

Imagine the invisible

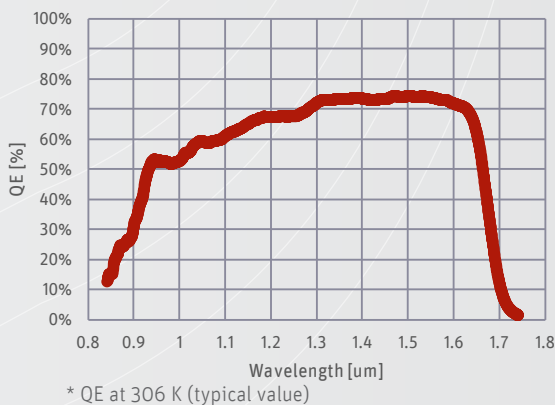
Industrial

# Lynx-512-CL

40 kHz high speed uncooled SWIR line-scan camera



## Smallest SWIR CameraLink line-scan camera with excellent sensitivity



Machine vision inspection using Lynx-512-CL 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.

optimize compact systems with lower cost lenses. The Lynx-512-CL comes without cooler and therefore lower power consuming.

The Lynx-512-CL is perfectly suited for high speed scanning with high line rates up to 40 kHz. In addition the camera comes with an industry-standard CameraLink interface for data transfer at full line rate.

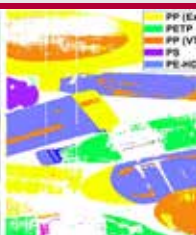
The Lynx-512-CL offers in many ways an affordable solution. The small form factor and small pixel formats from 25 x 25  $\mu\text{m}^2$  square pixels to 25 x 250  $\mu\text{m}^2$  rectangular pixels allows you to

You will reach optimal image quality with low dark current and excellent signal to noise ratios.

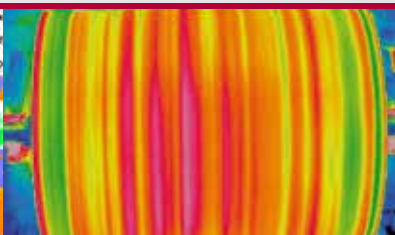
### Designed for use in



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
- Full flexibility in integration time settings
- Compliant with all CameraLink framegrabbers
- Broad range of pixel sizes, square and rectangular
- Standard CameraLink and extended trigger functionality

# 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](http://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	CameraLink 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	+/- 2.6 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 53 L mm
Weight camera head	< 153 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 <sup>6</sup> e-/s ** square pixel array 3 x 10 <sup>7</sup> 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 (μm <sup>2</sup> )	Line rate (kHz)
XEN-000633	512 x 1	25 x 25	40
XEN-000429		25 x 250	