

Ninox eSWIR 640

640 x 512, Extended SWIR Camera (up to 2650nm)



Key Features and Benefits

- **640 x 512, 15 μ m x 15 μ m pixel eSWIR sensor**
VGA resolution imaging from 0.9 μ m to 2.65 μ m
- **T2SL eSWIR Technology**
Excellent QE, MTF and uniformity
- **Global Shutter**
98Hz full frame video, distortion free
- **Vacuum Cooled to -100 $^{\circ}$ C**
Maintenance free, long camera lifetime



Resolution	640 x 512
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Frame Rate	up to 98 Hz
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Camera Link	16 bit Base
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Wavelength Range	eSWIR
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Specification for eSWIR 640

Sensor	T2SL
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.60mm x 7.68mm
Spectral Response ¹	0.9µm to 2.65µm
Readout Noise (RMS) ²	LG: <90e- HG: <50e-
Peak Quantum Efficiency	78% @1875nm
Full Well Depth	LG: >100k HG: >30k
Dark Current	<200fA @-100° C
Pixel Operability	>99.5%
Digital Output Format	16 bit Camera Link (base configuration/SDR)
Exposure Time ³	20µs - 80ms
Shutter Mode	Global Shutter
Frame Rate	98Hz
Optical Interface	C Mount (selection of SWIR Lens available)
Dynamic Range (Typ)	LG: >61dB HG: >55dB
Trigger Interface	Trigger IN and OUT-TTL compatible
Power Supply	12V DC +/- 0.5%
TE Cooling	Vacuum Cooled to -100° C
Image Correction	2 point NUC (offset and gain) + pixel correction
Functions controlled by serial communication	Exposure, intelligent AGC, Non Uniformity Correction, TEC
Camera Power Consumption ⁴	<70W
Operating Temperature ⁵	-20 to + 55° C
Storage Temperature	-30 to + 60° C
Dimensions (excluding standard mounting) ⁶	121mm x 141mm x 114mm
Weight	<1.9Kg

Raptor Photonics Limited reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors. This product is under the export control of the UK government 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

Specification for eSWIR 640

Camera

Ninox 640 eSWIR Digital Camera NXU2.5-CL-640

Power Supply RPL-NXU-PSU

Optional Accessories

Mini PC with XCAP STD and Frame Grabber RPL-PC-mf2280

Thunderbolt Frame Grabber RPL-mf2280

EPIX® EB1 Frame Grab- RPL-EPIX-EB1

EPIX® XCAP STD Software RPL-XCAP-STD

CameraLink Cable (2m)⁷ RPL-MCL-CBL-2M

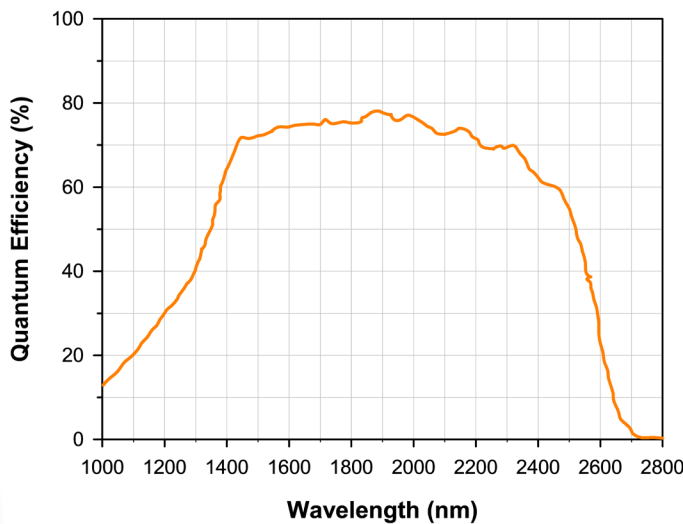
Thermoelectric Water Cooling Unit⁸ RPL-CHILLER

Chiller Tubing⁹ RPL-WTUBE-NINOX

Optical SWIR Lenses¹⁰ RPL-xx-xxxx

Applications

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



*Data Supplied by Sensor Manufacturer

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

Document#: INTeSWIR640II-CL-21-04-26