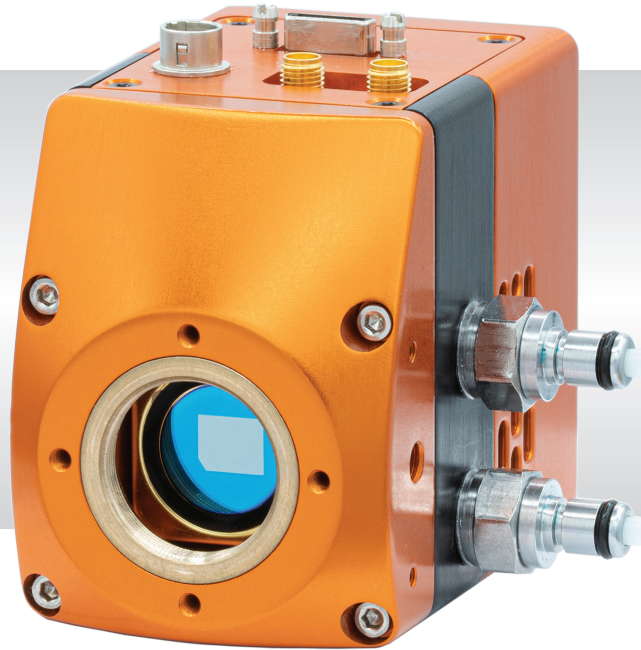


Ninox 1280

High resolution, low noise, cooled, digital VIS-SWIR camera

1280 x 1024 • 10µm x 10µm Pixel Pitch • Cooled to -15°C • 28e- readout noise •



Key Features and Benefits

The best performing Scientific VIS -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

- **28 electrons readout noise in high gain**

Enables highest VIS-SWIR detection limit

- **Ultra high intrascene dynamic range - 68dB (Typical)**

Enables simultaneous capture of bright & dark portions of a scene

| | |
|------------|--------------------|
| Resolution | 1280 x 1024 |
|------------|--------------------|

| | |
|------------|-------------------|
| Frame Rate | 10 to 60Hz |
|------------|-------------------|

| | |
|-------------|---------------|
| Camera Link | 12 bit |
|-------------|---------------|

| | |
|------------------|-----------------|
| Wavelength Range | VIS-SWIR |
|------------------|-----------------|

| | |
|----------------------|------------------------|
| Typical Dark Current | <2,000 e/p/s |
|----------------------|------------------------|

Specification for Ninox 1280

| | |
|--|--|
| 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 | 0.6µm to 1.7µm |
| Readout Noise (RMS) ² LG = Low Gain HG = High Gain | LG: <190e- (160e- typical) HG: 28e- |
| Peak Quantum Efficiency | >90% @ 1.3µm |
| Full Well Capacity | LG: 450ke- HG: 10ke- |
| Pixel Operability | >99.5% |
| Dark Current (e/p/s) | <4,000 @ -15°C (2,000 typical) |
| Digital Output Format | 12bit Camera Link (Medium Configuration) |
| Exposure Time | LG: 20µs to 10s HG: 40µs to 80ms |
| Shutter Mode | Global shutter |
| Frame Rate | 10 – 60Hz |
| Optical Interface | C-mount (selection of SWIR lens available) |
| Dynamic Range | LG: 69dB HG: 47dB |
| Trigger Interface | Trigger IN and OUT - TTL compatible |
| Power Supply | 12V DC ±5% |
| TE Cooling | Active, ΔT = 35°C |
| Image Correction ³ | 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 ⁴ | <8W (TEC ON, NUC ON) |
| Operating Case Temperature ⁵ | -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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Ordering Information

Camera

| | |
|---------------------------|------------------|
| Ninox 1280 Digital Camera | NX1.7-VS-CL-1280 |
| Power Supply Cable | RPL-HR4-K |

Optional Accessories

| | |
|--|-----------------|
| Mini PC with XCAP Std and frame grabber | RPL-PC-EL1 |
| EPIX® E8 frame grabber | RPL-EPIX-E8 |
| EPIX® XCAP Std software | RPL-XCAP-STD |
| MDR-SDR CameraLink Cable (2m) ⁷ | RPL-MCL-CBL-2M |
| Thermoelectric Water Chiller Unit ⁸ | RPL-CHILLER |
| Chiller Tubing ⁹ | RPL-WTUBE-NINOX |
| Optical Lenses ¹⁰ | RPL-xx-xxxx |

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: The NUC is not active for exposure times after 92.5ms. For more detailed information, please refer to the user manual.

Note 4: Measured in an ambient of 25°C with adequate heat sinking. 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: Two cables are required. The maximum cable length is 2m. For more information, please refer to the user manual.

Note 8: This also includes the liquid.

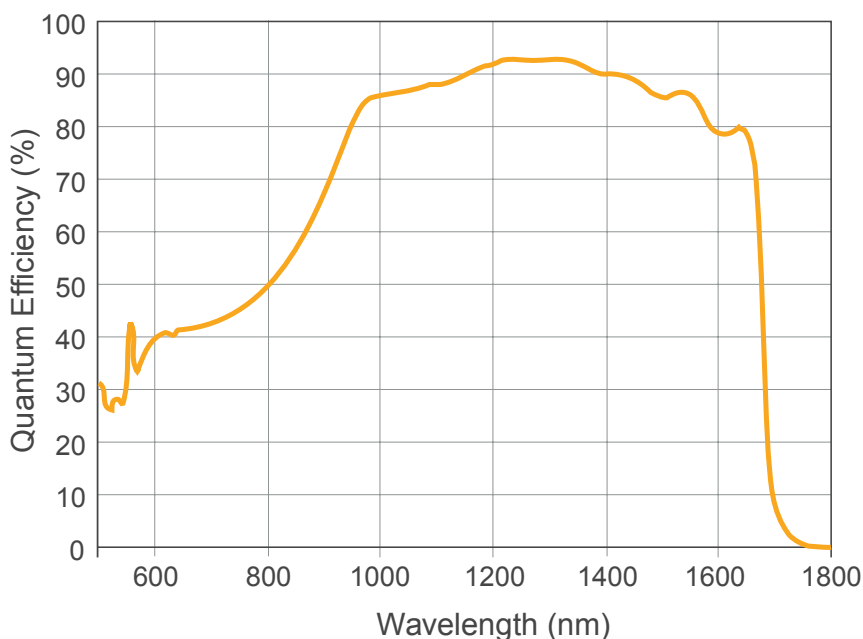
Note 9: This includes the tubing & connectors.

Note 10: 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



*Data supplied by sensor manufacturer

Applications

Scientific

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

Document #: INNINOX 1.7-VS-CL-1280 0521



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