Ninox 640 VIS-SWIR

High resolution, low noise, cooled, digital VIS-SWIR camera
640 x 512 • Air Cooled to -15˚C • <50e in high gain •

Key Features and Benefits

The best performing VIS-SWIR camera in the World!

- Air Cooled VIS-SWIR technology
  Air Cooled to -15°C. Enables low dark current and longer exposure
- **15µm x 15µm pixel pitch**
  Enables highest resolution VIS-SWIR image
- <50e in high gain
  Enables highest VIS-SWIR detection limit
- Ultra high intrascene dynamic range - 70dB
  Enables similtaneous capture of bright & dark portions of a scene
- On-board intelligent 3 point NUC
  Enables highest quality images

Resolution	640 x 512
Frame Rate	Up to 120Hz
Camera Link	14 bit
Wavelength Range	VIS-SWIR
Dark Current	<1,500 e/p/s

For more details, please contact us at
info@salvo-technologies.com

Salvo Imaging
10781 75th St. N
Largo, FL 33777

727.544.3736
888.725.8605
salvoimaging.com

SALVO IMAGING
a Division of Salvo Technologies

Specification for Ninox 640 VIS-SWIR

Sensor Type	InGaAs PIN-Photodiode
Active Pixel	640 x 512
Pixel Pitch	15µm x 15µm
Active Area	9.6mm x 7.68mm
Spectral response [1]	0.4µm to 1.7µm
Readout Noise (RMS) LG = Low Gain HG = High Gain	LG: <190 electrons (163 electrons typical) HG: <50 electrons (37 electrons typical)
Quantum Efficiency	>80% @ 1.55µm
Full Well Capacity	LG: 650ke- HG: 10ke-
Pixel Operability	>99.5%
Dark Current (e/p/s)	<1,500 @ -15°C
Digital Output Format	14 bit Camera Link (Base Configuration)
Exposure time	LG: 10µs to 26.8s HG: 100µs to 26.8s
Shutter mode	Global shutter
Frame Rate	up to 120Hz
Optical Interface	C-mount (selection of SWIR lens available)
Dynamic Range (Typical)	LG: 72dB, HG: 49dB
Trigger interface	Trigger IN and OUT - TTL compatible
Power supply	12V DC ±0.5V
TE Cooling	Active, ΔT = 35°C
Image Correction	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 [2]	<5W with TEC OFF, NUC ON <10W with TEC ON, NUC ON
Operating Case Temperature [3]	-20°C to +55°C
Storage Temperature	-30°C to +60°C
Dimensions (L*W*H) [4]	123.14mm x 89.48mm x 64.00mm
Weight	916g

Salvo Imaging reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.

Ordering Information

Camera

NINOX 640 VIS-SWIR digital camera	NX1.7-VS-CL-640
NINOX Power Supply Cable	RPL-HR4-K
Chiller Tubing [5]	RPL-WTUBE-NINOX
Liquid Re-circulator Unit	RPL-RECIRC

Optional Accessories

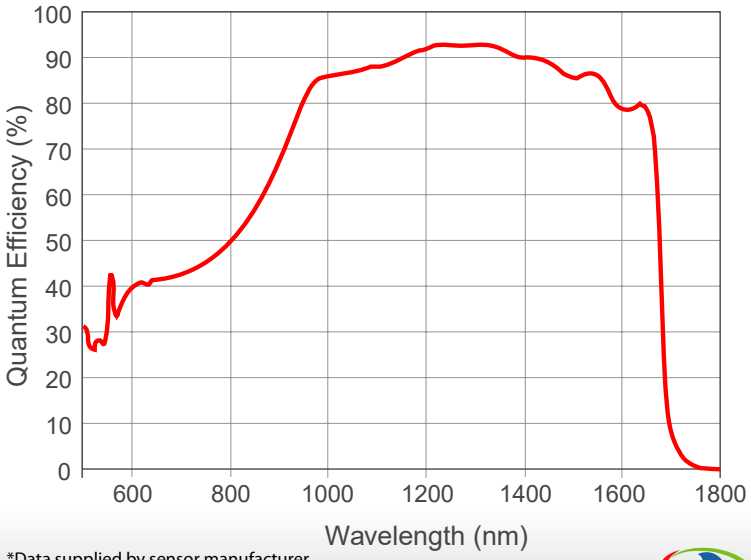
EPIX(R) base CL card	RPL-EPIX-EB1
EPIX(R) base notebook CL card	RPL-EPIX-ECB1-34
EPIX(R) base notebook CL card	RPL-EPIX-ECB1-54
EPIX(R) XCAP STD sofware	RPL-XCAP-STD
Camera Link Cable, 2m [6]	RPL-CL-CBL-2M
Optical SWIR lenses [7]	RPL-xx-xxxx

Note 1: Optional filters available: Low, High or bandpass
Note 2: Measured in an ambient of 25°C with adequate heat sinking
Note 3: Extended Operating Temperature range on request
Note 4: Dimensions include all connector parts on camera interface
Note 5: This includes the tube + connectors
Note 6: Longer CL cable available
Note 7: 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.salvoimaging.com

Quantum Efficiency



*Data supplied by sensor manufacturer

Applications

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

For more details, please contact us at info@salvo-technologies.com

Salvo Imaging
10781 75th St. N
Largo, FL 33777

727.544.3736
888.725.8605
salvoimaging.com

SALVO IMAGING
a Division of Salvo Technologies

nqa. ISO 9001 Registered Quality Management