

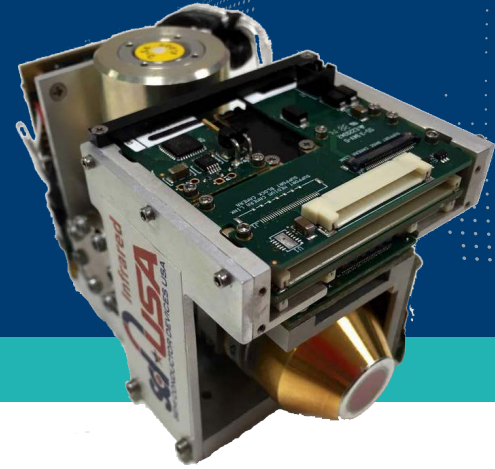


Kinglet MWIR Video Engine

XBn Low SWap High Performance MWIR 640x512

15 μ m pitch HOT(150K) Detector based on

Digital “PelicanD” ROIC



General Description

The Kinglet Video Engine (VE) is based on SCD’s State-of-the-Art XBn (InAsSb) Kinglet detector for reduced SWaP (size, weight and power) and high reliability (150K detector operating temperature) applications. This high performance video engine is a perfect solution for handhelds and compact payloads in a constrained system space and stringent power environment. Thanks to its 150K high-operating-temperature (HOT), the lifetime of cooler can be significantly extended while providing the same detection performance as conventional 77K InSb cameras. In order to support large variety of applications, the Kinglet VE can be configured based on various coolers (rotary K562S, K580 or linear), the aperture F-number can also be customized.

Applications

- Handheld Thermal Imagers
- Light payloads for mini UAV platforms
- Portable Thermal Weapon sight
- Situation Awareness and Surveillance
- Remote Weapon Stations

Main Features

- Open frame design
- <23mK NETD @ 150K detector high operating temperature (HOT)
- Much longer cooler life-span
- 60 FPS nominal frame rate at full 640x512 resolution, Windowing capable
- Standard NTSC and CameraLink interfaces (GigE is optional)
- Detector customizations (aperture, cooler type, configurations) are available
- Up to 3 NUC tables



Typical Performance

| Parameter | Value |
|------------------------|--|
| Format | 640 x 512 |
| Pixel size | 15µm |
| Material | XBn |
| Detector Temperature | 150K |
| Wavelength | 3.6-4.2µm |
| F/# | F/5.5, other configuration available upon request |
| Cold Shield Height | 19.6mm, other configuration available upon request |
| NETD | <23mK |
| Well Capacity | 1Me and 3Me, user selectable |
| Operability | >99.5% |
| Time to Cool Down | <3min @23°C |
| Weight | <400g, includes IDDCA with associated electronics and cooler controller |
| Power Input | 12V DC (nominal) |
| Power Consumption | < 6 W Steady State |
| Operating Temperature | -40°C to + 65°C |
| Digital Display Video | SD-SDI |
| Analog Display Video | NTSC or PAL |
| Digital Data Streaming | CamLink with GigE available |
| Command and Control | RS232C, Rs422 or optional with CamLink or GigE |
| Sync Modes | Internal/External Sync and Clock |
| Nominal Frame Rate | 60Hz on digital data stream |
| NUC Tables | Up to 3 |
| Digital Zoom | 2X or 4X Edge Preserving |
| Storage Temperature | -50°C to 70°C |
| Mounting | As needed, 2X 1/4 in - 20 with enclosure 4X mounting holes for open frame |

* Other optical configurations are possible.

**Specifications are subject to change without notice



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