



FAA Approved Facility

**New Ruggedized, High Corrosion/Harsh Environmental Resistant Helix/Patch Antennas**  
**Inmarsat/Iridium/ GPS: P/N: B1NXXRR-PA-XTS-U-XXX, Iridium/ GPS: P/N: B1RXXRR-PA-XTS-U-XXX,**  
**Thuraya/Tx-Globalstar/ GPS: P/N: B1XXLR-PA-XTS-U-XXX,**  
**Quad-Band (GSM/PCS)/Wi-Fi/S/C-Band/ GPS: P/N: B1LoLXXVR-PA-XTS-U-XXX,**  
**for Buoy, Marines, Underwater, Ground, Weather Balloon, and Helicopter Applications**

Also Available in other Mounting Configurations of 3G, 4G, 42G, 5G, S5, Mini-Arinc, and Arinc-743 Antenna Series

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



ANTCOM CORPORATION . 367 Van Ness Way, Suite 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>

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**COMMON SPECIFICATIONS:**

ZONE/REV	REVISIONS			
	DESCRIPTION	DATE	APPROVED	

**ELECTRICAL:**

FREQUENCY (MHz):	GNSS PORT: of either L1, or L1L2, or G3, or G5 Frequencies					COM PORT: of either Inmarsat/Iridium, or Iridium, or Thuraya, or Quad-Band.....			
	L5 GPS E5/E5a/E5b (S-Band) L5 IRNSS	L2 GPS B2 Compass	L2 GLO/NASS E6 Galileo B3 Compass	OmniStar-Band L6 Galileo B1 Compass	L1 GPS E1 E2 Galileo L1 IRNSS	L1 Rx Inmarsat or Thuraya	L1 Tx Inmarsat or Thuraya	Iridium or Globalstar	QUAD-BAND (GSM/PCS) L1-Band Wi-Fi/S/C-Band
1176.4 ± 12	1227.60 ± 12	1252.5 ± 7.5	1542.5 ± 14	1575.4 ± 15	1609 ± 7.0	1542.5 ± 17	1642.5 ± 17	1610-1626.5	1110-1990
1191.5 ± 27	1207.14 ± 10	1278.7 ± 12	1542.5 ± 5	1575.4 ± 17				1800-1990	2300-2500
1176.4 ± 15		1268.5 ± 10	1561.1 ± 10	1575.4 ± 12				4400-5900	

**RADIATION PATTERN:** HEMISPHERICAL  
**POLARIZATION:** RHCP or LHCP  
**VSWR:** < 2.0:1  
**IMPEDANCE:** 50 ohms  
**ANTENNA GAIN (dBi):** Free Space

Angle	+7	+0.5	-0.8	+1.9	+4.1	+2.0	+0.7	-0.3	+0.1
@ 90° Zenith:	-7	+0.5	-0.8	+1.9	+4.1	+2.0	+0.7	-0.3	+0.1
@ 10° Elevation:	-13	-5.6	-7.1	-5.0	-2.8	-5.1	-1.6	-1.9	-1.6
@ 20° Elevation:	-11	-3.9	-5.4	-3.9	-1.9	-4.1	-0.8	-1.1	-0.8
@ 30° Elevation:	-10	-2.6	-4.3	-2.6	-0.4	-2.5	-0.2	-0.8	-0.7
@ 60-90° Elevation:	> -8	> -1	> -2.4	> +0.8	> 2.9	> +0.8	> +0.3	> +1.6	> -0.7

**BEAM WIDTH (3dB):** 105 Deg. 105 Deg. 90 Deg. 95 Deg. 95 Deg. 95 Deg. 173 Deg. 180 Deg. 180 Deg. OMNI  
**AXIAL RATIO (dB):** 1.5 1 1 1 1 2 1 to 3 1 to 3 1 to 3 N/A  
**LIGHTNING PROTECTION:** DC GROUNDING

**LNA OPTION (for GNSS or GNSS/COM=Rx only VERSIONS (...A-...)):**

LNA GAIN (OPTION):	33 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	(2.5 to 24)V / < 50mA
POWER HANDLING:	PASSIVE:10W; LNA ACTIVE: 1 Watt CW

**MECHANICAL:**

SIZE: DIAMETER: 2.600in. [66 mm]  
 HEIGHT: 5.266 In. [133 mm]  
 WEIGHT: < 10oz. (283g)  
 FINISH: HERMETICALLY SEAL & TEFLON COATED

