



# PELICAN D

640 X 512, 15µm pitch Digital IDCA



Commercial Applications



## General Description

The PELICAN-D family of detectors is based on a 640 x 512 elements, 15µm pitch IR-FPA with a robust all-digital ROIC, 0.18 µm CMOS Process.

The IDCA includes a proximity board that provides the FPA timing, and the sensitive power supplies. In addition, the Camera Link interface highly simplifies the integration of the detector to the system.

PELICAN-D comes in 3 different technological flavors:

- Standard InSb (Spectral response 1 - 5.4 µm)
- HOT XBn (Spectral response 3.6 - 4.2 µm)
- LWIR – T2SL (Spectral response 7.5 - 9.3 µm)

Moreover, each of these options can be configured to meet the application requirements in terms of cold filter, cold shield, cooler type and orientation, etc.

The outstanding performance and stability have converted Pelican-D in the golden standard of thermographic applications.

## Main Features

- High frame rate (300Hz at full window)
- Camera Link interface
- Negligible blinking pixels and very stable NUC
- Integrate-Then-Read and Integrate-While-Read Integration modes
- Configurable cold shield, f number and cooler type

## Applications

	Pelican D	HOT Pelican D	Pelican D - LW
High End Thermography	✓		✓
Gas leak detection		✓	✓
Industrial Inspection	✓	✓	
Multipurpose Scientific Thermal cameras	✓	✓	✓
Spectroscopy	✓		
HLS and Surveillance	✓	✓	





## Typical Performance

Parameter	Value		
	Pelican D	HOT Pelican D	Pelican D-LW
Format	640 x 512, 15µm pitch	640 x 512, 15µm pitch	640 x 512, 15µm pitch
Technology	InSb	InAsSb - XBN	Type II Super lattice
Detector Spectral Response	1-5.4 µm	3.6 - 4.2 µm	7 - 9.3 µm
Cold Shield F#	f/1.5 - f/5.5	f/1.5 - f/5.5	f/1.5 - f/5.5
Operating Temperature	77K	150K	77K
Pixel capacity	1.5Me-, 5.8Me-	1.1Me-, 3.3Me-	1.3Me, 7Me-
NETD	<20mK @ 50% WF, 30 Hz	<28 mK @ 50% WF, 30 Hz	15mK @65% WF, 30Hz(*)
Operability	> 99.5%	> 99.5%	> 99.5%
Residual Non-Uniformity	<0.04% STD/DR @10-90% Well Fill	0.05% Std/DR @20-80% well fill	<0.04% STD/DR @10-90% Well Fill
Response Uniformity	<2.5% STD/DR	<2.5% STD/DR	<2.5% STD/DR
Integration modes	ITR/IWR	ITR/IWR	ITR/IWR
Readout modes	Normal/Dilution	Normal/Dilution	Normal/Dilution
Windowing	Flexible, at 2 rows steps	Flexible, at 2 rows steps	Flexible, at 2 rows steps
Max Frame rate @ full window	Up to 350 fps	Up to 350 fps	Up to 350 fps
Proximity board output	Camera Link	Camera Link	Camera Link
Cooler options	Ricor K508, K508N	Ricor K508, K508N, AIM SX020	Ricor K508, K508N, K548

(\*) By averaging 8 frames at the detector proxy level