



# IRIDIUM/GPS/Inmarsat/L-Band Antenna, P/N: 3GNSS16P-XTBC-X Rev A

3.5" Diameter, Center Connector, Flat, Front/Back Mount Configurations



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

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### SPECIFICATIONS

ZONE	REV	REVISIONS			
		DESCRIPTION	DATE	APPROVED	
A		ADDED CENTER CONNECTOR	10-02-12	S.H	
B		HEIGHT	10-06-16	S.H	

**ELECTRICAL:**

	Rx-Thuraya (LHCP), or Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP)	L1 GPS, E1, E2 Galileo, L1 IRNSS (RHCP)	IRIDIUM, L1 GLONASS (RHCP) or Tx-Globalstar (LHCP)	Tx-Thuraya (LHCP) or Tx-Inmarsat (RHCP)
<b>FREQUENCY:</b>	(1542.5 ± 17.5) MHz	(1575 ± 17) MHz	(1609 -1626) MHz	(1642.5 ± 17.5) MHz
<b>RADIATION PATTERN:</b>	HEMISPHERICAL			
<b>VSWR:</b>	< 2.0:1	< 2.0:1	< 2.0:1	< 2.0:1
<b>IMPEDANCE:</b>	50 ohms	50 ohms	50 ohms	50 ohms
<b>ANTENNA GAIN (dBic):</b>	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90° (ZENITH):	+ 2.5	+ 1.6	+ 3.7	- 1.5
@ 10° Elevation:	- 4.7	- 2.4	- 3.5	- 3.5
@ 20° Elevation:	- 3.8	+ 0.7	- 2.6	- 0.9
@ 30° Elevation:	- 2.1	+ 2.3	- 0.9	+ 0.3
@ 60 - 90° Elevation:	> + 1.0	> + 2.1	> + 2.3	> 0
<b>BEAM WIDTH (3dB):</b>	90 Deg.	140 Deg.	85 Deg.	140 Deg.
<b>AXIAL RATIO:</b>	3 dB			
<b>LIGHTNING PROTECTION:</b>	DC GROUNDING			
<b>LNA OPTION:</b>	33 dB Gain			
<b>LNA NOISE FIGURE:</b>	3.0 dB			
<b>LNA P1dB Out:</b>	+13 dBm			
<b>LNA DC POWER:</b>	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/ <50mA			
<b>REJECTION @ (-50/+50) MHz</b>	-40 dB / -40 dB			
<b>@ (-100/+100) MHz</b>	< -65 dB			
<b>POWER HANDLING:</b>	100 Watts CW (WITHOUT LNA) , 1 Watt CW (WITH LNA)			

**MECHANICAL:**

**SIZE:** DIAMETER: 3.50 in. [ 88.9 mm ]  
HEIGHT: 0.817 in. [ 20.75 mm ]

**WEIGHT:** 7.1oz. (201g)

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

**MATERIAL:** 6061-T6 ALUMINIUM 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-5441,  
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

**ACCEPTANCE TEST PROCEDURE:** ATP-GPS-L1L2-100

CONFIGURATION:	FREQ. BAND:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1215; L1/L2	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17825 PER FED-STD-595B
1.5: 1.5" SQ. (FLAT)	15; L1 ONLY	AL: WITH LNA/LIMITER	M: WITH MAG. MOUNT	MR: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.0" DIA. (FLAT)	16; L1 &	P: WITHOUT LNA	R: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	RX/TX, INMARSAT	PL: WITHOUT LNA and	R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	GLONASS/IRIDIUM	THINNER (0.58" THICK)			
5: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

QUANTITY	DESCRIPTION	PART NO	MATERIAL	FINISH	REF
4	MOUNTING SCREWS: 4-40, 3/4"	MS24693-C	-	-	3
4	MOUNTING SCREWS: 10-32, 1.5"	MS24693C2B0	-	-	2
1	O-RING	2-031/N756-75	-	-	1

PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
FRACTIONS DECIMALS ANGLES	
± 1/64 .0004 .005 ± 1°	
TOLERANCE SYM PER ANSI Y14.5	
REMOVE ALL BURRS	
BREAK EXTERNAL EDGES .005 TO .010	
FILLET R .005 TO R .010	
SCREEN THROUGH PER MIL-STD-887B	
DIA'S ON A COMMON C 2.0005	
MACHINED SURFACES	
DO NOT SCALE DRAWING	

4x .201 [ .05, 1.1 ] Thru  
Ø .385 [ .09, 7.8 ] X 100"  
for 10-32 SCREWS

Ø 3.500 [ Ø 88.90 ]

.950 [ 24.13 ]

1.900 [ 48.26 ] SQ.

.817 [ 20.75 ]

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

O-Ring (P/N: 2-031/N756-75)

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

22.5"

4x .190-32 UNC  
.250 Deep  
Equally Spaced on 1.375 Rad.

4x 4-40 UNC  
.250 Deep  
Equally Spaced on 1.153 Rad.

**P/N: 3GNSS16P-XTBC-1**

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

ANTCOM CORP.		TORRANCE, CALIFORNIA	
3.5" DIA., BOTTOM CONNECTOR			
IRIDIUM/GPS			
INMARSAT/GLONASS/ANTENNA			
REV	DATE	BY	CHK
D 3CVE1	3GNSS16P-XXC-X	B	
SCALE 1/1		SHEET 1 OF 1	

NMO Connector Option is Now Available for Some Antennas