



ISO 9001:2008/FAA Approved Facility

# L1/L2 GPS Antenna, P/N: 91G1215A-XB-X Rev C

1.36" Diameter x 8.6" Tall, C130/Sextant Port with Lock-Pin Configuration  
with BNC, TNC, SMA or N Connector Options



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

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

**SPECIFICATIONS**

**ELECTRICAL:**

FREQUENCY:	INMARSAT Rx: (1542.50 ±17.5) MHz	INMARSAT Tx: (1642.50 ±17.5) MHz	GPS L1: (1575.42 ±13) MHz	GPS L2: (1227.60 ±13) MHz
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL	
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1	< 1.5:1	< 1.5:1	< 2.0:1
GAIN (dBic):	GPS L1	Satcom Tx	Satcom Rx	GPS L2
@ 90° (Zenith):	+2.6	-4.2	-0.7	0.0
@ 10° Elevation:	0.0	-6.7	-4.2	-2.4 to -6.3
@ 20° Elevation:	+1.2	-5.6	-2.9	-1.8 to -4.8
@ 30° Elevation:	+1.7	-4.9	-2.1	-1.3 to -3.4
@ 45° Elevation:	+2.4	-4.9	-1.4	-0.5 to -1.5
@ 70° Elevation:	+2.3	-5.4	+0.1	0.0 to -0.5
BEAMWIDTH (3dB):	165 Deg.	155 Deg.	142 Deg.	(120 to 165) Deg.
AXIAL RATIO (dB):	1 to 3	1 to 3	1 to 4	1 to 5

**DC GROUNDING** YES (LIGHTNING PROTECTION)

**LNA OPTION**

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz:	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz:	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

**MECHANICAL:**

SIZE: DIAMETERS= 1in [25mm], 1.36in[35mm], 2.6in [64mm]  
HEIGHT = 8.614 in. [218.79 mm]

WEIGHT: 7.8 oz. (220 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: BNC CONNECTOR,  
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)  
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 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	LNA:	1	1						
1215: L1/L2	A: WITH LNA								1
15: L1 ONLY	P: WITHOUT LNA								
1216: L1/L2/INMARSAT									
0416: UHF/L1/L2/INMARSAT (2 Connectors)									

**P/N: 91G1216A-XB-4**

CABLE LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; B: BNC Female	-1: GLOSS WHITE #1792SPER 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: 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 #37036 PER FED-STD-595B

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

TOLERANCE 51M PER ANSI Y14.5

REMOVE ALL BURRS BEZEL EXTERNAL EDGES .005 TO .015 FINISH TO 32 RAIN SREW THREADS PER MIL-S-8879 FINISH ON A CORNER R.25 R.025 MACHINED SURFACES

DO NOT SCALE DRAWING

**ANTCOM CORP.** TORRANCE, CALIFORNIA

C130/Sextant Port ACTIVE L1/L2 GPS HELIX ANTENNA

DATE: 05/11/14 BY: S. HELVHIA MOY-20-08

DRW: 33VE1

CHK: 33VE1

APP: 33VE1

SCALE: 1/1

SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas