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 similtaneous 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**

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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

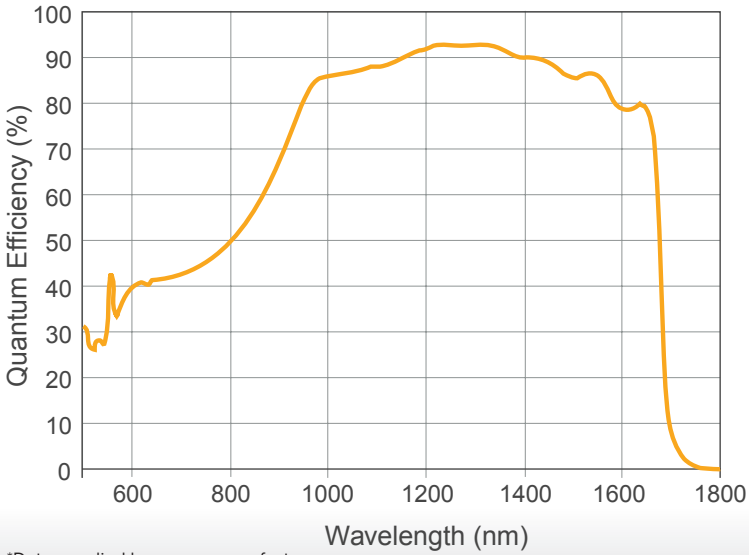
Mini PC with XCAP STD and frame grabber	RPL-PC-mf2280
Thunderbolt frame grabber	RPL-mf2280
EPIX® E8 frame grabber	RPL-EPIX-E8
EPIX® XCAP Std software	RPL-XCAP-STD
MDR-SDR CameraLink Cable (2m)[7]	RPL-MCL-CBL-2M
Thermoelectric Water Chiller Unit[8]	RPL CHILLER
Chiller Tubing[9]	RPL-WTUBE-NINOX
Optical 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 #: USNINOX 1.7-VS-CL-1280 0322

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