MORE THAN A VISION

INTELLIGENT QUESTIONS HAVE MORE THAN ONE ANSWER

Our inspection solutions.

SICK
Sensor Intelligence.

MORE THAN A VISION

In industrial environments, providing an effective solution to capture reality requires more than just a vision. With SICK you have the choice. Multiple dimensions, one philosophy: customer needs come first. Even in the face of the most challenging requirements, SICK supports you to realize your vision. Our broad 2D and pioneering 3D vision portfolio based on decades of innovation leadership helps customers worldwide. Positioning, inspection, measuring and reading – all at the same time, if needed. Our global technology experts are specialists in your industry and are located in your corner of the world. SICK's vision sensors see your world as it truly is.

➔ www.sick.com/more-than-a-vision

**There is never only one answer to intelligent questions.
The best technology depends on the task at hand.**

For every application, the same question is asked: Which technology is best? The best possible solution is always tailored to the individual technical and economic conditions of the application.

SICK offers a broad portfolio of vision products ranging from easy-to-use configurable sensors and programmable flexible cameras to high-speed streaming cameras to meet the toughest of requirements. To minimize complexity, cost, and risks during the implementation of programmable vision solutions, you can access sophisticated SICK-developed functions and the comprehensive HALCON machine vision library via SICK AppSpace. The Sensor Integration Machine prepares vertical integration for Industry 4.0. As a result, established modules give rise to perfectly tailored, new solutions that are suitable for Industry 4.0 tasks, like quality control, track and trace, object data collection and predictive maintenance events.

Configurable sensors

Configurable vision sensors make it quick and easy to set up parameters. Thanks to integrated image processing, the vision sensor works independently and provides results as an output.

Programmable cameras

Programmable cameras facilitate high flexibility, and work independently without a PC. They have integrated image processing, and deliver results as output.

Streaming cameras

Streaming cameras provide continuous data acquisition for external image processing on a PC. With a variety of data generation options, including 2D and 3D images, they offer maximum flexibility.

2D vision

SICK offers a powerful vision sensor portfolio designed to manage challenges in all industries where a standard sensor would not work. These vision sensors provide a full toolset for positioning, inspection, measurement and reading, depending on the variant. A flexible optical design fulfills the needs of almost all applications. Simplicity is ensured by automatic setup, intelligent algorithms and a common, intuitive user interface.

3D vision

SICK's 3D vision series offers a wide range of powerful and flexible products designed for reliable operation in harsh industrial environments. They range from versatile high-speed cameras that deliver high quality 3D and contrast images to smart and configurable stand-alone sensors that facilitate rapid development and easy integration. Their scalability ensures a perfect fit with your 3D vision application.

Sensor Integration Machine (SIM)

The Sensor Integration Machine (SIM) product family – part of the SICK AppSpace eco-system – is opening up new possibilities for application solutions. Data from SICK sensors and cameras can be merged, evaluated, archived, and transmitted. The portfolio features a scaled range of processing power levels and sensor connection numbers. As a result, the SIM family has the right solution to suit any application requirement.
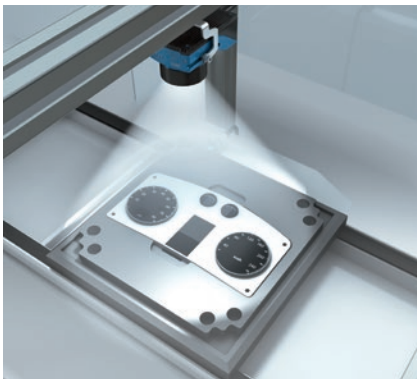
2D VISION

Inspector – An intelligent vision solution in an easy-to-use sensor package

The Inspector is an intelligent vision solution in an easy-to-use sensor package. No matter if the task is to verify completeness and quality, find a part's position or measure its dimensions, the Inspector is up to the challenge. It offers a flexible optical design, intuitive toolbox and a variety of interfaces for control, monitoring and data collection. The Inspector simply provides everything to meet integration needs and facilitate daily work.
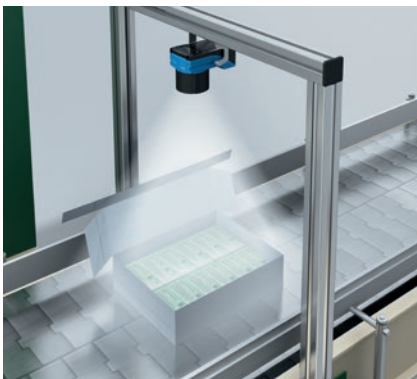
→ www.sick.com/Inspector

InspectorP63x – Programmable. Compact. Versatile.

