

Black Knight 1 CubeSat Description

West Point – 1U

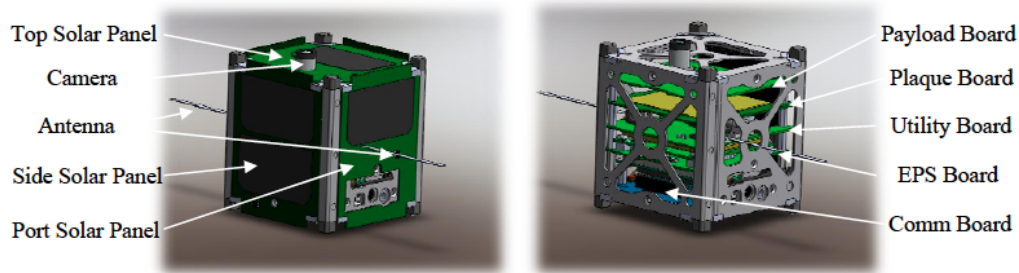


Figure 1: Black Knight

For West Point's first satellite, BK1 includes two experimental payloads. The first is a Passive Attitude Control System (PACS) intended to stabilize the satellite on two axes. The PACS first utilizes a 76.2 mm magnetic bar to orient one axis with the earth's magnetic field. Next, the PACS utilizes a passive friction-based damping system to stabilize the satellite on the second axis. The second payload houses a C328R camera with an infinite focus to capture and send JPEG images to the ground station via the communications subsystem.