



ISO 9001:2008/FAA Approved Facility

# Tx/Rx Beidou/GPS Antennas, P/N: 1B151625RLR-AP-XMMM-4F0-2 Rev B

## 2.0" Square, Back Mount Configurations



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REVISIONS		DATE	APPROVED

**ELECTRICAL:**

	TX	RX	L1 GPS
FREQUENCY:	(1610 - 1625) MHz	(2484 - 2499) MHz	(1575.42 ±12) MHz
RADIATION PATTERN:	HEMISPHERICAL		
POLARIZATION:	LHCP	RHCP	RHCP
VSWR:	< 1.5:1		
GAIN (dBic):	4 ft G.P. Free Space	4 ft G.P. Free Space	4 ft G.P. Free Space
@ 90° (Zenith):	+4.4	+1.5	+1.4
@ 10° Elevation:	-1.6	-2.1	-3.6
@ 20° Elevation:	+1.1	+0.6	-1.9
@ 30° Elevation:	+2.1	-0.3	-0.9
@ 45° Elevation:	+2.3	-0.1	-0.7
@ 70° Elevation:	+3.7	-0.7	+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:**

	N/A	(35 +/- 1) dB	33 dB (P1dBOut = +13 dBm)
LNA GAIN:			
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: 0.938 in. [23.83 mm]  
 WEIGHT: 3.9 oz. (110g)  
 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): MCX FEMALE, Rx (Blue): MCX FEMALE  
 (OPTIONAL: PINS, MMCX, 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, DO-228, MIL-C-5541,  
 MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

0.57" [14.53] (TNC), 0.72" [18.29] (N, N-Bulkhead)  
 0.357" [9.07] (SMA), 0.83" [21.00] (TNC-Bulkhead)  
 0.200" [5.08] (MCX)

1.921 [48.80]  
 4x.756 [19.20]

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

4x .756 [19.20]

2X 1.512 [38.40]

.354 [9.00]

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

RX TX GPS

.149 [3.78]

.557 [14.15]

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

.255 [6.48]

.255 [6.48]

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)	12151625L1L2GPS/Tx/Rx				
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

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

QTY	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	REV
1	ADHESIVE GASKET	12345G-3M-1G				3

UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES  
 FRACTIONS: 1/16, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1  
 DECIMALS: .005, .010, .015, .020, .025, .030, .035, .040, .045, .050, .055, .060, .065, .070, .075, .080, .085, .090, .095, .100  
 ANGLES: 15°, 30°, 45°, 60°, 90°, 120°, 150°, 180°  
 TOLERANCE: .010 PER ANSI Y14.5  
 REMOVE ALL BURRS  
 BREAK EXTERNAL EDGES TO .015  
 FILE TO .005  
 DEBURR ALL EDGES PER MIL-STD-883F  
 DIMENSIONS PER MIL-STD-883F  
 UNLESS OTHERWISE SPECIFIED  
 MACHINED SURFACES

DO NOT SCALE DRAWING

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

D 3CVE1 1B151625RLR-AP-XMMM-4F0-2 B

SCALE 1/1 SHEET 1 OF 1