7-Element CRPA Antenna Array

P/N: 7NF-14CGL1L2AL-XS-1 (30dB LNA with Limiters); P/N: 7NF-14CGL1L2A2L-XS-1 (22dB LNA with Limiters)
P/N: 7NF-14CGL1L2P-XS-1 (L1/L2 GPS); P/N: 7NF-14CG5P-XS-1 (L1/L2 GPS/GLONASS)
(14.09" Dia. x 0.815" High), ½ Lambda Spacing, GAS1 Foot Print
"-PL-" or "-AL-" for Limiter Options for High Power Pulse Protection

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Wide Band GNSS Option Is Available

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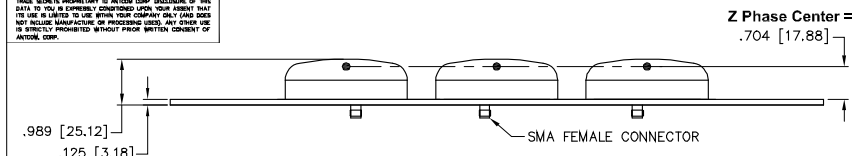
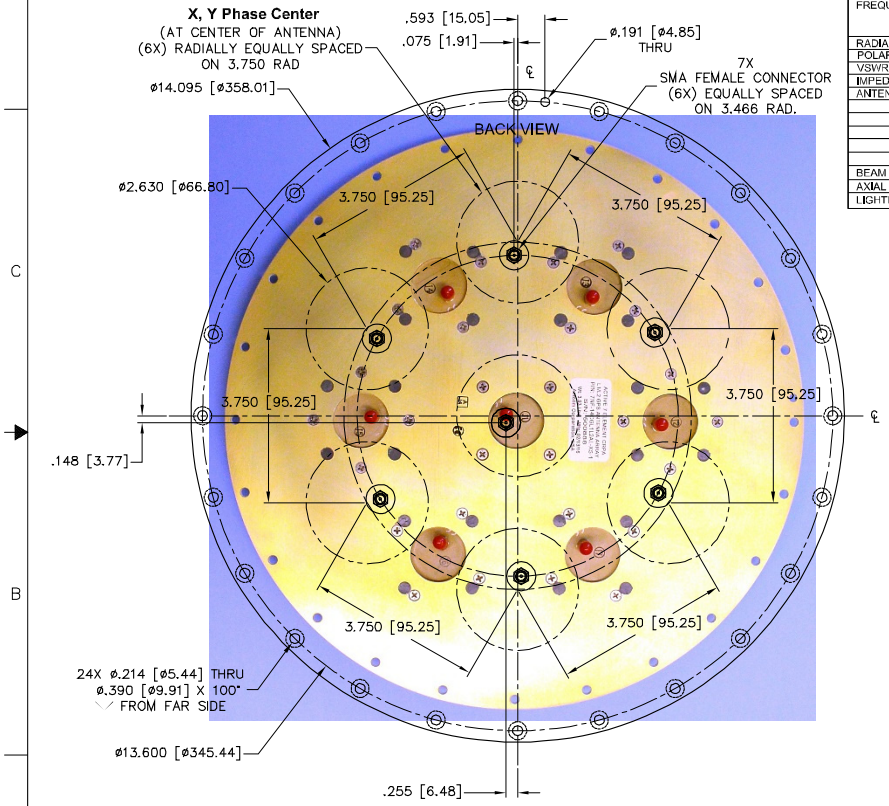
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	INITIAL	08/13/12	S.H
	B	HEIGHT	12/16/16	S.H