The InspectorP63x is an industrial programmable 2D camera for most vision tasks. Boasting image resolutions of 1-2 mega-pixels, a compact IP 67 housing, and a flexible high-end optical design, it is perfectly equipped to meet demanding automation environments. The application software is fully flexible thanks to the SICK AppSpace development environment, powered by the world-class HALCON vision library.

→ www.sick.com/InspectorP63x

InspectorP64x – Programmable. Cost-efficient. High-speed.

The InspectorP64x is an industrial programmable 2D camera for long-range and high-speed vision tasks. Boasting an image resolution of 1.7 megapixels, an IP 65 housing, and a flexible high-end optical design, it is perfectly equipped to meet demanding automation environments. The application software is fully flexible thanks to the SICK AppSpace development environment, powered by the world-class HALCON vision library.

→ www.sick.com/InspectorP64x

InspectorP65x – Programmable. Top performer. Long-range.

The InspectorP65x is an industrial programmable 2D camera for long-range and high-resolution vision tasks. Boasting image resolutions of 2-4 megapixels, an IP 65 housing, and a flexible high-end optical design, it is perfectly equipped to meet demanding automation environments. The application software is fully flexible thanks to the SICK AppSpace development environment, powered by the world-class HALCON vision library.

→ www.sick.com/InspectorP65x
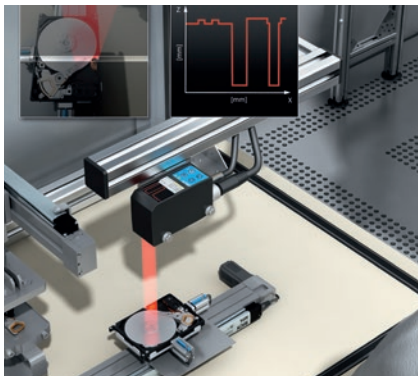
Profiler™ 2 – Cost-effective profile measurement

The Profiler™ 2 configurable sensor performs highly accurate measurements on the x and z axes. Up to four areas can be analyzed at the same time with one measurement. One of the ten integrated measurement functions can be selected to perform this analysis. The integrated evaluation unit saves time and money when it comes to installation. While the integrated CMOS receiver unit guarantees precise measuring, the supplied software makes commissioning simple and provides exceptional visualization of the measurement process.

➔ www.sick.com/Profiler
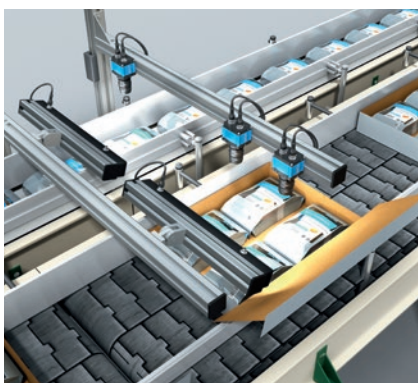
midiCam – Rugged industrial cameras with GigE interface and IP 67 enclosure rating

With its impressive IP 67 housing, the midiCam streaming camera series provides M12 connectors for the GigE interface as well as for power supplies, trigger and flash control. Alternatively PoE enables operation via the GigE connection. The midiCams are available with 1 or 2 megapixel resolution and in color, monochrome or – in some cases – NIR variants. Their CMOS-image sensors feature global shutter technology plus multiple ROI capability. A 60 MB image memory uncouples image-capturing and –transfer thus supporting multi-camera applications. The cameras enable rapid plug-and-play installation on the SIM4000.

➔ www.sick.com/midiCam
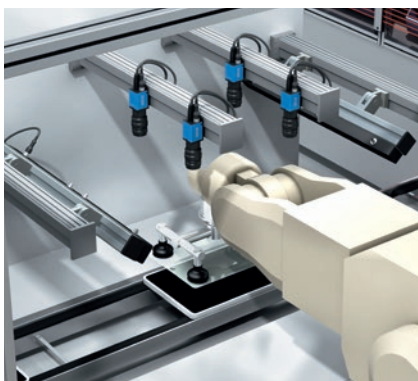
picoCam – Ultra-compact industrial cameras featuring GigE interface and PoE

Equipped with a compact housing, the picoCam streaming camera series provides both RJ45 GigE connectors and industry-suited connectors for power supplies as well as for trigger and flash control. Alternatively PoE enables operation via the GigE connection. The cameras are available with 1, 2 or 4-megapixel resolution and in color, monochrome or – in some cases – NIR variants. Their CMOS-image sensors feature global shutter technology and multiple ROI capability. A 60 MB image memory uncouples image-capturing and –transfer thus supporting multi-camera applications. The cameras enable rapid plug-and-play installation on the SIM4000.

