

# Pelican-D

The PELICAN-D is a 640 x 512 element, 15 $\mu$ m pitch, 2D Mid-Wave Infrared (MWIR) Digital Integrated Detector Cooler Assembly (IDCA). Available in various configurations, the Pelican-D offers sensing materials like InSb, XBn, and T2SL, accompanied by a wide range of cold shield apertures and cooler types. Its proximity board facilitates the FPA timing and sensitive power supplies. Moreover, the Camera Link interface greatly eases the integration of the detector into systems. SCD remains committed to standing by our customers, ensuring they have access to the most suitable solutions for their needs.

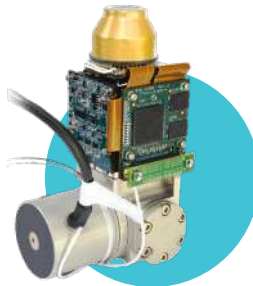
## Main Features

- High frame rate (350Hz at full window)
- Camera link interface
- Fully digital Readout Integrated Circuit (ROIC) based on CMOS process
- Integration modes: integrate-then-read and integrate-while-read



## Applications

- Long-Range Surveillance
- Armored Fighting Vehicle (AFV)
- Commander/Gunner Sights
- Airborne Intelligence, Surveillance, and Reconnaissance (ISR)
- Remote Weapon Station Sights
- Missile Approach Warning Systems (MAWS)



Integral rotary 

Integral roatary high reliability 

| Technology                              | InSb                                                                              | XBn                                                                               |                                                                                     | T2SL                                                                                |
|-----------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| DDC                                     | Pelican-D                                                                         | HOT Pelican D                                                                     | Kinglet                                                                             | Pelican-D LW                                                                        |
| Detector format                         | 640 x 512, 15µm pixel                                                             |                                                                                   |                                                                                     |                                                                                     |
| Cooler options                          |  |  |  |  |
| Spectral band                           | 3.6-5 µm<br>(1-5.4µm optional)                                                    | 3.6-4.2 µm<br>(1-4.2µm optional)                                                  |                                                                                     | LWIR<br>cut off 9.3µm                                                               |
| Operating temperature                   | 80K                                                                               | 150K                                                                              |                                                                                     | 77K                                                                                 |
| Mission profile                         |                                                                                   | High reliability                                                                  | Low SWap                                                                            | LWIR                                                                                |
| Length (optical axis)                   | 140mm                                                                             | 140mm                                                                             | 80mm                                                                                | 140mm                                                                               |
| Weight                                  | 650g                                                                              | 650g                                                                              | 280g                                                                                | 750g                                                                                |
| Cooler power consumption at 23 °C       | 12W                                                                               | 6W                                                                                | 2.5W                                                                                | 15W                                                                                 |
| Proximity electronics Power consumption | 1.7W                                                                              | 1.7W                                                                              | 0.8W                                                                                | 3W                                                                                  |
| Maximal frame rate                      | 350 Hz                                                                            | 350 Hz                                                                            | 100 Hz                                                                              | 350 Hz                                                                              |
| NETD at 70% well fill                   | 20mK                                                                              | 23mK                                                                              |                                                                                     | 15mK (65%, 30Hz)                                                                    |

Advanced ROIC functionality

Binning, windowing

