Product overview

Inspector85x

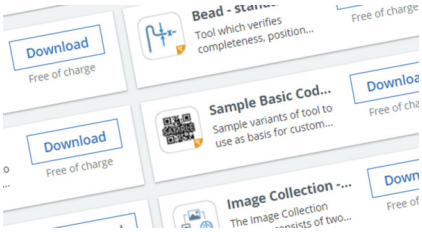
Focusing on the big picture

SICK
Sensor Intelligence.

Advantages

Go one step further with SICK Nova

Machine vision applications are easily handled in a web browser using point-and-click configuration, giving users the freedom to combine tools for image processing and integration as they need. But the functionality does not end there: With SICK Nova, users can download additional Nova tools or develop their own, allowing them to quickly and conveniently extend functionality to fit the application — without limitations.



Quickly solve tasks with just the right tools at your fingertips, check out these Tutorials for how! Link to playlist

Choose the right sensor for the application and use the same familiar software.

Rapidly create customized solutions with AppPool downloads or custom development.

Rapidly handle your applications like never before. Add, combine, and customize tools with ease.

The latest generation Inspector vision sensor

The state-of-the-art high-resolution imager (up to 12 MP) and powerful illumination provide outstanding details for large objects as well

The fast CPU solves demanding inspection tasks, even at very high process speeds

Intelligent, fast and versatile. The Inspector85x 2D vision sensor offers a higher speed, higher resolution, and exceptional integration possibilities

Unleash the capabilities of AI-assisted quality control

AI functionality makes machine vision tasks easier than ever. By teaching the vision sensor using examples instead of manually setting up rules, users can solve applications quickly while gaining new levels of inspection capabilities. Combining the benefits of AI tools and rule-based tools opens up extensive possibilities for solutions, regardless of how experienced the user is with machine vision.

Find out more about the AI solutions from SICK

Training the AI on the device
SICK Nova provide easy-to-use AI tools that can be taught using examples. Collect, train, and execute directly on the device. Combine with rule-based tools to easily verify known specifications.

AI training using SICK dStudio
SICK dStudio Cloud Service trains AI at scale with optimized inspection accuracy and speed on the sensor. Convenient data management and collaborative annotation make handling large data sets a breeze and makes it possible to take on big projects with confidence.

AI Blob Finder (dStudio)

The AI Blob Finder (dStudio) uses instance segmentation technology to detect, count, and measure objects within a defined region using a trained neural network. It identifies and separates each object in an image, pixel by pixel—even when multiple objects of the same type overlap—providing precise masks rather than bounding boxes.

This capability enables accurate measurement of length, width, and area, making it ideal for quality control tasks such as counting, sorting, positioning, and defect analysis. It can also deliver high-precision size data for cracks or surface anomalies and determine material quantities with exceptional accuracy.

Find out more about all SICK Nova AI tools

Technical data overview

Sensor	CMOS monochrome
Sensor resolution	2,464 px x 2,048 px (5 MP) 4,096 px x 3,008 px (12 MP)
Optical focus	Adjustable focus (manual) Dynamic focus control
Lens	C-mount
Optical format	1/1.8" / 1/1.1" (depends on variant)
Operator interfaces	Web server
Ethernet	✓, TCP/IP, UDP, FTP, HTTP, HTTPS, NTP
EtherNet/IP™	✓, EtherNet/IP™ Dual Port
PROFINET	✓, PROFINET Dual Port
Serial	✓, RS-232, RS-422
Configuration software	Web GUI (SensorApp configuration), SICK AppManager (IP determination and configuration, SensorApp installation), SICK AppStudio (programming)
Dimensions	143.3 mm x 90 mm x 46 mm [1)]

[1)] Housing only, without lens and optics protection hood.

Product description

With its fast CPU for high-speed applications, the Inspector85x provides a range of solutions for executing complex inspection tasks. The state-of-the-art high-resolution imager and powerful illumination deliver great image quality for large objects as well. The dual-port fieldbus support ensures flexible, industry-ready integration. The preinstalled SICK Nova InspectorP SensorApp with Quality Inspection toolset enable both expert and nonexpert users to rapidly configure the sensor using an intuitive web interface. With the Intelligent Inspection toolset, users can easily access deep learning tools.

At a glance

- Powerful quad-core CPU
- Up to 12 megapixel resolution and strong illumination
- Web-based user interface
- Quality Inspection toolset for localization, inspection and measurement
- Optional Intelligent Inspection toolset for classification and anomaly detection
- Dual port fieldbus and high speed I/Os
- Supports SICK Nova, SICK AppSpace and HALCON

Your benefits

- Solves demanding inspection tasks, even at very high process speeds
- Excellent resolution for inspecting large areas in outstanding detail
- Easy to operate and flexible to use
- Integrated tools for handling advanced machine vision tasks
- AI tools simplify common machine vision tasks and solve complex tasks where rule-based tools are inadequate
- Flexible integration into industrial network or PLC
- SICK Nova tool plug-ins for convenient customization of inspections in Lua script

Fields of application

- In-line quality inspection in automotive and white goods production lines that require large field of view
- OCR/OCV and quality inspection in packaging lines for consumer goods
- Solder inspection of electronics and automotive components
- Complex and unpredictable defect detection

Ordering information

Other models and accessories ➜ www.sick.com/Inspector85x

- **SensorApp:** Nova Inspector
- **Products by tasks:** Classification, Identifying, Position determination, 1D code, 2D code, presence inspection, Quality check, measuring, 2D, OCR
- **Illumination:** To be ordered separately as accessories
- **Lens:** To be ordered separately as accessories, C-mount
- **Working distance:** 500 mm ... 2,500 mm
- **Sensor:** CMOS monochrome
- **Optical focus:** adjustable focus

Sensor resolution	Type	Part no.
2,464 px x 2,048 px (5 MP)	V2D8505P-1MCXXXAF0SXXXX	1139001
		1139002
4,096 px x 3,008 px (12 MP)	V2D8512P-1MCXXXAF0SXXXX	1139003
		1139004

- **SensorApp:** Nova Inspector
- **Products by tasks:** Classification, Identifying, Position determination, 1D code, 2D code, presence inspection, Quality check, measuring, 2D, OCR
- **Illumination color:** White
- **Lens:** 25 mm, C-mount

Working distance	Sensor resolution	Sensor	Optical focus	Type	Part no.
500 mm ... 2,500 mm	4,096 px x 3,008 px (12 MP)	CMOS monochrome	Dynamic focus control	V2D8512P-1MEKEXAF2SXXXX	1154278

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

SICK
Sensor Intelligence.