

EARTH OBSERVATION SYMPOSIUM (B1)
Interactive Presentations (IP)

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IR CAMERA PAYLOAD FOR EARTH MONITORING ONBOARD A 3U CUBESAT

Abstract

We are developing a camera for operate in the mid IR. The electronic and the optic have been designed to convert the camera in a payload for a Cubesat 3U to observe the Earth with the aim to study the water bodies, the status of lands of sowing (maturing and pests), as well as vegetation distribution. The camera is built by a IR detector with an array of 120 x 160 microbolometers, an optical system optimized for long-wave length light, signal conditioning electronics and its digitization; also have a pre-processing core, compressing images algorithm and mass storage system. Given the reduced size of the Cubesat, we have been an effort to miniaturize the optics to satisfy the 3U standard. We describe also the electronic functional blocks and the methods for the data pre-processing and later selection.