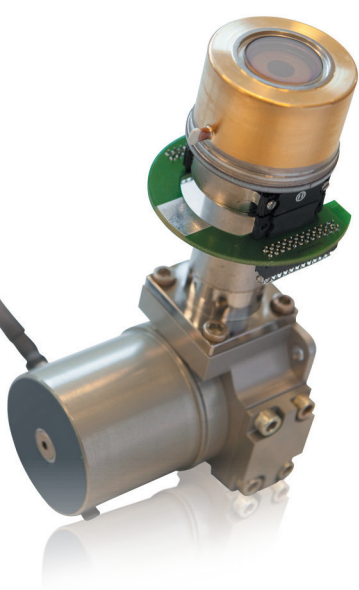
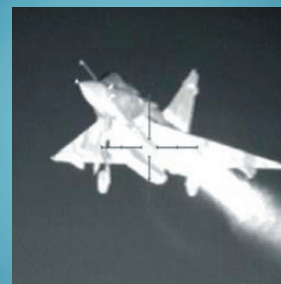


NEPTUNE SW

500 x 256 - 30 μm pitch - MCT

→ The detector for SWIR hyperspectral imaging and spectroscopy.



Neptune SW is a very high-performance IDCA which enables you imaging from 0.9 to 2.5 μm .

This IDCA is well-adapted to low flux in this wavelength range. The line by line gain selection function makes it perfectly suitable for hyperspectral imaging.

This high-performance IDCA takes full advantage of Sofradir's state of the art technologies.

ARRAY FEATURES

Format	500 x 256
Pixel pitch	30 μm x 30 μm
Detector spectral response	0.8 μm - 2.5 μm
FPA Operating temperature	Up to 200 K

ROIC (READ-OUT INTEGRATED CIRCUIT)

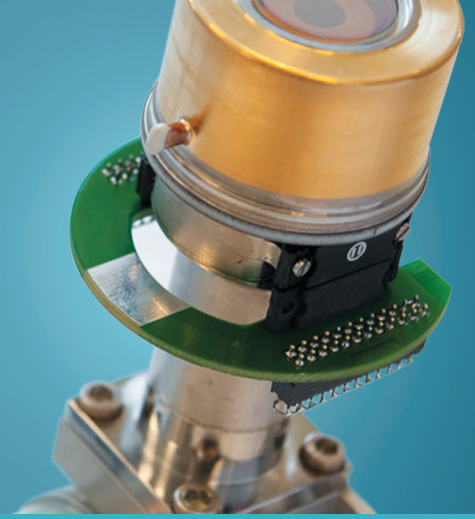
ROIC architecture	Snapshot operation, Integrate-While-Read mode
ROIC functionalities	Programmable integration time, programmable gain, anti-blooming system
Windowing modes	Selectable lines to be read (user configurable)
Gain selection	Selectable by lines (user configurable)
Charge handling capacity	0.5 10^6 e- (Gain 1) / 2.5 10^6 e- (Gain 2) for 100% well fill
Electrical dynamic range	> 3 V
Readout noise	< 150 e- (for 0.5 10^6 e- Gain 1); < 350 e- (for 2.5 10^6 e- Gain 2)
Signal outputs	2 or 4
Pixel output rate	Up to 8 MHz per output
Frame rate	Up to 250 Hz full frame rate

NEPTUNE SW

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NEPTUNE SW



TYPICAL (*) PERFORMANCES

NETD	> 1000 (for $2.5 \cdot 10^6$ e- Gain 2, 50% well fill, 50 Hz)
Array operability	99.5%
Non uniformity	< 7%
Linearity	> 99.5%
Quantum efficiency	> 60% without antireflective coating
	K508
FOV	TBD in function of user need
Regulated input power	< 10 Wdc (**)
Cooldown input power	< 17 Wdc (**)
Cooldown time	< 10 min
Weight	< 0.8 kg
Operating temperatures	- 40° C to 71° C

(*) Optional extended waveband : 40% @ 0.5 μm , 75% @ 0.8 μm , >80% from 0.9 μm to 1.6 μm

(**) Wdc = at cooler C&CE DC input

OPTIONS

Proximity driving electronics (including ADC)

Technical training and support

APPLICATIONS



Exclusive Distributor - North America



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They are not contractual and may change without prior notice.