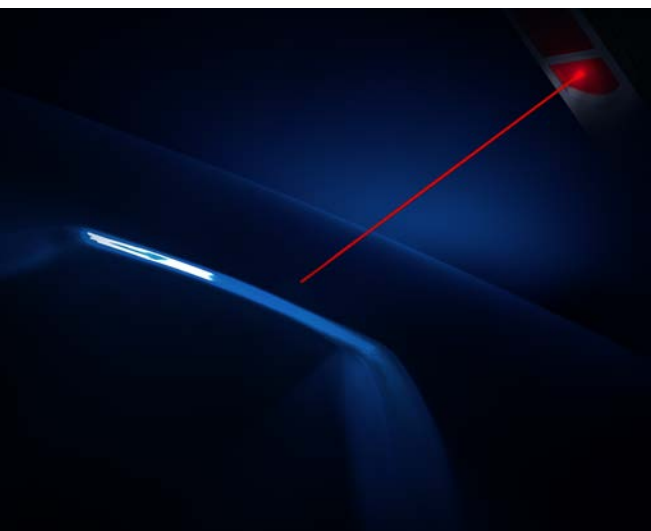


SICK.COM



THE INNOVATIONS MAGAZINE

SICK INNOVATIONS

Issue February 2026

SICK

Sensor Intelligence

EDITORIAL

Innovation is not a buzzword for us. It is our motivation to see and shape the world of tomorrow today. It takes the courage to rethink things and the will to actively shape developments. This is exactly where our aspiration as a technology company begins: not only to be a supplier, but to be a source of inspiration. The SICKinnovations magazine not only highlights new technologies and trends but is also a telescope for what becomes possible when we dare to try new things together with our customers and partners – ideas become solutions, concepts become real products, challenges become progress.

In this issue, we would like to show you how innovations not only increase efficiency but also provide real answers to pressing questions whether in automation, digitalization or sustainable production. Our industry is under pressure, but it is precisely in such moments that the best solutions often emerge – when we are willing to change our perspective.

Our customers are not customers for us they are co-creators. That's why we don't see innovation as a finished product, but as a joint process. Your requirements, your challenges, your goals – they drive us.

We invite you to discover in this magazine how we can break new ground together. With sensor intelligence, with creativity and with the firm belief that progress is best achieved through dialogue.

Yours

Dr. Niels Syassen

Member of the Executive Board Technology & Solutions SICK AG



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FORK SENSORS

MF

Simple detection in a miniature size

The latest fork sensor from SICK impresses with its miniature design, versatile mounting options, and particularly simple installation – no teach-in or adjustment parameters are required for reliable detection of opaque materials ranging such as metal to plastic



Optical solution for easy position detection

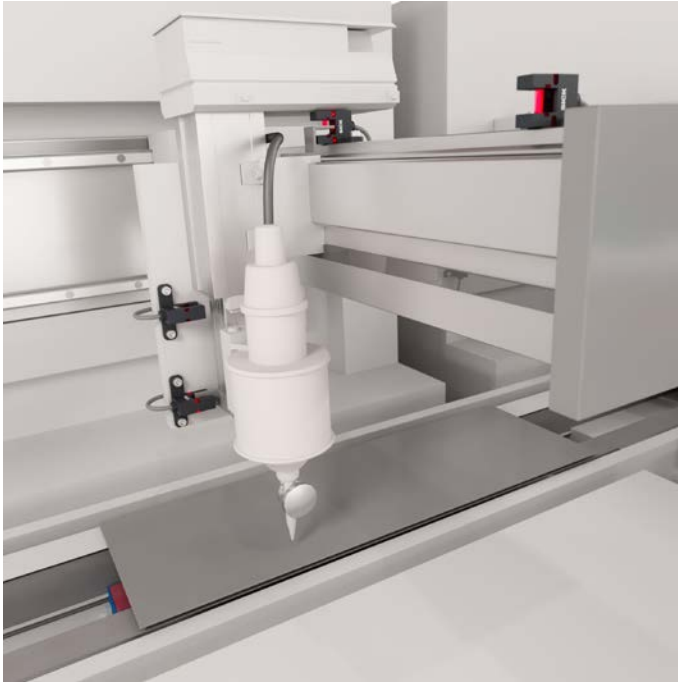


Plug and play: easy installation without commissioning

PRODUCT DESCRIPTION

Micro fork sensors are through-beam photoelectric sensors that combine a sender and receiver in a single housing. The sensors are characterized by their particularly small enclosure size and a wide range of mounting options. Thanks to their compact design, the mini fork sensors take up very little space and make integration even easier thanks to the different mounting brackets of the individual variants. As the sensors do not require teach-in or adjustment parameters, no commissioning is necessary. Thanks to this design, the fork sensor prevents operating errors during the process. The sensors detect opaque materials, which is why they are often used for positioning tasks.

