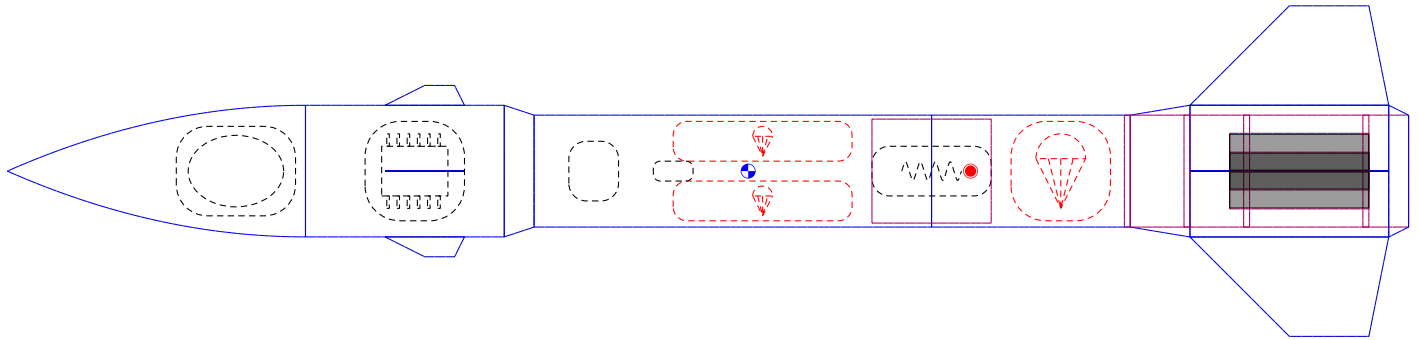


Rocket Design



Rocket

Stages: 1

Mass (with motor): 664 g

Stability: 1.69 cal

CG: 37.3 cm


















CP: 48.5 cm

3×D9-5

Altitude	258 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Flight Time	37.1 s	D9 (×3)	9.16 N	2.18 s	25 N	20 Ns	1.41:1	16.1 g	18/70 mm
Time to Apogee	7.75 s	Total:				59.9 Ns	4.22:1	48.3 g	
Optimum Delay	5.66 s								
Velocity off Pad	13.3 m/s								
Max Velocity	66.6 m/s								
Velocity at Deployment	9.24 m/s								
Landing Velocity	9.09 m/s								

Parts Detail

Sustainer

	Nose cone	3D Print (1.23 g/cm ³)	Parabolic series	Len: 15 cm	Mass: 21 g
	Body tube	3D Print (1.23 g/cm ³)	Dia _{in} 6.46 cm Dia _{out} 6.62 cm	Len: 10 cm	Mass: 20.2 g
	Egg		Dia _{out} 4.5 cm		Mass: 63 g
	Arduino Fins (4)	Balsa (0.17 g/cm ³)	Thick: 1 cm		Mass: 4 g
	Arduino + Payloads		Dia _{out} 5 cm		Mass: 73 g
	Transition	3D Print (1.23 g/cm ³)	Fore Dia: 6.62 cm Aft Dia: 5.63 cm	Len: 1.5 cm	Mass: 4.39 g
	Main Body	Cardboard (0.68 g/cm ³)	Dia _{in} 5.53 cm Dia _{out} 5.63 cm	Len: 20 cm	Mass: 11.9 g
	Parachute 1	Ripstop nylon (67 g/m ²)	Dia _{out} 50 cm	Len: 9 cm	Mass: 16.4 g
	Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 30 cm	
	Parachute 1	Ripstop nylon (67 g/m ²)	Dia _{out} 50 cm	Len: 9 cm	Mass: 16.4 g
	Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 30 cm	
	Parachute Servo		Dia _{out} 1 cm		Mass: 10 g
	Unspecified		Dia _{out} 3 cm		Mass: 200 g
	Body tube	Cardboard (0.68 g/cm ³)	Dia _{in} 5.23 cm Dia _{out} 5.63 cm	Len: 10 cm	Mass: 23.2 g
	Shock cord	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)		Len: 40 cm	Mass: 0.72 g
	Parachute Back	Ripstop nylon (67 g/m ²)	Dia _{out} 45 cm	Len: 5 cm	Mass: 13.9 g
	Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 30 cm	
	Tube Coupler	Cardboard (0.68 g/cm ³)	Dia _{in} 5.03 cm Dia _{out} 5.23 cm	Len: 6 cm	Mass: 6.58 g
	Transition	Cardboard (0.68 g/cm ³)	Fore Dia: 5.63 cm Aft Dia: 6.63 cm	Len: 3 cm	Mass: 0 g
	Boost	Cardboard (0.68 g/cm ³)	Dia _{in} 6.54 cm Dia _{out} 6.63 cm	Len: 10 cm	Mass: 6.33 g



Back Fins (4)	Balsa (0.17 g/cm ³)	Thick: 1 cm		Mass: 20 g
Engines	Cardboard (0.68 g/cm ³)	Dia _{in} 1.8 cm Dia _{out} 1.9 cm	Len: 7 cm	Mass: 4.15 g
Inner Tube	Cardboard (0.68 g/cm ³)	Dia _{in} 5.53 cm Dia _{out} 5.63 cm	Len: 14 cm	Mass: 32.4 g
Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 5.63 cm	Len: 0.3 cm	Mass: 0 g
Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 5.63 cm	Len: 0.3 cm	Mass: 0 g
Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 5.63 cm	Len: 0.3 cm	Mass: 27 g
Bulkhead	Cardboard (0.68 g/cm ³)	Dia _{out} 5.63 cm	Len: 0.3 cm	Mass: 0 g
Transition	Cardboard (0.68 g/cm ³)	Fore Dia: 6.63 cm Aft Dia: 5.63 cm	Len: 1 cm	Mass: 0 g



