Physical Structure:

4 frames made of 6061-T6 Aluminum, anodization Type II, black, with dimensions of 10 x 20 cm. The frames make up the X and Y axes of the satellite, with an overall dimension of 10 x 10 x 20 cm and mass of 2.66 kg.

This satellite meets the requirements listed in the CubeSat Design Specifications Document from Cal Poly: <https://static1.squarespace.com/static/5418c831e4b0fa4ecac1bacd/t/56e9b62337013b6c063a655a/1458157095454/cds_rev13_final2.pdf> as well as the NanoRacks CubeSat Deployer Interface Definition Document: <http://nanoracks.com/wp-content/uploads/NanoRacks-CubeSat-Deployer-NRCSD-Interface-Definition-Document.pdf> .

In the +Z axis is located the deployable helical antenna, with a deployed length of 507 ± 10 mm and diameter of 40.8 ± 1 mm. In the -Z axis is the deployable turnstile antenna array, made of four individual antennas at an angle of 15 degrees from the satellite and a length of 17 mm each.

The frames hold 20 printed circuit board cards inside, and have solar panels attached on the four outer sides. The satellite will be tumbling freely when not being used for imaging purposes. When images are being taken, the satellite will be stabilized with the +Z axis helical antenna pointed towards Earth.