

NOTICE OF PROPRIETARY RIGHTS
THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA INCLUDING TRADE SECRETS PROPRIETARY TO MATTERWAVES CORP. DISCLOSURE OF THIS DATA TO YOU IS EXPRESSLY CONDITIONED UPON YOUR ASSENT THAT ITS USE IS LIMITED TO USE WITH YOUR COMPANY ONLY (AND DOES NOT INCLUDE MANUFACTURE OR PROCESSING USES). ANY OTHER USE IS STRICTLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF MATTERWAVES CORP.

MATTERWAVES
Antenna Technology



Optional Mounting:
4x 10-32 UNC-2B
0.250" Deep
Equally Spaced
On 1.344" Rad.
22.5° Offset.
(FRPA)

P/N: MAT-3.5GPS1216P-TC1

SIZE:	FREQ. BAND:	LNA:	CABLE'S LENGTH:	CONNECTOR:
1.2 = 1.2" Sq., 1 = 2" Sq.	L1 or 15 = L1 GPS	A: WITH LNA	X: NO CABLE, #; CABLE LENGTH (IN)	S: SMA, T: TNC, N: N
1.9 = 1.9" Sq., 2.6 = 2.6" Dia.	L1L2 or 1215 = L1L2 GPS	A5: WITH 43dB LNA	M: MAG, N: NO MAG.	SB: SMB, SSB: SSMB
3.5 = 3.5" Dia., 4 = MINI ARINC	1216 = L1L2 GPS/GLONASS	P: WITHOUT LNA	MN: FLUSH MAGNET	M: MCX; MM: MMCX
743 = ARINC 743	L1L2L5, 16 = L1GNSS, GNSS		R: RIGHT ANGLE CON.	TB: TNC-BH, NB: N-BH
52 = 5" Dia. SURVEY				

