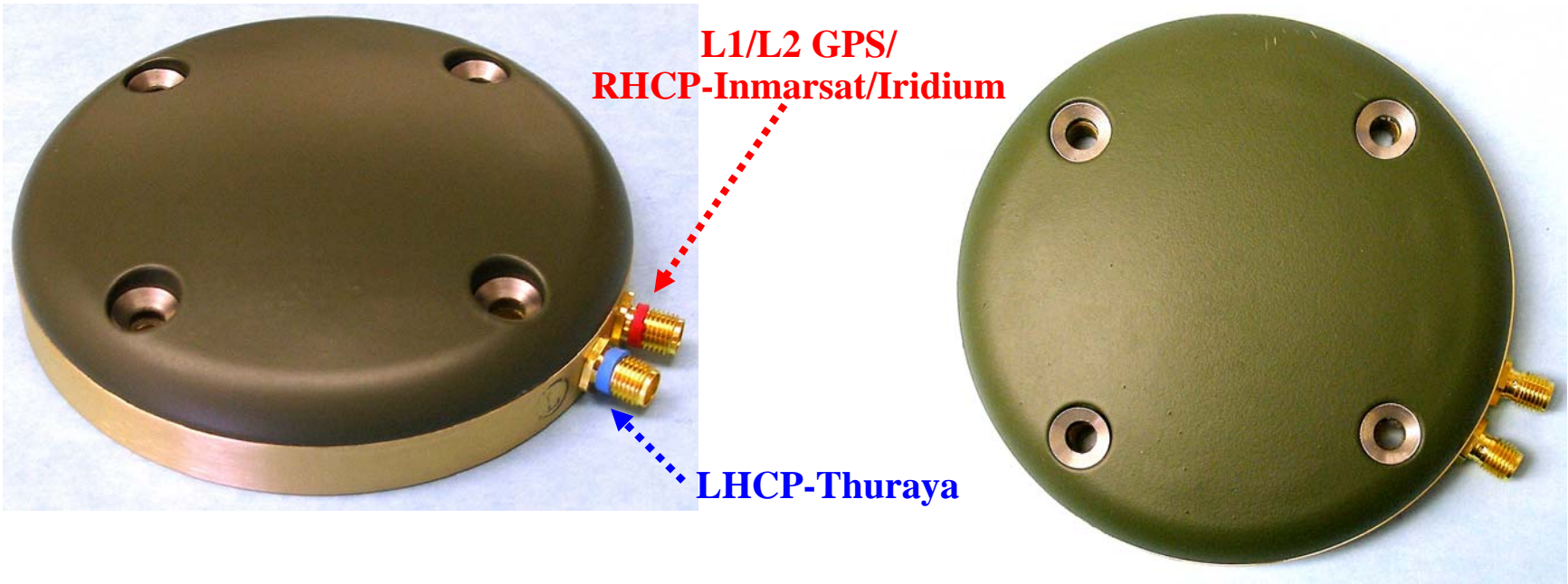
ANTCOM CORP. TORRANCE CALIFORNIA

2.6" Dia. Magnetic Mount, RHCP/LHCP L1/L2 GPS/INMARSAT/THURAYA GLONASS/IRIDIUM ANTENNA

DRAWN: M. BOAS OCT-30-03
CHECKED: S. HUYTHI OCT-30-03
DESIGNED: S. HUYTHI OCT-30-03
GAD FILE NO: []

SCALE 1/1 SHEET 1 OF 1

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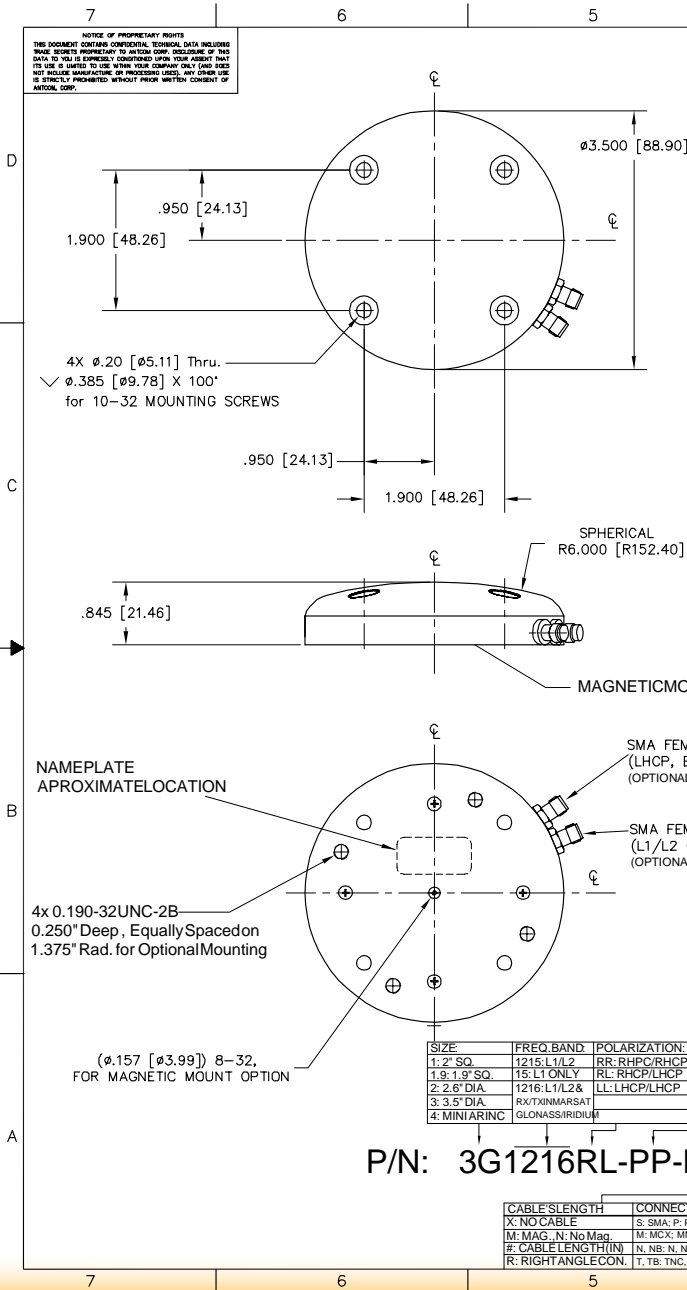


CC#: 3CVE1

2-Port L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, P/N: 3G1216RL-PP-NSS-X, 3.5" Diameter, Flat, Front/Back Mount, Side Connector Configuration



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SPECIFICATIONS

ELECTRICAL:	L1/L2 GPS				Rx L-BAND	Tx L-BAND	IRIDIUM
	L1: (1575.42 ±12)	4 ft G.P.	L2: (1227.60 ±12)	4 ft G.P.	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
FREQUENCY(MHz):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	Free Space	Free Space
ANTENNA GAIN @ Fc (dBic):	+5.5	+4.5	+3.3	+4.9	+3.1	+3.4	+4.3
@ 90° (ZENITH):	-1.2	-1.4	-3.8	-3.6	-3.7	-3.1	-2.2
@ 10° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0	-1.1	-0.6
@ 20° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3	0.0	+0.8
@ 30° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	> 2.6	> 3.5
@ 60 - 90° Elevation:							
BEAM WIDTH(3dB):	106 Deg	130 Deg	106 Deg	75 Deg	106 Deg	106 Deg	106 Deg
POLARIZATION:	RHCP				RHCP/LHCP		RHCP
RADIATION PATTERN:	HEMISPHERICAL						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
LNA OPTION							
LNA GAIN:	35 dB						
LNA NOISE FIGURE:	3.0 dB						
LNA P1dB Out:	+13 dBm						
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA						
REJECTION @ (-50/+50)MHz:	-40 dB / -40 dB						
@ (-100/+100)MHz:	< -65 dB						
POWER HANDLING:	200 Watts CW (WITHOUT LNA), 1 Watt CW (WITH LNA)						

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: 5.21 oz. (148 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: SMA FEMALE
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

ACCEPTANCE TEST PROCEDURE

QUANTITY	REQD	DESCRIPTION	PART NO	FINISH	REV
4	-	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
1	1	ADHESIVE GASKET	123456-3M-3G	-	1

P/N: 3G1216RL-PP-NSS-3

CABLE LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG; N: NO MAG	M: MCX; M: MMCX	-2: LUSTERLESS GRAY #37330 PER FED-STD-595B
F: CABLE LENGTH (IN)	N: NB; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON	T: TB; TNC; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FRACTIONS: 1/64, 3/32, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1

TOLERANCE: ± 0.005

REMOVE ALL BURRS

BREAK INTERNAL EDGES .006 TO .016

PLACES TO DIM TO: 0.005

DATE: 04/13/06

APPROVED: S. HUYNH April-13-06

DWG FILE NO: D:\3CVE1\3G1216RL-PP-NSS-3

SCALE: 1/1

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Side Con. L1/L2 GPS/RHCP-INMARSAT/IRIDIUM & LHCP-L-BAND ANTENNA

3CVE1 3G1216RL-PP-NSS-3

SHEET 1 OF 1

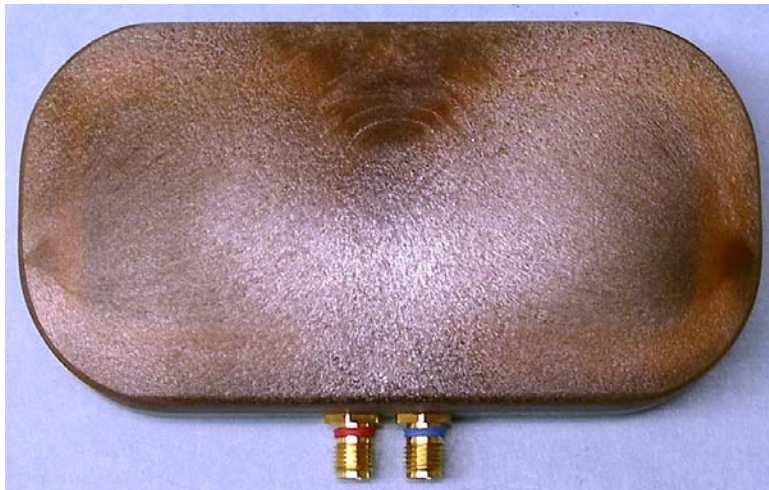


CC#: 3CVE1

**2-Port High Gain L1/L2 GPS/RHCP-Inmarsat/Iridium
& LHCP-Thuraya Antenna, P/N: 5G1216RL-PP-NSS-X,
(4.15" x 2.20" x 0.85"), Flat, Back/Magnetic Mount, Side Connector Configuration**



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P/N: 5G1216RL-PP-NSS-X
S.N.: 32284 WT. 7.2 g.
MFG. 05/19/06
Antcom Corporation
Torrance, CA, USA

A 14

2-PORT HIGH GAIN
L1/L2 GPS
RHCP INMARSAT
LHCP THURAYA

2-Port High Gain L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, P/N: 5G1216RL-PP-NSS-X, (4.15" x 2.20" x 0.85"), Flat, Back/Magnetic Mount, Side Connector Configuration

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CC#: 3CVE1

**2-Port L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna,
P/N: 2.3G1216RL-XXX-X,
Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration**



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LHCP-Thuraya

**L1/L2 GPS/
RHCP-Inmarsat/Iridium**



3. OTHER 2-PORT
GPS/RHCP-Inmarsat/Iridium or
GPS/LHCP-Thuraya Antennas:
Pictures, Outline Drawings, and Specifications

(Page 76 to 105)



CC#: 3CVE1

2-Ports, Active L1 or L1/L2 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1X16RR-AP-XXX-X,
or 2-Ports, Active L1 or L1/L2 GPS & LHCP-Thuraya Antenna, P/N: S5G1X16RL-AP-XXX-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration



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5G1X16RX-AP-XXX-1 (White)



5G1X16RX-AP-XXX-3 (Green)



5G1X16RX-AP-XXX-4 (Black)

Hermetically Sealed, Designed for Harsh Environment Applications.

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



5G1X16RX-AP-XTT-X (TNC Con.)



5G1X16RX-AP-XNN-X (N Con.)



5G1X16RX-AP-XST-X (SMA/TNC Con.)

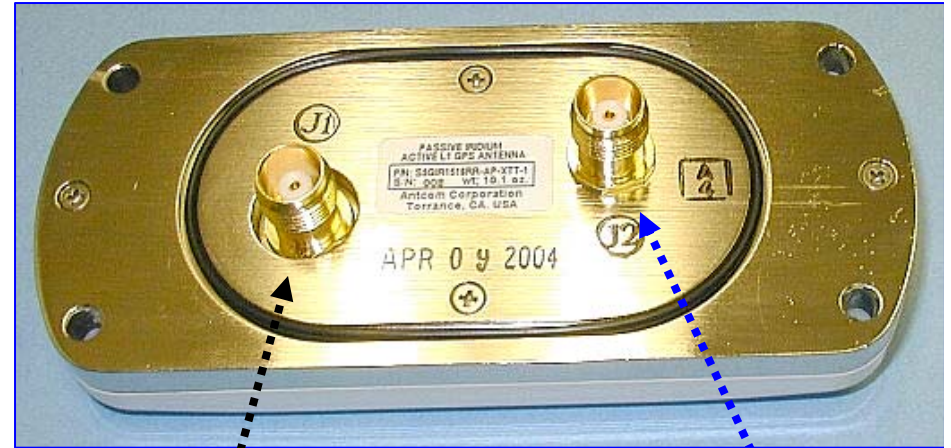


CC#: 3CVE1

2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1516RR-AP-XXX-X, or
2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: S5G1516RL-AP-XXX-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration



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Active GPS (RHCP)

RHCP
Inmarsat/Iridium,
or LHCP Thuraya



**2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1516RR-AP-XST-X, or
2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: S5G1516RL-AP-XST-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration**

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SPECIFICATIONS

ELECTRICAL:	IRIDIUM		GPS	
	FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL	
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P.
@ 90° (Zenith):	+4.9	+5.0	+4.6	+2.9
@ 10° Elevation:	-1.0	-2.5	-2.5	-1.8
@ 20° Elevation:	+1.5	-0.5	-1.1	+0.7
@ 30° Elevation:	+2.4	+1.0	+0.5	+1.7
@ 60° to 90° Elevation:	>+3.3	>+2.7	> 3.6	> 2.1
BEAMWIDTH(3dB):	129 °	98 °-106 °	103 °	146 °
AXIAL RATIO @ Zenith:	2 dB		2 dB	
POWER HANDLING:	30 W		1 Watt	
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING	
FILTER (REJ. @1616MHz):			> 60 dB	
LNA GAIN:	N/A		(33.0+/-1.0) dB	
LNA P 1dB Out:	N/A		+16 dBm	
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)	
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA	

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.5 oz. (242 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

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

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
4	MOUNTING SCREW: (10-32, 1")	MS24893C276	-	-	5
1	O-RING	2-038-N756-75	-	-	3

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

CONFIGURATION:

CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

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

ANTCOMCORP.
FLAT FIXED MOUNT ACTIVE IRIDIUM/GPS ANTENNA

P/N: S5GIR1516RR-AP-XST-X

DATE: DEC-13-02
DRAWN: S. HUYNH
APPROVED: S. HUYNH
SCALE: 1/1



CC#: 3CVE1

**2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1516RR-AP-XTT-X, or
2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: S5G1516RL-AP-XTT-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration**



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5.026 [127.66] ϕ

4x.800 [20.32]

2.200 [55.88]

4x ϕ .201 [ϕ 5.11]

\surd ϕ .385 [ϕ 9.78] X 100" for 10-32 MOUNTING SCREWS

4x2.119 [53.82]

.721 [18.31]

R6.000 [R152.40]

.572 [14.53]

.406 [10.31]

.784 [19.91]

.148 [3.77]

.937 [23.80]

.143 [3.63]

J2

DATE STAMP/
NAMEPLATE

J1

O-RING (2-038)

GPS: TNC Female (J2, Blue)

Iridium: TNC Female (J1, Red)

(+2.5 to +30) Volts DC

GPS/IRIDIUM/LNA

CABLE LENGTH

GPS/IRIDIUM CONNECTOR

COLOR

CONFIGURATION:	FREQ BAND	GPS/IRIDIUM/LNA	CABLE LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)		A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					

P/N: S5GIR1516RR-AP-XTT-X

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

SPECIFICATIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	IRIDIUM	GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 \pm 13)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	4 ft G.P. Free Space	F.S. 4 ft G.P.
@ 90° (Zenith):	+4.9	+5.0
@ 10° Elevation:	-1.0	-2.5
@ 20° Elevation:	+1.5	-0.5
@ 30° Elevation:	+2.4	+1.0
@ 60° to 90° Elevation:	>+3.3	>+2.7
		> 3.6
		> 2.1
BEAM WIDTH (3dB):	129° 98°-106°	103° 146°
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING
FILTER (REJ. @1616 MHz):		> 60 dB
LNA GAIN:	N/A	(33.0 \pm 1.0) dB, 20dB (-A2- Option)
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB (Filter loss is Included)
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30 TO 50) mA

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.3 oz (235 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

CONNECTOR: IRIDIUM: TNC FEMALE (J1, Red); GPS: TNC FEMALE (J2, Blue)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	TEST NO
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	3

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS SHALL BE IN 16THS OF AN INCH
 \pm 1/64 .0005 .0002 .0001 .00005

TOLENCES BY FORM AND FITS
BREAK ALL SHARP
BREAK INTERNAL EDGES .005 TO .010
FILLET R .005 TO R .0075
SOFTEN ALL CORNERS BY ALL .0075
MILL ON A CORNER

APPROVED: S. HUYH
DEC-13-02

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

FLAT FIXED MOUNT
ACTIVE IRIDIUM/GPS
ANTENNA

3CVE1

S5GIR1516RR-AP-XTT-X

SCALE 1/1

SHEET 1 OF 1



CC#: 3CVE1

2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1516RR-A2P-XTT-X, or
2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: S5G1516RL-A2P-XTT-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration



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5.026 [127.66]
4x.800 [20.32]
2.200 [55.88]
4x2.119 [53.82]
4x0.201 [0.511]
∠ φ.385 [0.978] X 100'
for 10-32 MOUNTING SCREWS

.721 [18.31]
R6.000 [R152.40]
.572 [14.53]
.406 [10.31]

.784 [19.91]
.148 [3.77]
.937 [23.80]
.143 [3.63]

J2
DATE STAMP/
NAMEPLATE
Iridium: TNC Female (J1, Red)
O-RING (2-038)

GPS: TNC Female (J2, Blue)

(+2.5 to +30) Volts DC

CONFIGURATION	FREQ BAND	GPS/IRIDIUM	CABLE LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1518: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MXX; MM: MMCX	2: LUSTERLESS GRAY #3320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM	R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	F: CABLE LENGTH (IN)	3: OLIVEDRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			T: TNC; TB: TNC-Bulkhead		4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: S5GIR1516RR-A2P-XTT-X

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

SPECIFICATIONS

ELECTRICAL:	
FREQUENCY:	IRIDIUM (1610.0 - 1626.5) MHz GPS L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL
POLARIZATION:	RHCP
VSWR:	< 1.5:1
GAIN (dB):	4 ft G.P.: Free Space F.S.
@ 90° (Zenith):	+4.9 +5.0 +4.6 +2.9
@ 10° Elevation:	-1.0 -2.5 -2.5 -1.8
@ 20° Elevation:	+1.5 -0.5 -1.1 +0.7
@ 30° Elevation:	+2.4 +1.0 +0.5 +1.7
@ 60° to 90° Elevation:	>+3.3 >+2.7 > 3.6 > 2.1
BEAM WIDTH (3dB):	129° 98°-106° 103° 146°
AXIAL RATIO @ Zenith:	2 dB
POWER HANDLING:	30 W 1 Watt
LIGHTNING PROTECTION:	DC GROUNDING DC GROUNDING
FILTER (REJ. @1616 MHz):	> 60 dB
LNA GAIN:	N/A (33.0+/-1.0) dB, 20dB (-A2- Option)
LNA P 1dB Out:	N/A +16 dBm
LNA NOISE FIGURE:	N/A 2.8 dB (Filter loss is included)
VOLTAGE/CURRENT:	N/A (+2.8 TO +28) Volts DC / (30 TO 50) mA

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.3 oz (235 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

CONNECTOR: IRIDIUM: TNC FEMALE (J1, Red); GPS: TNC FEMALE (J2, Blue)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	3

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS DECIMALS ANGLES
± 1/64 ± .005 ± 1'