➔ www.sick.com/picoCam
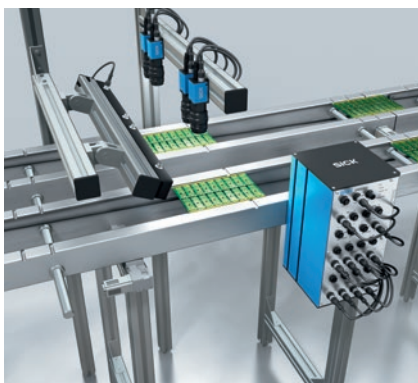
SIM4000 – An all-in-one solution for vision applications – and much more besides

The SIM4000 (Sensor Integration Machine) is a high-performance multi-camera and sensor processor that provides a one-box solution for complex vision applications. The device features eight PoE-capable GigE Vision interfaces – two of them configurable to 10 GigE performance – that can be used with SICK 2D or 3D cameras. Additional SICK sensors can be integrated via IO-Link to include distance, height or volume measurements, for example. Thanks to a fast multi-encoder interface, it is also possible to synchronize data via all the connections. When it comes to sophisticated image processing algorithms – involving the fusion of 2D or 3D sources to form a point cloud,
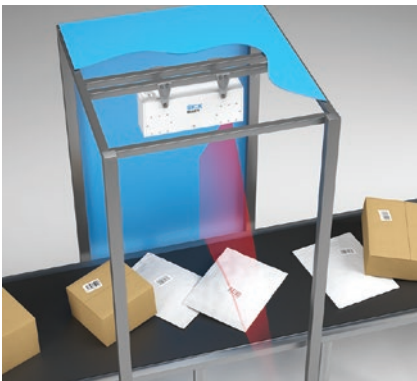
3D VISION
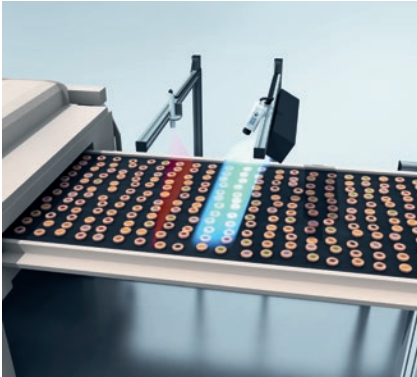
Ranger – Fastest 3D and MultiScan for advanced industrial solutions

Ranger extracts the true 3D shape of an object with high data quality at unsurpassed speed. It is used in applications such as measuring object height and volume, shape defect detection, quality grading and size sorting. With its unique MultiScan functionality, the object's shape, contrast, color, and scatter can be measured at the same time, enabling reliable inspection results and cost-efficient solutions; one Ranger performs it all!

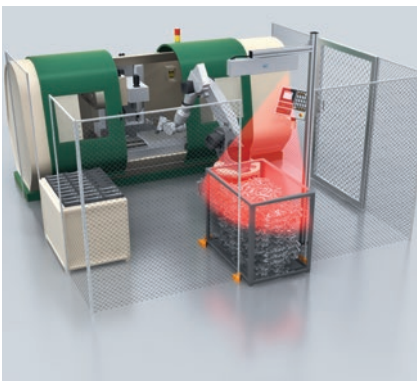**Stream**
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➜ www.sick.com/Ranger

Ruler – Gigabit 3D vision for tough environments

The Ruler E is designed for tough environments, such as the wood and mining industries. Ruler provides accurate 3D data even with remote operation over long cable distances, and in temperatures down to –30 °C. With its built-in light source, the streaming camera instantly provides true millimeter measurements, which makes integration easier. In addition to high-speed 3D measurements, the Ruler E also provides gray scale intensity and laser scatter.

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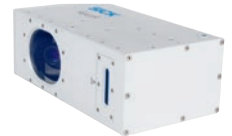
➜ www.sick.com/Ruler

ScanningRuler – Reliable and precise snapshot 3D for large field of view

The ScanningRuler is the perfect tool for 3D imaging in robot picking applications. It provides accurate and reliable 3D measurements of stationary objects. The streaming camera has a built-in laser light source and provides 3D point cloud measurements in millimeters of the entire scene. These features, in combination with the camera's immunity to ambient light and its simple configuration, make the ScanningRuler easy to integrate and use.

