

## CHAMELEON IMAGER

**The Chameleon** is a compact CubeSat imager that provides

- High resolution multispectral or hyperspectral linescan imaging.
- Large integrated high-speed data storage.
- Compact form factor that is optimised for integration with 3U or larger CubeSat frames.

The Chameleon builds upon the space qualified control electronics of the Gecko imager and combines this with high performance optics to maximise imaging capability in small form factor CubeSats. High capacity, high performance mass storage is integrated into the compact design. The opto-mechanics have been optimised to fit within the available volume of CubeSat deployers thus providing maximum volume to accompdate the functionality required for your high performance CubeSat mission.

Images are captured directly to the integrated mass storage. No need for additional payload data storage capacity on the satellite. Data can be streamed directly to a transmitter or to an on-board computer as required. Reliable operation is achieved by using a combination of proprietary hardware and ruggedised optics.

CHAMELEON IMAGER		
Spatial resolution (GSD) @ 500 km	6 m PAN 12 m MS	6 m PAN 19 m HS
Swath @ 500 km	49 km	20 km
Spectral bands (VIS-NIR)  PAN = Panchromatic  MS = Multispectral  HS = Hyperspectral	PAN + 4 MS (custom)	PAN + 148 HS (fixed)
Signal to noise ratio <sup>†</sup>	> 200 PAN > 100 MS	> 200 PAN > 100 HS
Data format <sup>†</sup>	10-bit or 12-bit	
Integrated mass data storage <sup>†</sup>	Up to 256 Gigabytes	
Compression	RAW or J2K lossless or lossy	
Data interfaces <sup>†</sup>	LVDS, SPI, I <sup>2</sup> C, CAN	
LVDS output rate	1 - 480 Mbps	
Dimensions of imager	2U (200 mm x 97 mm x 96 mm)	
CubeSat standard	Compatible with 3U and 6U	
Mass (incl. electronics)	1.6 kg	
Power usage: imaging mode	< 7 W	
readout mode	< 5 W	
Power supply	5V DC	
Operating temperature	+10°C to +30°C	
Survival temperature	-20°C to +70°C	
Radiation tolerance (TID)	Tested to 20 krad	
Donands on chasen configuration		