TOLERANCE FIT PER ANSI Y14.5
HOLE: H7/g6
SHAFT: h7/g6
HOLE: H8/d9
SHAFT: h8/d9
HOLE: H9/f9
SHAFT: h9/f9
HOLE: H10/k9
SHAFT: h10/k9
HOLE: H11/m8
SHAFT: h11/m8
HOLE: H12/n6
SHAFT: h12/n6
HOLE: H13/p6
SHAFT: h13/p6
HOLE: H14/r5
SHAFT: h14/r5
HOLE: H15/s7
SHAFT: h15/s7
HOLE: H16/t8
SHAFT: h16/t8
HOLE: H17/v8
SHAFT: h17/v8
HOLE: H18/x9
SHAFT: h18/x9
HOLE: H19/z9
SHAFT: h19/z9
HOLE: H20/a8
SHAFT: h20/a8
HOLE: H21/b7
SHAFT: h21/b7
HOLE: H22/c7
SHAFT: h22/c7
HOLE: H23/d8
SHAFT: h23/d8
HOLE: H24/e7
SHAFT: h24/e7
HOLE: H25/f7
SHAFT: h25/f7
HOLE: H26/g6
SHAFT: h26/g6
HOLE: H27/h6
SHAFT: h27/h6
HOLE: H28/j6
SHAFT: h28/j6
HOLE: H29/k5
SHAFT: h29/k5
HOLE: H30/m4
SHAFT: h30/m4
HOLE: H31/n3
SHAFT: h31/n3
HOLE: H32/p3
SHAFT: h32/p3
HOLE: H33/r2
SHAFT: h33/r2
HOLE: H34/s2
SHAFT: h34/s2
HOLE: H35/t2
SHAFT: h35/t2
HOLE: H36/u2
SHAFT: h36/u2
HOLE: H37/v2
SHAFT: h37/v2
HOLE: H38/w1
SHAFT: h38/w1
HOLE: H39/x1
SHAFT: h39/x1
HOLE: H40/y1
SHAFT: h40/y1
HOLE: H41/z1
SHAFT: h41/z1
HOLE: H42/a0
SHAFT: h42/a0
HOLE: H43/b0
SHAFT: h43/b0
HOLE: H44/c0
SHAFT: h44/c0
HOLE: H45/d0
SHAFT: h45/d0
HOLE: H46/e0
SHAFT: h46/e0
HOLE: H47/f0
SHAFT: h47/f0
HOLE: H48/g0
SHAFT: h48/g0
HOLE: H49/h0
SHAFT: h49/h0
HOLE: H50/i0
SHAFT: h50/i0
HOLE: H51/j0
SHAFT: h51/j0
HOLE: H52/k0
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HOLE: H53/l0
SHAFT: h53/l0
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SHAFT: h54/m0
HOLE: H55/n0
SHAFT: h55/n0
HOLE: H56/o0
SHAFT: h56/o0
HOLE: H57/p0
SHAFT: h57/p0
HOLE: H58/q0
SHAFT: h58/q0
HOLE: H59/r0
SHAFT: h59/r0
HOLE: H60/s0
SHAFT: h60/s0
HOLE: H61/t0
SHAFT: h61/t0
HOLE: H62/u0
SHAFT: h62/u0
HOLE: H63/v0
SHAFT: h63/v0
HOLE: H64/w0
SHAFT: h64/w0
HOLE: H65/x0
SHAFT: h65/x0
HOLE: H66/y0
SHAFT: h66/y0
HOLE: H67/z0
SHAFT: h67/z0
HOLE: H68/a-1
SHAFT: h68/a-1
HOLE: H69/b-1
SHAFT: h69/b-1
HOLE: H70/c-1
SHAFT: h70/c-1
HOLE: H71/d-1
SHAFT: h71/d-1
HOLE: H72/e-1
SHAFT: h72/e-1
HOLE: H73/f-1
SHAFT: h73/f-1
HOLE: H74/g-1
SHAFT: h74/g-1
HOLE: H75/h-1
SHAFT: h75/h-1
HOLE: H76/i-1
SHAFT: h76/i-1
HOLE: H77/j-1
SHAFT: h77/j-1
HOLE: H78/k-1
SHAFT: h78/k-1
HOLE: H79/l-1
SHAFT: h79/l-1
HOLE: H80/m-1
SHAFT: h80/m-1
HOLE: H81/n-1
SHAFT: h81/n-1
HOLE: H82/o-1
SHAFT: h82/o-1
HOLE: H83/p-1
SHAFT: h83/p-1
HOLE: H84/q-1
SHAFT: h84/q-1
HOLE: H85/r-1
SHAFT: h85/r-1
HOLE: H86/s-1
SHAFT: h86/s-1
HOLE: H87/t-1
SHAFT: h87/t-1
HOLE: H88/u-1
SHAFT: h88/u-1
HOLE: H89/v-1
SHAFT: h89/v-1
HOLE: H90/w-1
SHAFT: h90/w-1
HOLE: H91/x-1
SHAFT: h91/x-1
HOLE: H92/y-1
SHAFT: h92/y-1
HOLE: H93/z-1
SHAFT: h93/z-1
HOLE: H94/a-2
SHAFT: h94/a-2
HOLE: H95/b-2
SHAFT: h95/b-2
HOLE: H96/c-2
SHAFT: h96/c-2
HOLE: H97/d-2
SHAFT: h97/d-2
HOLE: H98/e-2
SHAFT: h98/e-2
HOLE: H99/f-2
SHAFT: h99/f-2
HOLE: H100/g-2
SHAFT: h100/g-2

ANTCOM CORP. TORRANCE, CALIFORNIA
FLAT FIXED MOUNT
ACTIVE IRIDIUM/GPS
ANTENNA

REV D 3CVE1 S5GIR1516RR-A2P-XTT-1
DATE DEC-13-02
SCALE 1/1
SHEET 1 OF 1

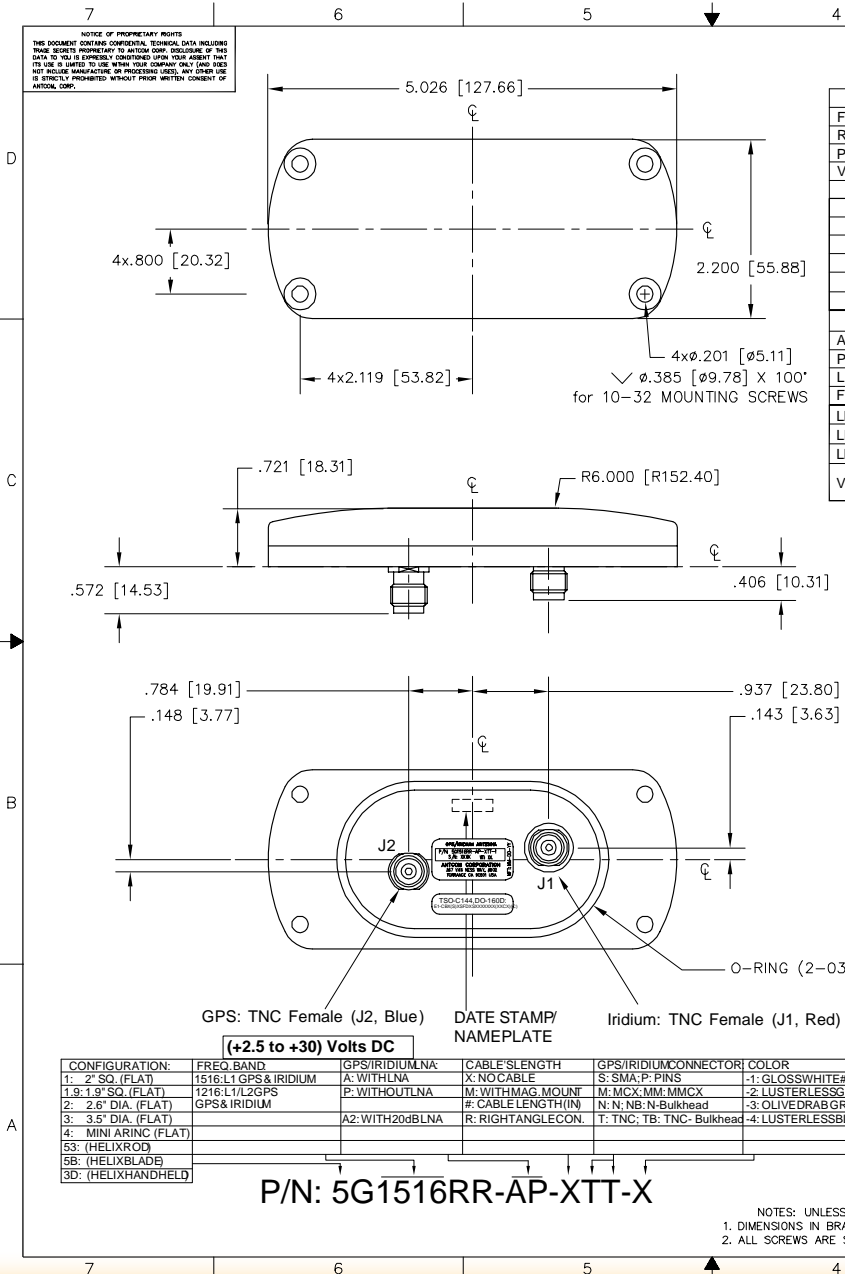


CC#: 3CVE1

2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: 5G1516RR-AP-XTT-X,
Or 2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: 5G1516RL-AP-XTT-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration



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



SPECIFICATIONS

ELECTRICAL:

	IRIDIUM		GPS	
FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)	
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL	
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7
@ 60° to 90° Elevation:	>+3.3	>+2.7	> 3.6	> 2.1
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °
AXIAL RATIO @ Zenith:	2 dB		2 dB	
POWER HANDLING:	30 W		1 Watt	
LIGHTNING PROTECTION:	DC GROUNDING G		DC GROUNDING G	
FILTER (REJ. @1616 MHz):			> 60 dB	
LNA GAIN:	N/A		(33.0+/-1.0) dB, 20dB (-A2- Option)	
LNA P 1dB Out:	N/A		+16 dBm	
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is included)	
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA	

MECHANICAL:

SIZE: WIDTH:2.20 in. [55.88mm], LENGTH:5.026in [127.66mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT: 7.84 oz. (222 g)
FINISH: SKYDROLRESISTANTPOLYURETHANENAMEL,AND NICKEL PLATING
MATERIAL: 6061-T6ALUMINUMALLOYBASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,ANDSKYDROLRESISTANCE, FIRE RETARDANT
CONNECTOR: IRIDIUM:TNC FEMALE(J1, Red); GPS:TNC FEMALE(J2, Blue)
MOUNTING: FLATFIXEDMOUNT; O-RING& 4 x 10-32MOUNTINGSCREWSPROVIDED

ENVIRONMENTAL:

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

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

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REV
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	1

CONFIGURATION:	FREQ. BAND	GPS/IRIDIUM/LNA	CABLE LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516-L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216-L1/L2 GPS	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)		A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 5G1516RR-AP-XTT-X

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

ANTCOM CORP. TORRANCE CALIFORNIA
 TSO APPROVED
 ACTIVE IRIDIUM/GPS
 ANTENNA

REV	DATE	DESCRIPTION	ZONE
1	DEC-13-02	3CVE1	5G1516RR-AP-XTT-1



CC#: 3CVE1

**2-Ports, Active L1/L2 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1216RR-AP-XST-X, or
2-Ports, Active L1/L2 GPS & LHCP-Thuraya Antenna, P/N: S5G1216RL-AP-XST-X
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration**



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MECHANICAL:
SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT: 8.0 oz. (226 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: GPS: SMA FEMALE, IRIIDIUM: TNC FEMALE (OPTION: SMA, TNC, N, Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

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

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	REQD
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	ADHESIVE GASKET	12345G-3M-4G	-	-	3
1	O-RING	2-038-N756-75	-	-	1

CONFIGURATION: FREQ. BAND: GPS/IRIDIUM LNA: CABLE'S LENGTH: GPS/IRIDIUM CONNECTOR: COLOR:

1- 2" SQ. (FLAT)	1516: L1 GPS & IRIIDIUM	A- WITH LNA	X- NO CABLE	S- SMA; P- PINS	-1- GLOSS WHITE #17325 PER FED-STD-595B
1.9- 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P- WITHOUT LNA	M- WITH MAG. MOUNT	M- MCX; MM- MMCX	-2- LUSTERLESS GRAY #36320 PER FED-STD-595B
2- 2.6" DIA. (FLAT)	GPS & IRIIDIUM		#- CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3- OLIVE DRAB GREEN #34031 PER FED-STD-595B
3- 3.6" DIA. (FLAT)			R: RIGHT ANGLE CON.	T- TNC; TB: TNC-Bulkhead	-4- LUSTERLESS BLACK #37038 PER FED-STD-595B
4- MINI ARINC (FLAT)					
53- (HELIX ROD)					
5B- (HELIX BLADE)					
3D- (HELIX HANDHELD)					

CONNECTIONS:
GPS: SMA Female (OPTIO N: TNC, N, MCX) (+2.5 to +30) Volts DC
DATE STAMP/ NAMEPLATE
Iridium: TNC Female (OPTIO N: SMA, N, MCX)

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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SPECIFICATIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	IRIDIUM			L1 OR L1/L2 GPS		
FREQUENCY:	(1610.0 - 1626.5) MHz			L1: (1575.42 ±13) L2: (1227.60 ±13) MHz		
RADIATION PATTERN:	HEMISPHERICAL			HEMISPHERICAL		
POLARIZATION:	RHCP			RHCP		
VSWR	< 1.5:1			< 1.5:1		
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P.	F.S.	4 ft G.P.
@ 90° (Zenith):	+4.9	+5.0	+4.6	+2.9	+1.8	+5.3
@ 10° Elevation:	-1.0	-2.5	-2.5	-1.8	-4.2	-2.3
@ 20° Elevation:	+1.5	-0.5	-1.1	+0.7	-2.9	+0.4
@ 30° Elevation:	+2.4	+1.0	+0.5	+1.7	-2.0	+2.3
@ 60° to 90° Elevation:	>+3.3	>+2.7	>3.6	>2.1	>0.9	>3.2
BEAMWIDTH(3dB):	129°	98°-106°	103°	146°	108°	74°
AXIAL RATIO @ Zenith:	2 dB			2 dB		
POWER HANDLING:	30 W			1 Watt		
LIGHTNING PROTECTION:	DC GROUNDING			DC GROUNDING		
FILTER (REJ. @ 1616MHz):				> 60 dB		
LNA GAIN:	N/A			(33.0+/-1.0) dB		
LNA P 1dB Out:	N/A			+16 dBm		
LNA NOISE FIGURE:	N/A			2.8 dB (Filter loss is Included)		
VOLTAGE/CURRENT:	N/A			(+2.8 TO +28) Volts DC / (30 TO 50) mA		

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

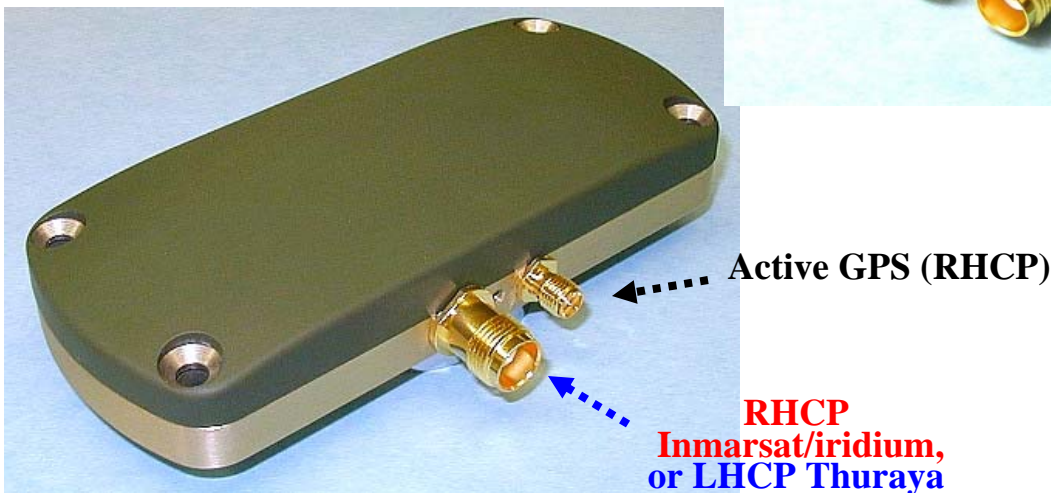
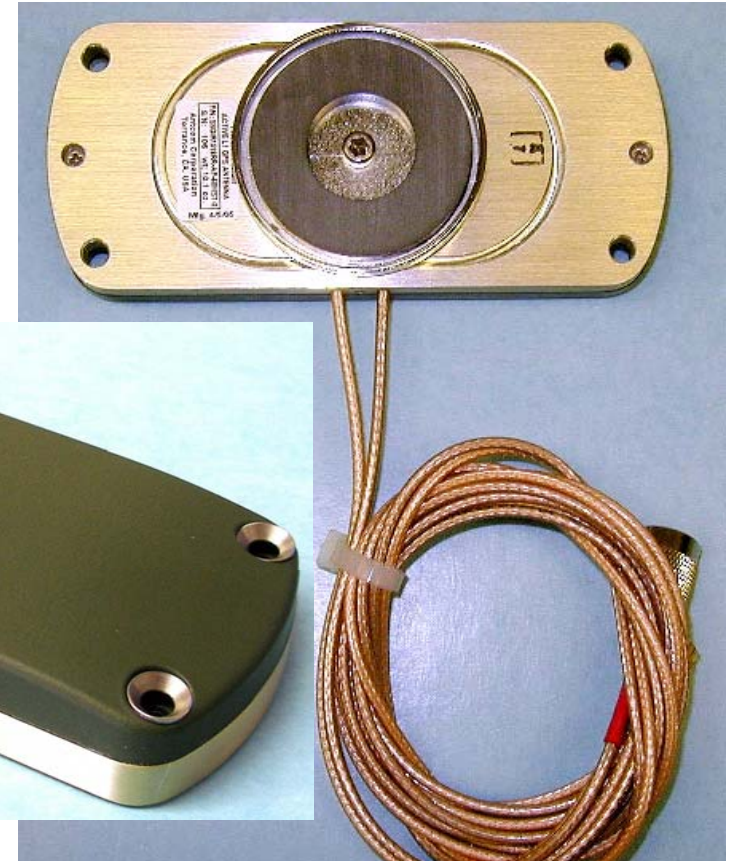
ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT ACTIVE IRIIDIUM/L1/L2 GPS ANTENNA

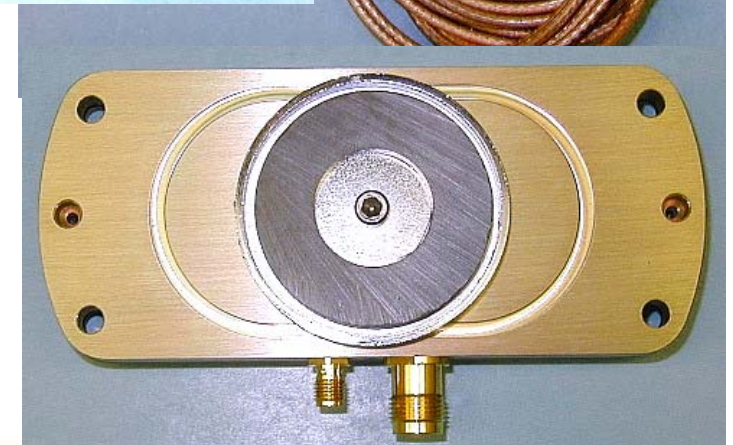
P/N: S5GIR1216RR-AP-XST-X

DATE: DEC-13-02
S. HUYNH
DEC-13-02

SCALE: 1/1
SHEET 1 OF 1



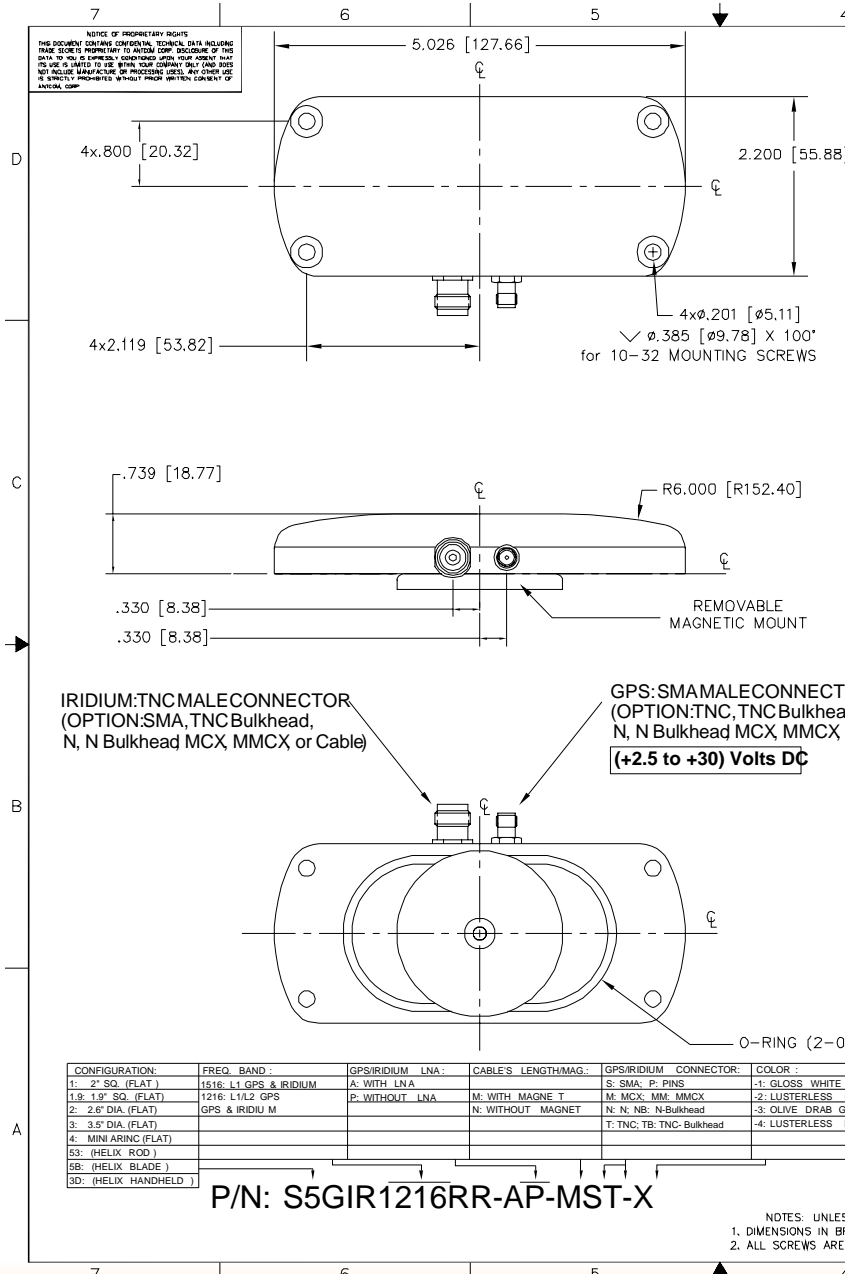
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**2-Ports, Active L1/L2 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1216RR-AP-XMXX-X, or
2-Ports, Active L1/L2 GPS & LHCP-Thuraya Antenna, P/N: S5G1216RL-AP-XMXX-X
(5.03"x2.08"x0.69"), Flat/Magnetic Mount, Side Connector Configuration**

CC#: 3CVE1

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



SPECIFICATIONS		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:	IRIDIUM		L1 OR L1/L2 GPS			
	FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13) L2: (1227.60 ±13) MHz		
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP			
VSWR:	< 1.5:1		< 1.5:1			
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9	+ 1.8	+ 5.3
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8	- 4.2	- 2.3
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7	- 2.9	+ 0.4
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7	- 2.0	+ 2.3
@ 60° to 90° Elevation:	>+3.3	>+2.7	> 3.6	> 2.1	> 0.9	> 3.2
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °	108 °	74 °
AXIAL RATIO @ Zenith:	2 dB		2 dB			
POWER HANDLING:	30 W		1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING			
FILTER (REJ. @1616 MHz):			> 60 dB			
LNA GAIN:	N/A		(33.0+/-1.0) dB			
LNA P 1dB Out:	N/A		+16 dBm			
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)			
VOLTAGE/CURRENT:	N/A		(±2.8 TO +28) Volts DC / (30 TO 50) mA			

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.739 in. [18.77 mm]

WEIGHT: 8.0 oz. (226 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: GPS: SMA FEMALE, IRIDIUM: TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REV
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	3
1	O-RING	2-038-N756-75	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	ANTCOM CORP. TORRANCE CALIFORNIA
FRACTIONS DECIMALS ANGLES	ANTCOM CORP. TORRANCE CALIFORNIA FLAT MAG MOUNT ACTIVE IRIDIUM/L1/L2 GPS ANTENNA
± 1/64 ± .001 ± .01	
TOLERANCE SH4 PER AMS 174.5	
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILE ALL SHARP CORNERS TO .015 RADIUS MACHINED SURFACES TO .0005	
DO NOT SCALE DRAWING	DRAWN: _____ CHECKED: _____ ENGINEER: _____ APPROVED: S. HUYNH DEC-13-02 DATE FILED: _____

CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH/MAG:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	S: SMA; P: PINS	1: GLOSS WHITE #17925 PER FED-STD-595B	
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAGNET	2: LUSTERLESS GRAY #36320 PER FED-STD-595B	
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM	N: WITHOUT MAGNET	N: N; NB: N-Bulkhead	3: OLIVE DRAB GREEN #34031 PER FED-STD-595B	
3: 3.5" DIA. (FLAT)			T: TNC; TB: TNC-Bulkhead	4: LUSTERLESS BLACK #37038 PER FED-STD-595B	
4: MINI ARINC (FLAT)					
5B: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

