Raptor photonics

# Ninox 640 SU

640 x 512, SWIR, -80ºC Cooled Camera



## Key Features and Benefits

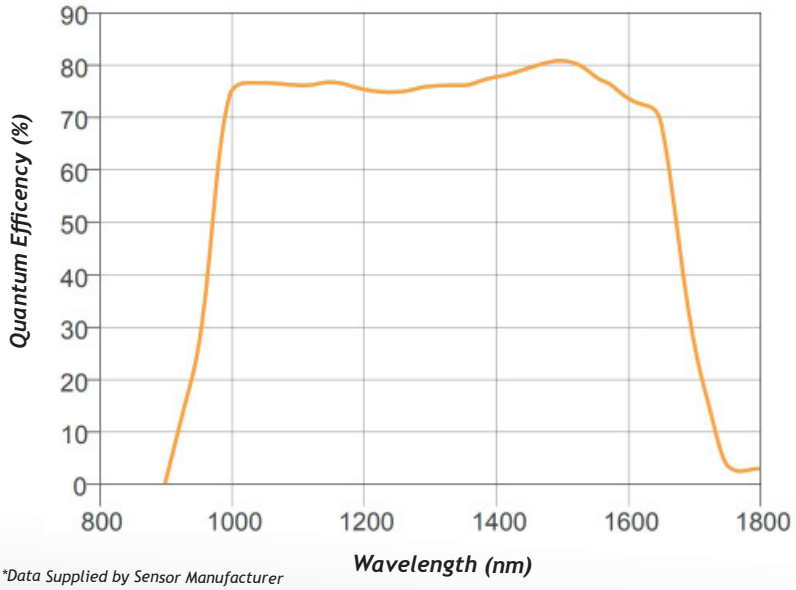
- **640 x 512, 15µm pitch SWIR sensor**
  VGA resolution imaging from 0.9µm to 1.7µm
- **Low Readout Noise**
  Maximising Sensitivty
- **Global Shutter**
  98Hz full frame video, with no distortion
- **Cooled VIS-SWIR Technology**
  Vacuum Cooled to -80ºC, for low dark current and longer exposures

| | |
|---|---|
| **Resolution** | 640 x 512 |
| **Frame Rate** | up to 98Hz |
| **Camera Link** | 16 bit |
| **Wavelength Range** | SWIR |

## Specification for Ninox 640 SU

| | |
|---|---|
| **Sensor** | InGaAs PIN-Photodiode |
| **Active Pixel** | 640 x 512 |
| **Pixel Pitch** | 15µm x 15µm |
| **Active Area** | 9.6mm x 7.68mm |
| **Spectral Response**[1] | 0.9µm to 1.7µm |
| **Readout Noise (RMS)** | LG: <85e- (72e- typical)<br>HG: <40e- (33e- typical) |
| **Peak Quantum Efficieny** | >80% @1.5µm |
| **Full Well Depth** | LG: >100ke-<br>HG: >24ke- |
| **Pixel Operability** | >99% |
| **Dark Current (e/p/s)** | <300 @-80ºC |
| **Digital Output Format** | 16 bit Camera Link (base configuration/SDR) |
| **Exposure Time** | 20µs - 300 secs* |
| **Shutter Mode** | Global Shutter |
| **Frame Rate** | 98Hz |
| **Optical Interface** | C Mount (selection of SWIR Lens available) |
| **Dynamic Range (Typ)** | LG:69dB<br>HG:51dB |
| **Trigger Interface** | Trigger IN and OUT-TTL compatible |
| **Power Supply** | 12V DC ±10% |
| **TE Cooling** | -80˚C with liquid cooling |
| **Image Correction** | 2 point NUC (offset, gain and dark current) + pixel correction |
| **Functions controlled by serial communication** | Exposure, Non Uniformity Correction,TEC |
| **Camera Power Consumption**[2] | <75W (with TEC ON, NUC ON) |
| **Operating Temperature**[3] | -20 to + 55˚C |
| **Storage Temperature** | -30 to + 60˚C |
| **Dimensons (excluding standard mounting)**[4] | 141mm x 121mm x 117mm |
| **Weight** | <1.84kg |

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*Data Supplied by Sensor Manufacturer

## Specification for Ninox 640 SU

### Camera

| | |
|---|---|
| Ninox 640 SU Digital Camera | NXU1.7-CL-640 |
| Power Supply Cable | RPL-NXU-PSU |

### 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)[5] | RPL-MCL-CBL-2M |
| Thermoelectric Water Cooling Unit | RPL CHILLER |
| Chiller Tubing[6] | RPL-WTUBE-NINOX |
| Optical SWIR Lenses[7] | 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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