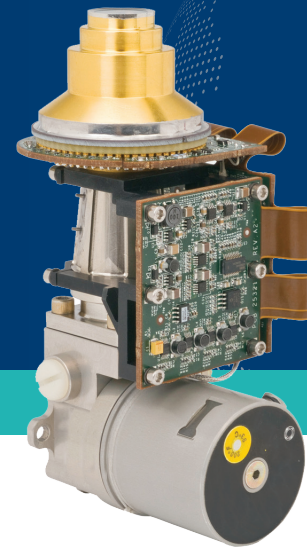




Hercules

1280 X 1024, 15 μm pitch,
digital InSb MWIR

Defense Applications



General Description

Establishing new standards in terms of Size, Weight, Power consumption and Performance, Hercules is the ultimate Mega-Pixel IR detector. This is achieved by the combination of the most advanced IR detectors manufacturing technologies available today:

- 15 μm pitch InSb process
- 0.18 μm Si-CMOS ROIC Process
- Compact, Stiff dewar
- Compact and light Integral rotary Stirling cooler

Main Features

- Camera Link interface
- 100 Hz Frame Rate at full window
- Long-term NUC stability
- High linearity and Low Residual Non-Uniformity
- Digital ROIC that yields Low Noise at system level, Reduced Size of System Electronics, and Low Power consumption

Applications

- IRST
- MWS
- Long Range Surveillance
- Navigation Payloads
- Reconnaissance





Typical Performance

Parameter	Performance
Detector type	InSb 2D array
FPA spectral range	1÷5.4µm
Array Format	1280x1024
Pixel Pitch	15µm
Integration modes	ITR/IWR
Pixel capacity and Floor noise (FN)	6Me- (900e-); 1Me- (250e-)
Maximum frame rate @ 14 BIT resolution	100 F/S @ Full window
Power dissipation	<100mW@60 Frame/Sec <160mW@100 Frame/Sec
Digital resolution	Up to 15bit
Readout mode	Normal/ Dilution
Windowing	Flexible windowing at selectable region of interest
Readout direction	Up-down, left-right
Residual Non Uniformity	<0.04% STD/DR@10-90% well fill capacity
Response uniformity	<2.5% STD/DR
Standard 0.75W Rotary Coolers	Integral Ricor K548, Split Ricor K549, JT cooler
Dimensions (with Ricor K548)	Weight - ~ 800 gr. Length (optical axis) - 148.5 mm