

Mass and Volume Budgets

SPACECRAFT SYSTEMS	Volume without Contingency (U)	Contingency		Volume with Contingency (U)
		%	(U)	
Electrical Power System (EPS)				
<i>Power Management and Distribution</i>	see XB1			see XB1
<i>Solar Arrays (conformal exterior)</i>	0.720			0.720
<i>Batteries (conformal propulsion tank corners)</i>	see XB1			see XB1
Communications System (COMM)				
<i>Ka Band Radio</i>	0.330			0.330
<i>UHF Radio</i>	see XB1			see XB1
<i>Antenna (TX+RX integrated w/solar arrays)</i>	see solar			see solar
Data Management System (DMS)				
<i>On Board Computer</i>	see XB1			see XB1
Structures & Mechanisms				
<i>Integrated with each system</i>	0.000			0.000
Attitude Determination & Control System (ADCS)				
<i>Subsystems</i>	see XB1			see XB1
Guidance, Navigation & Control System (GN&C)				
<i>Subsystems</i>	see XB1			see XB1
Propulsion System				
<i>Hybrid Trajectory Injection Motor Core</i>	2.000			2.000
<i>Hybrid Trajectory Injection Motor Fuel Tank</i>	1.000			1.000
<i>Ion Thrusters (Four Total)</i>	0.500			0.500
<i>Ion Propellant Tanks (Two Total)</i>	1.000			1.000
Thermal System				
<i>Integrated with each system</i>	0.000			0.000
Primary Payload Encoded Bit Stream				
<i>Allocated to Data System</i>	0.000			0.000
Scar for Secondary Payload (future)	0.000			0.000
CubeSat Bus	1.000			1.000
<i>Estimated Spacecraft Total Volume</i>	5.550	8.11%	0.450	6.000
Total Allowable Spacecraft Volume (U)	6.000			6.000