The UNMANNED II

New High Performance Unmanned GNSS +S-Band Antenna

P/N: G8SAnt-1A4TNB1

(2.9" Sq. X 0.99" Thick)

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

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"-HF" for High Iridium/Inmarsat/Thuraya-Rejection Front End Filter Option: -22dB@1616MHz, -34dB@(1625-1660)MHz

"-HFO" for Additional Omnistar Rejection: -27dB@1545MHz

NMO Connector Option is Now Available for Some Antennas

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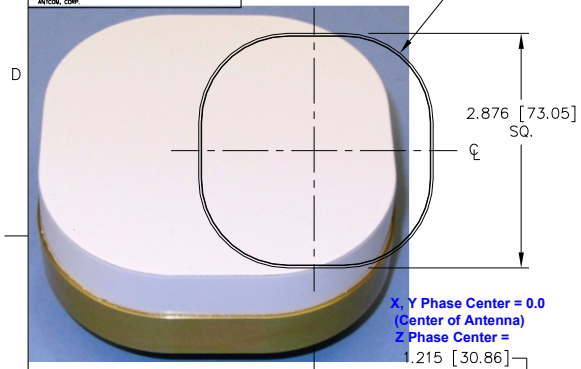

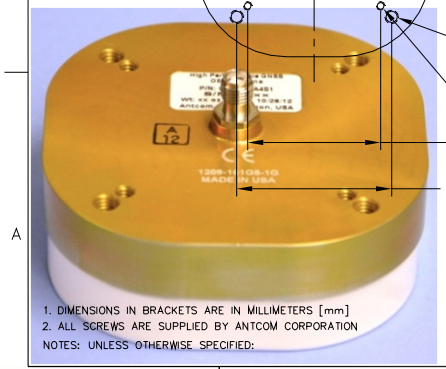

SPECIFICATIONS

ELECTRICAL:

	L5 GPS E5, E5a, E5b Galileo L5 IRNSS	L2 GPS B2 Compass	L2 GLONASS E6 Galileo B3 Compass	OmniSTAR / L-Band L6 Galileo B1 Compass	L1 GPS E1, E2 Galileo L1 IRNSS	L1 GLONASS	S-Band
FREQUENCY:	1176.45 ± 12 MHz 1164.45 - 1219.14 MHz 1176.45 ± 12 MHz	1227.60 ± 12 MHz 1207.14 ± 10 MHz	1242 - 1252 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10 MHz	1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10 MHz	1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz	1598 - 1609 MHz	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 (dBic):	ON 5" GP	F.S	ON 5" GP	F.S	ON 5" GP	F.S	ON 5" GP	F.S	ON 5" GP	F.S	ON 5" GP	F.S	
@ 90 ° Above Horizion (Top):	+ 1.9	- 2.6	+ 3.7	- 1.8	+ 4.1	- 1.6	+ 4.4	+ 3.8	+ 5.6	+ 4.4	+ 6.2	+ 4.9	+ 4.1
@ 15 ° Above Horizion:	- 4.5	- 8.7	- 3.3	- 7.3	- 3.0	- 6.9	- 4.5	- 4.4	- 3.5	- 4.0	- 3.0	- 3.5	- 3.0
@ 20 ° Above Horizion:	- 3.6	- 7.2	- 2.5	- 5.8	- 2.2	- 5.4	- 3.6	- 3.7	- 2.6	- 3.3	- 2.1	- 2.8	- 2.1
@ 25 ° Above Horizion:	- 2.7	- 5.6	- 1.6	- 4.2	- 1.3	- 3.8	- 2.7	- 3.0	- 1.6	- 2.5	- 1.1	- 2.0	- 1.4
@ 30 ° Above Horizion:	- 2.3	- 3.2	- 1.1	- 3.7	- 0.8	- 3.4	- 1.8	- 2.2	- 0.7	- 1.7	- 0.2	- 1.2	- 0.7
@ 70 ° Above Horizion:	+ 1.2	- 2.7	+ 2.9	- 1.9	+ 3.4	- 1.7	+ 3.6	+ 2.9	+ 4.8	+ 3.5	+ 5.4	+ 4.1	+ 3.5
BEAM WIDTH (3dB):	95 Deg.	130 Deg.	80 Deg.	135 Deg.	80 Deg.	134 Deg.	80 Deg.	77 Deg.	80 Deg.	76 Deg.	80 Deg.	77 Deg.	90 Deg.
AXIAL RATIO:	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB	1 dB
MULTIPATH REJECTION (RHCP/LHCP):													
@ 90 ° Above Horizion (Top):	23 dB	20 dB	23 dB	23 dB	22 dB	21 dB	31 dB	34 dB	32 dB	34 dB	32 dB	32 dB	
@ 0° Above Horizion:	19 dB	-3 dB	19 dB	-3 dB	16 dB	-4 dB	10 dB	15 dB	9 dB	14 dB	8 dB	19 dB	
@ 15° Above Horizion:	19 dB	8 dB	16 dB	8 dB	14 dB	8 dB	14 dB	18 dB	13 dB	17 dB	11 dB	14 dB	
@ 25° Above Horizion:	17 dB	15 dB	16 dB	18 dB	15 dB	16 dB	16 dB	19 dB	16 dB	17 dB	14 dB	16 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:	2.90 in. SQ. [73.7 mm] HEIGHT: 1.29 in [32.8mm]
WEIGHT:	7.7oz. (218.3 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F CLASS 1A
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC Female Bulkhead (OPTION: TNC, QMA, SMB, SMA, SSMA, SSMB, SSMC, MCX, MMCX)

ENVIRONMENTAL:

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

FEDERAL & MILITARY SPECIFICATIONS:

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

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

P/N: G8SAnt-1A4TNB1

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
MN: FLUSH MAGNET	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	TNB: TNC Bulkhead with With N Connector Thread on Bulkhead	-5: DESERT TAN #33446 PER FED-STD-595B

ITEM NO	PART NO	DESCRIPTION	QUANTITY REQD	FINISH
		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .005
MACHINED SURFACES 125

DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-24-09
ORIGINALLY DESIGNED	S. HUYNH	Mar-24-09
UPDATED	S. HUYNH	Oct-08-13
UPDATE DRAWN	P. TRAN	Oct-08-13
APPROVED	S. HUYNH	Oct-08-13

ANTCOM CORP. TORRANCE CALIFORNIA

2.8in. SQ. UNMANNED GNSS + S-BAND ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	G8SAnt-1A4TNB1	A

SCALE 1/1 SHEET 1 OF 1