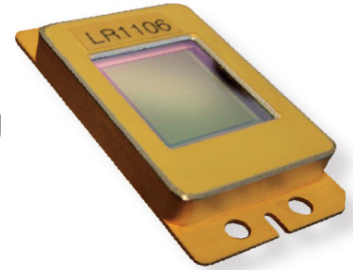


# Snake 640 SW

## High Resolution and High Sensitivity InGaAs FPA Module for Short Wave Infrared Imaging 640x512 InGaAs SWIR (15µm pitch)



Snake 640 SW is the newest generation VGA InGaAs FPA module by Sofradir. This high-sensitivity and high-resolution FPA assembly is designed for the most demanding, low-flux imaging applications from 0.9µm to 1.7µm. Sofradir InGaAs technology exhibits industry-leading performance in terms of dark current, uniformity and operability. Snake 640 SW is well-adapted for a large range of applications including night vision, surveillance, airborne gimbals and various industrial and scientific applications.

- InGaAs Sensor
- Low Power
- High Sensitivity
- Up to 240 Hz Operation
- 15 micron Pixel Technology

### ELECTRO-OPTICAL SPECIFICATIONS @ 25° C

Quantum Efficiency (QE)	> 70% from 1µm to 1.6µm
Noise with ROIC	< 30 e <sup>-</sup> (Gain 0)
Dark Current	< 0.15 pA @ 0.2 V detector bias
Operability	> 99.5% (*)
Non-uniformity without Correction	< 10%

### PACKAGING

Dimension (W x H x D)	50mm x 25.5mm x 6.5mm
Windows	Sapphire
Number of Pins	28
Cooler	Single stage TE Cooler (8 V - 9 W)
Packaging Characteristics	Hermetically sealed
Operation Temperature	From -20° C to 70° C
Storage Temperature	From -40° C to 70° C

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

### ROIC FEATURES

Integration Time	1µs to full frame
Maximum Full Frame Rate @ 9 MHz	60 Hz / 120 Hz / 240 Hz (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 <sup>-</sup> (Gain 0) / 120 10 <sup>3</sup> e <sup>-</sup> (Gain 1) / 1.44 10 <sup>6</sup> e <sup>-</sup> (Gain 2)
Output Signal Swing	2 V
Input Bias	1.8 V to 3.6 V
Windowing	Programmable: ≥ 8x4 (2 output mode, 30 KFPS) ≥ 16x4 (4 output mode, 30 KFPS) ≥ 32x4 (8 output mode, 30 KFPS)
Temperature Sensor Output	Yes

### ARRAY FEATURES

Sensor Type	InGaAs PIN - Photodiode
Format	640x512
Pixel Pitch	15µm x 15µm
Waveband	0.9µm to 1.7µm

Technical characteristics described in this data sheet are for information only and are not contractual. Because of ongoing product enhancements, specifications are subject to change without notice. Export of these products from the United States is controlled by the US Government. Prior authorization is required for re-export or transfer.