

Hercules

The HERCULES stands as one of the most superior and robust Mid-Wave Infrared (MWIR) detectors in the market. It features a 15 μm pitch Indium Antimonide (InSb) process and a 0.18 μm Silicon CMOS Readout Integrated Circuit (Si-CMOS ROIC). Its design includes a robust dewar and a compact, lightweight integral rotary Stirling cooler, culminating in exceptional performance capabilities. With the HERCULES, SCD's customers are consistently among the first to see crucial visual information.

Main Features

- Camera link interface
- 100 Hz frame rate at full window
- High linearity and low residual non-uniformity
- Digital readout integrated circuit (ROIC) enabling low system-level noise, reduced size of system electronics, and low power consumption

Applications

- IRST
- MWS
- Long range surveillance
- Airborne EVS
- Navigation payloads
- Reconnaissance



Technology	InSb	XBn	
Detector Format	1280 x 1024, 15µm pixel		
Cooler Options	Split rotary	Integral rotary	Integral rotary high reliability
Spectral band	3.6-5 µm (1-5.4µm available on request)	3.6-4.2 µm (1-4.2µm available on request)	
Operating temperature	80K	150K	
Mission profile	Airborne Gimbaled	Ground mounted	High Reliability
Length (optical axis)	138mm	162mm	149mm
Weight	1570g	860g	750g
Cooler Power consumption at 23°C	20W	19W	5.5W
Proximity electronics Power consumption at 23°C	3.3W	3.3W	3.3W
Maximum frame rate @ 14 BIT resolution	100 F/S @ Full window		
NETD (6Me- Cap.) at 50% Well fill	20mK		
Advanced ROIC functionality	Windowing, dilution		
Video Output	Camera Link (CL) digital output		