Stream
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➜ www.sick.com/ScanningRuler

SICK APP SPACE

Program
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for example – a powerful, hardware-accelerated multi-core processor ensures image pre-processing and I/O handling in real time. The integrated HALCON image processing library, plus the open SICK AppSpace software platform, make it possible to develop customized application programs for even the most demanding 2D and 3D vision applications. The SIM4000 is equipped with industrial-standard, Ethernet-based fieldbus interfaces and can also be integrated into a SICK CAN sensor network. The HMI and data visualization features can be provided on any browser-enabled notebook, PC or tablet. It is even possible to establish a wireless connection to the SIM4000 via Bluetooth.

➜ www.sick.com/SIM4000
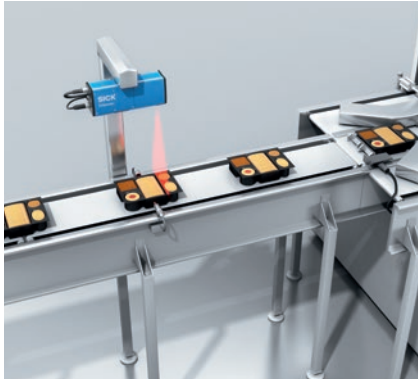
TriSpector1000 – Intuitive 3D inspection

The TriSpector1000 is a stand-alone configurable sensor for cost-efficient 3D inspections. No matter what the shape, color or orientation of the product, the sensor is up to the challenge. Now content, completeness and emptiness can be verified in all dimensions. It is perfectly suited for solving quality control applications in the consumer goods and packaging industry. Thanks to its intuitive user interface, the TriSpector1000 ensures easy commissioning and operation. Even quick device replacement is easy with guaranteed field of view and re-use of saved settings.

→ www.sick.com/TriSpector1000
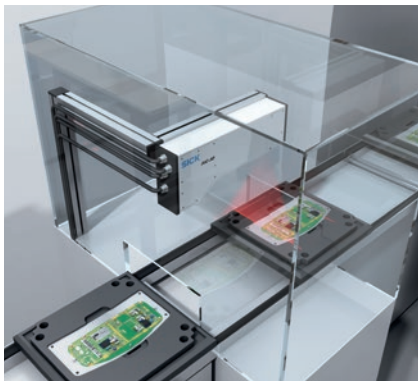
IVC-3D – Advanced 3D vision made easy

In three dimensions, the IVC-3D programmable camera performs inspection, location, and measurements on objects in order to increase throughput, control production, and perform quality control. The IVC-3D captures true object shape independent of contrast and color using laser triangulation, and works stand-alone (no PC needed) after configuration. An all-in-one solution, this factory-calibrated camera combines imaging, lighting and analysis in a single housing.

→ www.sick.com/IVC-3D
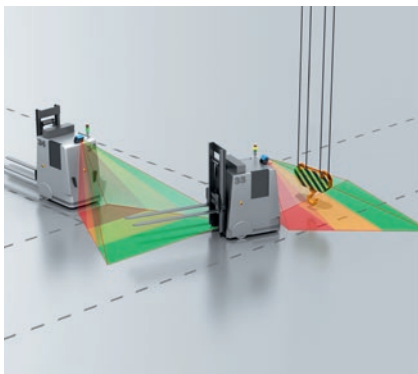
Visionary-T – 3D snapshot – customized for indoor use

The Visionary-T streaming camera offers real-time depth information for each pixel – even for stationary applications – based on time-of-flight measurement. High-performance visualization tools and reliable 3D information make the Visionary-T the ideal solution in applications including intralogistics, robotics, or industrial vehicles.

→ www.sick.com/Visionary-T

Visionary-B – 3D snapshot – two eyes for effective use outdoors

Visionary-B is a perfectly designed collision awareness assistance system for use on heavy duty off-road vehicles working in outdoor environments, e.g. at ports, mines, construction sites and agricultural sectors. The live images appear on the monitor and warn the operator only in critical situations with optical and audible warnings. As a plug & play solution, it is easily configurable, ready for operation and proves itself with easy handling.

→ www.sick.com/Visionary-B

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 7,400 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, we are always close to our customers. 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 various 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 round out 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:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and additional representatives ➜ **www.sick.com**

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