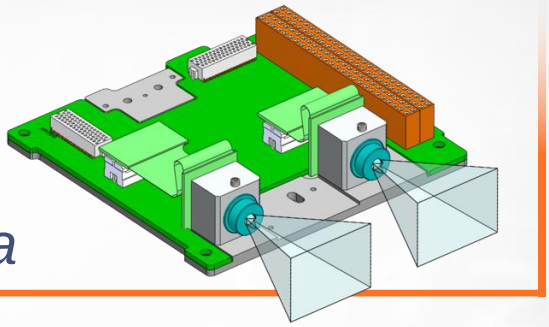
C3D

CubeSat Camera



Introduction

C3D is a space-qualified TRL 9 CubeSat camera system which has proven flight-heritage having flown on both of the UK Space Agency's CubeSat missions with a 100% success rate. C3D may be customised to cater for customers' individual requirements.

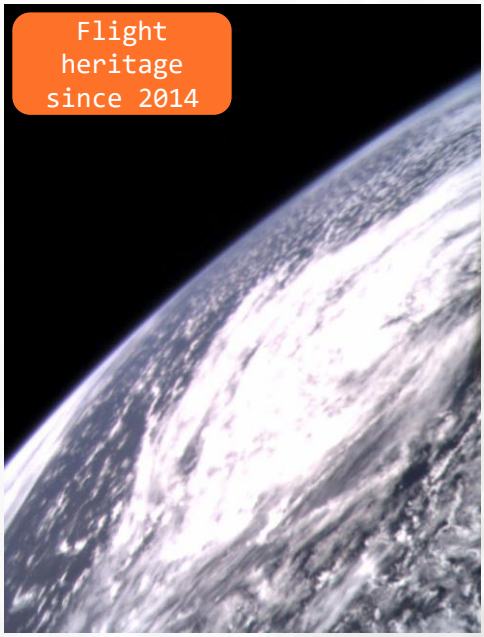


Image credit: AlSat Nano Mission, The Open University

Key Features

- Space-flight heritage since 2014
- Wide-field imager (WFI) camera optics
  - Up to three cameras per imager board
  - Two co-aligned cameras as in image above, for stereo or to allow for different specifications
  - Near- and far- field imaging capabilities
  - Colour and black & white sensors available
- Lossless image compression
- Compatible with 1U+ format cubesatellites
- Available as both engineering and flight models
- Applications include earth observation and spacecraft deployment monitoring
- Other custom options also available - enquire for more information

Specifications

Imaging	
Spatial resolution @ 650 km	360 m/pixel GSD (with lens below, other variants available)
Image sensor	1.3 MP CMOS: RGB or B&W
Pixels	5.3 µm (1280 x 1024)
Lens	Standard COTS lens 9.6 mm F/3.0
Wavelength Range	400 – 650 nm (RGB, extended with B&W)
Exposure	Auto or fixed

Mechanical and Environmental	
Dimensions of board	9.5 x 9.1 x 2.7 cm
Mass (Board + 1x WFI)	85 g
Peak power consumption	845 mW
Operating temperature	-25 to + 65 ˚C
Survival temperature	-35 to +75 ˚C (Tested)
Flight heritage	3 years

Data	
Data format	8-bit raw and thumbnail (1:10)
On board memory	16 MB SDRAM 8 MB Flash
Image compression	50% JPEG-LS (Lossless)
Data Interfaces	I2C or SPI

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