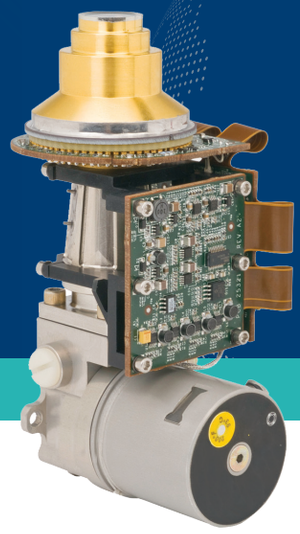
HOT Hercules

Mega-Pixel IR Digital Detector XBn
MWIR 1280 x 1024 15µm pitch



General Description

HOT Hercules is a state-of-the-art MWIR HD detector which integrates SCD' s 15µm XBn (InAsSb) pixel with our advanced digital ROIC technology.

HOT Hercules is based on SCD's XBn FPA technology which enables a very high FPA operating temperature of 150K without compromising on detector performance. This results in reduced SWaP (Size, Weight and Power) and high cooler reliability of more than 20,000 hours.

The 15µm format detector allows higher optics F/# than smaller pitch FPAs, providing high performance for demanding long range applications.

Applications

- IRST
- MWS
- Long Range Surveillance
- 24/7 Applications
- Navigation Payloads
- Reconnaissance

Main Features

- 100 Hz Frame Rate at full window
- Long-term NUC stability
- Digital output with Camera Link interface
- High image quality
- Reduced component volume and power consumption
- High Reliability

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Typical Performance

Parameter	Value
Detector type	Xbn (InAsSb)
Format	1280 x 1024
Focal plane temperature	150K
FPA spectral range	3.6-4.2 µm with notch @ 1.06 µm
Cold Shield F#	F/2 standard, others available
Pixel pitch	15 µm
Integration modes	ITR/IWR
Pixel capacity and floor noise (FN)	6Me- (900e-); 1Me (250e-)
Maximum frame rate @ 14 bit resolution	up to 100 F/S @ Full Window; 120F/S @ 1024 x 1024, up to 15 bit resolution available
Windowing	Flexible windowing with selectable region of interest
Readout direction	Up-down, down-up, left-right
NETD	22mK @ 50% well fill capacity
Residual non-uniformity	<0.04% STD/DR @ 10-90% well fill capacity
Cooler	Ricor K508/K508N or similar, 0.5W cooling power
Cooler MTTFF	>20,000 hours
Operations temperature	-40°C-71°C
Storage temperature	-54°C - 80° C
Dimensions (with Ricor K508N)	Weight - 750 gr.; Length (optical axis) - 149mm

Specifications are subject to change without notice

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