Raptor photonics

Ninox 640 II

640 x 512, VIS-SWIR, -15°C Cooled Camera

Key Features and Benefits

- **640 x 512,15µm pitch VIS-SWIR sensor**
  VGA resolution imaging from 0.6µm to 1.7µm

- **Low Readout Noise**
  Maximising Senstivity

- **Global Shutter**
  120Hz full frame video, with no distortion (ideal for triggering)

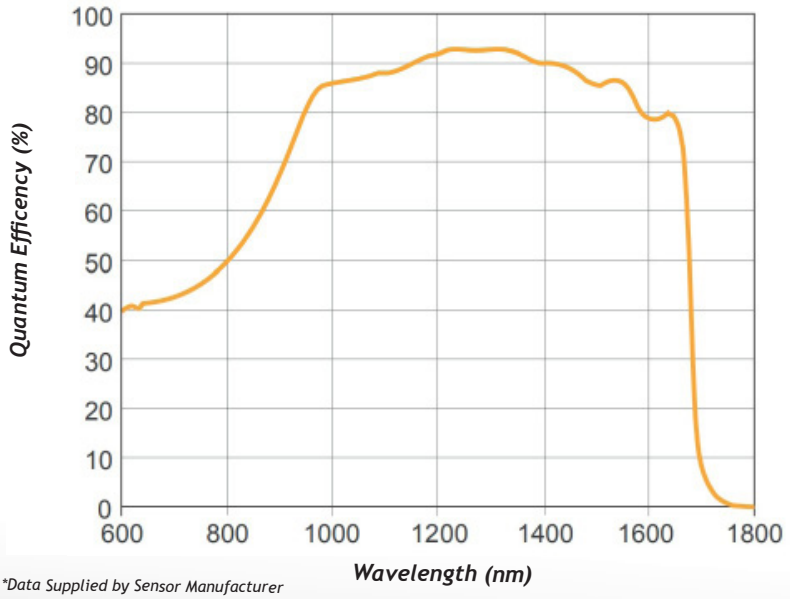
- **Cooled VIS-SWIR Technology**
  Air Cooled to -15°C, for low dark current and longer exposures

Resolution	640 x 512
Frame Rate	up to 120Hz
CBit Depth (ADC)	14 bit Base
Wavelength Range	VIS-SWIR

Specification for Ninox 640 II

Sensor	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.68mm
Spectral Response[1]	0.6µm to 1.7µm
Readout Noise (RMS)[2]	LG: <175e- (<150e- typical) HG: <22e- (<18e- typical)
Peak Quantumn Efficeny	>90% @1.3µm
Full Well Depth	LG: >250ke- HG: >10ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	<3000 @-15ºC (1,500 typical)
Digital Output Format	14 bit Camera Link (base configuration/SDR)
Exposure Time[3]	LG:50µs to 26.8s HG: 450µs to 26.8s
Shutter Mode	Global Shutter
Frame Rate	up to 120Hz
Optical Interface	C Mount (selection of SWIR Lens available)
Dynamic Range (Typ)	LG:62dB HG:55dB
Trigger Interface	Trigger IN and OUT-TTL compatible
Power Supply	12V DC +/- 0.5%
TE Cooling	Cooled to -15˚C
Image Correction	3 point NUC (offset,gain and dark current) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non Uniformity Correction, Gamma, Pk/Av, TEC, ROI
Camera Power Consumption[4]	<12W (with TEC ON,NUC ON)
Operating Temperature[5]	-20 to + 55˚C
Storage Temperature	-30 to + 60˚C
Dimensons (excluding standard mounting)[6]	87mm x 79mm x 79mm
Weight	555g

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictoral or typographical errors.This product is under the export control of the UK goverment and may be subject to a single individual export license before shipment. Note 1: Optional filters available: low, high or bandpass.Note 2: Typical readout noise is calculated from an average of the last 20 cameras shipped.Note 3: In practice, the maximum exposure time will be dark current limited.Note 4: Measured in an ambient of 25˚C with adequate heatsinking. For more detailed power consumption values, please refer to the user manual.Note 5: Extended Operating Temperature range available on request.Note 6: Dimensions include all connector parts on the camera interface.Note 7: Longer Camera Link cable available.Note 8: This includes the chiller and the liquid.Recommended coolant flow rate >0.5l/min & cooling capacity >100W @ 20˚C.Note 9: This includes the tubing & connectors.Note 10: Please consult us to check our range of lenses



*Data Supplied by Sensor Manufacturer

Specification for Ninox 640 II

Camera

Ninox 640 II Digital Camera	NN1.7-VS-CL-640
Power Supply Cable	RPL-HR4-K

Optional Accessories

Mini PC with XCAP STD and Frame Grabber	RPL-PC-mf2280
Thunderbolt Frame Grabber	RPL-mf2280
EPIX® E8 Frame Grabber	RPL-EPIX-E8
EPIX® XCAP STD Software	RPL-XCAP-STD
CameraLink Cable (2m)[7]	RPL-MCL-CBL-2M
Thermoelectric Water Cooling Unit[8]	RPL CHILLER
Chiller Tubing[9]	RPL-WTUBE-NINOX
Optical SWIR Lenses[10]	RPL-xx-xxxx

Applications

- Art Inspection
- Astronomy
- Beam Profiling
- Solar Cell Inspection
- Hyperspectral Imaging
- Microscopy
- Semi Conductor Inspection

For detailed tehnical drawings, volume pricing or to set up a demo, contact us at sales@raptorphotonics.com

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