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

CONNECTOR: COM PORT: TNC FEMALE; GNSS PORT: SMA FEMALE (OPTION: TNC, F, SMA, BNC, N, MCX, MMCX)

**ENVIRONMENTAL:**

TEMPERATURE: -95 °F TO +194 °F [-70 °C TO +90 °C]  
 -700ft to +70,000 ft. (for -U-FBM-U-FKM-U-TPM, from Mounting)  
 VIBRATION: 30 G's  
 HERMETICALLY SEAL

**FEDERAL & MILITARY SPECIFICATIONS:**

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-L-45208A, MIL-STD-810, MIL-STD-461E/F, AND SAE J1455

**ACCEPTANCE TEST PROCEDURE:** ATP-GPS-L1L2-100

P/N: B...-FBM  
(Flat/Bracket Mount)

P/N: B...-FKM  
(Flat/Bulkhead Mount)

P/N: B...-TPM  
(Threaded Pipe Mount)

P/N: B...-UPM  
(Unthreaded Pipe Mount)

COM & GNSS FREQUENCY (GHz):

INL1: COM=Inmarsat/Iridium; GNSS=L1GPS	RR: RHCP/RHCP
TL1: COM=Thuraya/Tx-Globalstar; GNSS=L1GPS	LR: LHCP/RHCP
LoL1: COM=QUAD-BAND (GSM/PCS)/L-Band/Locata/Wi-Fi/S/C-Band; GNSS=L1GPS	VR: Vertical/RHCP

Change "L1" to "L1L2" for GNSS=L1L2 GPS, to "G3" for GNSS=L1GPS/Glonass/L-Band/B1 to "G5" for GNSS=L1L2 GPS/Glonass/L-Band/B1/B3/B2/L5

POLARIZATION: P: PASSIVE  
 A: with LNA/FILTERS for Rx only VERSIONS

LNA: S: SMA; SMB; SMBR; B: BNC  
 M: MCX; MM; MMCX; MMR; MMCX-R  
 N: N/Bulkhead  
 SMC, SSMC, SSMB, SSMA

COM/GNSS Female Connector: \*1: TNC; F: F  
 S: SMA; SMB; SMBR; B: BNC  
 M: MCX; MM; MMCX; MMR; MMCX-R  
 N: N/Bulkhead  
 SMC, SSMC, SSMB, SSMA

COLOR: -U: TEFLON COATED GRAY for MARINES/BUOY APP.  
 -1: GLOSS WHITE #17925 PER FED-STD-595B PAINT  
 -2: LUSTERLESS GRAY #36320 PER FED-STD-595B PAINT  
 -3: OLIVE DRAB GREEN #34094 PER FED-STD-595B PAINT  
 -4: LUSTERLESS BLACK #37038 PER FED-STD-595B PAINT  
 -5: TAN #; FS 23446 or 33446, FED-STD-595 PAINT

**ANTCOM CORP.** TORRANCE, CALIFORNIA

DESIGNED BY: S. HUYNH  
 DATE: April-11-11

DRAWN BY: D. 3CVE1  
 SCALE: 1/1

REVISIONS:

NO.	DESCRIPTION	PART NO.	REV. NO.
1	Additional SILICON GASKET (Item 539a) for -FBM/-FKM	3061P001-2-2G	1

QUANTITY REQD: 5  
4  
3  
2

DESCRIPTION: 1 Additional SILICON GASKET (Item 539a) for -FBM/-FKM

PARTS LIST: 3061P001-2-2G

**P/N: B1R1RR-PA-XTS-U-XXX**

Dimensions: 2.600 [66.04] diameter, 5.266 [133.77] height, 0.994 [25.25] base diameter, 2.305 [58.56] mounting hole diameter, 0.720 [18] mounting hole diameter, 2x.249 [6.32] mounting hole diameter, 2.305 [58.56] mounting hole diameter, 1-14 UNS Threads or 3/4 NPT Threads, 0.1075 [27.31] set screw diameter, 1.500 [38.10] mounting hole diameter.

Materials: SILICON GASKET P/N: 3061P001-2-2G (Item 539a), P/N: MS28775-024 (94115K024), Item 553, PTFE O-RING P/N: 9559K28, 0-Ring P/N: 9559K28.

Mounting: 4x 6-32 UNC Threads, 0.250 Mounting Option, Compatible with 2G & S2 Antenna Series & Mounting Bracket P/N: MTR-2 Rev D

NMO Connector is Now Available for Some Antennas