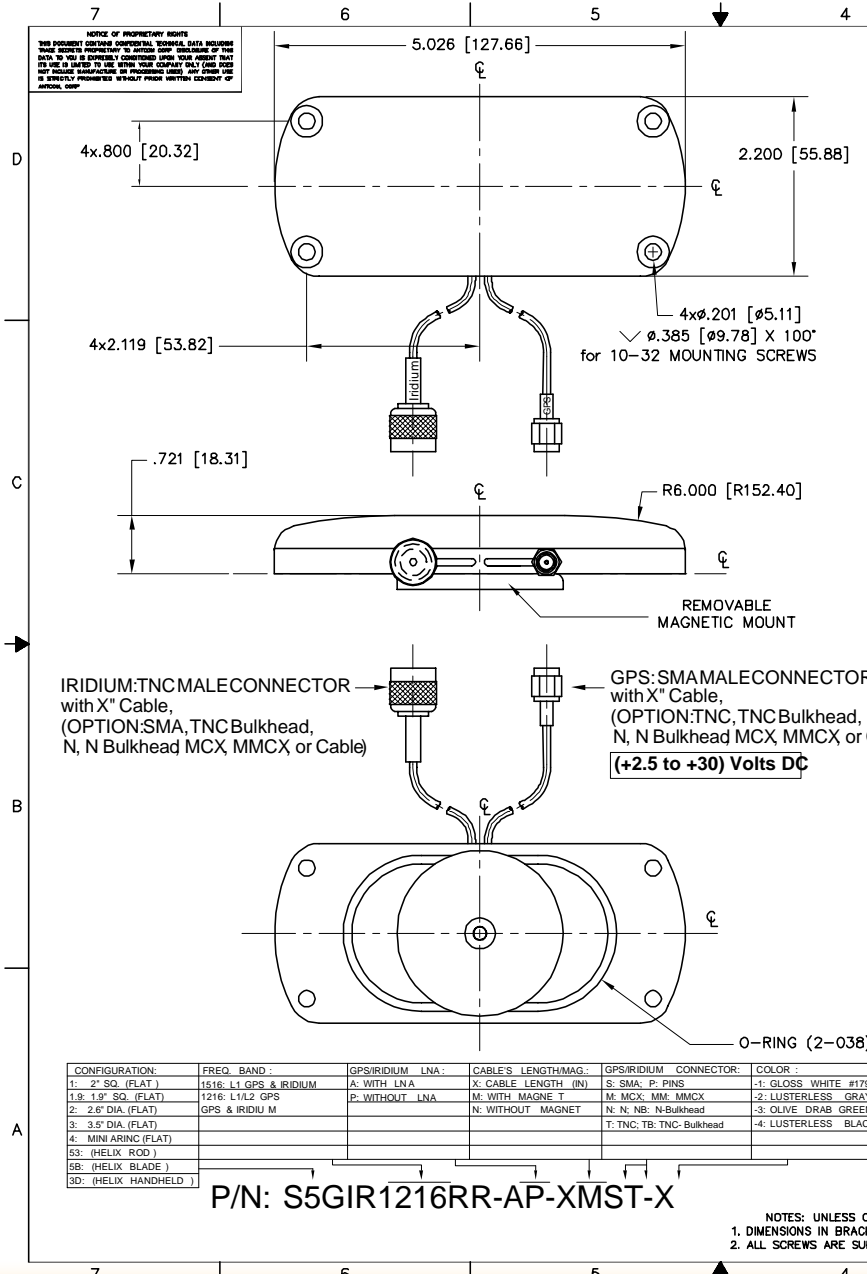
P/N: S5G1216RR-AP-MST-X

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

2-Ports, Active L1/L2 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1216RR-AP-XMST-X, or
2-Ports, Active L1/L2 GPS & LHCP-Thuraya Antenna, P/N: S5G1216RL-AP-XMST-X
(5.03"x2.08"x0.69"), Flat/Magnetic Mount, Side Cable Configuration

CC#: 3CVE1

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SPECIFICATIONS		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:		IRIDIUM		L1 OR L1/L2 GPS	
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13) MHz	L2: (1227.60 ±13) MHz		
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL			
POLARIZATION:	RHCP	RHCP			
VSWR:	< 1.5:1	< 1.5:1			
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P.	F.S.
@ 90° (Zenith):	+4.9	+5.0	+4.6	+2.9	+1.8
@ 10° Elevation:	-1.0	-2.5	-2.5	-1.8	-4.2
@ 20° Elevation:	+1.5	-0.5	-1.1	+0.7	-2.9
@ 30° Elevation:	+2.4	+1.0	+0.5	+1.7	-2.0
@ 60° to 90° Elevation:	>+3.3	>+2.7	> 3.6	> 2.1	> 0.9
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °	108 °
AXIAL RATIO @ Zenith:	2 dB		2 dB		
POWER HANDLING:	30 W		1 Watt		
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING		
FILTER (REJ. @1616 MHz):			> 60 dB		
LNA GAIN:	N/A		(33.0±/-1.0) dB		
LNA P 1dB Out:	N/A		+16 dBm		
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)		
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA		

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.0 oz. (226 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: GPS: SMA FEMALE, IRIDIUM: TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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	MATERIAL	FINISH	REF NO.
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	3
-2					1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 TOLERANCES: DIMENSIONS ± 1/64 DECIMAL ANGLES ± 1°
 SURFACE FINISH: 320
 HOLE FINISH: 320
 HOLE POSITION: ± 0.005
 HOLE DIA: ± 0.005
 HOLE LENGTH: ± 0.005
 HOLE TAPER: ± 0.005
 HOLE CHAMFER: ± 0.005
 HOLE DEPTH: ± 0.005
 HOLE DIA: ± 0.005
 HOLE LENGTH: ± 0.005
 HOLE TAPER: ± 0.005
 HOLE CHAMFER: ± 0.005
 HOLE DEPTH: ± 0.005

ANTCOM CORP. TORRANCE CALIFORNIA
 FLAT MAG MOUNT ACTIVE IRIDIUM/L1/L2 GPS ANTENNA

APPROVED: S. HUYNH DEC-13-02
 DRAWN: S. HUYNH
 CHECKED: S. HUYNH
 SCALE: 1/1
 SHEET: 1 OF 1

CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH/MAG:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: CABLE LENGTH (IN)	S: SMA; P: PINS	-1: GLOSS WHITE #1725 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAGNE T	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM M	N: WITHOUT MAGNET	N: N; NB: N-Bulkhead	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			T: TNC; TB: TNC-Bulkhead		-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					

P/N: S5G1216RR-AP-XMST-X

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



CC#: 3CVE1

**2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1516RR-AP-GST-X, or
2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: S5G1516RL-AP-GST-X
(5.03"x2.08"x0.69"), Glass/Top Mount Configuration**



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

NOTICE OF PROPRIETARY RIGHTS
THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA INCLUDING TRADE SECRETS PROPRIETARY TO ANTCOM CORP. DISCLOSURE OF THIS DATA TO YOU IS EXPRESSLY PROHIBITED UNLESS YOU AGREE THAT ITS USE IS LIMITED TO USE WITHIN YOUR COMPANY ONLY AND DOES NOT INCLUDE MANUFACTURE OR REVERSE ENGINEERING. ANY OTHER USE IS EXPRESSLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF ANTCOM CORP.

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1			

ELECTRICAL:

	IRIDIUM	GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	4 ft G.P. Free Space	F.S. 4 ft G.P.
@ 90° (Zenith):	+4.9 +5.0	+4.6 +2.9
@ 10° Elevation:	-1.0 -2.5	-2.5 -1.8
@ 20° Elevation:	+1.5 -0.5	-1.1 +0.7
@ 30° Elevation:	+2.4 +1.0	+0.5 +1.7
@ 60° to 90° Elevation:	>+3.3 >+2.7	> 3.6 > 2.1
BEAM WIDTH (3dB):	129 ° 98 °-106 °	103 ° 146 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING
FILTER (REJ. @1616 MHz):		> 60 dB
LNA GAIN:	N/A	(33.0±/-1.0) dB
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB (Filter loss is included)
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30 TO 50) mA

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.5 oz. (242 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

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

MOUNTING: GLASS/ FLAT FIXED FRONT MOUNT with O-RING

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	1

CONFIGURATION:

CONFIGURATION	FREQ BAND	GPS/IRIDIUM	CABLE LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: No Glass Mount	S: SMA, P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	G: Glass Mount	M: MCX, MM, MMCX	-2: LUSTERLESS GRAY #3320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM			N: N, NB, N Bulkhead	-3: OLIVEDRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			R: RIGHT ANGLE CON.	T: TNC, TB: TNC Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

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

ANTCOM CORP. TORRANCE, CALIFORNIA
(5.0 x 2.2 x 0.7) in
Glass/Top Mount
GPS/IRIDIUM ANTENNA

P/N: S5GIR1516RR-AP-GST-X

DATE: DEC-13-02
DRAWN: S. HUYNH
CHECKED: S. HUYNH
APPROVED: S. HUYNH
SCALE: 1/1
SHEET: 1 OF 1

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	1			

ELECTRICAL:

	IRIDIUM	GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	4 ft G.P. Free Space	F.S. 4 ft G.P.
@ 90° (Zenith):	+4.9 +5.0	+4.6 +2.9
@ 10° Elevation:	-1.0 -2.5	-2.5 -1.8
@ 20° Elevation:	+1.5 -0.5	-1.1 +0.7
@ 30° Elevation:	+2.4 +1.0	+0.5 +1.7
@ 60° to 90° Elevation:	>+3.3 >+2.7	> 3.6 > 2.1
BEAM WIDTH (3dB):	129 ° 98 °-106 °	103 ° 146 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING
FILTER (REJ. @1616 MHz):		> 60 dB
LNA GAIN:	N/A	(33.0±/-1.0) dB
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB (Filter loss is included)
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30 TO 50) mA

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.5 oz. (242 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

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

MOUNTING: GLASS/ FLAT FIXED FRONT MOUNT with O-RING

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLY SEALED

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

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	1

CONFIGURATION:

CONFIGURATION	FREQ BAND	GPS/IRIDIUM	CABLE LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: No Glass Mount	S: SMA, P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	G: Glass Mount	M: MCX, MM, MMCX	-2: LUSTERLESS GRAY #3320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM			N: N, NB, N Bulkhead	-3: OLIVEDRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			R: RIGHT ANGLE CON.	T: TNC, TB: TNC Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

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

ANTCOM CORP. TORRANCE, CALIFORNIA
(5.0 x 2.2 x 0.7) in
Glass/Top Mount
GPS/IRIDIUM ANTENNA

P/N: S5GIR1516RR-AP-GST-X

DATE: DEC-13-02
DRAWN: S. HUYNH
CHECKED: S. HUYNH
APPROVED: S. HUYNH
SCALE: 1/1
SHEET: 1 OF 1

2-Ports, Active L1 GPS & RHCP-Inmarsat/Iridium Antenna, P/N: S5G1516RR-AP-GMST-X, or
2-Ports, Active L1 GPS & LHCP-Thuraya Antenna, P/N: S5G1516RL-AP-GMST-X
(5.03"x2.08"x0.69"), Glass/Magnetic Mount Configuration

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

GPS: SMA MALE CONNECTOR (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable) **[+2.5 to +30] Volts DC**

SPECIFICATIONS

ELECTRICAL:	IRIDIUM		GPS	
	FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL	
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P.
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7
@ 60° to 90° Elevation:	>+3.3	>+2.7	> 3.6	> 2.1
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °
AXIAL RATIO @ Zenith:	2 dB		2 dB	
POWER HANDLING:	30 W		1 Watt	
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING	
FILTER (REJ. @1616 MHz):			> 60 dB	
LNA GAIN:	N/A		(33.0+/-1.0) dB	
LNA P 1dB Out:	N/A		+16 dBm	
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)	
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA	

MECHANICAL:

SIZE: WIDTH:2.20 in. [55.88mm], LENGTH:5.026 in [127.66mm], HEIGHT: 0.739 in. [18.77 mm]

WEIGHT: 8.0 oz (226g)

FINISH: SKYDROLRESISTANTPOLYURETHANENAMEL BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6ALUMINUMALLOYBASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, ANDSKYDROLRESISTANCE, FIRE RETARDANT

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

MOUNTING: GLASS/MAGNETIC MOUNT

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLYSEALED

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:	FREQ. BAND	GPS/IRIDIUM/LNA	CABLE LENGTH/MAG	GPS/IRIDIUM/CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	M: WITH MAGNET	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	N: WITHOUT MAGNET	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM			N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)				T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARING (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: S5GIR1516RR-AP-GMST-X

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

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF NO
4	MOUNTING SCREW: (10-32, 1")	MS24693C276			5
1	O-RING	2-038-N756-75			3
1	O-RING				1

UNLESS OTHERWISE SPECIFIED	ANTCOM CORP.
FRACTIONS: 1/64, 1/32, 1/16, 3/32, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1	(5.0 x 2.2 x 0.7) in Glass/Magnetic Mount GPS/IRIDIUM ANTENNA
TOLERANCE: DIM PER ANSI Y14.5	DESIGNED BY: S. HUYNH
REMOVE ALL BURRS	DATE: DEC-13-02
BREAK EXTERNAL EDGES .015 TO .015	DRAWN BY: S. HUYNH
FILLET: R .030 TO R .030	APPROVED BY: S. HUYNH
STOCK THICKNESS PER MIL-S-8879	DATE: DEC-13-02
DIA'S ON A COMMON Q. 27.000	QTY: 1
MACHINED SURFACES	SCALE: 1/1
DO NOT SCALE DRAWING	SHEET 1 OF 1



CC#: 3CVE1

**3-Port L1/L2 GPS, RHCP-Inmarsat/Iridium & LHCP-Thuraya L-Band Antenna,
P/N: S5G1216RL-XP-XSSS-X,
(5.03"x2.08"x0.69"), Flat, Top/Pipe Mount, Bottom Connector Configuration**



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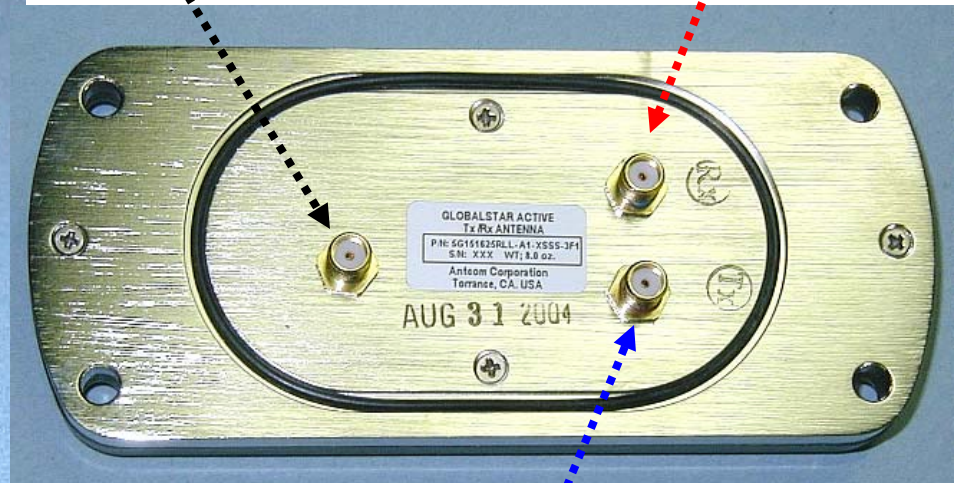
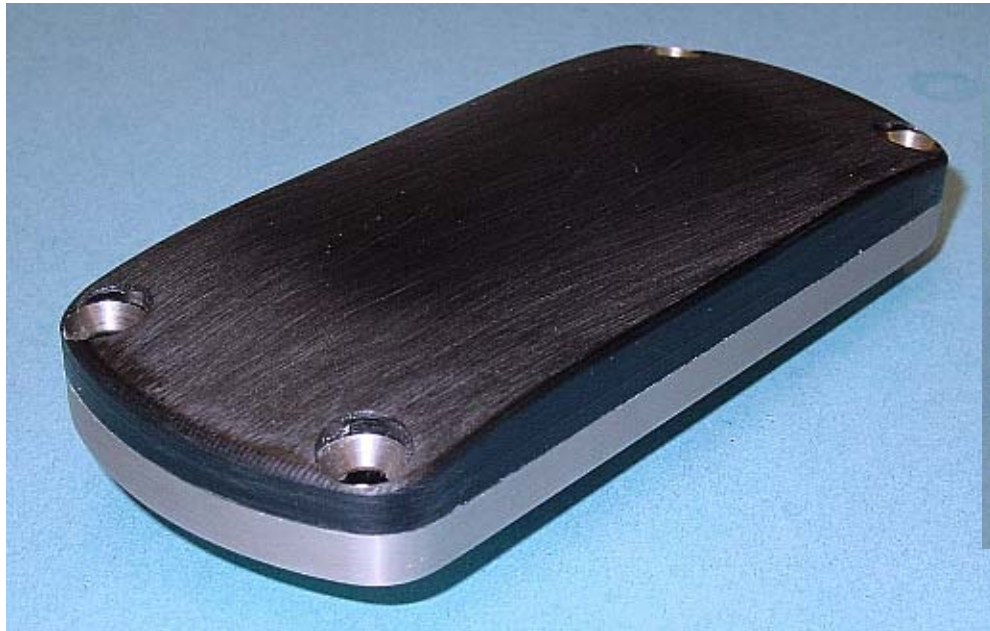
Hermetically Sealed, Designed for Harsh Environment Applications.

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



Active GPS (RHCP)

RHCP-Inmarsat/Iridium



LHCP-Thuraya,
or Wi-fi, or XM



Hermetically Sealed, Designed for Harsh Environment Applications.

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



RHCP Inmarsat/Iridium, or LHCP Thuraya



WSI (RHCP)



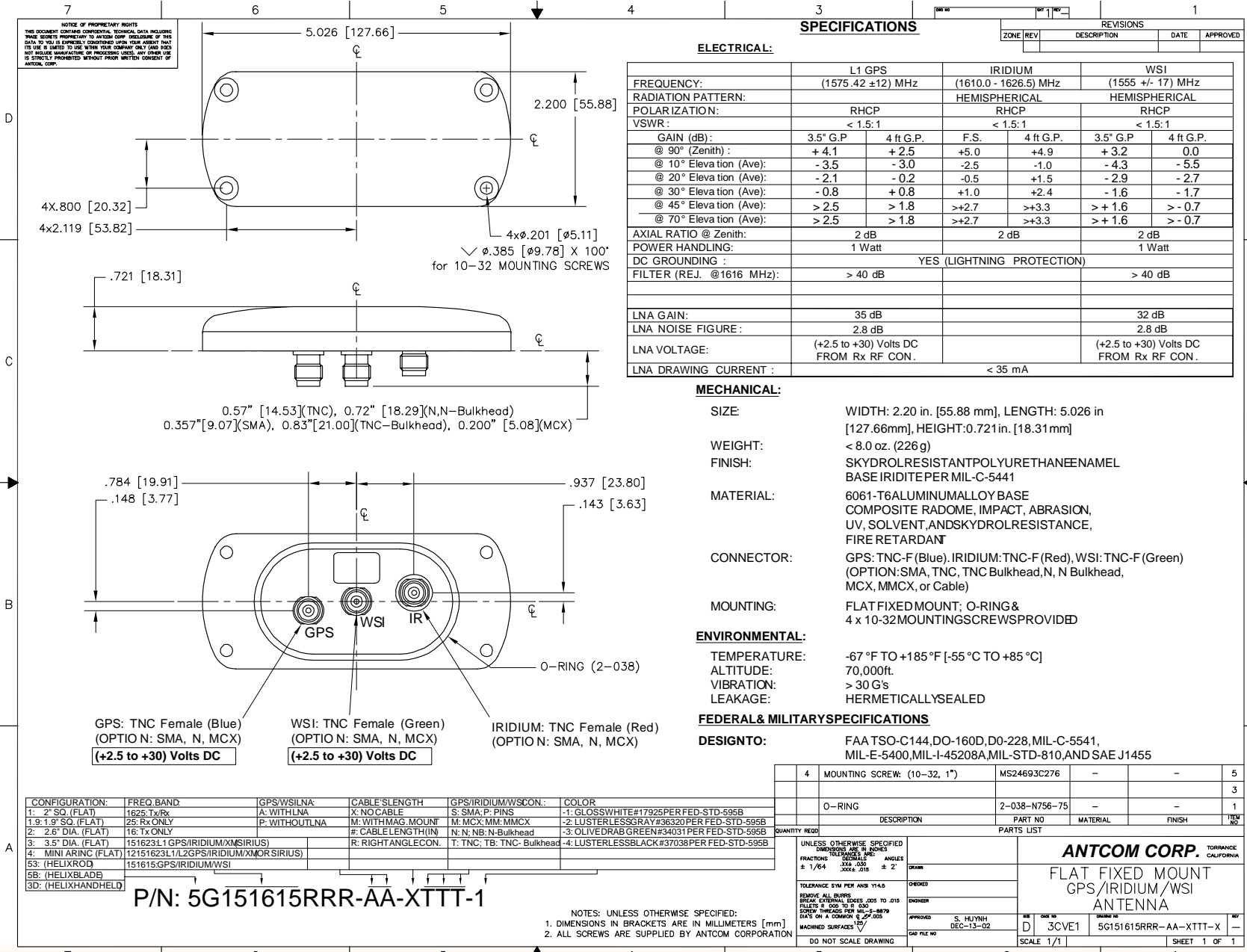


CC#: 3CVE1

**GPS/WSI/Inmarsat/Iridium Antenna, P/N: 5G151516RRR-AA-XTTT-X, or
GPS/WSI/Thuraya Antenna, P/N: 5G151516RRL-AA-XTTT-X
(5.03"x2.08"x0.69"), Flat or Pipe mount,**



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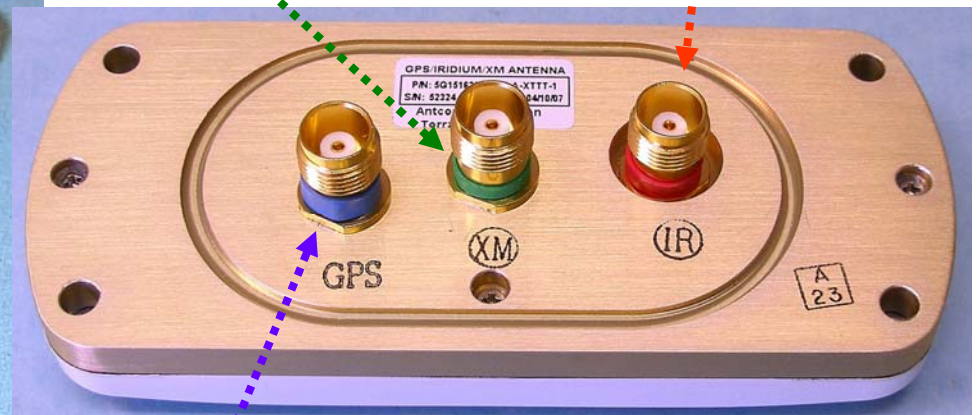
Hermetically Sealed, Designed for
Harsh Environment Applications.

