



NovAtel PN: 12023262

Commercial PN: S5GIR1516RL-AP-XSS-4

Active (L1 or L1/L2 GPS) & (IRIDIUM/Inmarsat or Thuraya) Antenna:
(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: S5GIR1X16RR-AP-XXX-X



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>



S5GIR1X16RR-AP-XXX-1 (White)



S5GIR1X16RR-AP-XXX-3 (Green)



S5GIR1X16RR-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)



S5GIR1X16RR-AP-XTT-X (TNC Con.)



S5GIR1X16RR-AP-XNN-X (N Con.)



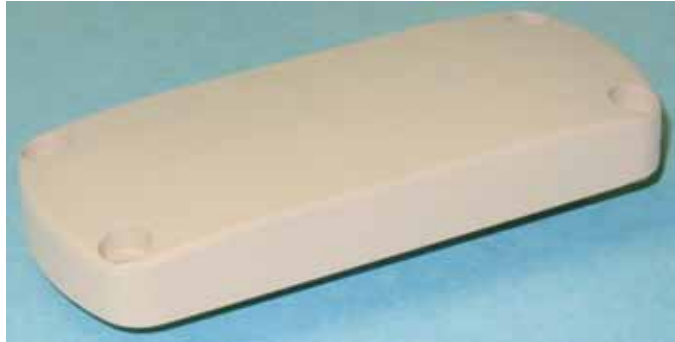
S5GIR1X16RR-AP-XST-X (SMA/TNC Con.)



Active (L1 or L1/L2 GPS) & (IRIDIUM/Inmarsat or Thuraya) Antenna:
(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: S5GIR1X16RR-AP-XXX-X



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S5GIR1X16RR-AP-XST-5 (Desert Sand)



S5GIR1X16RR-AP-XST-2 (Gray)



S5GIR1X16RR-AP-XST-5 (Desert Sand)



S5GIR1X16RR-AP-XST-2 (Gray)

Hermetically Sealed, Designed for Harsh Environment Applications.

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

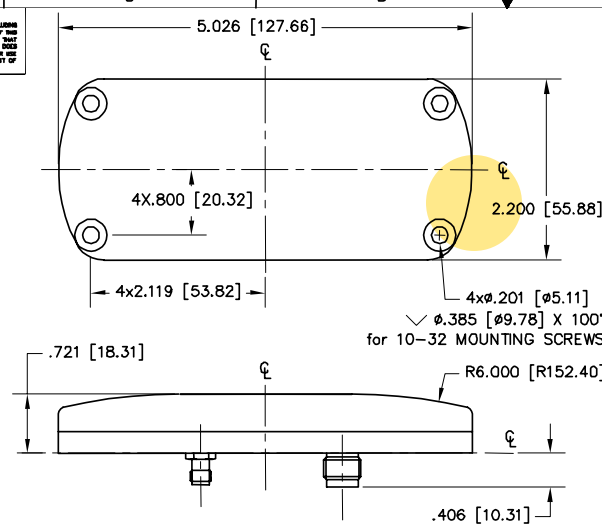


Active L1 GPS & (IRIDIUM/Inmarsat or Thuraya) Antenna:
(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: S5GIR1516RR-AP-XST-X



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SPECIFICATIONS

ELECTRICAL:	IRIDIUM		GPS	
	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)	
FREQUENCY:	IRIDIUM		GPS	
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

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)					

P/N: S5GIR1516RR-AP-XST-X

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
4	MOUNTING SCREW: (10-32, 1")	MS24893C276	-	-	5
1	O-RING	2-038-N756-75	-	-	3
					1

UNLESS OTHERWISE SPECIFIED

DRAWING DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

FRACTIONS: 1/16, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 4 3/4, 5, 5 1/4, 5 1/2, 5 3/4, 6, 6 1/4, 6 1/2, 6 3/4, 7, 7 1/4, 7 1/2, 7 3/4, 8, 8 1/4, 8 1/2, 8 3/4, 9, 9 1/4, 9 1/2, 9 3/4, 10

TOLERANCE DIM PER ANSI Y14.5

DECIMAL DIMENSIONS: 0.005, 0.010, 0.015, 0.020, 0.030, 0.040, 0.050, 0.060, 0.070, 0.080, 0.090, 0.100, 0.125, 0.150, 0.175, 0.200, 0.250, 0.300, 0.375, 0.450, 0.500, 0.625, 0.750, 0.875, 1.000, 1.250, 1.500, 1.750, 2.000, 2.500, 3.000, 3.750, 4.500, 5.000, 6.000, 7.000, 8.000, 9.000, 10.000

ANGLE DIMENSIONS: 0.125, 0.250, 0.375, 0.500, 0.625, 0.750, 0.875, 1.000, 1.250, 1.500, 1.750, 2.000, 2.500, 3.000, 3.750, 4.500, 5.000, 6.000, 7.000, 8.000, 9.000, 10.000

REMOVE ALL BURRS

REMOVE EXTERNAL THREADS 100% TO .015

FILLING OF DIMENSIONS PER ASME Y14.5

DATE: 11/15/2007

DRAWN BY: S. HUYNH

APPROVED BY: S. HUYNH

DEC-15-02

DO NOT SCALE DRAWING

ANTCOMCORP.

