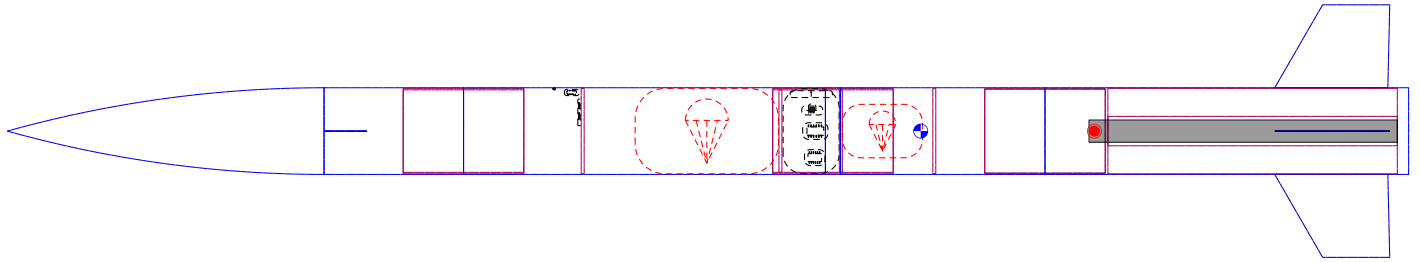


Rocket Design



Rocket

Stages: 1

Mass (with motor): 37912 g

Stability: 2 cal

CG: 308 cm

CP: 366 cm




November 2018 Stripe Launch

Altitude	1231 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Flight Time	69.2 s	M2500	2531 N	3.07 s	2996 N	7784 Ns	6.81:1	4248 g	75/1039
Time to Apogee	16.2 s	GG							mm
Optimum Delay	13.2 s								
Velocity off Pad	27.2 m/s								
Max Velocity	174 m/s								
Velocity at Deployment	40.8 m/s								
Landing Velocity	9.71 m/s								

Parts Detail

Sustainer

	Nose cone	Cardboard (0.68 g/cm ³)	Ogive	Len: 107 cm	Mass: 2858 g
	Body tube	Cardboard (0.68 g/cm ³)	Dia _{in} 28.8 cm Dia _{out} 29.2 cm	Len: 47 cm	Mass: 2585 g
	Tube coupler	Cardboard (0.68 g/cm ³)	Dia _{in} 27.8 cm Dia _{out} 28.8 cm	Len: 40.6 cm	Mass: 0 g
	Body tube	Cardboard (0.68 g/cm ³)	Dia _{in} 28.8 cm Dia _{out} 29.2 cm	Len: 122 cm	Mass: 3969 g
	Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 28.8 cm	Len: 1 cm	Mass: 0 g
	IPCam MBoard		Dia _{out} 2.1 cm		Mass: 6.9 g
	IPCam Battery		Dia _{out} 9 cm		Mass: 41.5 g
	IPCam Camera		Dia _{out} 0.65 cm		Mass: 6.2 g
	Avionics Switch Ring	Cardboard (0.68 g/cm ³)	Dia _{in} 28.8 cm Dia _{out} 29.2 cm	Len: 5.08 cm	Mass: 1678 g
	Avionics Bay	Cardboard (0.68 g/cm ³)	Dia _{in} 27.8 cm Dia _{out} 28.8 cm	Len: 40.6 cm	Mass: 0 g
	Avionics Mount Board		Dia _{out} 28.6 cm		Mass: 328 g
	SL100 (x2)		Dia _{out} 2.3 cm		Mass: 24.6 g
	Raspberry Pi		Dia _{out} 5.6 cm		Mass: 44.6 g
	Main Chute Bulkhead	Carbon fiber (1.78 g/cm ³)	Dia _{out} 27.8 cm	Len: 1 cm	Mass: 885 g
	Main Chute	Ripstop nylon (67 g/m ²)	Dia _{out} 305 cm	Len: 48.3 cm	Mass: 2359 g
	Shroud Lines	Tubular nylon (25 mm, 1 in) (29 g/m)	Lines: 4	Len: 290 cm	
	Drogue Chute Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 27.8 cm	Len: 1 cm	Mass: 526 g
	Drogue chute	Ripstop nylon (67 g/m ²)	Dia _{out} 76.2 cm	Len: 27 cm	Mass: 1179 g
	Shroud Lines	Tubular nylon (25 mm, 1 in) (29 g/m)	Lines: 4	Len: 183 cm	
	Arduino		Dia _{out} 5.34 cm		Mass: 25 g
	Batteries (x2)		Dia _{out} 3 cm		Mass: 95 g
	SL100 Speaker		Dia _{out} 2.5 cm		Mass: 6.9 g
	Body tube	Cardboard (0.68 g/cm ³)	Dia _{in} 28.6 cm Dia _{out} 29.2 cm	Len: 68.9 cm	Mass: 4218 g
	Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 28.6 cm	Len: 1 cm	Mass: 0 g
	Tube coupler	Cardboard (0.68 g/cm ³)	Dia _{in} 28.2 cm Dia _{out} 28.6 cm	Len: 40.6 cm	Mass: 0 g

	Body tube	Cardboard (0.68 g/cm ³)	Dia _{in} 28.8 cm Dia _{out} 29.2 cm	Len: 122 cm	Mass: 9525 g
	Trapezoidal fin set (4)	Cardboard (0.68 g/cm ³)	Thick: 0.3 cm		Mass: 0 g
	Engine block	Cardboard (0.68 g/cm ³)	Dia _{in} 9.9 cm Dia _{out} 28.8 cm	Len: 97.5 cm	Mass: 0 g