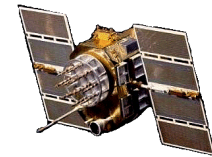




ISO 9001:2008/FAA Approved Facility

# L1/L2 GPS Antennas, P/N: 53G1215A-XT-X Rev B

## 3.5" Diameter, Survey and Pipe Mount Configurations



Antenna Mounts: <http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf>

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: [antennas@antcom.com](mailto:antennas@antcom.com) . <http://www.antcom.com>

**NOTICE OF PROPRIETARY RIGHTS**  
THIS DOCUMENT CONTAINS CONFIDENTIAL, TECHNICAL DATA INCLUDING TRADE SECRETS PROPRIETARY TO ANTCOM CORP. REPRODUCTION OF THIS DATA TO YOU IS EXPRESSLY CONDITIONED UPON YOUR AGREEMENT THAT THE USE IS LIMITED TO USE WITHIN YOUR COMPANY ONLY. YOU DO NOT HAVE THE RIGHT TO REPRODUCE OR TRANSMIT THIS INFORMATION IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. ANY OTHER USE IS EXPRESSLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF ANTCOM CORP.

4X  $\phi .20$  [ $\phi 5.11$ ] Thru.  $\phi .385$  [ $\phi 9.78$ ] X 100"  
✓ for 10-32 MOUNTING SCREWS

REMOVABLE GROUND PLANE

Phase Center:  
x=y=0;  
z=-.462 [11.73]

Removable Survey Mount:  
THD 0.625-11UNC-2B  
x0.7" Deep

1-1/16 [26.92]  
For High/Constant Vibration Applications,  
Please Tight The Antenna to  
~700 in-lbs of Torque with  
Thread Locker to Avoid Wear.

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

**P/N: 53G1215A-XT-1**

SIZE:	FREQ. BAND:	LNA:	CABLE LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ.	42: ARINC 743	A: 33 dB Gain	S: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.8; 1.9" SQ.	GO1218; L1/L2 GPS/GNSS/L-Band	A4: 40 dB Gain	M: MAG. N; NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2; 2.6" DIA.	GO118; L1 GPS/GNSS/L-Band	A2: 20 dB Gain	R: CABLE LENGTH (IN)	N: N; N: N Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
3; 3.5" DIA.	G01215; L1/L2, G1118; L1/L2	P: WITHOUT LNA	R: RIGHT ANGLE CON.	T: TB; TNC; TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC	GO1116; L1/L2/L3/L5/L6 GPS/GNSS/Galileo				-5: DESERT TAN #33446 PER FED-STD-595B

**SPECIFICATIONS**

**ELECTRICAL:**

FREQUENCY:	L1: (1575.42 ±15) MHz				L2: (1227.60 ±15) MHz			
RADIATION PATTERN:	HEMISPHERICAL							
POLARIZATION:	RHCP				RHCP			
VSWR:	< 1.5:1				< 1.5:1			
IMPEDANCE:	50 ohms				50 ohms			
ANTENNA GAIN (dBi):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9		
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6		
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1		
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8		
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0		
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.		
AXIAL RATIO:	2 dB				2 dB			
LIGHTNING PROTECTION:	DC GROUNDING							
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: DIAMETER: 3.50 in. [ 88.90 mm]  
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73] (Optional for Passive)

WEIGHT: 6.8 oz. (191 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL WITH NICKEL PLATED BASE

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

CONNECTOR: TNC FEMALE CONNECTOR  
(OPTION: SMA, 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 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

QUANTITY REQD	DESCRIPTION	PARTS LIST	PART NO	FINISH	REV
4	MOUNTING SCREWS: 10-32, 3/4"		MS24693C274	-	6
1	5" DIA. GROUND PLANE		12G1215P001-B6	-	3
1	SURVEY ANTENNA MOUNT		MTR-3 Rev A	-	2

**REVISIONS**

ZONE	REV	DESCRIPTION	DATE	APPROVED
A		Moved Connector Inward	Aug-22-06	S.H
B		NEW MOUNT	5/20/15	S.H

**ANTCOM CORP** TORRANCE, CALIFORNIA

OUTLINE DRAWING  
ACTIVE L1/L2 GPS  
SURVEY ANTENNA

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN DECIMAL FRACTIONS ± 1/64 DECIMALS ± .005 ANGLES ± 1° TOLERANCE 5/16 PER ANI Y14.5 REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 SURF FINISH PER MIL-S-8878 DIM'S ON A DIMENSION > .250 W/ MACHINED SURFACES 12/ DO NOT SCALE DRAWING

ORIGINAL DESIGN: S. HUYNH 01-05-29  
ORIGINAL DESIGNED: S. HUYNH 01-05-29  
UPDATE: P. TRAN May-20-15  
APPROVED: S. HUYNH May-20-15

SCALE 1/1

SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas