Imagine the invisible

**Lynx-512-GigE**

40 kHz high speed uncooled SWIR line-scan camera

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 pitch allows you to optimize compact systems with lower cost lenses. In addition the camera comes with an industry-standard GigE Vision and Power over Ethernet interface for much easier integration. The Lynx-512-GigE comes without cooler and therefore lower power consuming. 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).

**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
- Easy exchangeable lenses via C-Mount or optional U-Mount
**Specifications**

### Camera specifications | Lynx-S512-GigE
---|---
**Lens** | Broad selection of lenses available
Focal length | C-mount with adjustable back focus
Optical interface | Mounts easily to spectrometers
Optional: U-Mount with adjustable back focus
Optional: Filter holder
**Imaging performance** | Various Settings from 30 IF (HS) till 2130 IF (HDR)
Line rate | Max 40 kHz
Pixel rate | 25 MPixels/sec
Integration time | Full flexibility in settings from 1 µs to 1 s
A to D conversion resolution | 14 bit
CDS | Correlated Double Sampling
Gain settings (16 settings) | Various Settings from 30 IF (HS) till 2130 IF (HDR)
Pixel well depth (e-)/A-DU count | From 8.2 e-/cnt (HS) till 580 e-/cnt (HDR) |
Dynamic range | From 280:1 (HS) till 2600:1 (HDR) 
Noise | From 1.5 x 10^6 e- (HS) to 12.2 x 10^6 e- (HDR) 
Onboard image processing | Configurable single NUC
User adjustable fixed offset and gain control
**Interfaces** | 14 bit GigE
Digital output | Gigabit Ethernet: GigE Vision or Xeneth API/SDK
Camera control | Integrate white read / integrate then read snapshot acquisition
Image acquisition | Trigger in or out; LVCMOS
External trigger jitter | 40 ns
Trigger | Modes: Free running or user configurable line or frame trigger
Operating mode | Stand-alone or PC-controlled
**Power requirements** | +/- 4 W
Power consumption | 12 V
**Physical characteristics** | 12.5 mm lens
Ambient operating temperature | -40°C to 70°C
Maximum storage temperature | -50°C to 85°C
Dimensions | 69 W x 49 H x 62 L mm
Weight camera head | < 150 g (lens not included)

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

### Array specifications | Xlin-1.7-S512
---|---
Array type | InGaAs
# Outputs | 1 output
Spectral band | 0.8 µm to 1.7 µm
# Pixels | 512 x 1
Pixel pitch | 25 µm
Pixel height | 25 µm
Dark current array | 3 x 10^6 e-/s @ room temperature
InGaAs array length | 12.8 mm
Array cooling | Uncooled
Pixel operability | 100 %

### Product selector guide

<table>
<thead>
<tr>
<th>Part number</th>
<th># Pixels</th>
<th>Pixel size (µm²)</th>
<th>Line rate (kHz)</th>
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</thead>
<tbody>
<tr>
<td>XEN-000309</td>
<td>512 x 1</td>
<td>25 x 25</td>
<td>40</td>
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