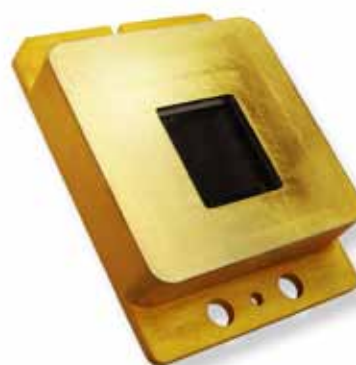


# SNAKE SW

640 x 512 - 15  $\mu\text{m}$  pitch - InGaAs

→ THE NEW GENERATION  
VGA InGaAs FPA SENSOR.

Snake SW is the new generation VGA InGaAs FPA sensor: a high-sensitivity and high-resolution FPA assembly designed for most demanding low flux imaging applications from 0.9  $\mu\text{m}$  to 1.7  $\mu\text{m}$ . Sofradir InGaAs technology exhibits outstanding performances in terms of dark current, uniformity and operability. Snake SW is well-adapted to a large range of applications such as night vision, surveillance, airborne gimbals and various industrial and scientific applications. This high-performance FPA assembly takes full advantage of Sofradir's state of the art technologies.



## ARRAY FEATURES

• Sensor type	InGaAs PIN - Photodiode
• Format	640 x 512
• Pixel pitch	15 $\mu\text{m}$ x 15 $\mu\text{m}$
• Waveband	0.9 $\mu\text{m}$ to 1.7 $\mu\text{m}$ (optional extended waveband = 0.4 $\mu\text{m}$ to 1.7 $\mu\text{m}$ )

## ROIC (READ-OUT INTEGRATED CIRCUIT)

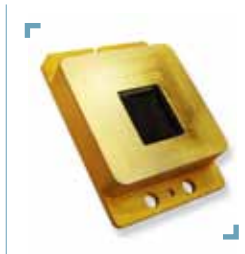
• Integration type	Snapshot
• Readout modes	IWR, ITR, NDR
• Integration time	1 $\mu\text{s}$ to full frame
• Maximum full frame rate @ 9 MHz	100Hz / 180 Hz / 300Hz (2, 4 or 8 outputs)
• Maximum frame rate @ 9 MHz	30 KHz (windowing mode)
• Maximum pixel rate	18 MHz per output
• Full well	43 10 <sup>3</sup> e- (Gain 0) / 120 10 <sup>3</sup> e- (Gain 1) / 1.44 10 <sup>6</sup> e- (Gain 2)
• Output signal swing	2.3 V
• Input bias	1.8 V to 3.6 V
• Windowing	Programmable ( $\geq 8 \times 4$ [2 output mode, 30 KFPS]; $\geq 16 \times 4$ [4 output mode, 30 KFPS]; $\geq 32 \times 4$ [8 output mode, 30 KFPS])
• Temperature sensor output	Yes

# SNAKE SW

640 x 512 - 15  $\mu$ m pitch - InGaAs



THE NEW GENERATION  
VGA InGaAs FPA SENSOR.



## TYPICAL (\*) PERFORMANCES

Quantum efficiency (QE)	> 70% from 1 $\mu$ m to 1.6 $\mu$ m (**)
Noise with ROIC	30 e- (Gain 0)
Dark current	30 fA @ 0.2 V detector bias
Operability	99.7% (***)
Non uniformity without correction	4 %

## PACKAGING

Dimension (W x H x D)	42 mm x 30 mm x 9 mm
Windows	Sapphire
Number of pins	28 Standard 1/10 inch pin pitch
Cooler	Single stage TE Cooler (8.4W)
Packaging characteristics	Hermetically sealed
Operation temperature	From - 40° C to 71° C
Storage temperature	From - 40° C to 71° C

(\*) Typical = Expected production mean value.

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

(\*\*\*) The fraction of pixels with responsivity deviation less than +/- 30 % from the mean.

## APPLICATIONS



Technical characteristics described in this data sheet are for information only.  
They are not contractual and may change without prior notice.

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SNAKE SW