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



XM (LHCP), OR
SIRIUS (RHCP)

RHCP
Inmarsat/iridium,
or LHCP Thuraya



GPS (RHCP)



CC#: 3CVE1

**GPS/IRIDIUM/XM or SIRIUS Antenna, P/N: 5G151623RRX-AA-XTTT-X, or
GPS/Thuraya/XM or SIRIUS Antenna, P/N: 5G151623RLX-AA-XTTT-X,
(5.03"x2.08"x0.69"), Flat or Pipe mount,**



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MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 0.721 in. [18.31 mm] < 8.0 oz. (226 g)

WEIGHT: < 8.0 oz. (226 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: GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), XM: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SPECIFICATIONS

	L1 GPS/L-Band	IRIDIUM	XM, OR SIRIUS RADIO
FREQUENCY:	(1575.42±12) MHz,	(1610.0 - 1626.5) MHz	(2338.75 +/- 10) MHz
RADIATION PATTERN:	(1555.00±17) MHz	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP	LHCP (XM), RHCP (SIRIUS)
VSWR:	< 1.5:1	< 1.5:1	< 1.5:1
GAIN (dB):	F.S 4 ft G.P.	F.S 4 ft G.P.	F.S 4 ft G.P.
@ 90° (Zenith):	+ 4.6	+2.9	+4.2
@ 10° Elevation (Ave):	- 2.5	- 1.8	-2.4
@ 20° Elevation (Ave):	- 1.1	+ 0.7	-0.8
@ 30° Elevation (Ave):	+ 0.5	+ 1.7	+0.8
@ 45° Elevation (Ave):	> 3.6	> 2.1	+2.8
@ 70° Elevation (Ave):	> 3.6	> 2.1	+4.6
AXIAL RATIO @ Zenith:	2 dB	2 dB	2 dB
POWERHANDLING	1 Watt		1 Watt
DC GROUNDING	YES (LIGHTNING PROTECTION)		
FILTER (REJ. @1616MHz):			57 dB
REJECTION @ (-50/+50)MHz	-45 dB / -70 dB		
@ (-100/+100)MHz	< -65 dB		
LNA GAIN:	34 dB (P1dBout= +13 dBm)		(35 +/- 1) dB
LNA NOISE FIGURE:	2.4 dB		2.8 dB
LNA VOLTAGE	(+2.5 to +30) Volts DC FROM Rx RF CON		(+2.5 to +30) Volts DC FROM Rx RF CON
LNA DRAWING CURRENT:	< 30 mA		< 38 mA

CONFIGURATION	FREQ. BAND	GPS/XM LNA:	CABLE'S LENGTH	GPS/IRIDIUM/XM CON.:	COLOR
1: 2" SQ. (FLAT)		R: SIRIUS	X: NO CABLE	S: SMA, P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1516: GPS/IRIDIUM	L: XM	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	151623: GPS/IRIDIUM/XM (OR SIRIUS)		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151615: GPS/IRIDIUM/L-Band		R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
5G: (5.0x2.2)in Rect.					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 5G1516XXRRX-AA-XTTT-1

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

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	REV
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	1

ANTCOM CORP. TORRANCE CALIFORNIA

FLAT FIXED MOUNT
GPS/IRIDIUM/XM (SIRIUS, or L-Band)
ANTENNA

DRAWN: _____ CHECKED: _____
ENGINEER: _____ APPROVED: S. HUYNH July-22-09
SCALE: 1/1

P/N: 5G1516XXRRX-AA-XTTT-1
SHEET 1 OF 1



Hermetically Sealed, Designed for
 Harsh Environment Applications.

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



RHCP
Inmarsat/Iridium,
or LHCP Thuraya



Wi-Fi or
 GSM



GPS (RHCP)



CC#: 3CVE1

Iridium & Globalstar Antenna:
(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: 5G161625RLL-A1-XSSS-XF1



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Hermetically Sealed, Designed for Harsh Environment Applications.

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





Iridium & Globalstar Antenna:

(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: 5G161625RLL-A1-XSSS-XF1

CC#: 3CVE1



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

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MECHANICAL:
SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT: 8.0 oz. (226 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: Tx (Red): SMA F., Rx (Blue): SMA F., IRIDIUM: SMA F. (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SPECIFICATIONS

	REVISIONS				
	ZONE	REV	DESCRIPTION	DATE	APPROVED
ELECTRICAL:					
TX GLOBALSTAR					
RX GLOBALSTAR					
IRIDIUM					
FREQUENCY:	(1610 - 1625) MHz	(2484 - 2499) MHz	(1610.0 - 1626.5) MHz		
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL		
POLARIZATION:	LHCP	LHCP	RHCP		
VSWR:	< 2.0:1	< 1.5:1	< 1.5:1		
GAIN (dB):	F.S 4 ft G.P.	F.S 4 ft G.P.	4 ft G.P. Free Space		
@ 90° (Zenith):	+4.9	+4.2	+3.7	+1.8	+4.9
@ 10° Elevation (Ave):	-2.4	-1.3	-3.2	-1.8	-1.0
@ 20° Elevation (Ave):	-0.8	+1.4	-1.6	+0.9	+1.5
@ 30° Elevation (Ave):	+0.8	+2.3	-0.2	+0.2	+2.4
@ 45° Elevation (Ave):	+2.8	+2.2	+1.3	+0.6	>+3.3
@ 70° Elevation (Ave):	+4.6	+3.5	+3.2	+0.6	>+2.7
AXIAL RATIO @ Zenith:	2 dB	2 dB	2 dB		
POWER HANDLING:	>5 W	1 Watt			
DC GROUNDING:	YES (LIGHTNING PROTECTION)				
FILTER (REJ. @1616 MHz):	57 dB				
REJECTION @ (-50/+50) MHz @ (-100/+100)MHz:					
LNA GAIN:	N/A	(35 +/- 1) dB			
LNA NOISE FIGURE:	N/A	2.8 dB			
LNA VOLTAGE:	N/A	(+2.5 to +30) Volts DC FROM Rx RF CON.			
LNA DRAWING CURRENT:	N/A	< 38 mA			

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	ADHESIVE GASKET	123456-3M-4G	-	-	3
1	O-RING	2-038	-	-	1
-2					

CONFIGURATION:	FREQ. BAND:	LNA:	CABLE'S LENGTH:	TX/RX/GPS CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1625: Tx/Rx	A1: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.8" SQ. (FLAT)	25: Rx ONLY	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)	16: Tx ONLY		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151625: L1 GPS/Tx/Rx		R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	12151625: L1/L2 GPS/Tx/Rx				
53: (HELIX ROD)	161625: IRIDIUM/GLOBALSTAR				
58: (HELIX BLADE)					
30: (HELIX HANDHELD)					

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT GLOBALSTAR/IRIDIUM ANTENNA

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES AND ANGLES ARE IN DEGREES. TOLERANCE .010 PER ASH 114-5. HOLE POSITION TOLERANCE .010 PER ASH 114-5. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.



DATE: DEC-13-02

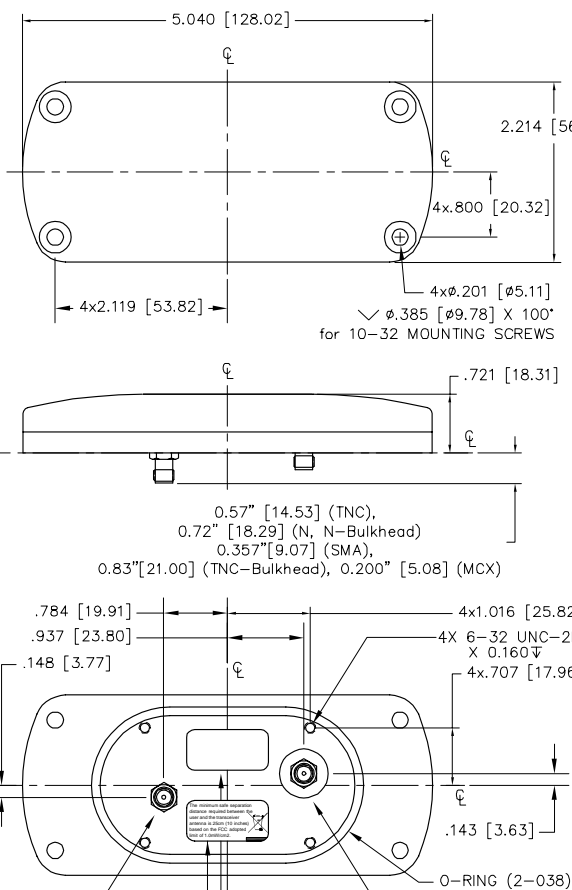
SCALE: 1/1

SHEET: 1 OF 1

GAT-17QP SDVM Passive Globalstar Antenna
P/N: CV90-C6630-1 Rev C (5G1625LL-PA-XSS-1 Rev B),
(5.04x2.21x0.72)in, Top/Bottom Mount Configuration: Outline Drawing

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5.040 [128.02]
 2.214 [56.24]
 4x.800 [20.32]
 4x2.119 [53.82]
 4x∅.201 [∅5.11]
 √ ∅.385 [∅9.78] X 100°
 for 10-32 MOUNTING SCREWS

.721 [18.31]

0.57" [14.53] (TNC),
 0.72" [18.29] (N, N-Bulkhead)
 0.357" [9.07] (SMA),
 0.83" [21.00] (TNC-Bulkhead), 0.200" [5.08] (MCX)

.784 [19.91]
 .937 [23.80]
 .148 [3.77]
 4x1.016 [25.82]
 4X 6-32 UNC-2B X 0.160
 4x.707 [17.96]
 .143 [3.63]
 O-RING (2-038)

SMA FEMALE (Blue, Rx)
 (+2.5 to +30) Volts DC
 NAMEPLATE
 SMA FEMALE (RED, Tx)

ELECTRICAL:

	TX	RX
FREQUENCY:	(16100 - 1626.5) MHz	(24835 - 2500.0) MHz
RADIATION PATTERN:	HEMISPHERICAL	
POLARIZATION:	LHCP	LHCP
VSWR:	< 2.0:1	< 2.0:1
Ave. GAIN (dBic)	Free Space	Free Space
@ 90° (Zenith, Top):	+5.7	+5.1
@ 10° Elevation:	-2.0	-2.1
@ 20° Elevation:	-0.1	-0.3
@ 30° Elevation:	+1.6	+1.1
@ 45° Elevation:	+3.0	+2.6
@ 70° Elevation:	+5.0	+4.6
AXIAL RATIO @ Zenith:	2.0 dB	2.0 dB
3dB BEAM WIDTH:	98°	99°
POWER HANDLING:	< 5 W	
DC GROUNDING:	YES (LIGHTNING PROTECTION)	
Tx/Rx COUPLING		
PASSIVE (WITHOUT LNA)	< -24 dB @ Tx Band	< -32 dB @ Rx Band
ACTIVE (WITH LNA)	< -40 dB @ Tx Band	< +12 dB @ Rx Band
FILTERREJ. :	(824-894)MHz (1610-1626.5) MHz (3220-3253) MHz (4830-4879.5) MHz	> 55 dB > 43 dB > 20 dB > 20 dB

LNA OPTION:

	N/A	(34 +/- 2) dB
LNA GAIN:	N/A	2.4 dB
LNA NOISE FIGURE:	N/A	> -23 dBm
LNA INPUT P1dB:	N/A	(+2.5 to +30) Volts DC FROM Rx RF CON.
LNA VOLTAGE:	N/A	< 38 mA
LNA DRAWING CURRENT:	N/A	

MECHANICAL:

SIZE: WIDTH: 2.21 in. [56 mm], LENGTH: 5.04 in [128 mm], HEIGHT: 0.72 in. [18 mm]

WEIGHT: 8.5 oz. (242 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

CONNECTOR: Tx (Red): SMA FEMALE, Rx (Blue): SMA FEMALE (OPTIONAL: N, TNC, MCX, MMCX, OR CABLE)

MOUNTING: FLAT FIXED MOUNT; O-RING, WITH 4 x 10-32, or 4 x 6-32 SCREWS

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, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QTY	DESCRIPTION	PART NO	REV
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	3
1	O-RING/Gasket	2-038-N756-75/56-Gasket-1 (Item 546)	1

CONFIGURATION:	POLARIZATION:	Rx LNA	CABLE LENGTH	Tx/Rx CONNECTOR	COLOR
1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	A: WITH 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	M: 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	P: WITHOUT LNA	P: 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	L: LUSTERLESS BLACK #37038 PER FED-STD-595B	
4: MINI ARINC (FLAT)					
5: 5" x 2.2" FLAT					
73: (HELIX ROD)					
7D: (HELIX HANDHELD)					

P/N: 5G1625LL-PA-XSS-X

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES TOLERANCES ± 1/64 ± .002 ± .010 ± .1° ± .1° ± .1°

TOLERANCE SYM PER ANSI Y14.5

BEFORE ALL DIMENSIONS ARE TO .015

FRAMES OF TERNAL EDGES .005 TO .015

SCREEN THREADS PER MIL-S-8879

DATE OF A CHANGE 2-27-08

MACHINED SURFACES TO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT
GLOBALSTAR
ANTENNA

DATE: 04-04
 DWG NO: 3CVE1
 PART NO: 5G1625LL-PA-XSS-X
 SCALE: 1/1
 SHEET 1 OF 1



CC#: 3CVE1

Active L1 or L1/L2 GPS & Globalstar Antenna:
(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: 5GXX151625RLL-A1-XSSS-XF1



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Hermetically Sealed, Designed for Harsh Environment Applications.

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





CC#: 3CVE1

Active L1 GPS & Globalstar Antenna: (5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: 5G151625RLL-A1-XSSS-XF1



FAA Approved
TSO Antennas



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MECHANICAL:
SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT: 8.0 oz. (226 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: Tx (Red): SMA F., Rx (Blue): SMA F., GPS: SMA F. (OPTION: SMA, TNC, Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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: FAATSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
4	MOUNTING SCREW: (10-32, 1")	MS24693C278	-	-	5
1	ADHESIVE GASKET	12345G-3M-4G	-	-	3
1	O-RING	2-038	-	-	1

QUANTITY LIST

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
-2	-1				

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS SHALL BE IN 16THS
DECIMALS SHALL BE TO 2 DECIMALS
HOLE DIMENSIONS SHALL BE TO 0.0005
HOLE LOCATIONS SHALL BE TO 0.005
HOLE ANGLES SHALL BE TO 0.005
HOLE TOLERANCES SHALL BE TO 0.005
HOLE SURFACES SHALL BE TO 0.005
HOLE SURFACES SHALL BE TO 0.005
MACHINED SURFACES SHALL BE TO 0.005

ANTCOM CORP. TORRANCE, CALIFORNIA
FLAT FIXED MOUNT GLOBALSTAR/L1 GPS ANTENNA

APPROVED: S. HUYTH
DATE: DEC-13-02
DRAWN: S. HUYTH
DATE: DEC-13-02

SCALE: 1/1
SHEET: 1 OF 1

SPECIFICATIONS

	TX GLOBALSTAR	RX GLOBALSTAR	L1 GPS
FREQUENCY:	(1610 - 1625) MHz	(2484 - 2499) MHz	(1575.42 ± 12) MHz
RADIATION PATTERN:	HEMISPHERICAL		
POLARIZATION:	LHCP	LHCP	RHCP
VSWR:	< 2.0:1	< 1.5:1	< 1.5:1
GAIN (dB):	F.S	4 ft G.P.	F.S
@ 90° (Zenith):	+4.9	+4.2	+3.7
@ 10° Elevation (Ave):	-2.4	-1.3	-3.2
@ 20° Elevation (Ave):	-0.8	+1.4	-1.6
@ 30° Elevation (Ave):	+0.8	+2.3	-0.2
@ 45° Elevation (Ave):	+2.8	+2.2	+1.3
@ 70° Elevation (Ave):	+4.6	+3.5	+3.2
AXIAL RATIO @ Zenith:	2 dB	2 dB	2 dB
POWER HANDLING:	> 5 W	1 Watt	1 Watt
DC GROUNDING:	YES (LIGHTNING PROTECTION)		
FILTER (REJ. @ 1616 MHz):	57 dB		
REJECTION @ (-50/+50) MHz @ (-100/+100) MHz:	-45 dB / -70 dB		
LNA GAIN:	N/A	(35 +/- 1) dB	34 dB (P1dBout = +13 dBm)
LNA NOISE FIGURE:	N/A	2.8 dB	2.4 dB
LNA VOLTAGE:	N/A	(+2.5 to +30) Volts DC FROM RxF CON.	2.5V/20mA, 3V/20mA, 3.3V/20mA, (2.5-24)V/<30mA
LNA DRAWING CURRENT:	N/A	< 38 mA	

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT: 8.0 oz. (226 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: Tx (Red): SMA F., Rx (Blue): SMA F., GPS: SMA F. (OPTION: SMA, TNC, Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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: FAATSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
4	MOUNTING SCREW: (10-32, 1")	MS24693C278	-	-	5
1	ADHESIVE GASKET	12345G-3M-4G	-	-	3
1	O-RING	2-038	-	-	1

QUANTITY LIST

QTY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
-2	-1				

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS SHALL BE IN 16THS
DECIMALS SHALL BE TO 2 DECIMALS
HOLE DIMENSIONS SHALL BE TO 0.0005
HOLE LOCATIONS SHALL BE TO 0.005
HOLE ANGLES SHALL BE TO 0.005
HOLE TOLERANCES SHALL BE TO 0.005
HOLE SURFACES SHALL BE TO 0.005
HOLE SURFACES SHALL BE TO 0.005
MACHINED SURFACES SHALL BE TO 0.005

ANTCOM CORP. TORRANCE, CALIFORNIA
FLAT FIXED MOUNT GLOBALSTAR/L1 GPS ANTENNA

APPROVED: S. HUYTH
DATE: DEC-13-02
DRAWN: S. HUYTH
DATE: DEC-13-02

SCALE: 1/1
SHEET: 1 OF 1

P/N: 5G151625RLL-A1-XSSS-1F1

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



Active L1/L2 GPS & Globalstar Antenna: (5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: 5G12151625RLL-A1-XSSS-XF1

CC#: 3CVE1



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SPECIFICATIONS

ELECTRICAL:	TX GLOBALSTAR		RXGLOBALSTAR		L1 GPS		L2 GPS	
	(1610 - 1625) MHz		(2484 - 2499) MHz		(1575.42±12) MHz		(1227.60±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL							
POLARIZATION:	LHCP				RHCP			
VSWR:	< 2.0:1		< 1.5:1		< 1.5:1			
GAIN (dB):	F.S	4 ft G.P.	F.S	4 ft G.P.	F.S	4 ft G.P.	F.S	4 ft G.P.
@ 90° (Zenith):	+4.9	+4.2	+3.7	+1.8	+4.6	+2.9	+1.8	+5.3
@ 10° Elevation (Ave):	-2.4	-1.3	-3.2	-1.8	-2.5	-1.8	-4.2	-2.3
@ 20° Elevation (Ave):	-0.8	+1.4	-1.6	+0.9	-1.1	+0.7	-2.9	+0.4
@ 30° Elevation (Ave):	+0.8	+2.3	-0.2	+0.2	+0.5	+1.7	-2.0	+2.3
@ 45° Elevation (Ave):	+2.8	+2.2	+1.3	+0.6	> 3.6	> 2.1	> 0.9	> 3.2
@ 70° Elevation (Ave):	+4.6	+3.5	+3.2	+0.6	> 3.6	> 2.1	> 0.9	> 3.2
AXIAL RATIO @ Zenith:	2 dB		2 dB		2 dB			
POWER HANDLING:	>5 W		1 Watt		1 Watt			
DC GROUNDING	YES (LIGHTNING PROTECTION)							
FILTER (REJ. @ 1616MHz):	57 dB				> 60 dB			
REJECTION @ (-50/+50) MHz					-45 dB / -70 dB		-40 dB / -40 dB	
@ (-100/+100) MHz					< -65 dB		< -65 dB	
LNA GAIN:	N/A		(35 +/- 1) dB		32 dB (P1dBout = +13 dBm)			
LNA NOISE FIGURE:	N/A		2.8 dB		3.0 dB			
LNA VOLTAGE:	N/A		(+2.5 to +30) Volts DC FROM Rx RF CON.		2.5V/20mA, 3V/29mA,			
LNA DRAWING CURRENT:	N/A		< 38 mA		3.3V/35mA(2.5-24)V/<50mA			

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66mm], HEIGHT: 0.721 in. [18.31 mm]
8.0 oz. (226 g)

WEIGHT:

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: Tx (Red): SMA F., Rx (Blue): SMA F., GPS: SMA F. (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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	MATERIAL	FINISH	REF
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	ADHESIVE GASKET	12345G-3M-4G	-	-	3
1	O-RING	2-038	-	-	1

CONFIGURATION:	FREQ. BAND:	LNA:	CABLE LENGTH:	TX/RX/GPS CONNECTOR:	COLOR:
1: 2' SQ. (FLAT)	1625: Tx/Rx	A1: WITH LNA	X: NO CABLE	S: SMA, P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1: 9: 1.5' SQ. (FLAT)	25: Rx ONLY	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX, MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6' DIA. (FLAT)	16: Tx ONLY		#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5' DIA. (FLAT)	151625: L1 GPS/Tx/Rx		R: RIGHT ANGLE CON.	T: TNC, TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	12151625: L1/L2 GPS/Tx/Rx				
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 5G12151625RLL-A1-XSSS-1F1



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

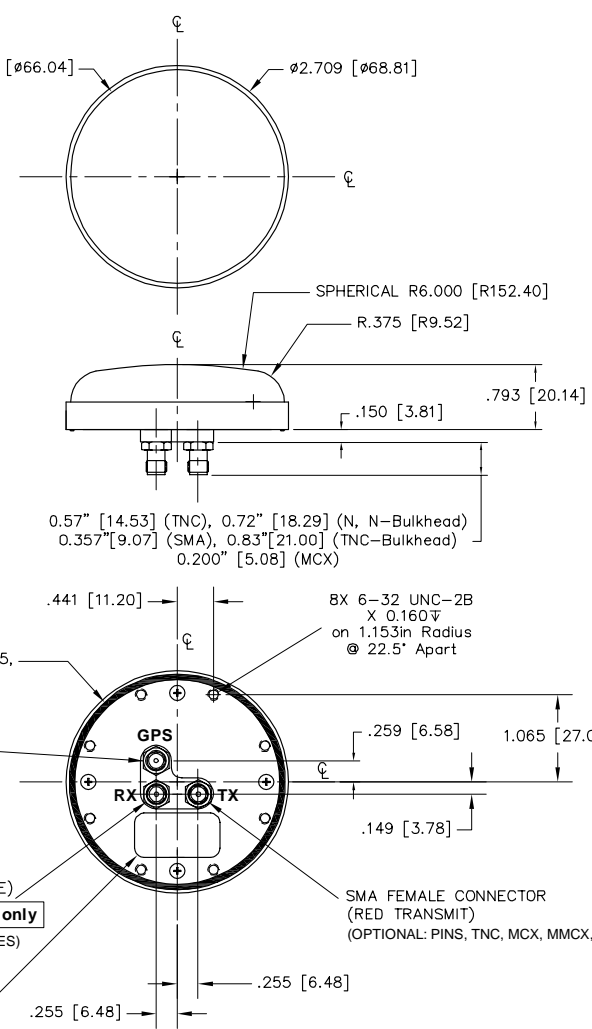
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ± 1/64 UNLESS OTHERWISE SPECIFIED. ANGLES ± 1° UNLESS OTHERWISE SPECIFIED. SURFACE FINISH: UNLESS OTHERWISE SPECIFIED, ALL SURFACES SHALL BE FINISHED TO A 125 R.M.S. SURFACE FINISH PER MIL-STD-883C METHOD 2009. SURFACES TO BE MACHINED SHALL BE IDENTIFIED BY A DIMENSION LINE AND A MACHINING SYMBOL. MACHINED SURFACES: DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA
FLAT FIXED MOUNT GLOBALSTAR/L1/L2 GPS ANTENNA

