



**New Infinite Balance 1/2 Wave Length Quadrifilar Helix L1 GPS Timing Antenna, P/N: BL1R-A-XTB-1-FKM-LP**  
 for More Gain, High Multipath Rejection & Broader 194deg Beamwidth for Timing, Buoy, Marines, Ground and Weather Station App  
 with High Iridium/Inmarsat/Thuraya-Rejection Front Filters (36dB@1616MHz, 44dB@1625MHz, 55dB@1640MHz, 67db@1660MHz)  
 with High Power Front End Limiter Suitable for High Interference Environment  
 with Lightning Protection Compliance Per EN61000-4-5 Level 4



Available in L1GPS/Glonass, L1GPS/Glonass/Omnistar, L1/L2GPS, L1/L2GPS/Glonass, L1/L2GPS/Glonass/Omnistar and Other GNSS Bands

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**SPECIFICATIONS**

ZONE	REV	DESCRIPTION	DATE	APPROVED

**ELECTRICAL:**

FREQUENCY:	L1: (1575.42 ± 12.0) MHz
RADIATION PATTERN:	HEMISPHERICAL
POLARIZATION:	RHCP
VSWR:	< 2.0:1
IMPEDANCE:	50 ohms
ANTENNA GAIN (dBi):	
@ 90 ° Above Horizon (Top):	+ 1.2
@ 15 ° Above Horizon:	- 0.2
@ 20 ° Above Horizon:	+ 0.2
@ 25 ° Above Horizon:	+ 0.5
@ 30 ° Above Horizon:	+ 0.6
@ 70 ° Above Horizon:	+ 0.0
BEAM WIDTH (3dB):	192 Deg.
AXIAL RATIO:	1 dB
MULTIPATH REJECTION (RHCP/LHCP):	
@ 90 ° Above Horizon (Top):	20 dB
@ 15° Above Horizon:	16 dB
@ 25° Above Horizon:	18 dB
DC GROUNDING:	YES
LIGHTNING PROTECTION COMPLIANCE:	PER EN61000-4-5 LEVEL 4
LNA GAIN (OPTION):	33 dB
LNA NOISE FIGURE:	2.7 dB
LNA P1dB Out:	+13dBm
LNA DC POWER:	(+2.4 TO +5) Volts DC / (15 TO 30) mA
FRONT FILTER REJECTION @ (-50/+50) MHz:	-41 dB / -59 dB
@ (-100/+100) MHz:	< -65 dB
FRONT END HIGH POWER LIMITER:	BUILT-IN
ANTENNA PROPAGATION DELAY:	34 ns

