



# Ninox 640 II

Ultra low noise, cooled, digital VIS-SWIR camera 640 x 512 • 15µm x 15µm Pixel Pitch • 18 electrons • Air Cooled to -15°C •



# **Key Features and Benefits**

The best performing VIS-SWIR camera in the World!

- Ultra Low Noise Sensor: 18e-Enables ultimate low light Vis-SWIR image
- Air Cooled VIS-SWIR technology Air Cooled to -15°C. Enables low dark current for longer exposures
- **15µm x 15µm Pixel Pitch** Enables highest resolution VIS-SWIR image
- Ultra High Intra-scene Dynamic range 62dB (Typical) Enables similtaneous capture of bright & dark portions of a scene

Resolution	640 x 512
Readout Noise	18e- (typical)
Spectral Response <b>0.6µm - 1.7µm</b>	
Typical Dark Current <b>&lt;1500e/p/s</b>	







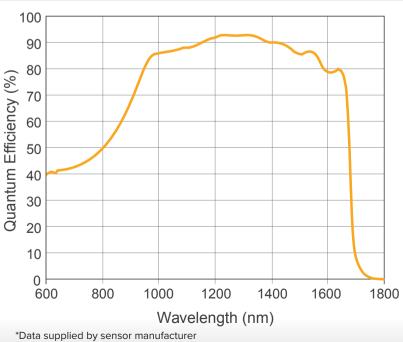
**Instrument Expert Original factory** packaging www.dorgean.com

## **Specification for Ninox 640 II**

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15μm x 15μm
Active Area	9.6mm x 7.68mm
Spectral Response <sup>1</sup>	0.6µm to 1.7µm
Readout Noise (RMS)² LG = Low Gain HG = High Gain	LG: <175e- (150e- typical) HG: <22e- (18e- typical)
Peak Quantum Efficiency	>90% @ 1.3µm
Pixel Well Depth	LG: >250ke-, HG: 10ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	<3,000 @-15°C (1,500 typical)
Digital Output Format	14bit Camera Link (Base Configuration) /SDR
Exposure Time <sup>3</sup>	LG: 10μs to 26.8s HG: 100μs to 26.8s
Shutter Mode	Global shutter
Frame Rate	Up to 120Hz
Optical Interface	C-mount (selection of SWIR lens available)
Dynamic Range (Typical)	LG: 62dB HG: 55dB
Trigger Interface	Trigger IN and OUT - TTL compatible
Power Supply	12V DC +/- 0.5V
TE Cooling	Cooled to -15°C, $\Delta T = 35^{\circ}C$
Image Correction	3 point NUC (offset, Gain & Dark Current) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non Uniformity Correction, Gamma, Pk/ Av, TEC, ROI
Camera Power Consumption <sup>₄</sup>	<10W with TEC ON, NUC ON)
Operating Case Temperature⁵	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H)6	87.30mm x 78.86mm x 79.30mm
Weight	550g
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### **Quantum Efficiency**



# **Ordering Information**

Demo is available on request. Pricing AOR subject to volumes.

**Detailed technical drawings** can be downloaded at www.raptorphotonics.com

#### **Applications**

#### Scientific

- Astronomy
- Beam Profiling
- Hyperspectral Imaging
- Semiconductor Inspection
- Solar Cell Inspection
- Thermography
- Microscopy
- Art Inspection



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