DATE: DEC-13-02
DRAWN BY: S. HUYNH
CHECKED BY: D. 3CVE1
SCALE: 1/1
SHEET 1 OF 1

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



$\phi 2.600$ [Ø66.04] $\phi 2.709$ [Ø68.81]
 SPHERICAL R6.000 [R152.40]
 R.375 [R9.52]
 .150 [3.81] .793 [20.14]

0.57" [14.53] (TNC), 0.72" [18.29] (N, N-Bulkhead)
 0.357" [9.07] (SMA), 0.83" [21.00] (TNC-Bulkhead)
 0.200" [5.08] (MCX)

.441 [11.20] 8X 6-32 UNC-2B X 0.160" ∇ on 1.153in Radius @ 22.5° Apart
 .259 [6.58] 1.065 [27.05]
 .149 [3.78] .255 [6.48]

O-Ring (P/N: 2-037-N756-75, or 9557K127)
 SMA FEMALE CONNECTOR (OPTION: MCX, MMCX) (+2.5 to +30) Volts DC
 SMA FEMALE CONNECTOR (BLUE RECEIVE) (+2.5 to +30) Volts DC for Active Antenna only (OPTIONAL: PINS, TNC, MCX, MMCX, OR CABLES)
 SMA FEMALE CONNECTOR (RED TRANSMIT) (OPTIONAL: PINS, TNC, MCX, MMCX, OR CABLES)
 LABEL

SPECIFICATIONS

	TX	RX	L1 GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	(2483.5 - 2500.0) MHz	(1575.42 ±12) MHz
RADIATION PATTERN:	HEMISPHERICAL		
POLARIZATION:	LHCP	LHCP	RHCP
VSWR (50 ohms):	< 2.0:1		
GAIN (dB):	Free Space	Free Space	Free Space
@ 90° (Zenith):	+3.7	+3.3	+2.3
@ 10° Elevation (Ave):	-3.5	-3.2	-5.1
@ 20° Elevation (Ave):	-1.8	-1.5	-2.7
@ 30° Elevation (Ave):	-0.1	-0.3	-1.7
@ 45° Elevation (Ave):	+1.9	+1.1	+0.0
@ 70° Elevation (Ave):	+3.6	+2.9	+1.6
AXIAL RATIO @ Zenith:	< 2 dB	< 2 dB	< 2 dB
LNA GAIN:	N/A	(34 +/- 1) dB	(33 +/- 1) dB
LNA NOISE FIGURE @ 85C:	N/A	< 2.8 dB	< 3 dB
LNA INPUT P1dB (dBm):	N/A	> -23	> -23
ACTIVE ISOLATION @ TX:	N/A	TX-> RX > 30 dB	TX->GPS > 35dB
FILTER REJ.: (824-894) MHz	> 55 dB		
(1610-1626.5) MHz	> 43 dB		
(3220-3253) MHz	> 20 dB		
(4830-4879.5) MHz	> 20 dB		
LNA VOLTAGE:	N/A	(+2.5 to +30) Volts DC FROM Rx RF CON.	
LNA DRAWING CURRENT:	N/A	< 38 mA	< 30 mA
POWER HANDLING:	<5 W	1 Watt	1 Watt

MECHANICAL:

SIZE: DIAMETER: 2.70 in. [68.81 mm]
 HEIGHT: 0.793 in. [20.14 mm]

WEIGHT: <4.00 oz. (113 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: Tx (Red): SMA FEMALE, Rx (Blue): SMA FEMALE (OPTIONAL: PINS, TNC, MCX, MMCX, OR CABLES)

ENVIRONMENTAL:

TEMPERATURE: -67 °F to +185 °F [-55 °C to +85 °C]
 ALTITUDE: 70,000 ft.
 VIBRATION: > 30 G's
 HUMIDITY: (90-95)% @ 40C

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

ZONE	REV	DESCRIPTION	DATE	APPROVED
				5
1		O-Ring	2-037-N756-75 (9557K127)	3
1		Magnetic Mount Option	MTR-5B	2
				1

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
					5
1	O-Ring	2-037-N756-75 (9557K127)			3
1	Magnetic Mount Option	MTR-5B			2
					1

CONFIGURATION	FREQ. BAND	GPS/RX/LNA OPTION	CABLE LENGTH	GPS/TX/RX CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1625: Tx/Rx	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	25: Rx ONLY	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.7" DIA. (FLAT)	16: Tx ONLY		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151625L1 GPS/Tx/Rx		R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	12151625L1/L2 GPS/Tx/Rx				-5: DESERT TAN
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FRACTIONS: DECIMALS: ANGLES: TOLERANCES: ± 1/64 .005 .005 ± 1°

REMOVE ALL SURFS. BEFORE EXTERNAL DIMS. DIMS TO .015 FILETS TO .005 TO .030 SPOKE DIMS FOR HLT-5-8879 DATY ON A COMPAN 24.000

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

2.7" DIAMETER, FIXED MOUNT, GLOBALSTAR/GPS ANTENNA

DESIGNED BY: S. HUYNH
 ENGINEER: S. HUYNH
 APPROVED: S. HUYNH
 DATE: 01-05-29

SCALE: 1/1

P/N: 2G151625RLL-AA-XSSS-1F1

3CVE1 2G151625RLL-AA-XSSS-1F1




SHEET 1 OF 1

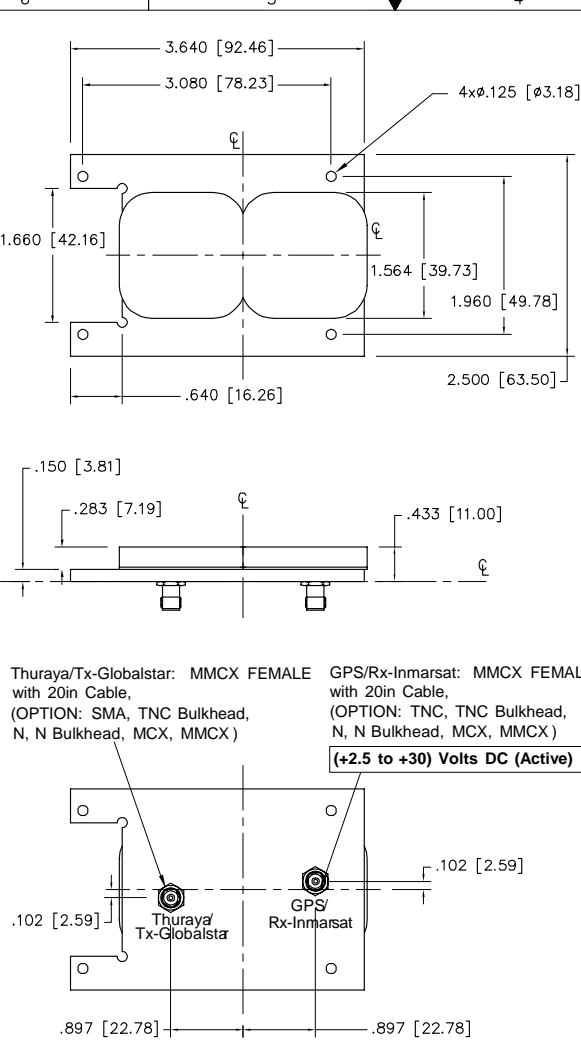
RHCP RX-Inmarsat/GPS & LHCP Thuraya/TX-Globalstar Antenna:

P/N: 3x2G1516RL-P-XMMMM-4

(3.64"x 2.50"x 0.43"), **Front Mount** (Other Configurations are Available)

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Thuraya/Tx-Globalstar: MMCX FEMALE with 20in Cable, (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX)

GPS/Rx-Inmarsat: MMCX FEMALE with 20in Cable, (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX)

(+2.5 to +30) Volts DC (Active)

SPECIFICATIONS

ELECTRICAL:		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED
FREQUENCY:		Thuraya & Tx-Globalstar (1610.0 - 1626.5) MHz	Rx-Inmarsat/GPS (1525 -1580) MHz	
RADIATION PATTERN:		HEMISPHERICAL	HEMISPHERICAL	
POLARIZATION:		LHCP	RHCP	
VSWR:		< 1.5:1	< 1.5:1	
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+4.6	+2.9
@ 10° Elevation:	-1.0	-2.5	-2.5	-1.8
@ 20° Elevation:	+1.5	-0.5	-1.1	+0.7
@ 30° Elevation:	+2.4	+1.0	+0.5	+1.7
@ 60° to 90° Elevation:	>+3.3	>+2.7	>3.6	>2.1
BEAM WIDTH (3dB):		129 ° 98 °-106 °	103 °	146 °
AXIAL RATIO @ Zenith:		2 dB	2 dB	
POWER HANDLING:		30 W	1 Watt	
LIGHTNING PROTECTION:		DC GROUNDIN G	DC GROUNDIN G	
LNA OPTION				
LNA GAIN:		N/A	(33.0+/-1.0) dB, 20dB (-A2- Option)	
LNA P 1dB Out:		N/A	+16 dBm	
LNA NOISE FIGURE:		N/A	2.8 dB (Filter loss is Included)	
VOLTAGE/CURRENT:		N/A	(+2.8 TO +28) Volts DC / (30 TO 50) mA	

MECHANICAL:

SIZE: WIDTH:1.56 in. [39.7mm], LENGTH:3.64 in [92.5mm], HEIGHT:0.63 in. [16.0mm]

WEIGHT: 3.5 oz. (99 g)

FINISH: SKYDROLRESISTANTPOLYURETHANEENAMEL,AND NICKEL PLATING

MATERIAL: 6061-T6ALUMINUMALLOYBASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,ANDSKYDROLRESISTANCE, FIRE RETARDANT

CONNECTOR: Thuraya/Tx-GlobalstarMMCX FEMALE(J1, Red); GPS/Rx-InmarsatMMCX FEMALE(J2, Blue). Availablein Other Con. Types

MOUNTING: FLAT FRONT(2 x 6-32 SCREWS),BACK(4 x 2-56 SCREWS), or FLUSHMAGNET

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLYSEALED

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

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	REQ NO
4					5
1					3
1					1

CONFIGURATION:	FREQ. BAND 1/2 (MHz):	BAND 1/2 Polarizations:	GPS LNA:	CABLE LENGTH	GPS/IRIDIUM CONNECTOR:
1: 2' SQ. (FLAT)	1516:Rx-Inmarsat/GPS	RL:RHCP/LHCP	A: WITH33dB LNA	X: NO CABLE	S: SMA:P: PINS
1.9: 1.9' SQ. (FLAT)	Thuraya/Tx-Globalstar	LR:LHCP/RHCP	P: WITHOUT LNA	MN: FlushMag. Mount	M: MCX:MM: MMCX
2: 2.6' DIA. (FLAT)	1216:Rx-Inmarsat/L1/L&PS& Thuraya/Tx-Globalstar	RR:RHCP/RHCP	A1: WITH12dB LNA	#: CableLength(in)	N: N: NB: N-Bulkhead
3: 3.5' DIA. (FLAT)		LL:LHCP/LHCP	A2: WITH20dB LNA	R: RIGHT ANGLE CON.	T: TNC: TB: TNC- Bulkhead
4: MINI ARINC (FLAT)					
53: (HELIX ROD)	XXYY: Anyother 2 bands				
5B: (HELIX BLADE)					
5D: (HELIX HANDHELD)					




P/N: 1.5G1516RL-P-XSS-4

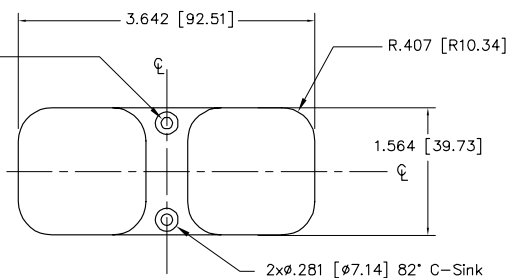
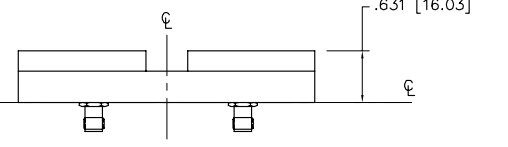
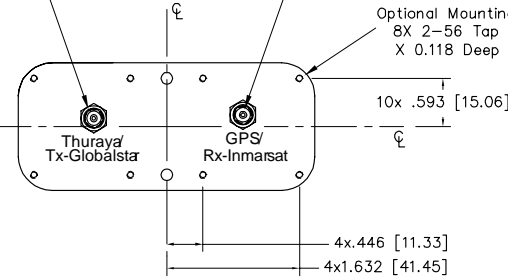
RHCP RX-Inmarsat/GPS & LHCP Thuraya/TX-Globalstar Antenna:

P/N: 1.5G1516RL-P-XSS-4

(3.6"x 1.5"x 0.6"), Front Mount (Other Configurations are Available)

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SPECIFICATIONS

ELECTRICAL:

	Thuraya & Tx-Globalstar	Rx-Inmarsat/GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	(1525 - 1580) MHz
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	LHC.P	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	4 ft G.P. Free Space	F.S.
@ 90° (Zenith):	+4.9	+4.6
@ 10° Elevation:	-1.0	-2.5
@ 20° Elevation:	+1.5	-1.1
@ 30° Elevation:	+2.4	+0.5
@ 60° to 90° Elevation:	>+3.3	> 3.6
BEAM WIDTH (3dB):	129 ° 98 °-106 °	103 ° 146 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDIN G	DC GROUNDIN G
LNA OPTION		
LNA GAIN:	N/A	(33.0+/-1.0) dB, 20dB (-A2- Option)
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB (Filter loss is Included)
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30 TO 50) mA

MECHANICAL:

SIZE: WIDTH:1.56 in. [39.7 mm], LENGTH:3.64 in [92.5 mm], HEIGHT:0.63in. [16.0 mm]

WEIGHT: 3.5 oz. (99 g)

FINISH: SKYDROLRESISTANTPOLYURETHANEENAMEL,AND NICKEL PLATING

MATERIAL: 6061-T6ALUMINUMALLOYBASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,ANDSKYDROLRESISTANCE, FIRE RETARDANT

CONNECTOR: Thuraya/Tx-GlobalstarSMA FEMALE(J1, Red); GPS/Rx-InmarsatSMA FEMALE(J2, Blue). Availablein Other Con. Types

MOUNTING: FLAT FRONT (2 x 6-32 SCREWS),BACK (4 x 2-56 SCREWS), or FLUSHMAGNET

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLYSEALED

FEDERAL & MILITARYSPECIFICATIONS

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

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Thuraya/Tx-Globalstar: SMA FEMALE with 20in Cable, (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX)

GPS/Rx-Inmarsat: SMA FEMALE with 20in Cable, (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX)

(+2.5 to +30) Volts DC (Active)

Optional Mounting: 8X 2-56 Tap X 0.118 Deep

CONFIGURATION:	FREQ. BAND 1/2 (MHz):	BAND 1/2 Polarizations:	GPS LNA:	CABLE LENGTH	GPS/IRIDIUM CONNECTOR:
1: 2" SQ. (FLAT)	1516:Rx-Inmarsat/GPS	RL: RHCP/LHCP	A: WITH33dB LNA	X: NO CABLE	S: SMA-P-PINS
1.9: 1.9" SQ. (FLAT)	Thuraya/Tx-Gobalstar	LR: LHCP/RHCP	P: WITHOUTLNA	MIN: FlushMag. Mount	M: MCX; MM: MMCX
2: 2.6" DIA. (FLAT)	1216:Rx-Inmarsat/L1/L2GPS& Thuraya/Tx-Gobalstar	RR: RHCP/RHCP	A1: WITH12dB LNA	N: Cable Length(in)	N: N; NB: N-Bulkhead
3: 3.5" DIA. (FLAT)		LL: LHCP/LHCP	A2: WITH20dB LNA	R: RIGHT ANGLECON.	T: TNC; TB: TNC-Bulkhead
4: MINI ARINC (FLAT)					
53: (HELIXROD)	XXYY: Anyother 2 bands				
5B: (HELIXBLADE)					
3D: (HELIXHANDHELD)					

QUANTITY REQD

DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT
				5
				3
				1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FRACTIONS: DECIMALS: ANGLES: ± 1/64 ± .005 ± .010 ± 1°

REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILE TO R .005 ORDER DIMENSIONS PER ASME Y14.5-1997 DIM'S ON A COMMON 2"±.006 MACHINED SURFACES

TOLERANCE: DIM PER ANSI Y14.5

COLOR: -1: GLOSSWHITE#17925PER FED-STD-595B -2: LUSTERLESSGRAY#36320PER FED-STD-595B -3: OLIVEDRAB GREEN#34031PER FED-STD-595B -4: LUSTERLESSBLACK#37038PER FED-STD-595B -5: DESERT TAN

APPROVED: S. HUYNH June-27-07

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

Low Profile Ruggedized Thuraya/Tx-Gobalstar & Rx-Inmarsat/GPS Antenna

P/N: 1.5G1516RL-P-XSS-4

SCALE 1/1

SHEET 1 OF 1

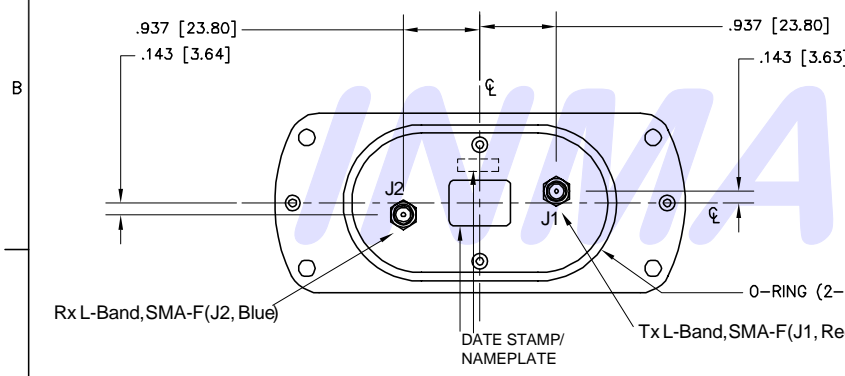
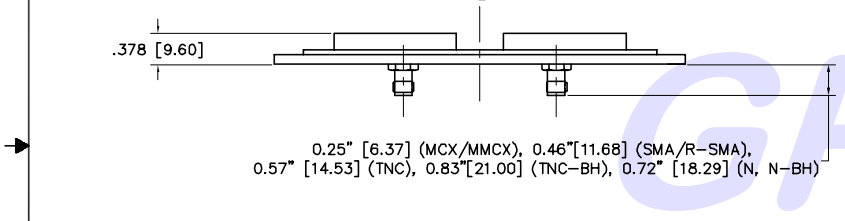
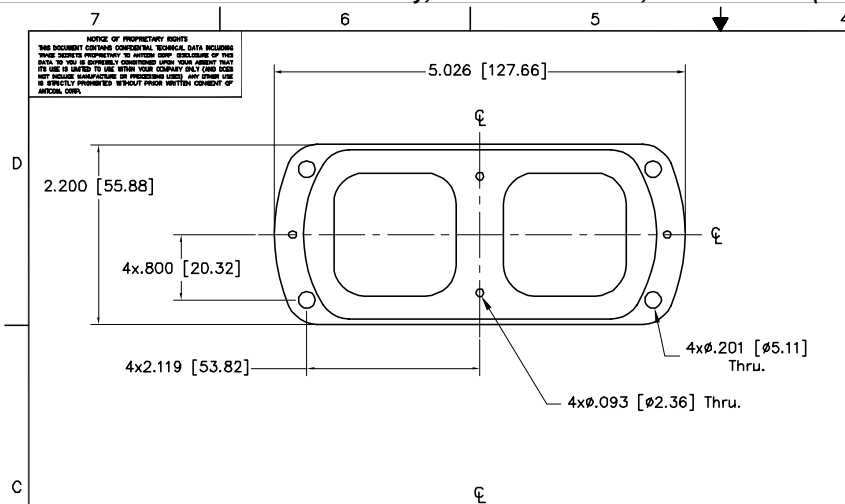


CC#: 3CVE1

Separated Tx & Rx RHCP-Inmarsat L-Band Antenna, P/N: 5G1516RR-PP-XSS-X, (5.03"x2.08"x0.37"), Flat, Top Mount, Bottom Connector Configuration



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RX/TX FREQUENCY MHZ:	RX/TX POLARIZATION :	Rx/Tx LNA:	CABLE'S LENGTH :	Rx/Tx CONNECTOR :	COLOR :
1518: RX/TX L-BAND	RR: RX: RHCP, TX: RHCP	A: WITH LNA	X: NO CABLE	S: SMA; RS: R-SMA; P: PIN S	1: GLOSS WHITE #17925 PER FED-STD-595B
1216: L1/L2 GPS/RX L-BAND & TX L-BAND	RL: RX: RHCP, TX: LHCP	P: WITHOUT LNA	M: WITH MAG. MOUN T	M: MMCX; MM: MMCX	2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	LL: RX: LHCP, TX: LHCP		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	3: OLIVE DRAB GREEN #24031 PER FED-STD-595B
	LR: RX: LHCP, TX: RHCP			T: TNC; TB: TNC-Bulkhead	4: LUSTERLESS BLACK #37038 PER FED-STD-595B
1223: L1/L2 GPS & XM					

P/N: 5G1516RR-PP-XSS-X

ELECTRICAL: SPECIFICATIONS

	TX L-BAND INMARSAT (1642.50 ±17.5)	RX L-BAND INMARSAT (1542.50 ±17.5)
FREQUENCY:	(1642.50 ±17.5)	(1542.50 ±17.5)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	4 ft G.P.	Free Space
@ 90° (Zenith):	+4.9	+5.0
@ 10° Elevation:	-1.0	-2.5
@ 20° Elevation:	+1.5	-0.5
@ 30° Elevation:	+2.4	+1.0
@ 60° to 90° Elevation:	>+3.3	>+2.7
BEAM WIDTH (3dB):	129 °	98 °-106 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	30 W
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING
FILTER:	N/A	N/A
LNA GAIN:	N/A	N/A
LNA P 1dB Out:	N/A	N/A
LNA NOISE FIGURE:	N/A	N/A
VOLTAGE/CURRENT:	N/A	N/A

