



ISO 9001:2008/FAA Approved Facility

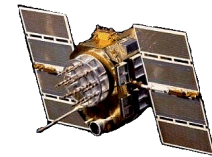
Antenna Mounts: <http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf>

# Active or Passive L1/L2 GPS Antenna

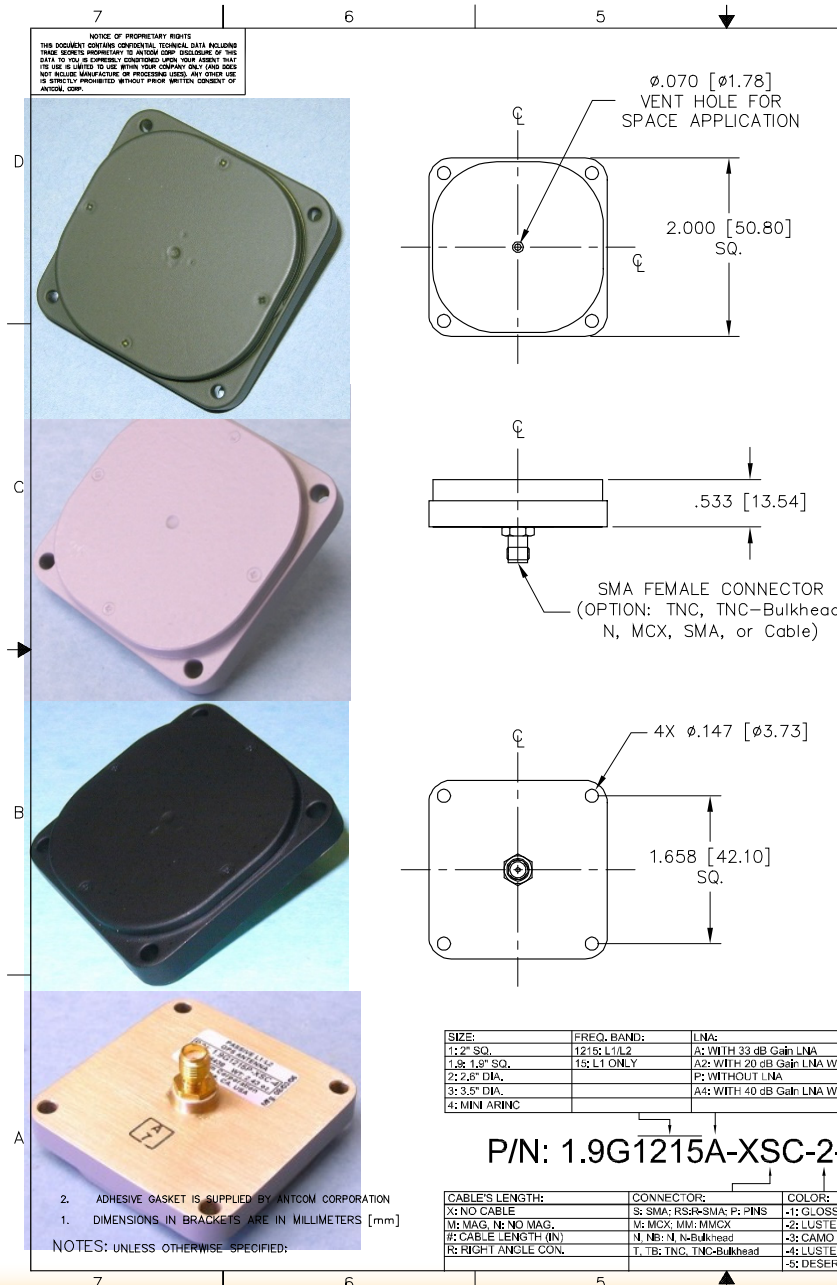
## P/N: 1.9G1215X-XSC-2-SNG Rev E

### (With Vent Hole For Space Application)

### 2.0" Square, Flat Mount Configuration



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| SPECIFICATIONS |                               | REVISIONS   |      |          |
|----------------|-------------------------------|-------------|------|----------|
| ZONE           | REV                           | DESCRIPTION | DATE | APPROVED |
| D              | Top X/Y, Thickness Correction | April-30-16 | S.H. |          |
| E              | VENT HOLE                     | 01/31/18    | D.R. |          |

