Álava Ingenieros
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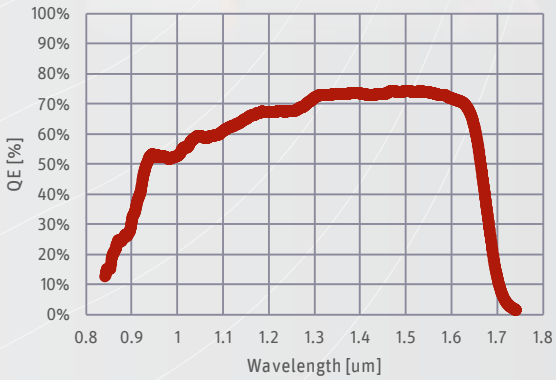
Xenics
Infrared Solutions

Imagine the invisible

Industrial

Lynx-512-GigE

40 kHz high speed uncooled SWIR line-scan camera



* QE at 306 K (typical value)

Smallest SWIR GigE Vision line-scan camera with excellent sensitivity

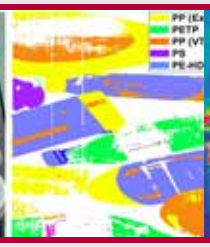
Machine vision inspection using Lynx-512-GigE provides you valuable information about process stability and quality assurance measurements. The SWIR camera matches perfectly the absorption spectra of various plastics, is less sensitive to emissivity changes for thermal measurements and reveals invisible internal defects.

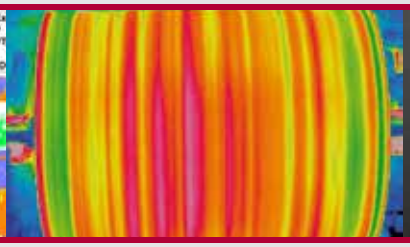
The Lynx-512-GigE offers in many ways an affordable solution. The small form factor and small pixel formats from 25 x 25 µm² square pixels to 25 x 250 µm² rectangular pixels allows you to optimize compact systems with lower cost lenses. The camera features an industry-standard GigE Vision with Power over Ethernet interface and comes without cooler consuming less power. The Lynx-512-GigE is perfectly suited for high speed scanning with high line rates up to 40 kHz.

You will reach optimal image quality with low dark current and excellent signal to noise ratios. You can choose from various configurations in between High Sensitivity mode (HS) or High Dynamic Range mode (HDR).

Designed for use in

Material classification





High speed: linescan imaging

Food inspection

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
- Smallest SWIR line-scan camera
- High sensitivity for low-light conditions
- Standard GigE Vision and trigger functionality
- Compliant with any software supporting GenICam
- Broad range of pixel sizes, square and rectangular
- Easy exchangeable lenses via C-Mount or optional U-Mount

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	25 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	512 x 1
Pixel size	25 µm x 25 µm or 25 µm x 250 µm
Spectral band	0.9 * to 1.7 µm
Peak quantum efficiency	≈ 80 % @ 1.6 µm
Pixel operability	99.6 %(no adjacent bad pixels)
Array length	12.8 mm
Array cooling	Uncooled
Dark current	3 x 10^6 e⁻/s ** square pixel array 3 x 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-000309	512 x 1	25 x 25	40
XEN-000430		25 x 250	

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Xenics
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ISO 9001:2008 certified