



FAA Approved Facility

# The SURVEY I

## New High Performance Ruggedized Survey Mount 1 GNSS + S-Band Antenna

### P/N: G8SAnt-3A4TB1-M1 Rev A

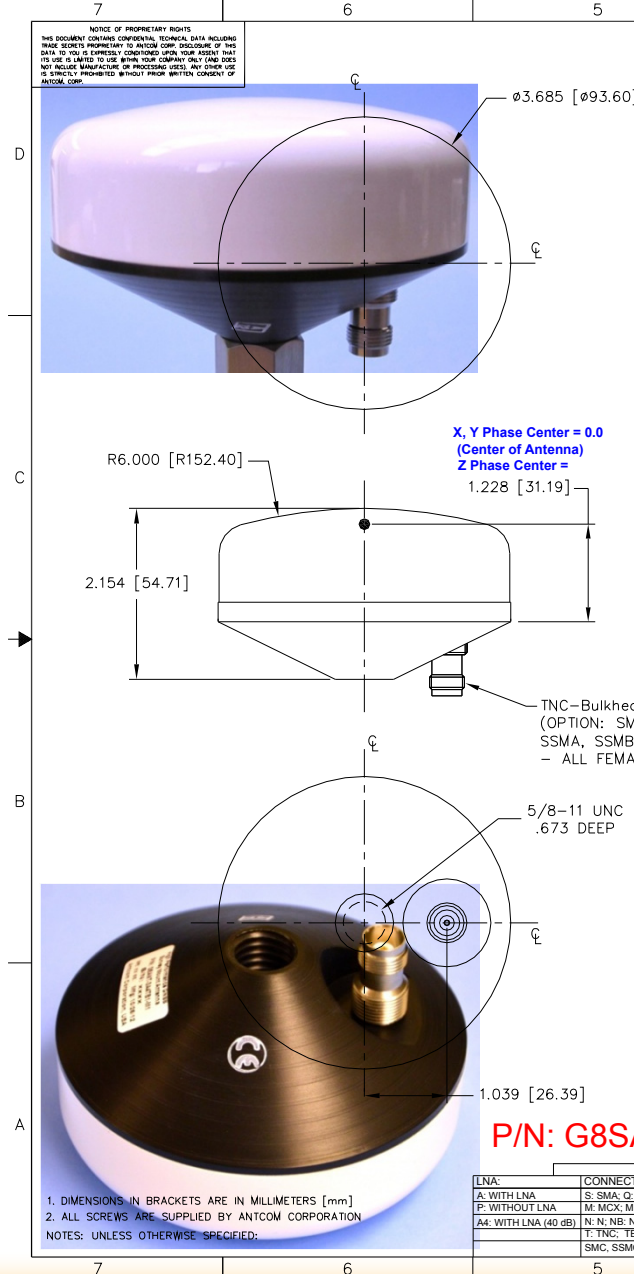
### For Survey, Mining, and Ground Applications

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>

“-HF” for High Iridium/Inmarsat/Thuraya-Rejection Front End Filter Option: **-22dB@1616MHz**, **-34dB@1625-1660MHz**,  
“-HFO” for Additional Omnistar Rejection: **-27dB@1545MHz**



