

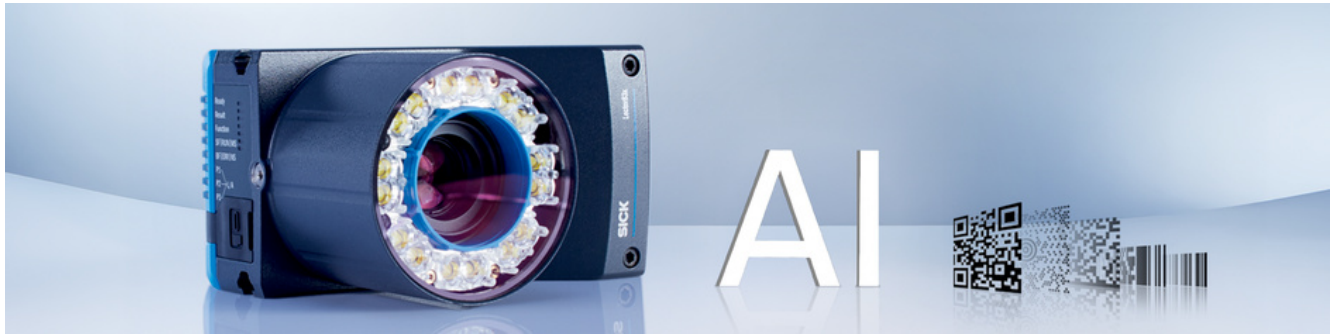


## Lector83x

1D and 2D code identification using a camera for large fields of view and medium reading distances

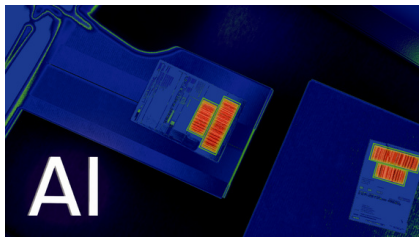
**SICK**  
Sensor Intelligence.

## Advantages



## Fast AI-based code readers – even under difficult conditions

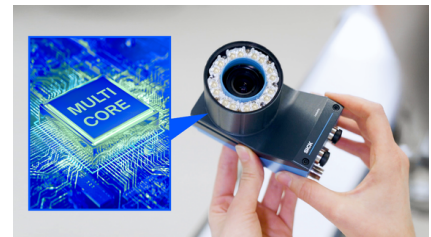
Do you have difficulties capturing large quantities of codes quickly and accurately at different distances? Do limited space, varying code quality or poor lighting conditions pose a challenge? Then the Lector83x is the right solution.

**AI-based segmentation – efficient image processing**

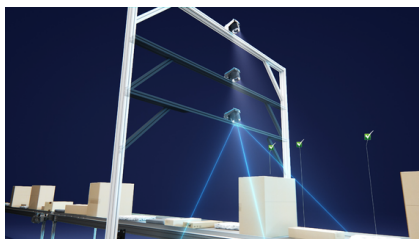
With AI-based segmentation, only the relevant image areas are decoded in real time. This ensures up to 75% faster image processing and thus higher reading speeds.

**Intelligent image optimization – for precise decoding**

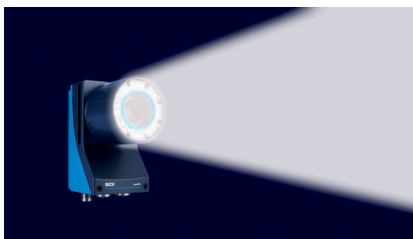
Thanks to super-resolution and upsampling, decoding is precise even at low resolutions. Superresolution improves the resolution of 1D codes using scan fusion, while upsampling optimizes the image quality of 2D codes.

**Multi-core CPU in a compact housing – for fast processing of large data volumes**

The powerful multi-core CPU ensures efficient code processing and high system speed. For confined spaces and mobile applications, the Lector83x offers high performance in a compact design.

**Variable lenses – for different reading distances**

Thanks to various lenses, the Lector83x effortlessly captures codes with a wide field of view in the close range or fine details from a distance (200 – 2,500 mm).

**High-performance imager and LEDs – for razor-sharp images**

Get sharp, detailed images even for small codes with up to 5 megapixel resolution. The intense light from the 16 high-performance LEDs also reaches dark corners and increases reading accuracy and image illumination with a great depth of field.

**Smart optical accessories – for clear codes and freedom from glare**

Reliable code reading is based on clearly visible codes. Selectable illuminations enable high-contrast images regardless of code and background color. A polarizing filter that can be switched on reduces reflections and glare, e.g., on shiny surfaces. Infrared light (NIR) prevents dazzle for employees during operation.

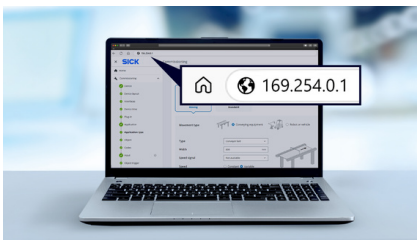


**Efficient, resilient and universal – fast code reading under various conditions with the POWERHOUSE Lector83x.**



## Ready for operation in 5 minutes – even without an expert

Are you familiar with the problem that configuring a device is a tedious matter that also requires expert knowledge? The Lector83x is ready for operation in just a few minutes, without the need for an expert.



### Web server – location-independent device access

The Lector83x can be configured via a web server using various interfaces (Ethernet, USB-C). Diagnostics and monitoring are simple, and integration into IT infrastructures is secure and scalable.



