

Blackbird 1280

The BLACKBIRD SXGA represents SCD's advanced Mid-Wave Infrared (MWIR) High Definition detector, integrating their mature 1280x1024 Focal Plane Array (FPA) technology. This technology is based on Indium Antimonide (InSb), XBN, or Hot Full Midwave (HFM) with a 10µm pixel size. It includes a digital readout circuit fabricated using an advanced CMOS process. The accompanying proximity electronic board supports Video Engine capabilities while ensuring low power consumption. This results in a very large format detector with exceptional image quality, high frame rate, and a compact size. SCD remains dedicated to standing by our customers, ensuring they have access to the best solutions tailored to their needs.

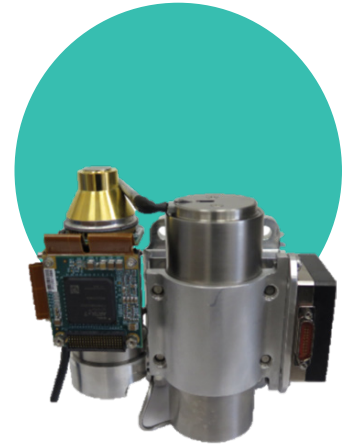
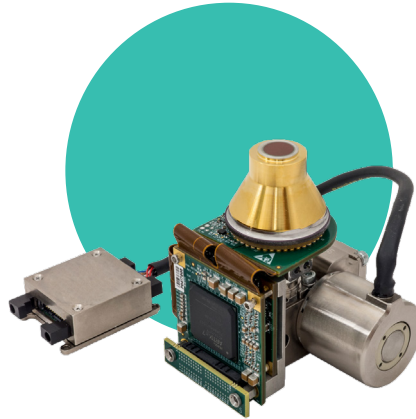
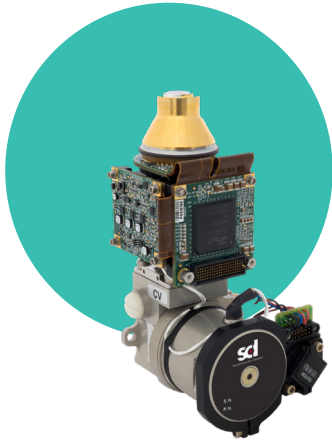
Main Features

- High sensitivity: characterized by low readout noise, low dark current, and high quantum efficiency
- High frame rate: capable of up to 180 Hz in full frame
- Simple electronic interface - maintains the legacy camera link interface
- Option for 1280x1024 or 1280x720 video format

Applications

- Persistent surveillance
- Long/medium range surveillance & targeting
- Remote weapon station
- IRST
- MWS







DDC	Blackbird 1280		
Technology	InSb		
Detector Format	1280x1024, 10µm		
Cooler options	Split rotary	Integral rotary	Integral rotary high reliability
Spectral band	3.6 - 5 µm (1-5.4µm available on request)		
Operating temperature	80K		
Mission profile	Harsh conditions		High Reliability
Length (optical axis)	96mm	140mm	140mm
Weight	1300g	720g	720g
Cooler power consumption	14W	12.5W	12.5W
Proximity electronics power consumption		3.5W	
NETD (2Me- Cap.) at 70% Well fill		25mK	
Maximal Frame Rate (FR) Raw image at full frame		180Hz	
Advanced ROIC functionality	Binning, windowing		

Integrated video processing key features

- Non Uniformity Correction (NUC)
- Bad-Pixel Replacement (BPR)
- Automatic Exposure / Gain Control (AGC)
- Dynamic Range Compression (DRC)
- Auto focus support (Q-Factor)
- Digital zoom
- Graphic overlay support
- Pseudo-color look-up-tables
- Spatial & temporal noise reduction
- Maximal frame rate 60Hz



Blackbird 1280

Mini Blackbird 1280

HOT Blackbird 1280

Blackbird 1280 HFM

XBn			HFM	
1280x1024, 10µm			1280x1024, 10µm	
Split linear high reliability	Integral rotary	Integral rotary high reliability	Split rotary	Integral rotary high reliability
3.6 - 4.2 µm (1-4.2µm available on request)			3.6 - 4.9 µm	
150K			120K	
Very high Reliability	Low SWaP	Very high Reliability	Harsh conditions	High Reliability
135mm	82mm	140mm	96mm	140mm
1500g	350g	720g	1300g	720g
10W	3W	7W	12W	8.5W
3.5W				
25mK				
180Hz				
Binning, windowing				

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