MATTERWAVES' PROPRIETARY

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	B1-B2-B3-B3a-B3b-B3c-B3d-B3e-B3f-B3g-B3h-B3i-B3j-B3k-B3l-B3m-B3n-B3o-B3p-B3q-B3r-B3s-B3t-B3u-B3v-B3w-B3x-B3y-B3z-B3aa-B3ab-B3ac-B3ad-B3ae-B3af-B3ag-B3ah-B3ai-B3aj-B3ak-B3al-B3am-B3an-B3ao-B3ap-B3aq-B3ar-B3as-B3at-B3au-B3av-B3aw-B3ax-B3ay-B3az-B3ba-B3bb-B3bc-B3bd-B3be-B3bf-B3bg-B3bh-B3bi-B3bj-B3bk-B3bl-B3bm-B3bn-B3bo-B3bp-B3bq-B3br-B3bs-B3bt-B3bu-B3bv-B3bw-B3bx-B3by-B3bz-B3ca-B3cb-B3cc-B3cd-B3ce-B3cf-B3cg-B3ch-B3ci-B3cj-B3ck-B3cl-B3cm-B3cn-B3co-B3cp-B3cq-B3cr-B3cs-B3ct-B3cu-B3cv-B3cw-B3cx-B3cy-B3cz-B3da-B3db-B3dc-B3dd-B3de-B3df-B3dg-B3dh-B3di-B3dj-B3dk-B3dl-B3dm-B3dn-B3do-B3dp-B3dq-B3dr-B3ds-B3dt-B3du-B3dv-B3dw-B3dx-B3dy-B3dz-B3ea-B3eb-B3ec-B3ed-B3ee-B3ef-B3eg-B3eh-B3ei-B3ej-B3ek-B3el-B3em-B3en-B3eo-B3ep-B3eq-B3er-B3es-B3et-B3eu-B3ev-B3ew-B3ex-B3ey-B3ez-B3fa-B3fb-B3fc-B3fd-B3fe-B3ff-B3fg-B3fh-B3fi-B3fj-B3fk-B3fl-B3fm-B3fn-B3fo-B3fp-B3fq-B3fr-B3fs-B3ft-B3fu-B3fv-B3fw-B3fx-B3fy-B3fz-B3ga-B3gb-B3gc-B3gd-B3ge-B3gf-B3gg-B3gh-B3gi-B3gj-B3gk-B3gl-B3gm-B3gn-B3go-B3gp-B3gq-B3gr-B3gs-B3gt-B3gu-B3gv-B3gw-B3gx-B3gy-B3gz-B3ha-B3hb-B3hc-B3hd-B3he-B3hf-B3hg-B3hi-B3hj-B3hk-B3hl-B3hm-B3hn-B3ho-B3hp-B3hq-B3hr-B3hs-B3ht-B3hu-B3hv-B3hw-B3hx-B3hy-B3hz-B3ia-B3ib-B3ic-B3id-B3ie-B3if-B3ig-B3ih-B3ii-B3ij-B3ik-B3il-B3im-B3in-B3io-B3ip-B3iq-B3ir-B3is-B3it-B3iu-B3iv-B3iw-B3ix-B3iy-B3iz-B3ja-B3jb-B3jc-B3jd-B3je-B3jf-B3jg-B3jh-B3ji-B3jj-B3jk-B3jl-B3jm-B3jn-B3jo-B3jp-B3jq-B3jr-B3js-B3jt-B3ju-B3jv-B3jw-B3jx-B3jy-B3jz-B3ka-B3kb-B3kc-B3kd-B3ke-B3kf-B3kg-B3kh-B3ki-B3kj-B3kk-B3kl-B3km-B3kn-B3ko-B3kp-B3kq-B3kr-B3ks-B3kt-B3ku-B3kv-B3kw-B3kx-B3ky-B3kz-B3la-B3lb-B3lc-B3ld-B3le-B3lf-B3lg-B3lh-B3li-B3lj-B3lk-B3ll-B3lm-B3ln-B3lo-B3lp-B3lq-B3lr-B3ls-B3lt-B3lu-B3lv-B3lw-B3lx-B3ly-B3lz-B3ma-B3mb-B3mc-B3md-B3me-B3mf-B3mg-B3mh-B3mi-B3mj-B3mk-B3ml-B3mm-B3mn-B3mo-B3mp-B3mq-B3mr-B3ms-B3mt-B3mu-B3mv-B3mw-B3mx-B3my-B3mz-B3na-B3nb-B3nc-B3nd-B3ne-B3nf-B3ng-B3nh-B3ni-B3nj-B3nk-B3nl-B3nm-B3nn-B3no-B3np-B3nq-B3nr-B3ns-B3nt-B3nu-B3nv-B3nw-B3nx-B3ny-B3nz-B3oa-B3ob-B3oc-B3od-B3oe-B3of-B3og-B3oh-B3oi-B3oj-B3ok-B3ol-B3om-B3on-B3oo-B3op-B3oq-B3or-B3os-B3ot-B3ou-B3ov-B3ow-B3ox-B3oy-B3oz-B3pa-B3pb-B3pc-B3pd-B3pe-B3pf-B3pg-B3ph-B3pi-B3pj-B3pk-B3pl-B3pm-B3pn-B3po-B3pp-B3pq-B3pr-B3ps-B3pt-B3pu-B3pv-B3pw-B3px-B3py-B3pz-B3qa-B3qb-B3qc-B3qd-B3qe-B3qf-B3qg-B3qh-B3qi-B3qj-B3qk-B3ql-B3qm-B3qn-B3qo-B3qp-B3qq-B3qr-B3qs-B3qt-B3qu-B3qv-B3qw-B3qx-B3qy-B3qz-B3ra-B3rb-B3rc-B3rd-B3re-B3rf-B3rg-B3rh-B3ri-B3rj-B3rk-B3rl-B3rm-B3rn-B3ro-B3rp-B3rq-B3rr-B3rs-B3rt-B3ru-B3rv-B3rw-B3rx-B3ry-B3rz-B3sa-B3sb-B3sc-B3sd-B3se-B3sf-B3sg-B3sh-B3si-B3sj-B3sk-B3sl-B3sm-B3sn-B3so-B3sp-B3sq-B3sr-B3ss-B3st-B3su-B3sv-B3sw-B3sx-B3sy-B3sz-B3ta-B3tb-B3tc-B3td-B3te-B3tf-B3tg-B3th-B3ti-B3tj-B3tk-B3tl-B3tm-B3tn-B3to-B3tp-B3tq-B3tr-B3ts-B3tt-B3tu-B3tv-B3tw-B3tx-B3ty-B3tz-B3ua-B3ub-B3uc-B3ud-B3ue-B3uf-B3ug-B3uh-B3ui-B3uj-B3uk-B3ul-B3um-B3un-B3uo-B3up-B3uq-B3ur-B3us-B3ut-B3uu-B3uv-B3uw-B3ux-B3uy-B3uz-B3va-B3vb-B3vc-B3vd-B3ve-B3vf-B3vg-B3vh-B3vi-B3vj-B3vk-B3vl-B3vm-B3vn-B3vo-B3vp-B3vq-B3vr-B3vs-B3vt-B3vu-B3vv-B3vw-B3vx-B3vy-B3vz-B3wa-B3wb-B3wc-B3wd-B3we-B3wf-B3wg-B3wh-B3wi-B3wj-B3wk-B3wl-B3wm-B3wn-B3wo-B3wp-B3wq-B3wr-B3ws-B3wt-B3wu-B3wv-B3ww-B3wx-B3wy-B3wz-B3xa-B3xb-B3xc-B3xd-B3xe-B3xf-B3xg-B3xh-B3xi-B3xj-B3xk-B3xl-B3xm-B3xn-B3xo-B3xp-B3xq-B3xr-B3xs-B3xt-B3xu-B3xv-B3xw-B3xx-B3xy-B3xz-B3ya-B3yb-B3yc-B3yd-B3ye-B3yf-B3yg-B3yh-B3yi-B3yj-B3yk-B3yl-B3ym-B3yn-B3yo-B3yp-B3yq-B3yr-B3ys-B3yt-B3yu-B3yv-B3yw-B3yx-B3yy-B3yz-B3za-B3zb-B3zc-B3zd-B3ze-B3zf-B3zg-B3zh-B3zi-B3zj-B3zk-B3zl-B3zm-B3zn-B3zo-B3zp-B3zq-B3zr-B3zs-B3zt-B3zu-B3zv-B3zw-B3zx-B3zy-B3zz			(1540-1610) MHz			(1164-1298) MHz		
RADIATION PATTERN:	HEMISPHERICAL								
POLARIZATION:	RHCP			RHCP					
VSWR:	< 2.0:1			< 2.0:1					
IMPEDANCE:	50 ohms			50 ohms					
ANTENNA GAIN (dBic):	Free Space	5 in G.P.	4 ft G.P.	Free Space	5 in G.P.	4 ft G.P.			
@ 90 ° (ZENITH):	+ 3.5	+ 2.6	+ 1.7	+ 0.0	+ 2.0	+ 2.4			
@ 10 ° Elevation:	- 3.3	- 4.1	- 3.0	- 6.5	- 4.0	- 6.3			
@ 20 ° Elevation:	- 2.3	- 2.8	- 0.1	- 4.7	- 3.0	- 3.2			
@ 30 ° Elevation:	- 1.0	- 1.0	+ 1.0	- 3.4	- 2.0	- 1.2			
@ 60 - 90 ° Elevation:	> + 2.4	> +1.7	> +0.7	>-1.5	> +1.3	> 0			
BEAM WIDTH (3dB):	95 Deg.	96 Deg.	145 Deg.	105 Deg.	99 Deg.	110 Deg.			
AXIAL RATIO:	2 dB			2 dB					