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.378in. [9.60 mm]

WEIGHT: 5.20 oz. (147 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

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

CONNECTOR: Rx L-Band, SMA-F (J2, Blue), Tx L-Band, SMA-F (J1, Red) (OPTION: MMCX, MCX, R-SMA, TNC, N, OR CABLE)

MOUNTING:

FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS 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:

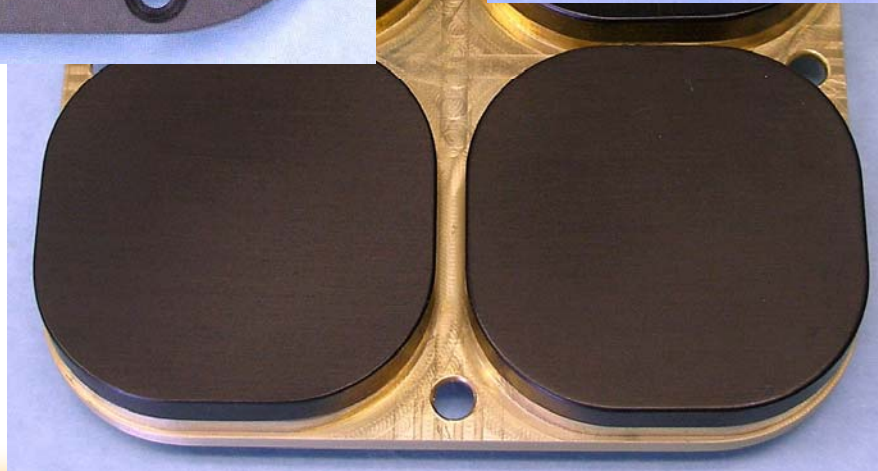
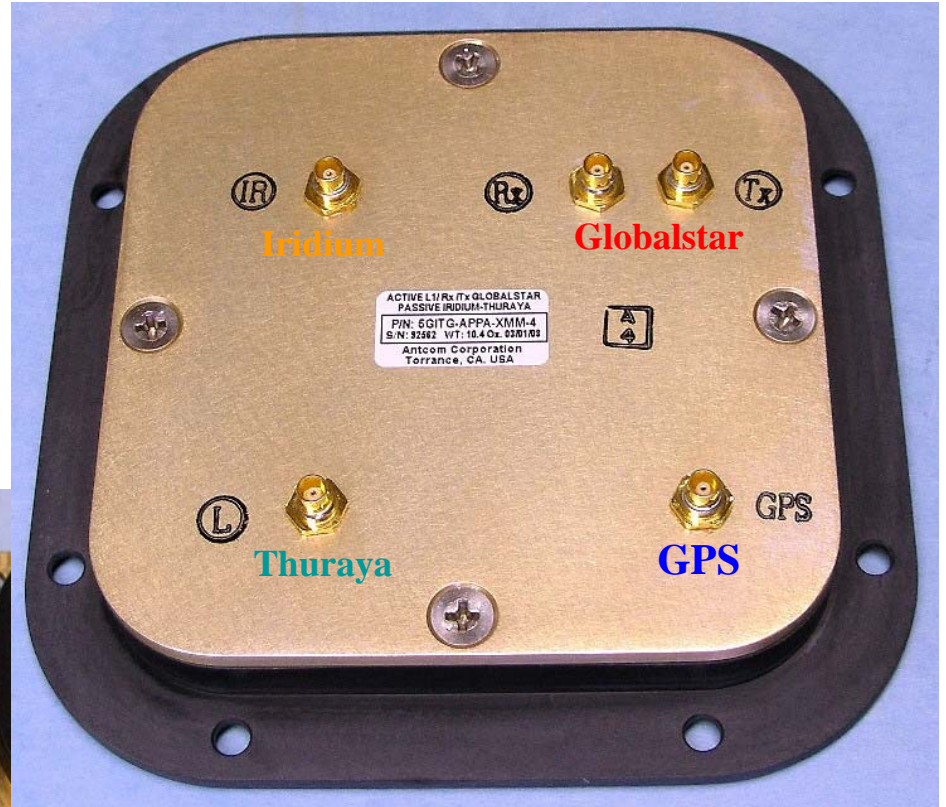
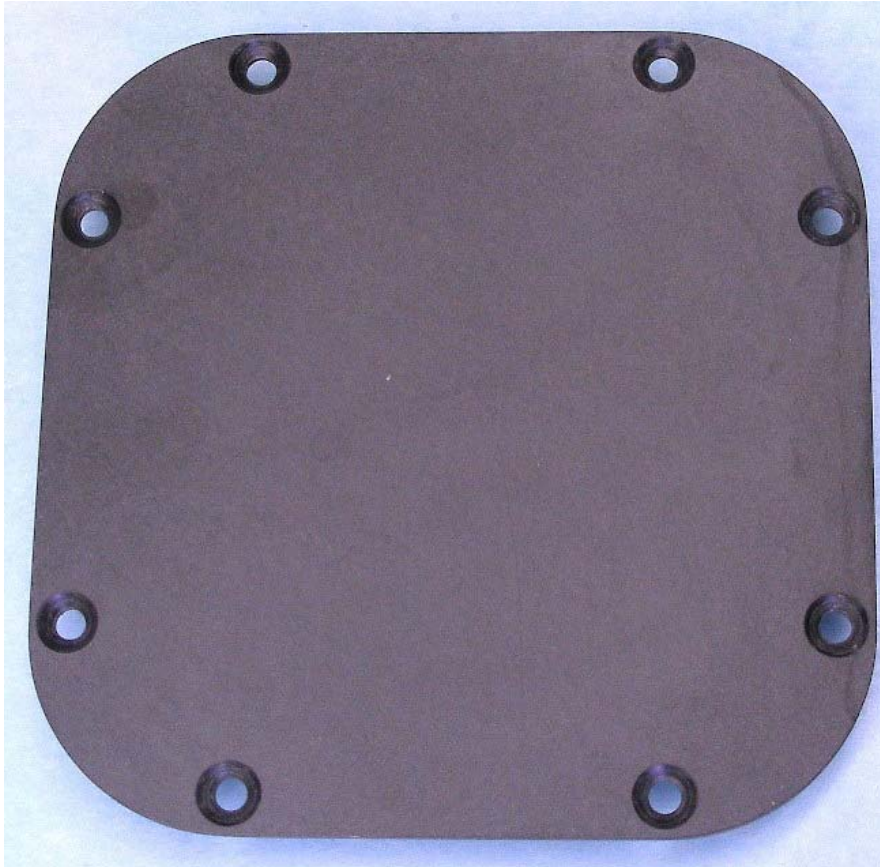
DESIGN TO: FAA TSO-C144, DO-160D, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	QTY
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1	O-RING	2-038-N756-75	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ± 1/64 DECIMAL ANGLES ± 1° TOLERANCE 5TH PER ANSI Y14.5 BREAK ALL DIMS BREAK EXTERNAL EDGES .000 TO .015 FINISH IS .001 TO .005 SURF ON A COARSE & .005 ON MACHINED SURFACES DO NOT SCALE DRAWING	DRAWN CHECKED OWNER APPROVED S. HUYNH Nov-12-03 DUP FILE NO	ANTCOM CORP. TORRANCE CALIFORNIA	
		FLAT FIXED MOUNT RX/TX L-BAND INMARSAT ANTENNA	
SCALE 1/1		SHEET 1 OF 1	

**Combined GPS, Iridium, Thuraya, and Tx/Rx Globalstar Antenna,
 P/N: 5GITG-APPA-XMM-4:
 5.2" x 5.2" x 0.7", Conformal/Flat Mount Configurations**

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



**P/N: 5GITG-APPA-XMM-4-N
 (Non-Conformal)**



**4. ONE/TWO-PORTS SWITCH ABLE
GPS/RHCP-Inmarsat/Iridium
& LHCP-Thuraya Antennas:
Pictures, Outline Drawings, and Specifications**

(Page 106 to 112)



CC#: 3CVE1

1-Port Switch able L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, P/N: 1G1216RLS-P-XS-X, 2" Square, Back Mount, Bottom Connector Configuration



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MECHANICAL:

SIZE: LENGTH: 2.080 in. [52.78 mm], WIDTH: 2.080 in. [52.78 mm]
 HEIGHT: 0.657 in. [16.69 mm], .499 in. [12.67mm] (No Radome option)

WEIGHT: 2.88 oz. (82 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 T

CONNECTOR: SMA FEMALE
 (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead,
 MCX, MMCX, 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

ELECTRICAL:

FREQUENCY (MHz):	L1/L2 GPS				RHCP/LHCP-L1/L2 BAND INMARSAT		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)		
ANTENNA GAIN (dBic):	3.5" Dia. GP +5.5	4 ft G.P. +4.5	3.5" Dia. GP +3.3	4 ft G.P. +4.9	3.5" Dia. GP +3.1	Free Space +3.4	3.5" Dia. GP +4.3
@ 90 ° (ZENITH):							
@ 10 ° Elevation:	-1.2	-1.4	-3.8	-3.6	-3.7	-3.1	-2.2
@ 20 ° Elevation:	+0.3	+1.4	-2.0	-0.1	-2.0	-1.1	-0.6
@ 30 ° Elevation:	+1.8	+2.2	-0.5	-1.8	-1.3	0.0	+0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		
POLARIZATION:	RHCP				RHCP/LHCP		
VSWR:					< 1.5:1		
IMPEDANCE:					50 ohms		
AXIAL RATIO:					2 dB		
LIGHTNING PROTECTION:					DC GROUNDING		
POWER HANDLING:					200 Watts CW		

NOTES: UNLESS OTHERWISE SPECIFIED:

- ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
- DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

PARTS LIST

QTY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REF NO
1	ADHESIVE GASKET	12345G-3M-1G				5

ANTCOM CORP. TORRANCE, CALIFORNIA

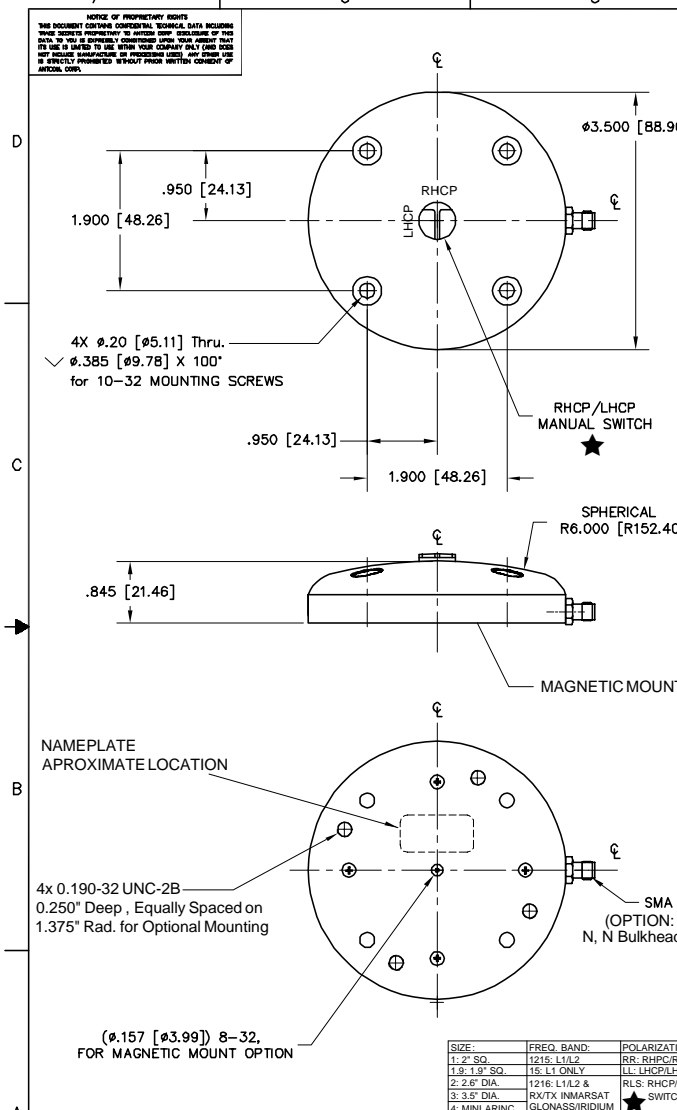
2.0" SQUARE L1/L2 GPS & L-BAND INMARSAT ANTENNA WITH SWITCHABLE RHCP/LHCP

SCALE: 1/1

SHEET 1 OF 1

1-Port Switch able L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, P/N: 3G1216RLS-P-NS-X, 3.5" Diameter, Front/Back Mount, Side Connector Configuration

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MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: 5.15 oz. (.146 Kg)

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: SMA FEMALE
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead,
MCX, MMCX, 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

QUANTITY	DESCRIPTION	PART NO.	FINISH	REQ.
4	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
1	ADHESIVE GASKET	123456-3M-3G	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	FRACIONS TO BE IN 16ths	ANGLES TO BE IN DEGREES
TOLERANCE SIZE PER ANSI Y14.5		
REMOVE ALL BURRS		
BREAK EXTERNAL EDGES .000 TO .015		
FILLET R .005 TO R .010		
DATE ON A COORDINATE SYSTEM		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
TOLERANCE SIZE PER ANSI Y14.5		
REMOVE ALL BURRS		
BREAK EXTERNAL EDGES .000 TO .015		
FILLET R .005 TO R .010		
DATE ON A COORDINATE SYSTEM		

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Side Con. L1/L2 GPS & L-BAND INMARSAT ANTENNA WITH SWITCHABLE RHCP/LHCP

DESIGNED BY: M. BOAS
CHECKED BY: S. HUYNH
DATE: Oct-29-03

APPROVED BY: S. HUYNH
DATE: Oct-29-03

SCALE: 1/1

SHEET 1 OF 1

SPECIFICATIONS

ELECTRICAL:	L1/L2 GPS		RHCP/LHCP-L-BAND INMARSAT		
	L1: (1575.42 ±12)	L2: (1227.60 ±12)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
FREQUENCY (MHz):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space
ANTENNA GAIN (dBic):	+5.5	+4.5	+3.3	+4.9	+3.4
@ 90 ° (ZENITH):	+5.5	+4.5	+3.3	+4.9	+3.4
@ 10 ° Elevation:	-1.2	-1.4	-3.8	-3.6	-2.7
@ 20 ° Elevation:	+0.3	+1.4	-2.0	-0.1	-1.1
@ 30 ° Elevation:	+1.8	+2.2	-0.5	-1.8	0.0
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	>+2.6
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL		
POLARIZATION:	RHCP		RHCP / LHCP		
VSWR:			< 1.5:1		
IMPEDANCE:			50 ohms		
AXIAL RATIO:			2 dB		
LIGHTNING PROTECTION:			DC GROUNDING		

LNA OPTION:

LNA GAIN:	35 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA
REJECTION @ (-50/+50) MHz:	-40 dB / -40 dB
@ (-100/+100) MHz:	< -65 dB
POWER HANDLING:	200 Watts CW (WITHOUT LNA), 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE: DIAMETER: 3.50 in. [88.90 mm]
HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: 5.15 oz. (.146 Kg)

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: SMA FEMALE
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead,
MCX, MMCX, 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

QUANTITY	DESCRIPTION	PART NO.	FINISH	REQ.
4	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
1	ADHESIVE GASKET	123456-3M-3G	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	FRACIONS TO BE IN 16ths	ANGLES TO BE IN DEGREES
TOLERANCE SIZE PER ANSI Y14.5		
REMOVE ALL BURRS		
BREAK EXTERNAL EDGES .000 TO .015		
FILLET R .005 TO R .010		
DATE ON A COORDINATE SYSTEM		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
TOLERANCE SIZE PER ANSI Y14.5		
REMOVE ALL BURRS		
BREAK EXTERNAL EDGES .000 TO .015		
FILLET R .005 TO R .010		
DATE ON A COORDINATE SYSTEM		

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Side Con. L1/L2 GPS & L-BAND INMARSAT ANTENNA WITH SWITCHABLE RHCP/LHCP

DESIGNED BY: M. BOAS
CHECKED BY: S. HUYNH
DATE: Oct-29-03

APPROVED BY: S. HUYNH
DATE: Oct-29-03

SCALE: 1/1

SHEET 1 OF 1

P/N: 3G1216RLS-P-NS-3

CABLES LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG; N: No MAG	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
E: CABLE LENGTH (IN)	N: N.B; N: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TB; TNC; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

**1-Port Switch able L1/L2 GPS/RHCP-Inmarsat/Iridium &
LHCP-Thuraya Antenna, P/N: 5G1216RL-PP-MS-X,
(4.15" x 2.20" x 0.85"), Magnetic Mount, Side Connector Configuration**

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CC#: 3CVE1

1-Port Switch able L1/L2 GPS/RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, P/N: 5G1216RL-PP-MS-X, (4.15" x 2.20" x 0.85"), Magnetic Mount, Side Connector Configuration



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MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 4.156in [105.56 mm], HEIGHT: 0.845 in. [21.46 mm]

WEIGHT: XX oz. (XX g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEM FILM

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

CONNECTOR: SMA-Female
(OPTION: MMCX, MCX, R-SMA, TNC, N, OR CABLE)

MOUNTING: 4X 4-40 SCREWS, OR ADHESIVE GASKET

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

SPECIFICATIONS

ZONE	REVISIONS			
	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	L1/L2 GPS (FOR RHCP ONLY)	Rx/Tx L-BAND INMARSAT/THURAYA/IRIDIUM
FREQUENCY (MHz):	L1: (1575.42 ±12) L2: (1227.60 ±12)	(1542.50 ±17.5) (1642.50 ±17.5) (1602-1626)
POLARIZATION :	RHC P	★ RHCP/LHCP (SIDE MANUAL SWITCH)
ANTENNA GAIN (dBic):		★ ~ 5.4 dBic
BEAM WIDTH (3dB):		~ 87 Deg.
RADIATION PATTERN :		HEMISPHERICAL
VSWR:		< 1.7: 1
IMPEDANCE:		50 ohms
AXIAL RATIO :		2 dB
LIGHTNING PROTECTION :		DC GROUNDING

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF ID
4					5
1					3
1					1

RX/TX FREQUENCY MHz:	INMARSAT POLARIZATION:	GPS LNA:	MOUNTING OPTION	GPS/ INMARSAT CON.	COLOR :
1516: RX/TX L-BAND	RR: RHCP ONLY	A: ACTIVE (WITH LNA)	X: BOTTOM CON.	S: SMA; RS: R-SMA; P: PIN S	1: GLOSS WHITE #17925 PER FED-STD-595B
1216: L1/L2 GPS/L-BAND	RL: RHCP/LHCP	P: PASSIVE (NO LNA)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	LL: LHCP ONLY	N: NO MAG. MOUNT	N: NO MAG. MOUNT	N: N; NB: N-Bulkhead	3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
		BM: MAG. MOUNT WITH #in CABLE	T: TNC; TB: TNC-Bulkhead		4: LUSTERLESS BLACK #37038 PER FED-STD-595B
1223: L1/L2 GPS & XM					

P/N: 5G1216RL-PP-MS-X

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</p> <p>FRACTIONS TO DECIMALS AND ANGLES ± 1/64 .005 .010 ± .1°</p> <p>TOLERANCE SHIP PER ANSI Y14.5</p> <p>REMOVE ALL SURF. BREAK INTERNAL EDGES .010 TO .015</p> <p>PLATE 11, 12, 15, 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100</p> <p>MARKED SURFACES</p> <p>DO NOT SCALE DRAWING</p>	<p style="text-align: center;">ANTCOM CORP. TORRANCE CALIFORNIA</p> <p style="text-align: center;">1 PORT MAGNETIC MOUNT HIGH GAIN RHCP/LHCP INMARSAT & L1/L2 GPS ANTENNA</p> <p>DESIGNED: _____</p> <p>DRAWN: _____</p> <p>APPROVED: S. HUYNH Nov-02-05</p> <p>DATE: _____</p> <p>SCALE 1/1</p> <p>SHEET 1 OF 1</p>	<p style="text-align: center;">ANTCOM CORP. TORRANCE CALIFORNIA</p> <p style="text-align: center;">1 PORT MAGNETIC MOUNT HIGH GAIN RHCP/LHCP INMARSAT & L1/L2 GPS ANTENNA</p> <p>DESIGNED: _____</p> <p>DRAWN: _____</p> <p>APPROVED: S. HUYNH Nov-02-05</p> <p>DATE: _____</p> <p>SCALE 1/1</p> <p>SHEET 1 OF 1</p>
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CC#: 3CVE1

2-Port Switchable RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, & L1/L2 GPS Antenna, P/N: 5G1216RL-PP-XSS-X, (4.15" x 2.20" x 0.85"), Back Mount, Bottom Connector Configuration



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MECHANICAL:
 SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 4.156in [105.56 mm], HEIGHT: 0.845 in. [21.46 mm]
 WEIGHT: XX oz. (XX g)
 FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEM FILM
 MATERIAL: BASE: 6061-T6 ALUMINUM ALLOY
 COMPOSITE RADOME: IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
 CONNECTOR: J1 (Inmarsat RHCP): SAM-M, J2 (L1/L2 GPS): SMA-F (OPTION: MMCX, MCX, R-SMA, TNC, N, OR CABLE)
 MOUNTING: 4X 4-40 SCREWS, OR ADHESIVE GASKET
 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

SPECIFICATIONS

ZONE/REV	REVISIONS			
	DESCRIPTION	DATE	APPROVED	

ELECTRICAL:		J2: L1/L2 GPS	J1: Rx/Tx INMARSAT/GLONASS/IRIDIUM
FREQUENCY:		L1: (1575.42 ±15) MHz; L2: (1227.60 ±15) MHz	(1542.50 ±17.5) (1602-1626)
RADIATION PATTERN:		HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:		RHCP	★ RHCP/LHCP (TOP MANUAL SWITCH)
VSWR:		< 1.5:1	< 2.0:1
IMPEDANCE:		50 ohms	50 ohms
ANTENNA GAIN (dBic):			
@ 90 ° (ZENITH):		+ 4.6	+ 1.8
@ 10 ° Elevation:		- 2.5	- 4.2
@ 20 ° Elevation:		- 1.1	- 2.9
@ 30 ° Elevation:		+ 0.5	- 2.0
@ 60 - 90 ° Elevation:		> 3.6	> 0.9
BEAM WIDTH (3dB):		103 Deg.	108 Deg.
AXIAL RATIO:		2 dB	2 dB
LIGHTNING PROTECTION:		DC GROUNDING	DC GROUNDING

LNA OPTION:	
LNA GAIN:	33 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	(2.5-3.3)V/35mA, (5-24)V/<50mA
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB
@ (-100/+100) MHz	< -65 dB
POWER HANDLING:	1 Watt CW

1	ADHESIVE GASKET	123456-3M-1G	-	-	1
QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	UNIT

UNLESS OTHERWISE SPECIFIED		ANTCOM CORP. TORRANCE, CALIFORNIA	
FRAC TIONS	DECIMALS	2 PORTS RHCP/LHCP INMARSAT & L1/L2 GPS ANTENNA	
± 1/64	0.0005		
± 1/32	0.0010		
± 1/16	0.0020		
TOLERANCE ENDS PER ANSI Y14.9		DESIGN	
REMOVE ALL BURRS		DRAWN	
BREAK EXTERNAL EDGES AND TO .015		APPROVED	
FLATS TO .001 TO .010		S. HUYNH	
DATE ON A COMPLEX DRAWING		Nov-02-05	
MACHINED SURFACES		DATE FILE NO	
DO NOT SCALE DRAWING		SCALE 1/1	SHEET 1 OF 1

