

## GECKO IMAGER

The **Gecko** is an ultra-compact CubeSat imager that provides

- **RGB** matrix or **multispectral** linescan imaging.
- Large **integrated high-speed data storage**.
- **Compact form factor** that is optimised for integration with 2U or larger CubeSat frames.

The Gecko imager builds upon the success of the nSight-1 Earth observation satellite (where it was the main payload) and its success as part of the European QB50 programme.

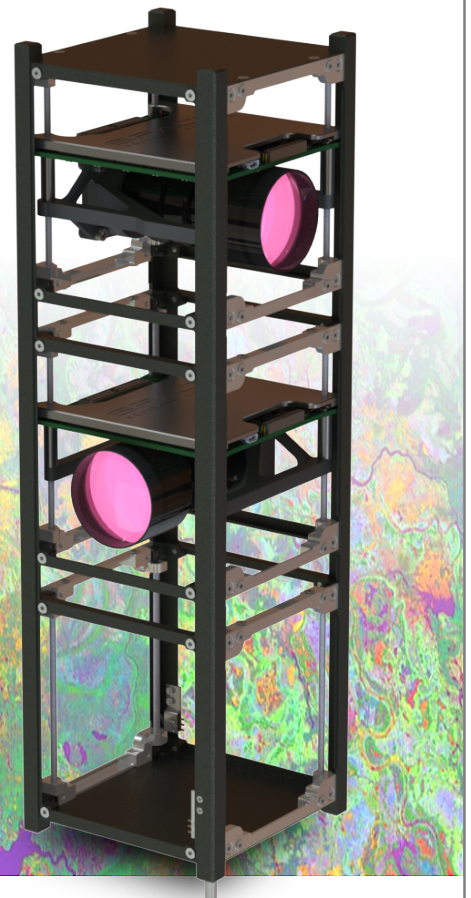
High capacity, high performance mass storage is integrated into the compact design. Featuring a mounting frame compatible with standard 2U, 3U and 6U frames, the Gecko imager is a perfect match for your CubeSat mission.

RGB images are captured directly from its matrix sensor to integrated mass storage in snapshot (global shutter) mode. Image thumbnail generation enables previews and selective image download over constrained data links. Data may be streamed to the on-board computer and downlinked at lower data rates, as required.

Reliable operation achieved by using a combination of proprietary hardware and space-proven ruggedised optics.

| GECKO IMAGER   |                                  |                                 |
|--|----------------------------------|---------------------------------|
| Spatial resolution (GSD) @ 500 km  | 39 m RGB                         | 10 m PAN<br>20 m MS             |
| Swath @ 500 km   | 80 km                            | 41 km                           |
| Spectral bands (VIS-NIR)<br>RGB = Red, Green, Blue<br>PAN = Panchromatic<br>MS = Multispectral | RGB<br>(Bayer)                   | PAN +<br>4 MS<br>(custom)       |
| Signal to noise ratio <sup>†</sup>   | > 100                            | > 200 PAN<br>> 150 MS           |
| Data format <sup>†</sup>   | 8-bit or 10-bit                  |                                 |
| Integrated mass data storage <sup>†</sup>  | Up to 128 Gigabytes              |                                 |
| Compression  | RAW or J2K lossless or lossy     |                                 |
| Data interfaces <sup>†</sup>   | LVDS, SPI, I <sup>2</sup> C, CAN |                                 |
| Dimensions of imager   | < 1U (56 mm x<br>97 mm x 96 mm)  | < 1U (58 mm x<br>97 mm x 96 mm) |
| CubeSat standard   | Compatible with 2U, 3U, 6U       |                                 |
| Mass (incl. electronics)   | 390 g                            | 500 g                           |
| Power usage : imaging mode   | 2.7 W                            | < 3.5 W                         |
| readout mode   | 1.4 W                            | < 2.5 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                |                                 |

<sup>†</sup> Depends on chosen configuration.



SCS & Space Advisory Company

proud members of



St. Andrews Building, 3rd Floor | Somerset Links Office Park, De Beers Avenue | Somerset West, 7130 | South Africa  
+27 21 300 0060 | [www.spaceadvisory.com](http://www.spaceadvisory.com) | [info@spaceadvisory.com](mailto:info@spaceadvisory.com)

20190430