ZONE	REVISIONS						
	REV	DESCRIPTION	DATE	APPROVED			
<b>ELECTRICAL: SPECIFICATIONS</b>							
FREQUENCY:	L5 GPS E5, E5a, E5b Galileo L5 IRNSS 1176.45 ± 12 MHz 1164.45 - 1219.14 MHz 1176.45 ± 12 MHz	L2 GPS B2 Compass 1227.60 ± 12 MHz 1207.14 ± 10 MHz	L2 GLONASS E6 Galileo B3 Compass 1242 - 1252 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10 MHz	OmniSTAR / L-Band L6 Galileo B1 Compass 1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10 MHz	L1 GPS E1, E2 Galileo L1 IRNSS 1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz	L1 GLONASS 1598 - 1609 MHz	S-Band 2493 ± 12 MHz
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP	RHCP	RHCP	RHCP	RHCP	RHCP	RHCP
VSWR:	< 2.0:1	< 2.0:1	< 2.0:1	< 2.0:1	< 2.0:1	< 2.0:1	< 2.0:1
IMPEDANCE:	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms
ANTENNA GAIN (dBi):							
@ 90° Above Horizon (Top):	+ 0.2	+ 1.3	+ 1.4	+ 4.1	+ 4.9	+ 5.0	+ 4.1
@ 15° Above Horizon:	- 4.5	- 3.8	- 3.9	- 3.9	- 3.3	- 3.1	- 3.0
@ 20° Above Horizon:	- 3.5	- 2.9	- 3.0	- 3.1	- 2.5	- 2.3	- 2.1
@ 25° Above Horizon:	- 2.5	- 2.0	- 2.1	- 2.1	- 1.6	- 1.5	- 1.4
@ 30° Above Horizon:	- 2.2	- 1.7	- 1.8	- 1.5	- 0.8	- 0.7	- 0.7
@ 70° Above Horizon:	- 0.2	+ 0.8	+ 0.9	+ 3.4	+ 4.2	+ 4.4	+ 3.5
BEAM WIDTH (3dB):	124 Deg.	120 Deg.	120 Deg.	80 Deg.	80 Deg.	80 Deg.	90 Deg.
AXIAL RATIO:	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB
MULTIPATH REJECTION (RHCP/LHCP):							
@ 90° Above Horizon (Top):	34 dB	32 dB	30 dB	26 dB	28 dB	29 dB	
@ 0° Above Horizon:	8 dB	7 dB	8 dB	18 dB	12 dB	11 dB	
@ 15° Above Horizon:	14 dB	15 dB	14 dB	16 dB	14 dB	12 dB	
@ 25° Above Horizon:	19 dB	19 dB	17 dB	17 dB	15 dB	15 dB	
LIGHTNING PROTECTION:	DC GROUNDING						
LNA GAIN:	42 dB	42 dB	42 dB	43 dB	43 dB	43 dB	43 dB
LNA NOISE FIGURE (With Filter):	2.6 dB	2.6 dB	2.6 dB	2.9 dB	2.9 dB	2.9 dB	2.9 dB
LNA P1dB Out:	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm	+10 dBm
LNA DC POWER:	(3.3-24)V/-50mA						
POWER HANDLING:	3 Watt CW (With Limiter)						

#### MECHANICAL:

SIZE: DIAMETER: 3.68 in. [93.6mm]  
HEIGHT: 2.15 in [38.5mm]

WEIGHT: 14.6oz. (413.9 g)

FINISH: BASE: HARD BLACK ANODIZE PER MIL-A-8625F, TYPE III, CLASS 2  
RADOME: SKYDROL RESISTANT POLYURETHANE ENAMEL PER FED-STD-595B

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

CONNECTOR: TNC Bulkhead  
(OPTION: SMA, QMA, SMB, SMC, SSMA, SSMB, SSMC, MCX, MMCX)

#### ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]  
70,000 ft.  
> 30 G's  
HERMETICALLY SEAL

#### FEDERAL & MILITARY SPECIFICATIONS:

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

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

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

LNA:	CONNECTOR:	COLOR:
A: WITH LNA	S: SMA; Q: QMA; SMB; SMBR; B: BNC	-1: GLOSS WHITE #17925 PER FED-STD-595B
P: WITHOUT LNA	M: MCX; MM; MMCX; MMR; MMCX-R	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
A4: WITH LNA (40 dB)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	SMC; SSMC; SSMB; SSMA	-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD	DESCRIPTION	PARTS LIST	PART NO	FINISH	ITEM NO
					2
					1

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
FRACTIONS ARE DECIMAL INCHES  
ANGLES ± 1/64  
HOLE DIA ± .015  
HOLE POS ± .010

ORIGINAL DRAWN S. HUYNH Mar-24-09  
ORIGINAL DESIGNED S. HUYNH Mar-24-09  
TOLERANCE ± .010 PER ANSI Y14.5  
REMOVE ALL BURRS  
BREAK EXTERNAL EDGES .006 TO .010  
P. TRAIN  
SCREW TORQUES PER MIL-STD-8839  
DATA ON A COMMON 2.000  
MACHINED SURFACES  
DO NOT SCALE DRAWING

APPROVED S. HUYNH Sep-10-12

**ANTCOM CORP.** TORRANCE CALIFORNIA  
3.7in. DIAMETER SURVEY MOUNT 1 GNSS + S-BAND ANTENNA

REV: 1  
DATE: 08-08-14  
SCALE: 1/1  
SHEET: 1 OF 1

NMO Connector Option is Now Available for Some Antennas