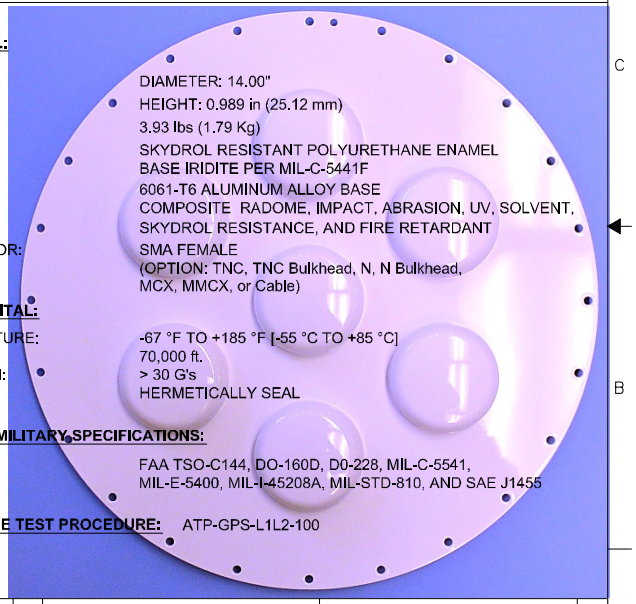
SPECIFICATIONS

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
FREQUENCY:	1176,45 ± 12 MHz 1164,45 - 1219,14 MHz 1176,45 ± 15 MHz	1227,60 ± 12 MHz 1207,14 ± 10 MHz	1252,50 ± 7,5 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	1609 ± 7,0 MHz
RADIATION PATTERN:	HEMISPHERICAL					
POLAREDATION:	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
IMPEDANCE:	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms	50 ohms
ANTENNA GAIN (dBic):	4 ft G.P.	4 ft G.P.	4 ft G.P.	4 ft G.P.	4 ft G.P.	4 ft G.P.
@ 90 ° (ZENITH):	- 3	+ 4,8	+ 2,4	- 2,0	+ 2,0	+ 1,4
@ 10 ° Elevation:	- 10	- 3,5	- 6,3	- 5,1	- 2,5	- 3,4
@ 20 ° Elevation:	- 7	- 0,3	- 3,2	- 1,9	+ 0,4	- 0,5
@ 30 ° Elevation:	- 5	+ 1,8	- 1,2	- 0,5	+ 1,6	+ 0,5
@ 60 - 90 ° Elevation:	> - 4	> 2,6	> - 0,1	> - 0,5	> + 1,6	> -0,2
BEAM WIDTH (3dB):	120 Deg.	115 Deg.	110 Deg.	145 Deg.	150 Deg.	145 Deg.
AXIAL RATIO:	2 dB	1 dB	2 dB	2 dB	1 dB	3 dB
LIGHTNING PROTECTION:	DC GROUNDING					

MECHANICAL:

SIZE: DIAMETER: 14.00"
HEIGHT: 0.989 in (25.12 mm)
WEIGHT: 3.93 lbs (1.79 Kg)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: SMA FEMALE
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, 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, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFORMALITY:	SIZE (INCHES):	SHAPE:	FREQ. BAND:	LNA:
CC: CONFORMAL/CURVED		C: CIRCULAR	12: L1/L2	A: WITH LNA
CF: CONFORMAL/FLAT		S: SQUARE	1: L1 ONLY	AL: WITH LNA/LIMITER
NF: NOT CONFORMAL/FLAT		T: TRIANGULAR	G: L1/L2/L5	P: WITHOUT LNA
NC: NOT CONFORMAL/CURVED		H: HEXAGON		
		R: RECTANGULAR		

ITEM NO	PART NO	DESCRIPTION	QUANTITY REQD
1	MS24693C274	MOUNTING SCREWS: 10-32, 3/4"	24

PARTS LIST

P/N: 7NF-14CGL1L2P-XS-X

NUMBER OF ELEMENT:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .xx ±.01, .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 Ø ±.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	May-29-01
ORIGINALLY DESIGNED	S. HUYNH	May-29-01
UPDATE DRAWN	P. TRAN	Aug-13-12
DESIGN UPDATE	S. HUYNH	Aug-13-12
APPROVED	S. HUYNH	Aug-13-12

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING:
7 ELEMENT L1L2 GPS CIRCULAR ANTENNA ARRAY

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	7NF-14CGL1L2P-XS-X	B

SCALE 1/1 SHEET 1 OF 1

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf
Amplifiers/Power Divider/Combiner/Filters :http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts1.pdf