FLAT FIXED MOUNT
ACTIVE IRIDIUM/GPS
ANTENNA

3CVE1 S5GIR1516RR-AP-XST-X

SCALE 1/1

SHEET 1 OF 1

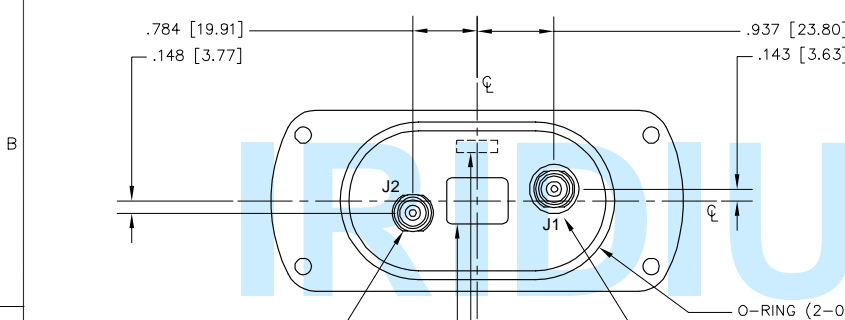
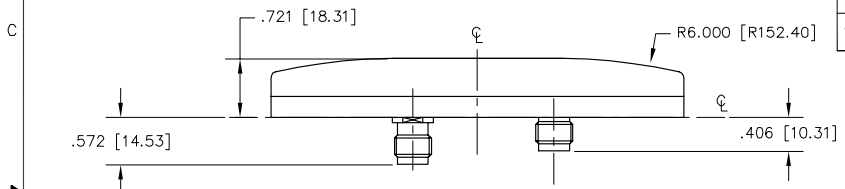
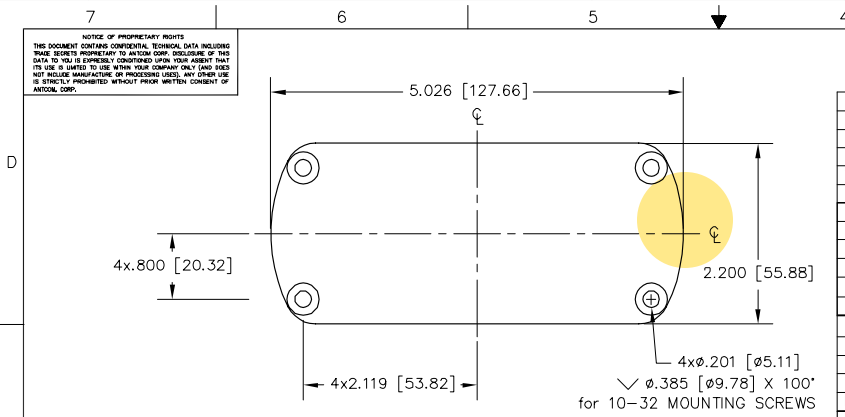


Active L1 GPS & (IRIDIUM/Inmarsat or Thuraya) Antenna: (5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: S5GIR1516RR-AP-XTT-X



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(+2.5 to +30) Volts DC

GPS: TNC Female (J2, Blue) DATE STAMP/
NAMEPLATE Iridium: TNC Female (J1, Red)

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: MCM; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 3.5" DIA. (FLAT)	GPS & IRIDIUM		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVEDRAB 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: 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		REVISIONS		
ZONE	REV	DESCRIPTION	DATE	APPROVED

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
@ 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
F.S.	+4.6	+2.9
4 ft G.P	-1.8	+0.7
	+1.7	> 2.1
BEAM WIDTH (3dB):	129 °	98 °-106 °
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, 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: 5.026 in [127.66mm], HEIGHT: 0.721 in. [18.31 mm]
7.84oz. (222 g)

WEIGHT:

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]
ALTIITUDE: 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	-	-	3
					1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS TOLERANCES ANGLES ± 1/64 .000 .010 ± 1°	DRWEN	DESIGNED BY	DATE
TOLERANCE .51M PER ANSI Y14.5 REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILED .005 TO R .030 DIMS UNLESS NOTED OTHERWISE DIMS ON A COMMON EDGE .005 UNLESS OTHERWISE NOTED	CHECKED	DESIGNED BY	DATE
DO NOT SCALE DRAWING	APPROVED	DATE	

ANTCOM CORP. TORRANCE CALIFORNIA	
FLAT FIXED MOUNT ACTIVE IRIDIUM/GPS ANTENNA	
REV	DATE
D	3CVE1
S5GIR1516RR-AP-XTT-1	
SCALE	1/1
SHEET	1 OF 1



