

Ninox 1280 VIS-SWIR

High resolution, low noise, cooled, digital VIS-SWIR camera
1280 x 1024 • Cooled to -15°C • <40e readout noise •



Key Features and Benefits

The best performing Scientific SWIR camera in the World!

- **Cooled VIS-SWIR technology**
Cooled to -15°C. Enables low dark current for longer exposures
- **10µm x 10µm pixel pitch**
Enables highest resolution VIS-SWIR image
- **<40 electrons readout noise**
Enables highest VIS-SWIR detection limit
- **Ultra high intrascene dynamic range - 69dB (Typical)**
Enables simultaneous capture of bright & dark portions of a scene
- **On-board intelligent 3 point NUC**
Enables highest quality images

Resolution	1280 x 1024
Frame Rate	Up to 60Hz
Cameralink	12 bit
Wavelength Range	VIS-SWIR
Dark Current	<1,500 e/p/s

Specification for Ninox 1280 VIS-SWIR

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	1280 x 1024
Pixel Pitch	10µm x 10µm
Active Area	12.8mm x 10.24mm
Spectral Response ¹	0.4µm to 1.7µm
Noise (RMS)	<180 electrons Low Gain (171 electrons typical), <40 electrons High Gain (37 electrons typical)
Quantum Efficiency	Peak >92% (>87% @ 1.064nm, 82% @ 1.55nm)
Pixel Well Depth	Low Gain: 500Ke-, High Gain: 10Ke-
Pixel Operability	>99.5%
Dark Current	<1,500e/p/s @-15°C
Digital Output Format	12bit CameraLink (Medium Configuration)
Maximum Exposure Time	Frame Period (ms) – 7.502ms in Low Gain, Frame Period (ms) – 13.540ms in High Gain
Shutter Mode	Global shutter
Frame Rate	Up to 60Hz programmable
Optical Interface	C-mount (selection of SWIR lens available)
Camera Setup / Control	CameraLink
Dynamic Range	69dB (Typical)
Trigger Interface	Trigger IN and OUT - TTL compatible
Power Supply	12V DC ±10%
TE Cooling	to -35°C Delta
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 ²	<10w (Typical)
Operating Case Temperature ³	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions & Weight	80.5mm x 56mm x 73mm / 550g

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Ordering Information

Camera

NINOX 1280 VIS-SWIR digital camera	NX1.7-VS-CL-1280
NINOX Power Supply Cable	RPL-HR4-K
Liquid Recirculator Unit	RPL-RECIRC ⁴
Chiller Tubing	RPL-WTUBE-NINOX ⁵

Optional Accessories

EPIX(R) Medium or Full CL card	RPL-EPIX-E8
MiniPC with EL1 Card	RPL-PC-EL1
EPIX(R) XCAP STD software	RPL-XCAP-STD
CameraLink Cable, 2m (x2) ⁶	RPL-CL-CBL-2M
Optical SWIR lenses ⁷	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass

Note 2: Measured @ 30°C

Note 3: Extended Operating Temperature range on request

Note 4: This includes the chiller and the liquid

Note 5: This includes the tube + connectors

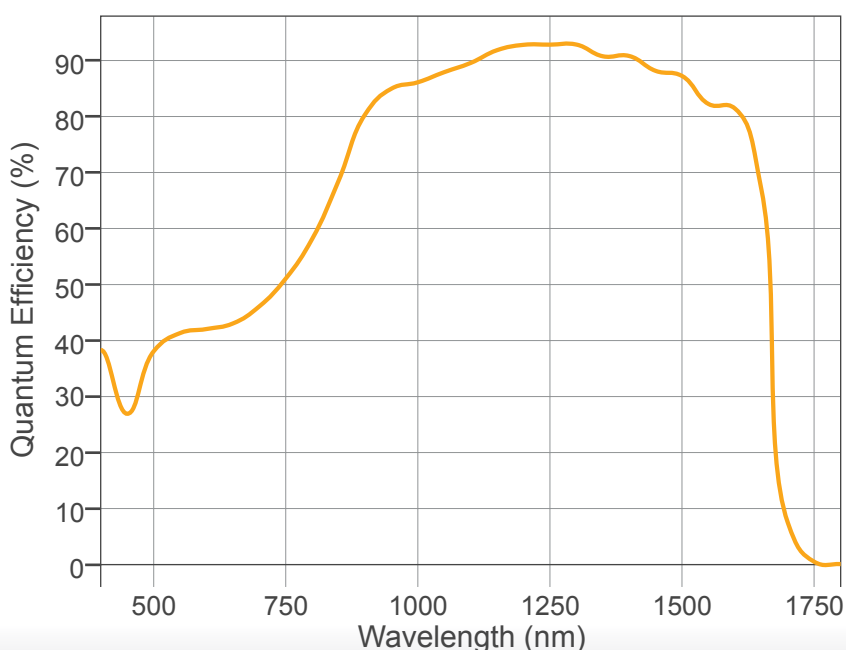
Note 6: Two cables required

Note 7: Please consult us to check our range of lenses

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

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

Quantum Efficiency



Applications

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

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