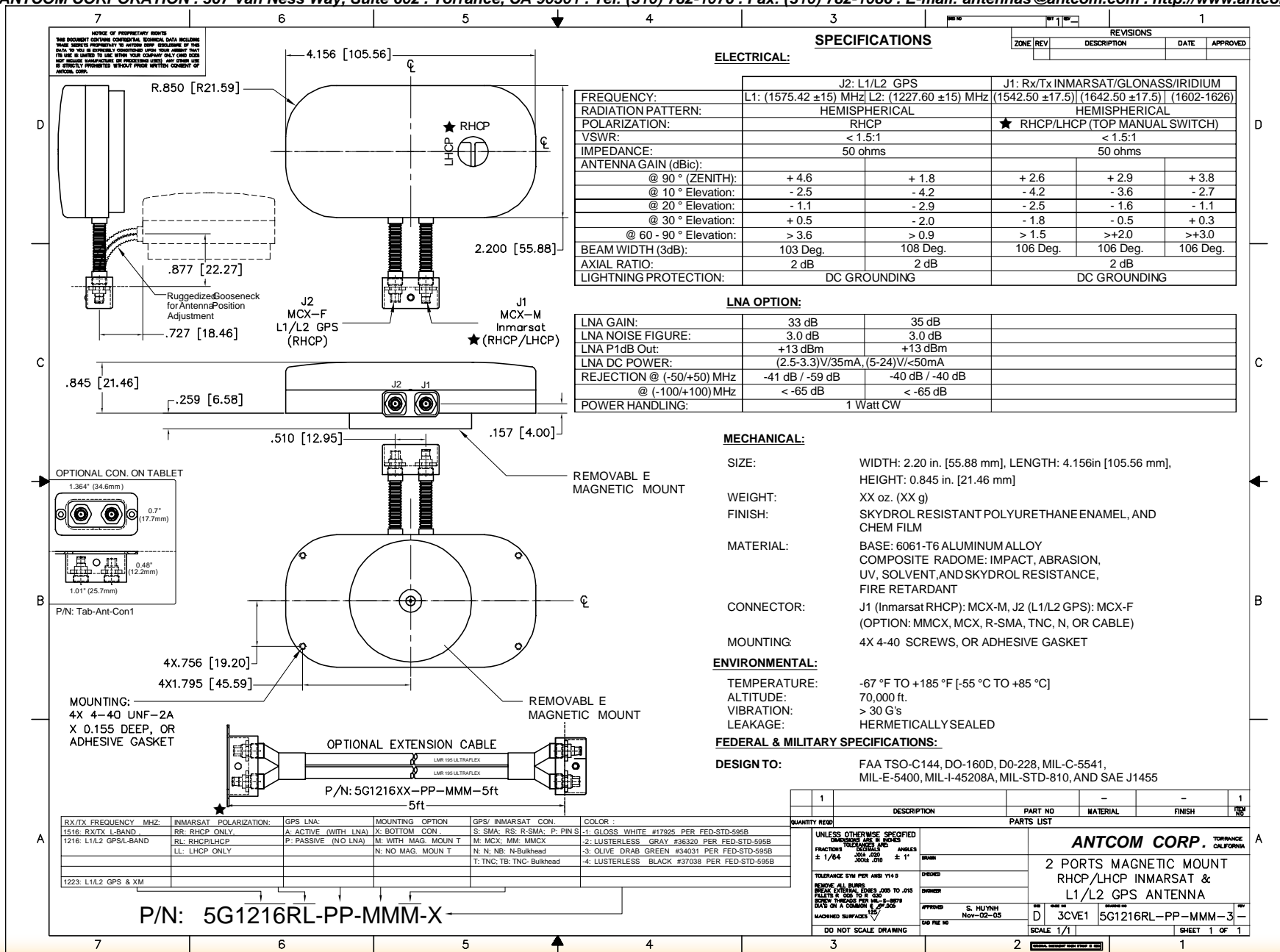


CC#: 3CVE1

2-Port Switchable RHCP-Inmarsat/Iridium & LHCP-Thuraya Antenna, & L1/L2 GPS Antenna, P/N: 5G1216RL-PP-MMM-X, (4.15" x 2.20" x 0.85"), Flat/Magnetic Mount, Side Connector Configuration



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**5. ONE-PORT (NO GPS)
RHCP-Inmarsat/Iridium
& LHCP-Thuraya Antennas:
Pictures, Outline Drawings, and Specifications**

(Page 113 to 115)



P/N: 3G1216VH-P-NS-3 (Green)

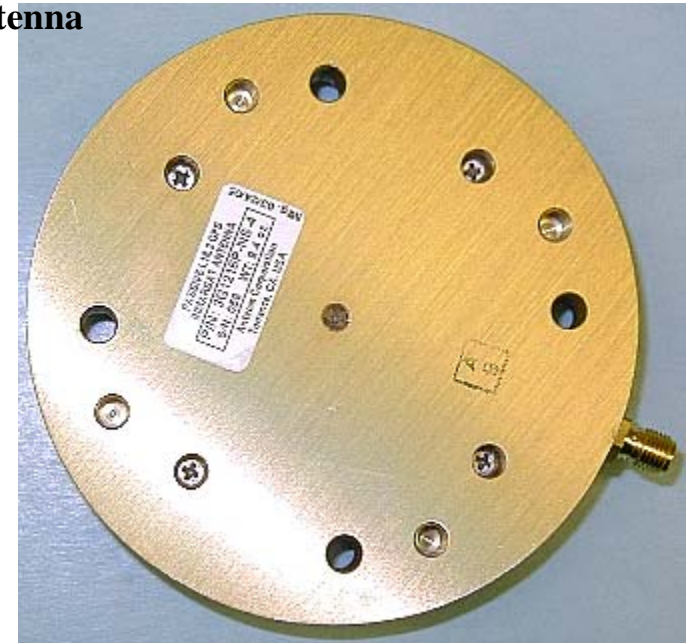


**- RHCP Inmarsat/Iridium
 - LHCP Thuraya**

**All Together in One Antenna
 (No GPS)**



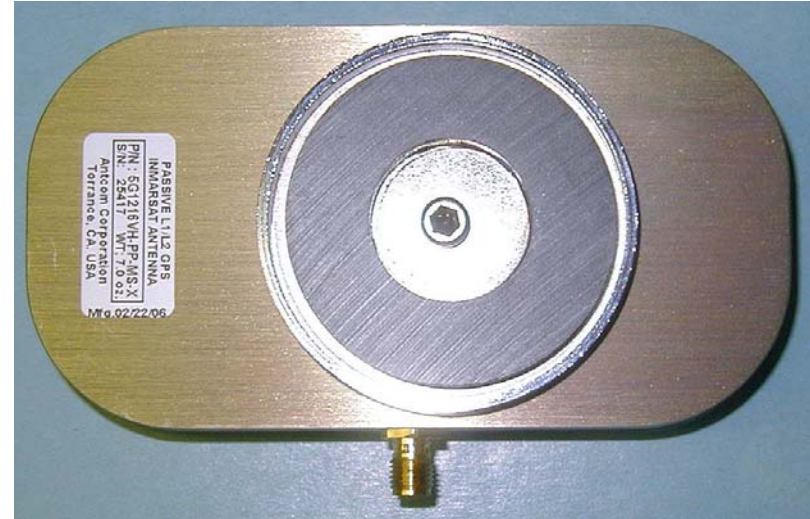
P/N: 3G1216VH-P-NS-4 (Black)



**Hermetically Sealed, Designed for Harsh Environment Applications.
 Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead**

1-Port (No GPS) RHCP-Inmarsat/Iridium/LHCP-Thuraya Antenna,
P/N: 5G1216VH-PP-MS-X,
(4.15" x 2.20" x 0.85"), Flat, Back/Magnetic Mount, Side Connector Configuration

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- RHCP Inmarsat/Iridium
- LHCP Thuraya
All Together in One Antenna
(No GPS)



6. Amplifier, Power Divider/Combiner & Filters

(Page 116 to 120)

(5-3000) MHz Low Noise Amplifier,

P/N: 2GXXXXAMPXX-XS-3MM

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REVISIONS			
ZONE	REV	DESCRIPTION	DATE
A		For DC Connector Options	July-25-06

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	(5 - 500) MHz	(800 - 3000) MHz	L1 or L1/L2 GPS Band (with Filters)	(2.400- 2.500) GHz (with Filter)
VSWR:	< 2:1	< 2:1	< 2:1	< 2:1
IMPEDANCE:	50 ohms	50 ohms	50 ohms	50 ohms
LNA GAIN:	(33) dB	(37, 20) dB	33 dB	35 dB
LNA NOISE FIGURE:	1.8 dB	1.8 dB	3.0 dB	2.8 dB
LNA P1dB Out:	+8 dBm	+11 dBm	+11 dBm	+11 dBm
LNA DC POWER:	+(15 to 18)V, < 35 mA		(+2.8 to +24) V, < 38 mA	
REJECTION @ (-50/+50) MHz			(-41/-59) dB or -40 dB (REJ. @1616 MHz):	
REJECTION @ (-100/+100) MHz			< -65 dB	
POWER HANDLING:	1 Watt CW			

MECHANICAL:

SIZE: LENGTH=2.00 in.[50.80 mm], WIDTH=2.00 in.[50.80 mm], HEIGHT= 0.37 in.[9.33 mm]

WEIGHT: 4.00 oz. (.113 Kg)

FINISH: IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY

CONNECTOR: SMA FEMALE (OPTIONAL: MCX, MMCX, SMA-M, TNC, TNC-M, OR N)

ENVIRONMENTAL:

TEMPERATURE : -67 °F TO +185 °F [-55 °C TO +85 °C] (Operational)
-85 °F TO +302 °F [-65 °C TO +150 °C] (Storage)

ALTITUDE: 70,000 ft.

VIBRATION: >30 G's

LEAKAGE: HERMETICALLY SEALED

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

FREQ. BAND:	LNA GAIN:	DC OPTION:
1030: (1 to 3) GHz	20: 20 dB GAIN 37: 37 dB GAIN	1: DC BIAS FROM RF OUTPUT PORT P1 ONLY 2: DC BIAS FROM RF OUTPUT PORT P1 & PASS IT TO RF INPUT PORT 2 (FOR MULTIPLE INLINE AMP.) 3: EXTERNAL DC INPUT @ PORT 3 ONLY
15: L1 Only (with Filter)	33: 33 dB GAIN	14: DC BIAS FROM RF OUTPUT PORT P1 & PASS REG. 3V OUTPUT TO PORT 4
1215: L1/L2 Only (with Filters)	35: 35 dB GAIN	32: EXTERNAL DC INPUT @ PORT 3 & PASS IT TO RF INPUT PORT 2 (FOR MULTIPLE INLINE AMP.)
2425: 2.4-2.5 Only (with Filters)	33: 33 dB GAIN	324: EXTERNAL DC INPUT @ PORT 3 & PASS IT TO RF INPUT PORT 2 & REG. 3V OUTPUT TO PORT 4
5500: (5 to 500) MHz		

P/N: 2G1215AMP33-XM-324M

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

CABLE'S LENGTH:	INPUT/OUTPUT CONNECTOR	Ext. DC CONNECTOR
X: NO CABLE	S: SMA, SM: SMA-M,	S: SMA, SM: SMA-M,
M: WITH MAG. MOUNT	M: MCX, MM: MMCX	M: MCX, MM: MMCX
#: CABLE LENGTH (IN)	T: TNC, TM: TNC-M	T: TNC, TM: TNC-M, N: N
R: RIGHT ANGLE CON.	N: N	NO CON. FOR DC OPTION 1 AND 2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

FRACTIONS: DECIMALS: ANGLES: ± 1/64 .001 .005 ± 1°

TOLERANCE 51M PER ANSI Y14.5

REWORK ALL SURFACES BEING INTERNAL EDGES .006 TO .016

FIELD 1: JOB 18 8 1600

WORK TIME/LOGS FOR MIL-8-9879

DRY ON A COARSE 125-006

MACHINED SURFACES

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING (0.005-3) GHz, UHF, GPS, or S-BAND AMPLIFIER

DATE: 3CVE1
DRAWN BY: S. HUYNH
APPROVED: Oct-02-02

SCALE: 1/1 SHEET 1 OF 1

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	(0.250-0.500) GHz	(0.5-1.0) GHz	(1.0-3.0) GHz
VSWR:	< (2.0-3.5):1	< 2.0:1	< 1.5:1
IMPEDANCE:	50 ohms	50 ohms	50 ohms
INSERTION LOSS (dB):	(0.3 to 0.8)	0.4	0.3
AMPLITUDE BALANCE (dB):	+/-0.2	+/-0.2	+/-0.2
PHASE BALANCE (Deg.):	+/-1.0	+/-1.0	+/-1.0
POWER HANDLING:	100 Watt CW		

MECHANICAL:

SIZE: LENGTH=1.00 in. [25.40 mm], WIDTH=1.70 in. [43.18 mm]
HEIGHT 0.40 in. [10.16 mm]

WEIGHT: < 3.00 oz. (85.0 g)

FINISH: BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
UV, ABRASION, AND SKYDROL RESISTANCE

CONNECTOR: SMA FEMALE
(OPTIONAL: TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C] (Operational)
-85 °F TO +302 °F [-65 °C TO +150 °C] (Storage)

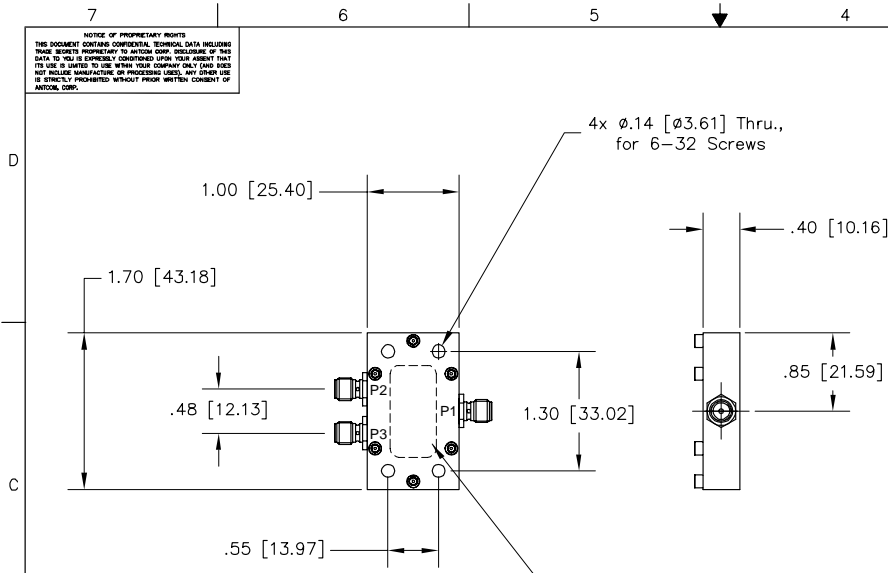
ALTITUDE: 70,000 ft.

VIBRATION: >30 G's

LEAKAGE: HERMETICALLY SEALED

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



NAMEPLATE APPROXIMATE LOCATION

SMA FEMALE CONNECTORS (TNC, N, OR CABLE IS OPTIONAL) DC ENABLE/DISABLE IS OPTIONAL

SMA FEMALE CONNECTOR (TNC, N, OR CABLE IS OPTIONAL) DC ENABLE/DISABLE IS OPTIONAL

FREQ. BAND:	LNA GAIN:	DC OPTION:
1215: (0.3-3) GHz	13: 13 dB GAIN	1: P1, P2, P3 DC ALL DISABLE
	20: 20 dB GAIN	2: P1, P2, P3 DC ALL ENABLE
	33: 33 dB GAIN	3: P1, P2 DC ENABLE; P3 DC DISABLE



P/N: 2G1215S-XS2-2

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

CABLE'S LENGTH:	CONNECTOR:
X: NO CABLE	T: TNC (Optional Bulkhead)
M: WITH MAG. MOUNT	S: SMA
F: CABLE LENGTH (IN)	N: N (Optional Bulkhead)
R: RIGHT ANGLE CON.	M: MCX

QUANTITY REQD	PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	ANTCOM CORP. TORRANCE CALIFORNIA 2-WAY, IN PHASE with DC ENABLE/DISABLE POWER DIVIDER/COMBINER S. HUYNH Feb-09-04 2G1215S-XS2-X SCALE 1/1 SHEET 1 OF 1
FRACTIONS DECIMALS ANGLES	
± 1/64 .015 .010 ± 1°	
TOLERANCE SURF PER ANSI Y14.5	
BEFORE ALL DIMS: .005 TO .015	DO NOT SCALE DRAWING
PERF. LITERAL: .005 TO .015	
DRILL DIA: .0015 TO .0025	
DRILL DEPTH: .0015 TO .0025	
DRILL DIA: .0015 TO .0025	
DRILL DEPTH: .0015 TO .0025	
DRILL DIA: .0015 TO .0025	
DRILL DEPTH: .0015 TO .0025	

4-Way Power Divider/Combiner for Multiple Channels, (P/N: 4G1215S-XS4-X)

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REVISIONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	(0.250-0.500) GHz	(0.5-1.0) GHz	(1.0-3.0) GHz
VSWR:	< (2.0-3.5):1	< 2.0:1	< 1.5:1
IMPEDANCE:	50 ohms	50 ohms	50 ohms
INSERTION LOSS (dB):	(0.6 to 1.6)	0.8	0.6
AMPLITUDE BALANCE (dB):	+/-0.2	+/-0.2	+/-0.2
PHASE BALANCE (Deg.):	+/-1.0	+/-1.0	+/-1.0
POWER HANDLING:	100 Watt CW		

MECHANICAL:

SIZE: LENGTH=1.50 in. [38.10 mm], WIDTH=3.00 in. [76.2 mm]
HEIGHT 0.40 in. [10.16 mm]

WEIGHT: 3.00 oz. (85 g)

FINISH: BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
UV, ABRASION, AND SKYDROL RESISTANCE

CONNECTOR: SMA FEMALE
(OPTIONAL: TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C] (Operational)
-85 °F TO +302 °F [-65 °C TO +150 °C] (Storage)

ALTITUDE: 70,000 ft.

VIBRATION: >30 G's

LEAKAGE: HERMETICALLY SEALED

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

P/N: 4G1215S-XS4-1

FREQ. BAND:	LNA GAIN:	DC OPTION:
1215: 0.3-3 GHz	13: 13 dB GAIN 20: 20 dB GAIN 33: 33 dB GAIN	1: ALL DC INPUT/OUTPUT DISABLE 2: ALL DC INPUT/OUTPUT ENABLE P1: PORT P1 DC INPUT/OUTPUT ENABLE P12: PORT P1, P2 DC INPUT/OUTPUT ENABLE P123: PORT P1, P2, P3 DC INPUT/OUTPUT ENABLE

CABLE LENGTH:	CONNECTOR:	PORTS:
X: NO CABLE	T: TNC (Optional Bulkhead)	2: 2-WAY
M: WITH MAG. MOUNT	S: SMA	4: 4-WAY
#: CABLE LENGTH (IN)	N: N (Optional Bulkhead)	8: 8-WAY
R: RIGHT ANGLE CON.	M: MCX	

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

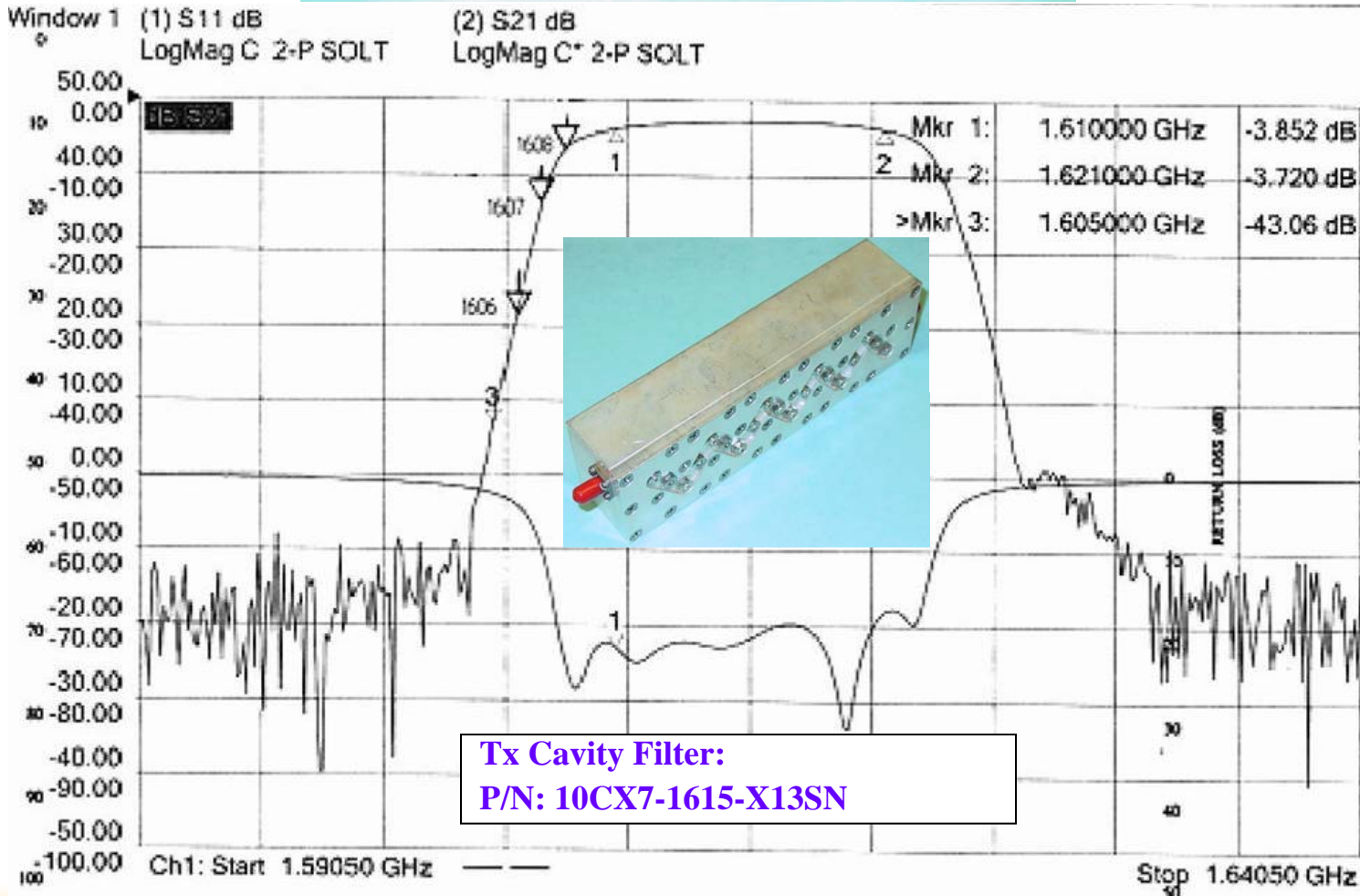
QTY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REV
1						1

QUANTITY NEEDED: _____ PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	ANTCOM CORP. TORRANCE, CALIFORNIA
FRACTIONS DECIMALS ANGLES TOLERANCES AND DECIMALS ± 1/64 .0005 ± .001 ± 1°	
REWORK ALL SURFACES BREAK EXTERNAL EDGES .005 TO .015 FILED IN .005 TO .010 SLOW TURNED FOR .001-.003-.0075 MACHINED SURFACES ✓ DO NOT SCALE DRAWING	DRAWN: S. HUYNH CHECKED: S. HUYNH DATE: Feb-09-04 Dwg File No: _____ SCALE: 1/1 SHEET 1 OF 1

Tx Globalstar Cavity Filter,
P/N: 10CX7-1615-X13SN (Item 785)

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Tx Cavity Filter:
P/N: 10CX7-1615-X13SN



7. Antenna Mounts, Adapters, Covers Ground Planes, Gaskets, O-Rings, & Sealing

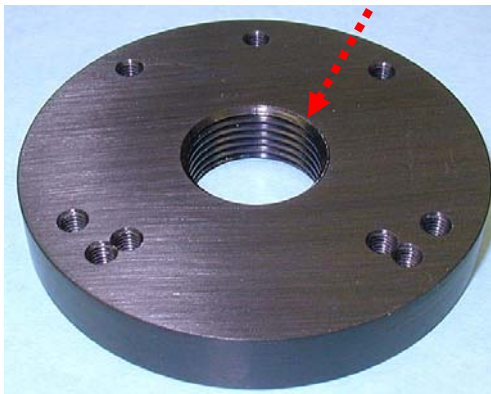
(Page 121 to 129)

Antenna Mounts (Pipe Mounts/Spacer, 1 of 2)

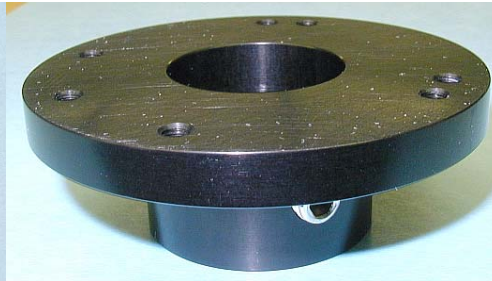
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1"-14 Thread



1"-14 Threaded Pipe Mount,
 3.25" Dia. x 0.5" Thick,
 P/N: MTR-1-14 (Item 480)
 for 3G, 53G, 73G, S3IR,
 S53 Antenna Series



1.25in Dia.