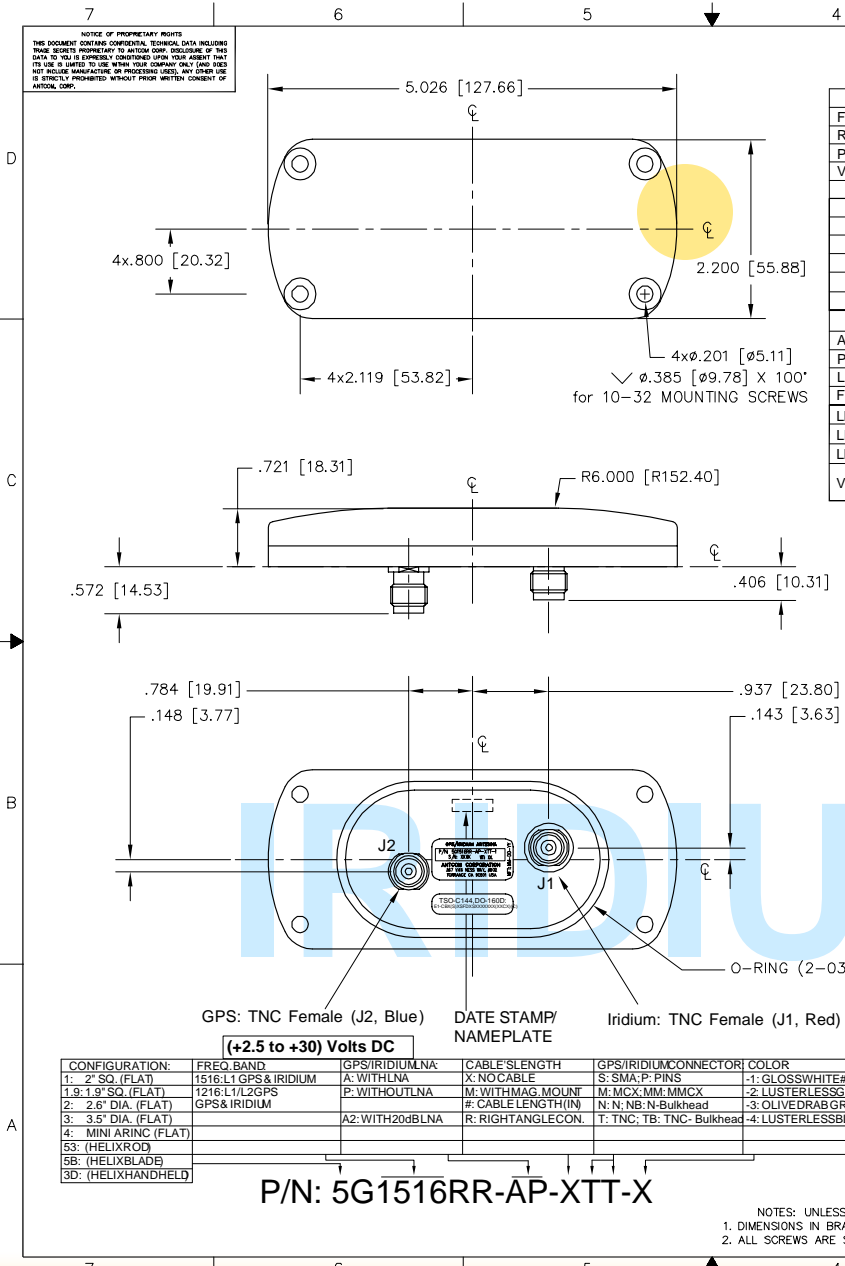
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(5.03"x2.08"x0.69"), Flat or Pipe mount, P/N: 5G1516RR-AP-XTT-X



FAA Approved
TSO Antennas



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ELECTRICAL:

	IRIDIUM	GPS
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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	> 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)

ENVIRONMENTAL:

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

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLYSEALED

FEDERAL & MILITARY SPECIFICATIONS

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

(+2.5 to +30) Volts DC

CONFIGURATION:	FREQ. BAND	GPS/IRIDIUM/LNA	CABLE LENGTH	GPS/IRIDIUMCONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516:L1GPS&IRIDIUM	A: WITHLNA	X: NOCABLE	S: SMA:P: PINS	-1: GLOSSWHITE#1792SPER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216:L1L2GPS	P: WITHOUTLNA	M: WITH MAG. MOUNT	M: MCX:MM: MMCX	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS&IRIDIUM		#: CABLELENGTH(IN)	N: N: NB: N-Bulkhead	-3: OLIVEDRABGREEN#34031PER FED-STD-595B
3: 3.5" DIA. (FLAT)		A2: WITH20dB LNA	R: RIGHTANGLECON.	T: TNC: TB: TNC- Bulkhead	-4: LUSTERLESSBLACK#37038PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIXROD)					
5B: (HELIXBLADE)					
3D: (HELIXHANDHELD)					

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	FRACCTIONS DECIMALS ANGLES	TOLERANCE
± 1/64	± .005	± 1'
TOLERANCE 5M PER ANSI Y14.5		
BREAK EXTERNAL EDGES .005 TO .015		
RAYS ON A COMMON CENTER		
MACHINED SURFACES		
DO NOT SCALE DRAWING		

ANTCOM CORP. TORRANCE CALIFORNIA

TSO APPROVED ACTIVE IRIDIUM/GPS ANTENNA

DATE: 3CVE1
SCALE: 1/1

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