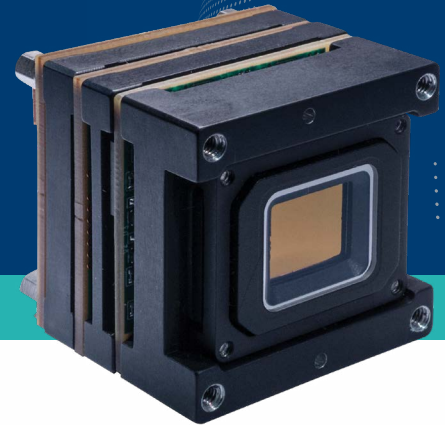




SWIR Imager

Military grade low SWaP-C
SWIR Video Core



General Description

SWIR Imager (SWIRi) is SCD's revolutionary low SWaP-C (Size, Weight, Power and Cost) 640 x 512 SWIR video core.

SWIRi is specially designed to be used as a Low Light Level sensor in man portable hand held binoculars, in "see spot" devices or as a replacement for any GEN2 Image Intensifier application.

The low SWaP features of this video core are based on SCD's TECless ceramic package with a 15 μ m pitch InGaAs detector coupled to SCD's (patent protected) Asynchronous Laser Pulse Detection (ALPD) (see spot) capability.

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

- High frame rate, Global Shutter
- SWIR-VIS (0.6 – 1.7 μ m)
- Low SWaP hermetically sealed package
- Special features:
 - Two dimensional Laser Range Finder (TLRF)
 - Asynchronous Laser Pulse Detection (ALPD)Low Light Level Imaging
- Covert Surveillance with 24/7 day operation
- Spectroscopy
- Evaluation Kit available - Includes SWIRi and cables (power, communication, video)





Typical Performance

Parameter	Value
Sensor	InGaAs
Format	640 x 512
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 standard
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	31 x 31 x 32 mm
Weight	< 60 grams
Operation temperature	-40°C to +71°C
Storage temperature	-40°C to +71°C
Shock	500G @ 0.5msec, 1000 shocks per axis and direction ó sine

Specifications are subject to change without notice



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