Xenics
Infrared Solutions

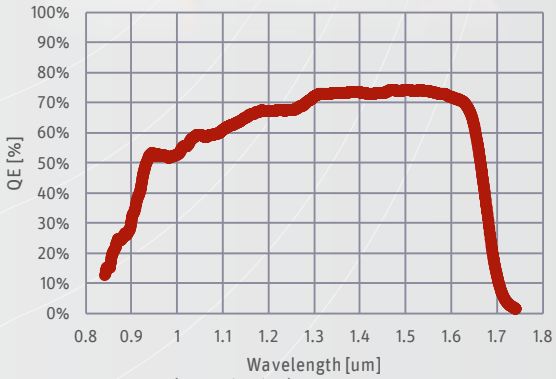
Imagine the invisible

Industrial

Lynx-1024-GigE

High resolution, high speed uncooled SWIR line-scan camera

Smallest SWIR GigE Vision line-scan camera with excellent sensitivity



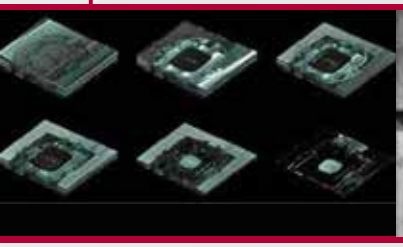
* QE at 306 K (typical value)

Machine vision inspection using Lynx-1024-GigE provides high resolution information about quality assurance measurements. The SWIR camera matches perfectly the absorption spectra of low-level photon emissions, is less sensitive to emissivity changes for thermal measurements and provides increased subsurface penetration depth images.

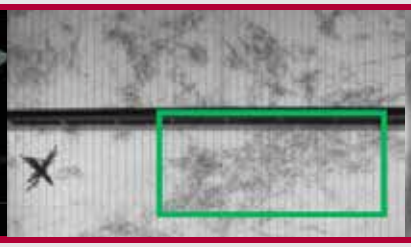
The Lynx-1024-GigE offers in many ways an affordable solution. The small form factor, high resolution and smallest pixel formats from 12.5 x 12.5 μm^2 square pixels to 12.5 x 250 μm^2 rectangular pixels allow more precision and optimization of compact systems with lower cost lenses.

The Lynx-1024-GigE is a flexible solution with an industry-standard GigE Vision and Power over Ethernet interface. You can operate multiple integration times and multiple gain settings. Furthermore you will reach optimal image quality choosing from various configurations in High Sensitivity mode (HS) or High Dynamic Range Mode (HDR).

Designed for use in



OCT: cross-sections MEMS



Semiconductor photoluminescence

Web inspection pharmaceuticals

Thermal imaging of hot objects

Applications

- Food inspection
- Non-destructive testing
- Industrial web inspection
- Semiconductor inspection
- High speed line scan imaging
- Optical Coherence Tomography (OCT)
- Non-contact thermal imaging of (hot) objects

Benefits & Features

- Made in Europe
- Full flexibility in integration time settings
- Standard GigE Vision and trigger functionality
- Compliant with any software supporting GenICam
- Broad range of pixel sizes, square and rectangular
- Smallest SWIR line-scan camera with smallest pixel pitch
- High resolution and high sensitivity for low-light conditions

Broad range of accessories available to optimize your system

Lens & filter options

Various focal lengths available

> Discover our Lens Selector Guide
www.xenics.com/LSG

Inputs

Outputs

Software

- Xeneth Basic
- Xeneth Advanced (optional)
- Xeneth SDK (optional)
- Xeneth LabVIEW SDK (optional)

Specifications

Camera Specifications

Imaging performance	
Maximum line rate	40 kHz
Pixel rate	50 MPixels/sec
Exposure time range	Full flexibility in settings from 3 µs to several seconds
CDS	Correlated Double Sampling
Gain settings (16 settings)	Various Settings from 30 fF (HS) till 2130 fF (HDR) *
Pixel well depth	From 450 Ke⁻ (HS) till 32 Me⁻ (HDR) *
Gain (in 16 bit)	From 8 e⁻/ADU count (HS) till 580 e⁻/ADU count (HDR) *
Dynamic range	From 280:1 (HS) till 2600:1 (HDR) *
A to D conversion resolution	14 bit
On-board image processing	Configurable single Non-Uniformity Correction (NUC) with intelligent bad pixel replacement; user adjustable fixed offset and gain control
Interfaces	
Optical interface	C-mount (optional F-mount) Optional filter retaining ring available for C-mount only
Camera control	Gigabit Ethernet: GigE Vision or Xeneth API/SDK
Image acquisition	Integrate while read (IWR)/ integrate then read (ITR); snapshot acquisition
Trigger	Trigger in and/or out; LVCMOS Modes: free running or user configurable line and frame trigger
Operating mode	Stand-alone or PC-controlled
Power requirements	
Power consumption	+/- 4.6 W
Power supply	12 V DC
Physical characteristics	
Ambient operating temperature range	-40 °C to 70 °C (industrial components)
Storage temperature range	-50 °C to 85 °C (industrial components)
Dimensions	49 W x 49 H x 71 L mm
Weight camera head	‹ 208 g (lens not included)

(*): Typical values, depending on gain setting
(HS): High Sensitivity mode; (HDR): High Dynamic Range mode

Array Specifications

Array type	InGaAs
Resolution	1024 x 1
Pixel size	12.5 µm x 12.5 µm or 12.5 µm x 250 µm
Spectral band	0.9 * to 1.7 µm
Peak quantum efficiency	≈ 80 % @ 1.6 µm
Pixel operability	› 99 %
Array length	12.8 mm
Array cooling	Uncooled
Dark current	1.5×10^6 e⁻/s ** square pixel array 1.5×10^7 e⁻/s ** rectangular pixel array

(*) Typical Quantum Efficiency (QE): › 40 % at 0.9 µm to 1.7 µm
(**) @ 25 °C sensor temperature (typical value)

Product selector guide

Part number	# pixels	Pixel size (µm²)	Line rate (kHz)
XEN-000310	1024 x 1	12.5 x 12.5	40
XEN-000432		12.5 x 250	

www.xenics.com
www.sinfrared.com

Xenics Headquarters
Ambachtenlaan 44, BE-3001 Leuven, Belgium
T +32 16 38 99 00 • sales@xenics.com

Xenics
Infrared Solutions

ISO 9001:2008 certified