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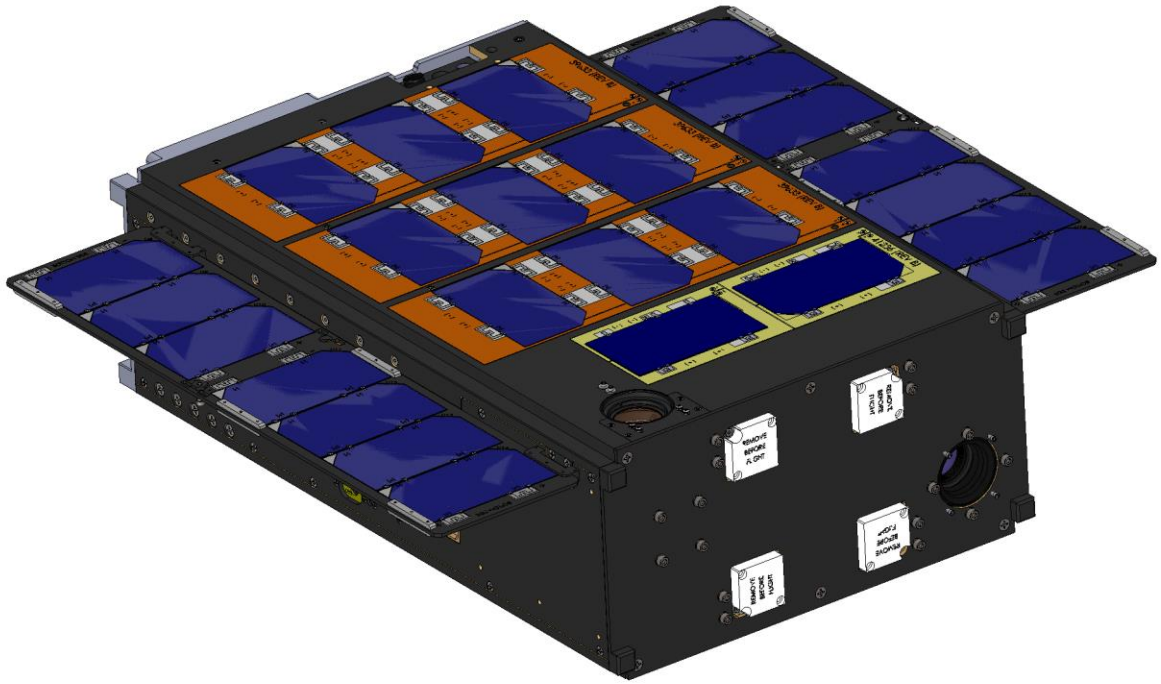
1) 4 unique area-to-mass values are included in the DAS logs: 0.014299 0.008370 0.0084 0.002472 Please identify the orientation of the spacecraft that each is associated with, and what the expected timeframe the spacecraft will operate in that orientation for. Of the four numbers listed, three are unique (0.008370 and 0.0084 are the same). Of the three unique numbers presented, the 0.002472 m^2/kg and 0.014299 m^2/kg are the minimum and maximum ballistic coefficients for AC16 and are computed as bounds of the orbit lifetime even though the AC16 satellites will not fly in either orientation. The 0.008370 m^2/kg (and by rounding, the 0.0084 m^2/kg) is the tumbling ballistic coefficient. It is the dominant AC16 mission orientation.

2) Please provide the dimensions of the spacecraft after the solar panels have deployed. With the solar panels deployed, the spacecraft outer dimensions are 39.1 cm x 36.5 cm x 11.2 cm.

3) Please describe how the solar cells are mounted on the spacecraft. The two solar arrays are mounted as shown in the graphic below. The solar cells are mounted with LINQTAPE™ PIT2SD Series double-sided polyimide tape with silicone adhesive. The adhesive covers the entire back of the solar cell providing uniform and significantly more adhesion strength than is necessary for the comparatively lightweight solar cell. This method of solar cell adhesion has been used on all AeroCube satellites.



4) Regarding the failure modes and mitigations on page 10 of the ODAR, which of these will still be active once the mission timeframe has completed and the spacecraft is left to reenter passively? All of the mitigations on page 10 of the ODAR remain active after the mission is complete because the satellite does not have a post-mission configuration – it is always active and tumbling until reentry.

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5) Please state whether the ionic liquid, if released in droplet form, will sublimate? If not, please also answer the following: a) Provide information on the reliability of the ionic liquid container and any possible failure modes that might result in the release of the ionic liquid (including an analysis of the effects of launch forces, on-orbit thermal stress, heating due to battery failure, small debris, etc.). Any droplets on orbit, which we say is not possible, will not sublimate. The Accion Tile-2 thruster (shown below) will be vibration tested at the spacecraft level to envelope launch loads. Thermal analysis of the spacecraft shows that the Tile-2 thruster is within its qualified operating range. The satellite batteries have safety mechanism that vents an over pressured cell thereby preventing an explosion. In the unlikely event that any liquid propellant was to escape its individual containment for whatever reason, then it would remain captured inside the overall Tile-2 metal structure (shown in blue) due to surface tension when it contacts an interior surface. b) Confirm that no ionic liquid is released as droplets from the spacecraft under normal propulsion operations. A letter from the Chief Scientist of Accion Systems, Inc., the thruster manufacturer states that no droplets can escape from the unit. The letter is submitted as an exhibit.