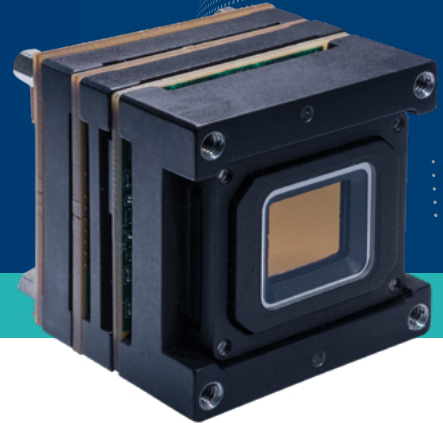




SWIR Imager

Military grade low SWaP-C
SWIR Video Core

Defense Applications



General Description

SWIR Imager is SCD's revolutionary low SWaP-C 640, 15 μ m SWIR video core. The SWIR Video core is a high sensitivity low SWaP InGaAs Imager specially designed to be used as a Low Light Level sensor in man portable hand held binoculars, "see spot" devices or as a replacement for any GEN2 Image Intensifier application. The SWIRi comes with SCD new low SWaP-C detector package with a 15 μ m pitch InGaAs FPA coupled to SCD SNIR ROIC.

Based on the high sensitivity detector with the advantages of the SNIR ROIC features like Asynchronous Laser Pulse Detection (ALPD) this SWIR Video core introduces a top-notch solution for the wide range of military and commercial applications.

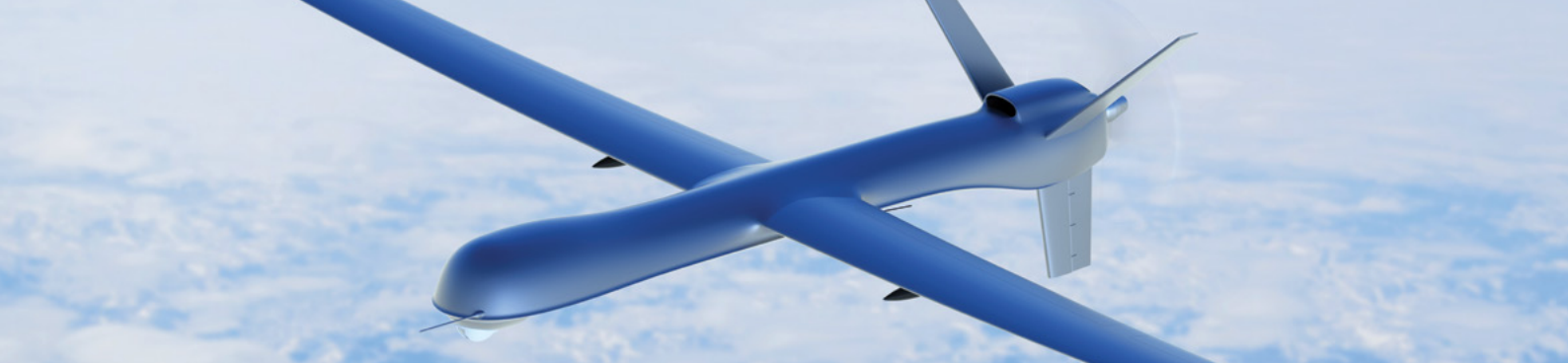
Applications

- Enhanced Combat Night Driving
- Adverse weather condition day view (penetrating fog, haze, smoke)
- Laser "See Spot"
- Low Light Level solution with digital interface and simple integration

Main Features

- Low Light Level Imaging
- Hand Held Night Vision devices
- Driving Vision Enhancement (DVE)
- "See Spot" with ALPD
- Active Imaging
- Covert Surveillance with 24/7 day operation
- Spectroscopy
- Process monitoring
- Non-Destructive Testing
- Evaluation Kit available - Includes SWIRi and cables (power, communication, video)





Typical Performance

Parameter	Value
Sensor	InGaAs
Format	640x512
Pitch	15 μm
Spectral range	0.6 – 1.7 μm
Quantum Efficiency (1.2 μm to 1.6 μm)	> 70%
Readout Floor Noise (LNIM-CDS Mode)	< 40 [e]
Noise Equivalent Power (LNIM-CDS Mode)	< 1 [fW]
Image correction/enhancement algorithms	NUC, BPR, HDR, AGC, DRC, NR
Frame rate	30Hz
Time to image	< 10 sec
Latency	Sub frame
Supply Voltage	5V
Power consumption	< 1.4 Watt
TEC-Less operation	Can be used TEC-Less
Video output 1 (LVCMOS)	8/13 bit Parallel, Glueless VGA AMOLED, BT.656
Video output 2 (LVDS)	Camera Link, simultaneously with the parallel output
Digital zoom	x2, x4
Polarity invert	Yes
Image flip	Yes
Discrete button inputs	8
Overlay graphics	Text/Reticles
Size	31x31x32 mm
Weight	< 60 grams
Operation temperature	-20°C to +65°C
Storage temperature	-40°C to +71°C
Shock	500G @ 0.5msec, 1000 shocks per axis and direction ó sine

Specifications are subject to changes without further notice