### Application-based GUI – automatic configuration

Individual application data can be entered quickly using the device's intuitive GUI and the Lector83x configures itself automatically. An expert is no longer necessary – the Lector83x is ready for use in just a few minutes.



### MicroSD card – simple, fast parameter cloning

Parameters can be saved on the microSD card. This leads to time savings and greater efficiency when multiple devices are configured or device replacement becomes necessary during machine downtime.



**Fast, user-friendly and simple – application-based configuration in just 5 minutes with the Lector83x quickstarter.**



## Simple network integration – for fast operating processes

Has the integration and networking of your shop floor data been time-consuming and complicated so far? The Lector83x ensures fast operating processes right from the start.



### Numerous industry protocols

The integrated DualPort fieldbus (PROFINET, EtherNet/IP™) allows flexible ring and line topologies for efficient, reliable data transmission. The dedicated Gigabit Ethernet connection enables the transmission of high-resolution image data and TCP/IP integration.



### Simple integration and flexible connections

Integration as a primary and secondary device is possible via the established SICK CAN sensor network (CSN). Various connections such as power supply connections, digital I/Os and serial communication simplify the connection and control of the system.



### USB-C – Service made easy

The USB-C network connection serves as a practical service interface without burdening the operating network. Configuration and diagnostics can be carried out quickly and easily.



**Versatile, flexible and practical – network integration made easy with the Lector83x networker.**



### Technical data overview

<b>Focus</b>	Adjustable focus
<b>Sensor type</b>	CMOS monochrome
<b>Sensor resolution</b>	2,048 px x 1,536 px (3.15 MP) 2,464 px x 2,048 px (5 MP)
<b>Scanning frequency</b>	30 Hz
<b>Enclosure rating</b>	IP65
<b>Ethernet</b>	✓, TCP/IP
<b>CAN</b>	✓
<b>Serial</b>	✓, RS-232, RS-422
<b>USB</b>	✓, USB 2.0
<b>EtherNet/IP™</b>	✓ (2)
<b>PROFINET</b>	✓ (2)
<b>Weight</b>	471 g / 545 g (depends on variant)

### Product description

The Lector83x camera-based code reader offers high reading performance at medium reading distances and is easy to integrate into industrial networks. The compact camera has a resolution of 3 or 5 megapixels, a large depth of field, and a wide field of view. In addition to very high computing power and the dual-port fieldbus as well as other connections, the compact design ensures fewer devices and installation effort at reading stations.

Using AI-based segmentation, the camera also identifies damaged codes at conveyor speeds of up to 2.5 m/s and correctly assigns them to objects. The Lector83x can be intuitively configured using a web server and is ready for use within a few minutes – even without specialist knowledge.

### At a glance

- AI-based segmentation, superresolution, multi-core CPU
- Large depth of field, wide field of view
- Resolution of 3 or 5 megapixels, various lenses and illumination colors
- Intuitive, application-based configuration via web server
- Three-dimensional assignment of codes to objects
- Dual-port fieldbus and DIOs

### Your benefits

- High camera resolution for precise reading and evaluation of even small codes on large surfaces
- High sorting rate and less manual rework thanks to high read rate, regardless of the code quality
- High-performance decoder and processor for high throughput with small object distances
- Flexible integration into industrial networks or PLCs
- Easy commissioning thanks to intuitive, application-based configuration via web server
- High flexibility in a small space: coverage of large areas with a single camera – small number of devices and components required

### Fields of application

- Retail and warehousing: Identification in sorting and picking processes, recording of incoming and outgoing goods
- CEP industry: Identification, e.g., for letters, parcels, flats
- Automotive: Tire identification
- Packaging industry: Multi-code identification on primary and secondary packaging



## Ordering information

Other models and accessories → [www.sick.com/Lector83x](http://www.sick.com/Lector83x)

- **Variant:** main unit
- **Optical focus:** adjustable focus (manual)
- **Communication interface:** Ethernet, CAN, Serial, USB, EtherNet/IP™, PROFINET

Sensor resolution	Type	Part no.
2,048 px x 1,536 px (3.15 MP)	V2D8303R-1MCXXXAF0SXXX	1149549
2,464 px x 2,048 px (5 MP)	V2D8305R-1MCXXXAF1SXXX	1149550

- **Variant:** Complete device
- **Optical focus:** adjustable focus (manual)
- **Communication interface:** Ethernet, CAN, Serial, USB, EtherNet/IP™, PROFINET

Sensor resolution	Illumination color	Focal length	Type	Part no.
2,048 px x 1,536 px (3.15 MP)	White	8 mm	V2D8303R-1MCIBXAF1SXXX	1149568
		12 mm	V2D8303R-1MCKCXAF1SXXX	1144813
		16 mm	V2D8303R-1MCKDXAF1SXXX	1149569
		25 mm	V2D8303R-1MCKEXAF1SXXX	1149570
2,464 px x 2,048 px (5 MP)	White	8 mm	V2D8305R-1MCIBXAF1SXXX	1149571
		12 mm	V2D8305R-1MCICXAF1SXXX	1149572
		16 mm	V2D8305R-1MCKDXAF1SXXX	1144812
		25 mm	V2D8305R-1MCKEXAF1SXXX	1149573
	Infrared (NIR)	16 mm	V2D8305R-1MCDDXAF2SXXX	1151785

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)