1.2" Dia. Pipe
 MTR-1-1.25 Rev D (Item 479)
 for 3G, 53G, 73G, S3IR,
 S53 Antenna Series,



1.075in Dia.



1" Dia. Pipe
 P/N: MTR-1-1 Rev D (Item 478)
 for 3G, 53G, 73G, S3IR,
 S53 Antenna Series,



5/8-11 Thread



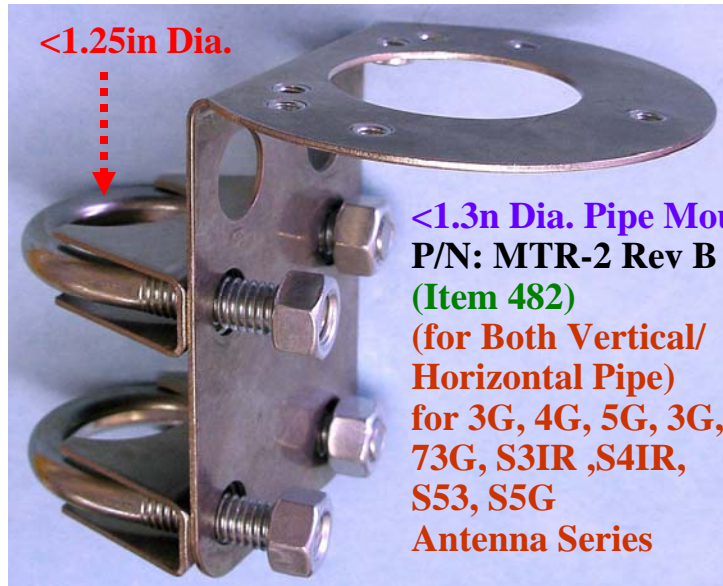
5/8-11 Thread, Survey Mount,
 3.25" Dia. x 0.72" High,
 P/N: MTR-3 Rev B
 (Item 484a)
 for 3GO, 5GO, 53GO,
 73GO Antenna Series



Antenna Spacer Ring,
 P/N: 53-XXXXYYYP-20N-4A-B
 (Item 480G),
 for 3G, 53G, 73G, S3IR,
 S53 Antenna Series

Antenna Mounts (Pipe Mounts, 2 of 2)

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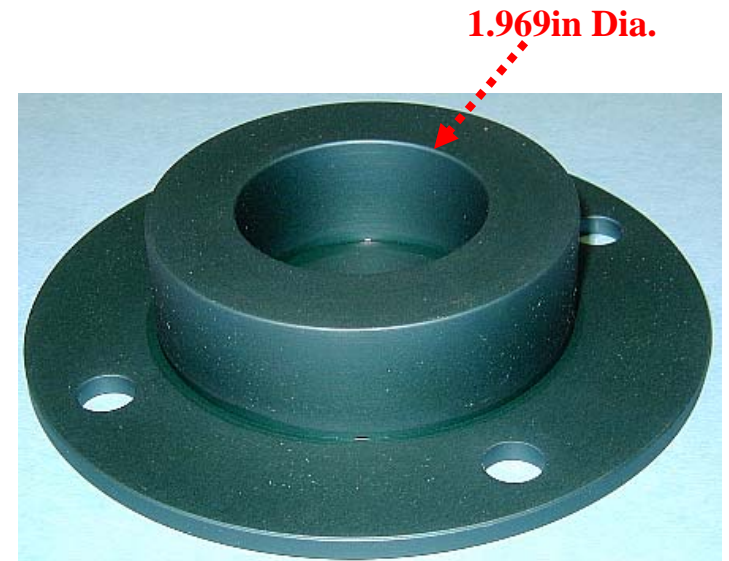
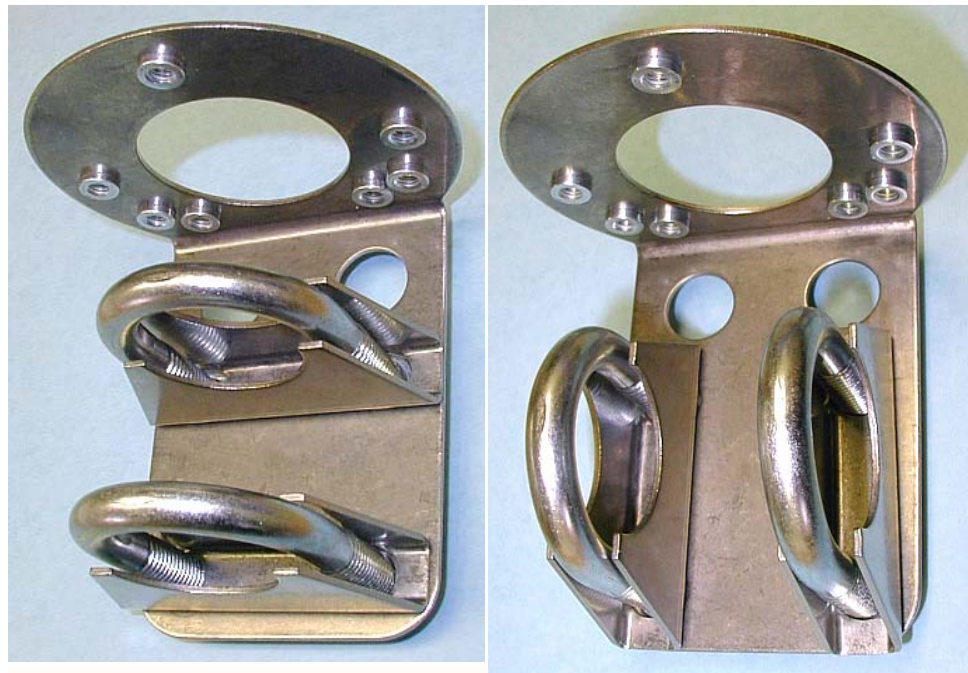


<1.3in Dia. Pipe Mount,
P/N: MTR-2 Rev B
(Item 482)
(for Both Vertical/
Horizontal Pipe)
for 3G, 4G, 5G, 3G,
73G, S3IR ,S4IR,
S53, S5G
Antenna Series

1" Pipe Mount,
P/N: 71G-MOUNT (Item 478a)
for 3D, 51G, 73G, S51
Antenna Series



1.075in Dia.



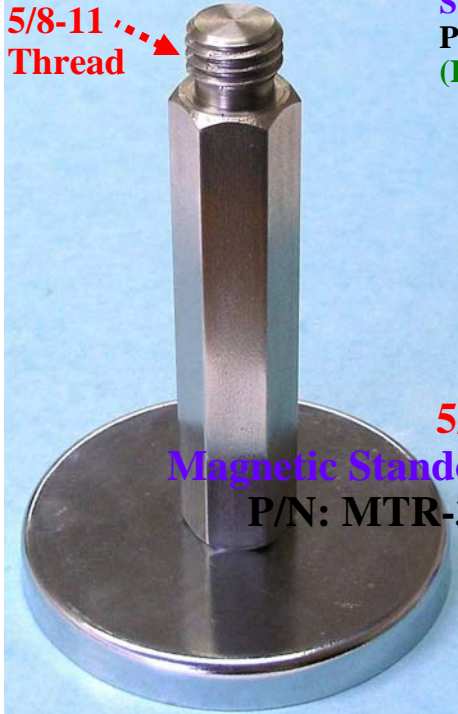
1.969in Dia.

Motorola Antenna Mount,
P/N: MTR-4 (Item 485)
for 3G, 53G, 73G, S3IR, S53
Center Connector Antenna Series

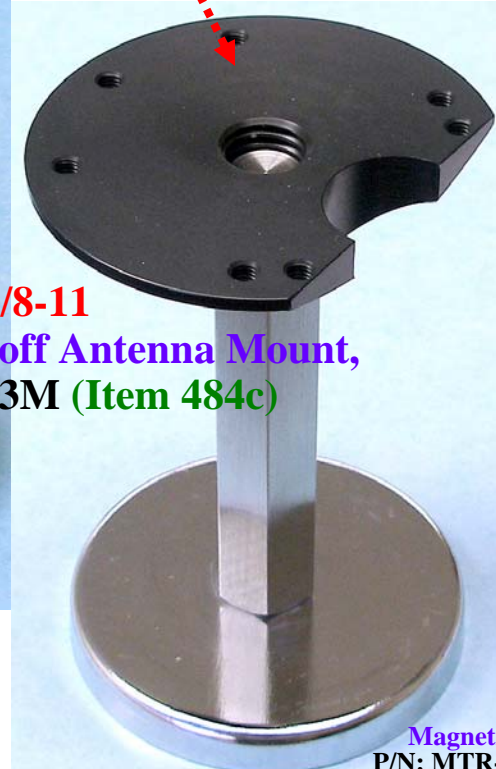
Antenna Mounts (Magnetic Mounts 3 of 3)

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5/8-11 Thread

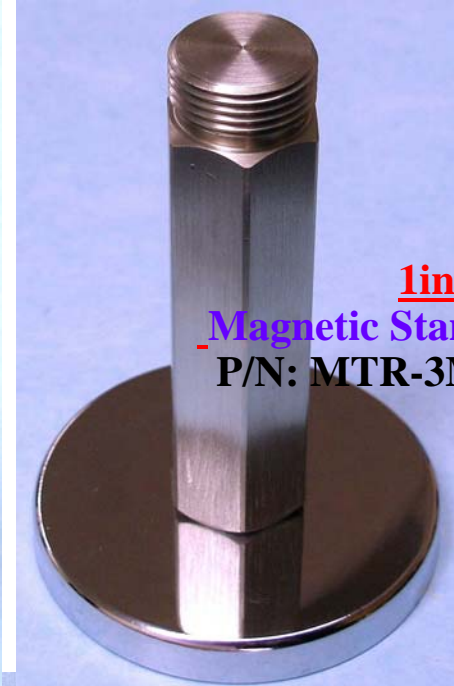


**Survey Mount,
P/N: MTR-3 Rev A
(Item 484a)**



**5/8-11
Magnetic Standoff Antenna Mount,
P/N: MTR-3M (Item 484c)**

1"-14 Thread



**1"-14 Threaded Pipe Mount,
3.25" Dia. x 0.5" Thick,
P/N: MTR-1-14 (Item 480)
for 3G, 53G, 73G, S3IR,
S53 Antenna Series**



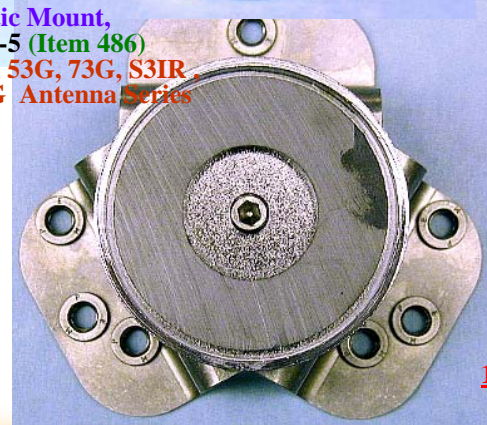
**1in-14 Thread
Magnetic Standoff Antenna Mount,
P/N: MTR-3M-1-14 (Item 484c14)**



**1in-14 & 5/8-11 Thread Magnetic Mount,
P/N: MTR-3M-S2 (Item 484c2)**



**Magnetic Mount,
P/N: MTR-5 (Item 486)
for 3G, 4G, 5G, 53G, 73G, S3IR,
S4IR, S53, S5G Antenna Series**



**1in-14 & 5/8-11 Thread Magnetic Mount,
P/N: MTR-3M-S2 (Item 484c2)**

CB Antenna Mounting Kit (Boom Assembly, Cable, and Nut)

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CB Antenna Mount Kit

With 1/2-28 UNEF-2A Top Threaded Thru. Hole for Antenna Mounting Interface,
and 5/8-11 UNC-2B Threaded Bottom for Mounting,
P/N: CB-Kit (Item 490kit), With Boom, Cable, and Nut

3) CB Antenna Cable
P/N: SMA-M-LMR195F-5ft-SMA-F
(Item 432cb)



1) CB Antenna Boom Assembly,

16.75 Long x 0.625in Dia., 0.37in Dia. Thru.

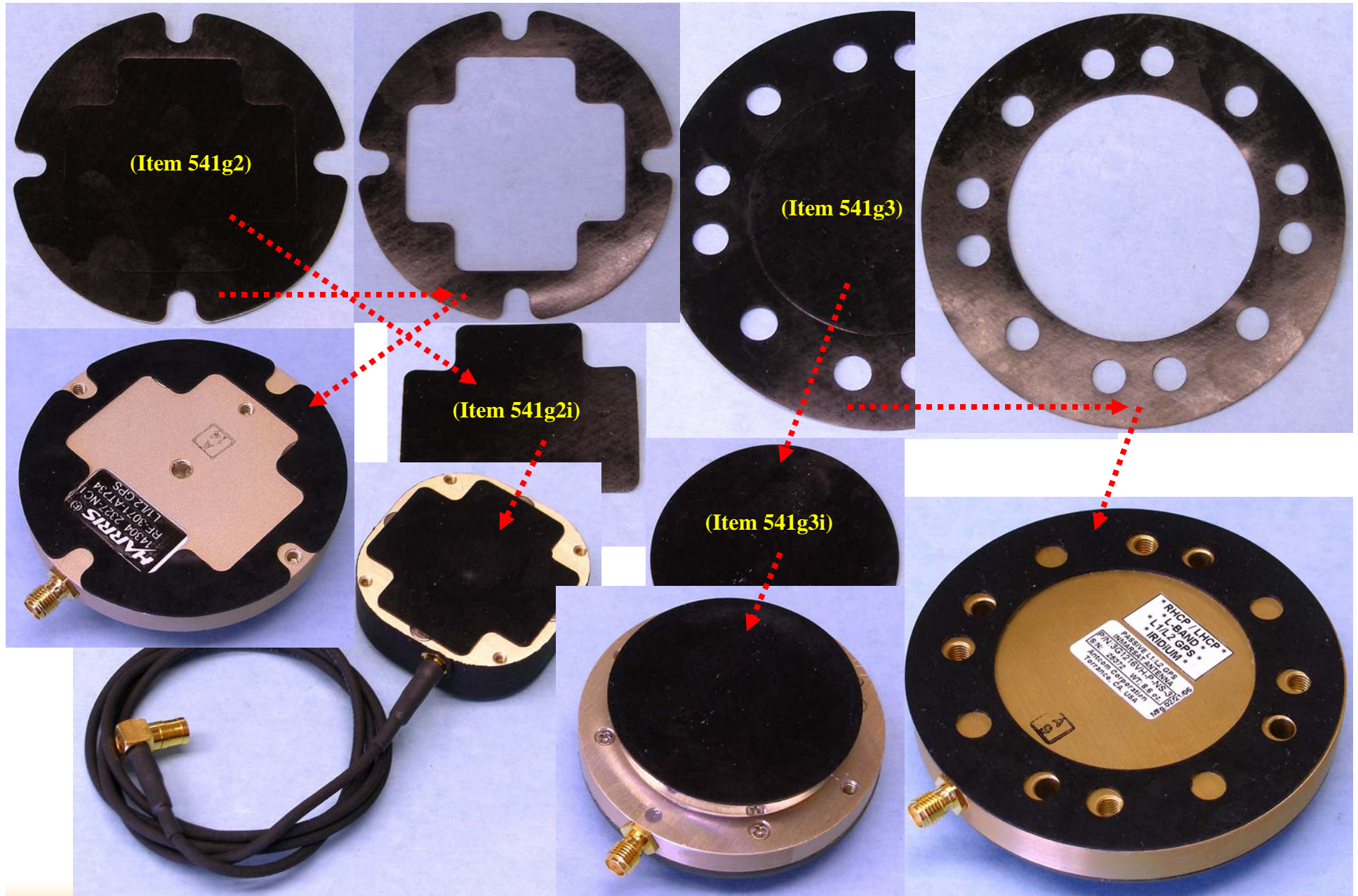
With 1/2-28 UNEF-2A Top Threaded Thru. Hole for Antenna Mounting Interface
and 5/8-11 UNC-2B Threaded Bottom for Mounting,

P/N: CB-Boom (Item 490boom)

4) CB Antenna Nut
5/8-11 UNC-2B Thread,
Zinc Plated Steel
P/N: 93839A832 (Item 489cb)

Magnet Cover, P/N: Magnet-Cover-2/-2i/-3/-3i
(Item 541g2, 541g2i, 541g3, 541g3i)
for 1G 2G, 2DG, 3G, S2, and S3 Antenna Series, with Adhesive Back

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Panel Antenna Mount/Plate (1/4-20 Thread)

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P/N: HGX-PMT04



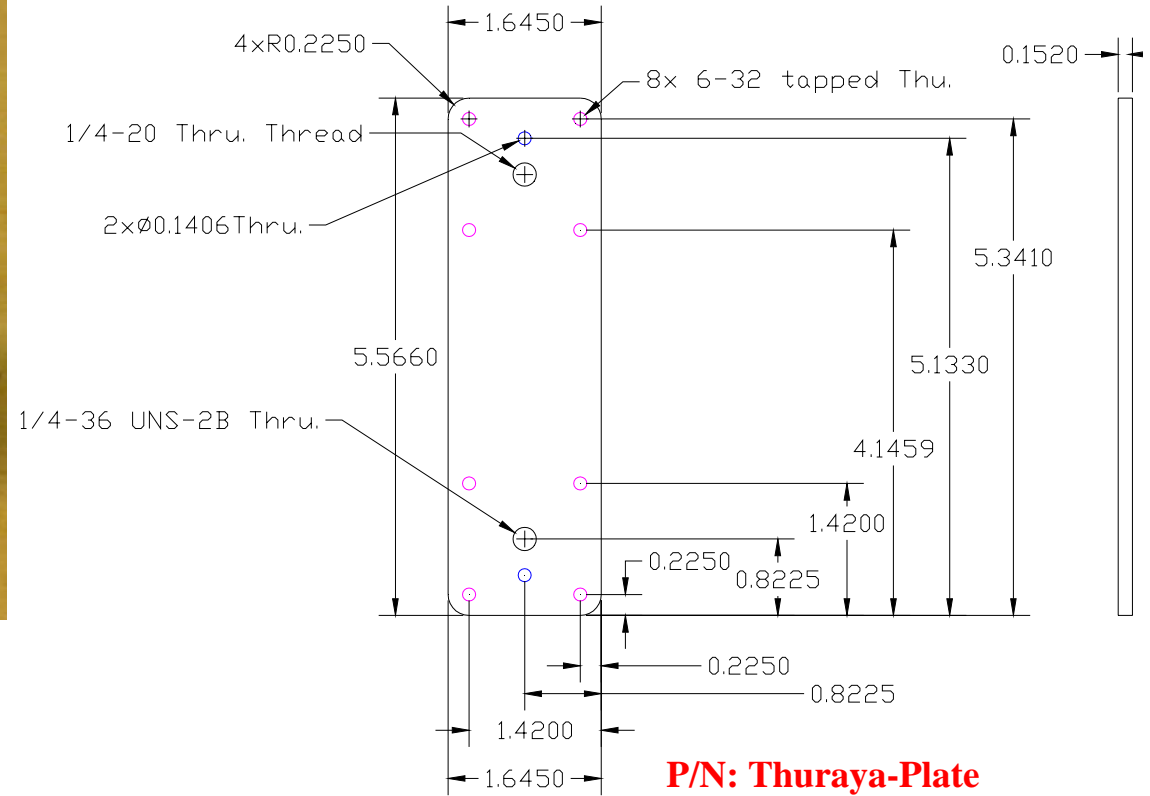
P/N: HGX-PMT03



P/N: HGX-PMT02



P/N: HGX-PMT15



P/N: Thuraya-Plate



**Antenna Mounts, Adapters, Covers,
Ground Planes, Gaskets, O-Rings, and Sealing
(Please ask for this Brochure and Other
L1, L1/L2, L5 GPS/Glonass, L-Band, Inmarsat,
UHF/Cellular/GSM/PCS/Wi-Fi, CDMA, VRC-99A/B,
Iridium, Thuraya, Globalstar, ICO, XM,
UHF Satcom, L, S, C, K Antenna Brochures
at
antennas@antcom.com**



CC#: 3CVE1

11. Links to Pdf Catalogs:

L1/L2/L5 GPS, L1/L2 Glonass, Omnistar, Galileo, Compass, GSM, Iridium, Inmarsat, Globalstar, Thuraya, XM/Sirius, UHF, L, S, C, X-band Antennas, Power Divider/combiner, Amplifiers, and RF Cables.



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