|                    |                                   |   |                       |                 |            |           |           |
|--------------------|-----------------------------------|---|-----------------------|-----------------|------------|-----------|-----------|
| <b>ELECTRICAL:</b> | <b>FREQUENCY:</b>                 | L1: (1575.42 ±12) MHz                                 | L2: (1227.60 ±12) MHz |                 |            |           |           |
|                    | <b>RADIATION PATTERN:</b>         | HEMISPHERICAL   |                       |                 |            |           |           |
|                    | <b>POLARIZATION:</b>              | RHCP  |                       |                 |            |           |           |
|                    | <b>VSWR:</b>                      | < 1.5:1   |                       |                 |            |           |           |
|                    | <b>IMPEDANCE:</b>                 | 50 ohms   |                       |                 |            |           |           |
|                    | <b>ANTENNA GAIN (dBic):</b>       | Free Space  | 3 in G.P.             | 4 ft G.P.       | Free Space | 3 in G.P. | 4 ft G.P. |
|                    | @ 90° (ZENITH):                   | + 3.7   | + 4.7                 | + 3.1           | - 1.7      | + 3.3     | + 4.5     |
|                    | @ 10° Elevation:                  | - 2.9   | - 1.8                 | - 1.9           | - 7.3      | - 3.8     | - 3.5     |
|                    | @ 20° Elevation:                  | - 1.3   | - 0.3                 | + 0.6           | - 6.2      | - 2.0     | - 0.8     |
|                    | @ 30° Elevation:                  | 0.0   | + 1.4                 | + 1.7           | - 5.2      | - 0.5     | + 1.4     |
|                    | @ 60 - 90° Elevation:             | > 3.0   | > 3.9                 | > 2.4           | > - 3.2    | > 2.7     | > 2.2     |
|                    | <b>BEAM WIDTH (3dB):</b>          | 108 Deg.  | 114 Deg.              | 143 Deg.        | 100 Deg.   | 106 Deg.  | 74 Deg.   |
|                    | <b>AXIAL RATIO:</b>               | 2 dB  |                       |                 |            |           |           |
|                    | <b>LIGHTNING PROTECTION:</b>      | DC GROUNDING  |                       |                 |            |           |           |
|                    | <b>LNA GAIN:</b>                  | 33 dB (Option A), 20 dB (Option A2)                   |                       |                 |            |           |           |
|                    | <b>LNA NOISE FIGURE:</b>          | 3.0 dB (Option A), 2 dB (Option A2)                   |                       |                 |            |           |           |
|                    | <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> | -41 dB / -59 dB                                       |                       | -40 dB / -40 dB |            |           |           |
|                    | @ (-100/+100) MHz:                | < -65 dB  |                       |                 |            |           |           |
|                    | <b>POWER HANDLING:</b>            | 1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-) |                       |                 |            |           |           |

**MECHANICAL:**

**SIZE:** LENGTH = 2.00 In. [50.80 mm], WIDTH = 2.00 In. [50.80 mm]  
 HEIGHT = 0.533in. [13.54mm]

**WEIGHT:** 2.6 oz. (74 g)

**FINISH:** SKYDROL RESISTANT POLYURETHANE ENAMEL  
 BASE IRIDIUM PER MIL-C-5541

**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, MCX, SMA, 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

| SIZE:         | FREQ. BAND: | LNA:  |
|---------------|-------------|---|
| 1: 2" SQ.     | 1215; L1/L2 | A: WITH 33 dB Gain LNA                            |
| 1.8" 1.8" SQ. | 1S; L1 ONLY | A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS |
| 2: 2.8" DIA.  |             | P: WITHOUT LNA                                    |
| 3: 3.5" DIA.  |             | A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS |
| 4: MINI ARINC |             |   |

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| CABLE'S LENGTH:      | CONNECTOR:                | COLOR:                                       |
|----------------------|---------------------------|--|
| X: NO CABLE          | S: SMA; RS-R-SMA; P: PINS | -1: GLOSS WHITE #17925 PER FED-STD-595B      |
| M: MAG; N: NO MAG.   | M: MCX; MM; MCX           | -2: LUSTERLESS GRAY #36320 PER FED-STD-595B  |
| #: CABLE LENGTH (IN) | N: NB; N: NB-Bulkhead     | -3: CAMO GREEN #34094 PER FED-STD-595B       |
| R: RIGHT ANGLE CON.  | T, TB: TNC, TNC-Bulkhead  | -4: LUSTERLESS BLACK #37038 PER FED-STD-595B |
|                      |                           | -5: DESERT TAN #33446 PER FED-STD-595B       |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES ± 1/64 .002 .015 .002 ± 1°

TOLERANCE SURF PER ANSI Y14.5 REMOVE ALL SURF FINISH UNLESS OTHERWISE SPECIFIED SURF FINISH PER MIL-S-8878 DAYS ON A CONFORM Q 25,000 MACHINED SURFACES 1/2 DO NOT SCALE DRAWING

DRAWN: S. HUYNH Feb-19-04  
 ME: P. TRAN Jun-31-18  
 EE: S. HUYNH Feb-19-04  
 MFG: R. ROA Jun-31-18  
 QA: L. DISONGLA Jan-31-18

APPROVED: D. REID Jun-31-18

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

3CVE11.9G1215A-XSC-2-SNG

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:

NMO Connector Option is Now Available for Some Antennas