MECHANICAL:

SIZE:	DIAMETER: 3.530 in. [89.66 mm]
WEIGHT:	HEIGHT: 0.856 in. [21.7 mm]
FINISH:	9.2 oz. (261 g)
MATERIAL:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
CONNECTOR:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT SKYDROL RESISTANCE, AND FIRE RETARDANT
ENVIRONMENTAL:	TNC FEMALE (OPTION: SMA, TNC-BH, N, N-BH, MCX, MMCX, SMB, SSMB)
TEMPERATURE:	OPERATING: -68 °F to +185 °F [-55 °C to +85 °C] STORAGE: -71 °F to +203 °F [-57 °C to +95 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE / IP RATING:	HERMETICALLY SEAL / IP69K

FEDERAL & MILITARY SPECIFICATIONS:

TSO-C129/C132/C144, MIL-C-5541F(Finish), MIL-DTL-14072(Finish), DO-160/210/228(Test)
MIL-STD-810G(Test), MIL-STD-461E/F(Elec Interfer), MIL-STD-464C(ELEC MAG), SAE J1455(Env)
MIL-STD-202(Elec Comp), MIL-HDBK-5400/454(Elec Eq), MIL-PRF-39012(Con), MIL-STD-889B(Metal)
EN 55155(Terminations), RCC-319-14 (Termination), MIL-STD-129/1285(Marking), MIL-STD-130N-1(ID)
MIL-C-85704B(Solvent), MIL-G-81827(Grease), RCC-324-01(Safety), MIL-I-45208A/NAS411-1(HAZ)

4	WASHER	10-32Washer	3
4	10-32 1IN SCREWS	93085A833	2
1	O-RING & GASKET	9557K123 (2-031) & MAT-G-3.5IN	1
QUANTITY REQD		PART NO	FINISH
		PARTS LIST	ITEM NO
Small Disadvantaged Women-Owned US Antenna Design & Manufacture Company DUNS: 069526517 TIN/EIN: 823039862 DLA ATI(SpEC)/JCP: Approved (0079669)			
ANTENNAS@MATTERWAVES.COM		www.MATTERWAVES.com	
ISO9001-2015 CERTIFIED		TORRANCE, CALIFORNIA, USA	
ORIGINALLY DESIGNED S. HUYNH JULY-30-18		3.5in Diameter Jamming / Interference Protection PASSIVE GNSS ANTENNA	
APPROVED S. HUYNH JULY-30-18		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS TOLERANCES ARE: ± 1/64 .XXX .010 ± 1'	
SCALE 1/1		HTS: 8529104000 ECCN: 7A994/5A991.g	