



# Tx/Rx Beidou/GPS Antennas, P/N: 1B151625RLR-AP-XSSS-4F0 Rev B

## 2.0" Square, Back Mount Configurations


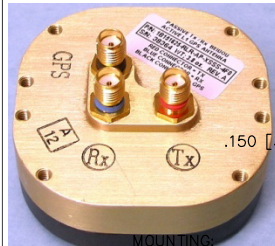


ISO 9001:2008/FAA Approved Facility

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REVISIONS		DATE	APPROVED

**SPECIFICATIONS**

**ELECTRICAL:**

	TX	RX	L1 GPS
FREQUENCY:	(1610 - 1625) MHz	(2484 - 2499) MHz	(1575.42 ±12) MHz
RADIATION PATTERN:	HEMISPHERICAL		
POLARIZATION:	LHCP	RHCP	RHCP
VSWR:	< 1.7:1	< 1.5:1	< 1.5:1
GAIN (dBic):	4 ft G.P. Free Space	4 ft G.P. Free Space	4 ft G.P. Free Space
@ 90° (Zenith):	+4.4	+3.0+/-0.5	+1.4
@ 10° Elevation:	-1.6	-2.8+/-0.5	-3.6
@ 20° Elevation:	+1.1	-1.2+/-0.5	-1.9
@ 30° Elevation:	+2.1	-0.4+/-0.5	-0.9
@ 45° Elevation:	+2.3	+0.7/-0.5	-0.7
@ 70° Elevation:	+3.7	+2.3+/-0.5	+0.7
AXIAL RATIO @ Zenith:	2 dB	2 dB	2 dB
POWER HANDLING:	5 W	1 Watt	1 Watt
DC GROUNDING:	YES (LIGHTNING PROTECTION)		
ISOLATION @1616MHz:	20 dB (F0 Option), 57 dB (F1)		> 30 dB

**LNA OPTION:**

LNA GAIN:	N/A	(35 +/- 1) dB	33 dB (P1dBout = +13 dBm)
LNA NOISE FIGURE:	N/A	2.2 dB (F0 Option), 2.8 dB (F1)	2.8dB
LNA VOLTAGE:	N/A	(+2.5 to +30) Volts DC FROM Rx RF CON.	(+2.5 to +30) Volts DC FROM Rx RF CON.
LNA DRAWING CURRENT:	N/A	< 38 mA	< 30 mA

**MECHANICAL:**

SIZE: LENGTH: 2.080 in. [ 52.78 mm], WIDTH: 2.080 in. [ 52.78 mm]  
HEIGHT: 0.788 in. [ 20.02 mm]

WEIGHT: 2.88 oz. (.082 Kg)

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

COLOR: GLOSS WHITE #17925 PER FED-STD-595B  
LUSTERLESS GRAY #36320 PER FED-STD-595B  
OLIVE DRAB GREEN #34031 PER FED-STD-595B  
LUSTERLESS BLACK #37038 PER FED-STD-595B

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

CONNECTOR: Tx (Red): SMA FEMALE, Rx (Blue): SMA FEMALE  
(OPTIONAL: PINS, 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, DO-228, MIL-C-5541,  
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

**MOUNTING:**  
8x M2.5 Thread  
X 0.200" DEEP,  
ADHESIVE GASKET

**SMA FEMALE CONNECTOR (OPTION: MCX, MMCX)**  
(+2.5 to +30) Volts DC

**SMA FEMALE CONNECTOR (BLUE RECEIVE)**  
(+2.5 to +30) Volts DC for Active Antenna only  
(OPTIONAL: PINS, MCX, MMCX, OR CABLE)

**SMA FEMALE MALE CONNECTOR (RED TRANSMIT)**  
(OPTIONAL: PINS, MCX, MMCX, OR CABLE)

CONFIGURATION:	FREQ. BAND:	GPS/RX/LNA OPTION:	CABLE LENGTH:	TX/RX/GPS CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1625 Tx/Rx	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	25: Rx ONLY	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	16: Tx ONLY		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151625L1 GPS/Tx/Rx		R: RIGHT ANGLE CON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	12151625L1/L2 GPS/Tx/Rx				
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

**P/N: 1B151625RLR-AP-XSSS-4F0**

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

QUANTITY	DESCRIPTION	PART NO.	SPECIFICATION	MATERIAL	FINISH	ITEM NO.
1	ADHESIVE GASKET	12345G-3M-1G				3

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

TOLERANCE 51M PER ANSI Y14.5

REWORK: ALL SURFACES  
REPEAL EXTERNAL EDGES .005 TO .015  
DIPS ON A CONICAL TIP .005  
SIZES IN PARENTHESIS PER MIL-9-8879  
DIPS ON A CONICAL TIP .005

DO NOT SCALE DRAWING

2.0" SQUARE FLAT  
ACTIVE, OR PASSIVE Tx/Rx  
BEIDOU/GPS ANTENNA

DATE: SEP-01-06  
DRAWN: S. HUYNH  
CHECKED: S. HUYNH  
APPROVED: S. HUYNH

SCALE: 1/1  
SHEET: 1 OF 1