**MECHANICAL:**

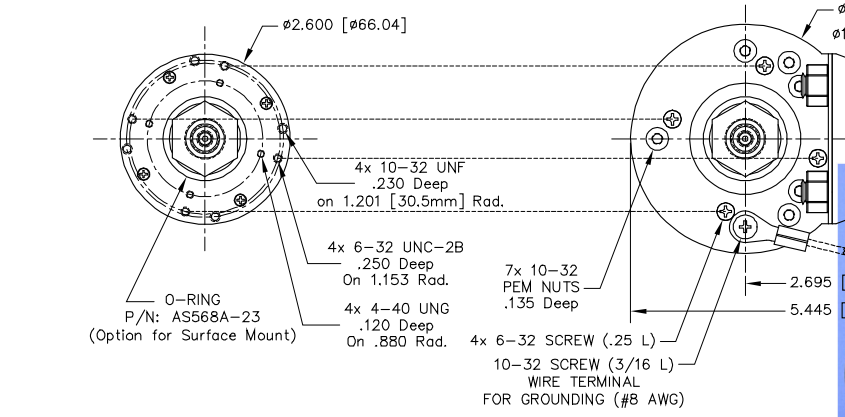
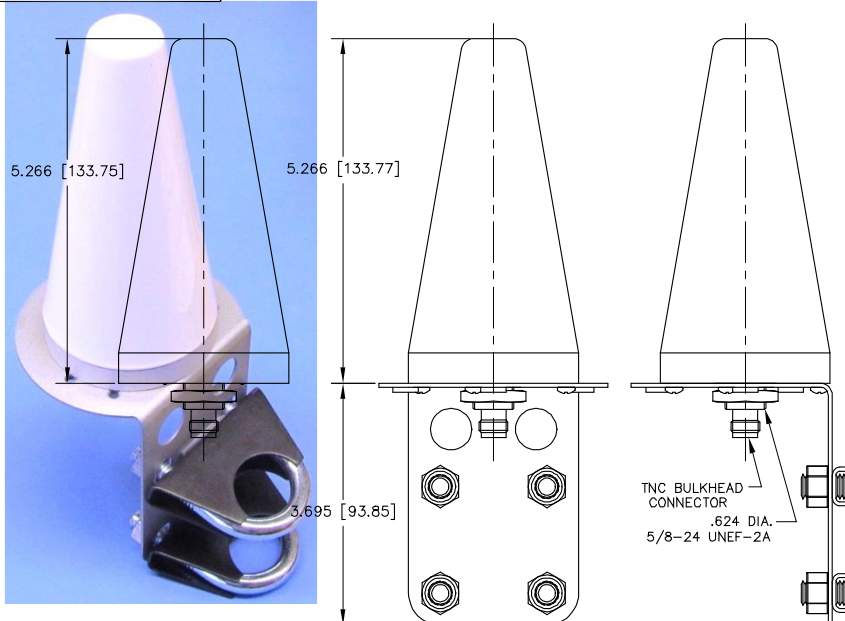
SIZE:	DIAMETER: 2.60in. [66 mm] HEIGHT: 5.266 in. [133 mm]
WEIGHT:	< 8oz. (226g)
FINISH:	HERMETICALLY SEAL & TEFLON COATED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE & RUGGEDIZED RADOME IMPACT, ABRASION, UV, SOLVENT, SKYDROL, CORROSION RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE BULKHEAD (OPTION: TNC-BK, 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-FKM/U-TPM from Mounting Surface) 30 G's HERMETICALLY SEAL
VIBRATION:	

**FEDERAL & MILITARY SPECIFICATIONS:**

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

**ACCEPTANCE TEST PROCEDURE:**

ATP-GPS-L1L2-100



**P/N: BL1R-A-XTB-1-FKM-LP**

FREQUENCY (GHz):	POLARIZATION:	LNA:	FEMALE CONNECTOR:	COLOR:	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS ANGLES ± 1/64 .0005 .005 ± 1°
IN: Inmarsat/Iridium/L1GPS/Glonass (RHCP); IR4/Iridium/L1GPS/Glonass (RHCP)	R: RHCP	P: WITHOUT LNA	T: TNC; TB: TNC-Bulkhead; B: BNC	-1: GLOSS WHITE #17925 PER FED-STD-595B PAINT	APPROVAL MARK: S. HUYNH April-11-11
T: Thuraya/Tx Globalstar (LHCP); G: Tx only Globalstar (LHCP)	L: LHCP	A: WITH LNA (33dB)	S: SMA; SMB; SMBRM; MCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B PAINT	APPROVAL MARK: S. HUYNH April-11-11
L1: L1 GPS Only; G3: L1 GPS/GLONASS/L-Band/B1; L1L2: L1/L2 GPS only	V: Vertical	A2: WITH LNA (20dB)	M/MCMCX; N: N-Bulkhead; Q: QMA	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B PAINT	APPROVAL MARK: S. HUYNH Jan-14-14
G5: L1/L2 GPS/GLONASS/L-Band/B1/B3/B2/L5	H: Horizontal	A4: WITH LNA (40 dB)	S/MC; SSMC; SSM; SSMA	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B PAINT	APPROVAL MARK: S. HUYNH Jan-14-14
L01: QUAD-BAND (GSM/PCS/L-Band/Locata/Wi-Fi/S/C-Band)			T/B: TNC-Bulkhead with Microstrip; T/B: TNC-Bulkhead	-5: TAN #1: FS 23446 or 33446; FED-STD-595 PAINT	DO NOT SCALE DRAWING

**ANTCOM CORP.** TORRANCE CALIFORNIA

Active L1 GPS Timing Antenna

REV: 3CVE1 DRAWING NO: BL1R-A-XTB-1-FKM-LP

SCALE: 1/1 SHEET: 1 OF 1

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