

APPENDIX: STATIC STABILITY

In this appendix the placement of the items and the estimation of both the center of gravity and center of pressure are shown.

ITEM	DIMENSIONS [mm ³]	WEIGHT [g]	X _{CG} [m]
Flight Control Computer ADS-B-Transponder Communication Systems/Modems	170 x 180 x 80 89 x 46 x 18 57 x 98 x 86	1100	0.426
IMU	100 x 30 x 40	50	0.7
Flight Termination Parachute	280 x 120 x 50	890	1.14
Flight Termination Launcher	200 x 55 x 55	157	1.675
Camera System	97 x 95 x 97	420	0.07
Batteries	L=150 mm; R=185 mm	4000	0.29
Payload	150 x 350 x 200	3000	1.065
Fuselage	L=2065 mm; R=215 mm	3600	0.9
Front Wing Group	-	2000	0.44
Back Wing Group	-	2000	1.14

The estimated CG and the CP are the following:

X _{CG} [m]	X _{CP} [m]
0.7	0.75

The CP is behind the CG, leading to a static stability in the configuration. Besides, it is possible to use the batteries to ensure it for any range.