APPLICATION EXAMPLES



The sensors are used in particular for detecting the position of moving machine components

BENEFITS

- Space-saving installation
- Suitable mounting options for easy integration
- Wide range of material applications - from metal to plastic
- Saves time during installation
- Fast object detection increases process speed
- More flexibility for use in dusty and damp environments
- Redundant acquisition and output of statuses for reliable operation
- Accurate positioning ensures higher process quality

FEATURES

- Miniature design (with dimensions up to 26 mm)
- Choice of different integrated mounting options
- Infrared light for detecting opaque materials
- Used in simple applications, the slot fork sensor does not require teach-in or complex settings
- Switching frequency of 4 kHz and response time of 100 μ s
- IP 67 enclosure rating
- Two opposing switching signals: Output 1 is active when the fork opening is empty, output 2 is active when an object is detected
- Repeatability of 0.01 mm

Visit www.sick.com/MF for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



LASER DISTANCE SENSORS

DT80 Ethernet

Optical distance sensors for reliable measurements of natural objects up to 80 m

The Dx80 combines a large measuring range with high measuring accuracy for industrial applications. New: Ethernet version with integrated MQTT client for direct connection to automation and cloud systems.



Compact and robust metal housing for easy integration even in confined spaces



Easy commissioning and intuitive operating experience thanks to the symbol-supported colour display

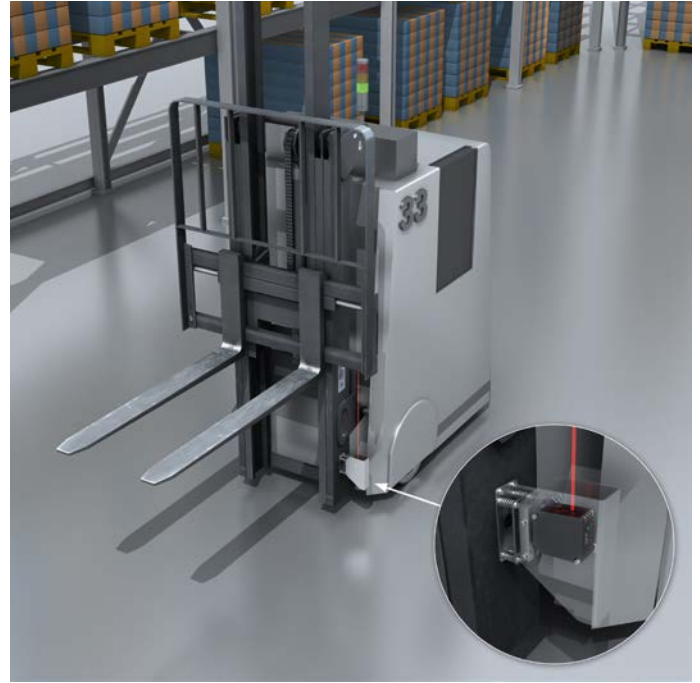
PRODUCT DESCRIPTION

The Dx80 laser distance sensor combines a large measuring range with high measurement accuracy – all in a compact housing. The modern sensor with advanced materials and technologies enables high performance: with a scanning range of up to 80 m, it offers a measurement accuracy of ± 2 mm. This makes the sensor the ideal solution for demanding applications – whether in manufacturing, machine building or mobile systems. With an integrated IO-Link interface or future-oriented Ethernet communication, the Dx80 can be flexibly integrated into a variety of automation environments.

APPLICATION EXAMPLES



Positioning and collision avoidance of industrial cranes



Height positioning of the hoist on automated guided vehicles

BENEFITS

- Accurate measurements to increase process quality and save valuable resources
- Large measuring range to meet the requirements of a variety of applications
- Flexible system integration and access to sensor data via IO-Link or Ethernet interface with cloud connectivity via MQTT
- Effortless parameterization and visualization via SOPAS ET
- Easy commissioning and intuitive operating experience thanks to the symbol supported color display
- Compact and rugged metal housing for uncomplicated integration even in tight installation spaces

FEATURES

- Measurement accuracy of +/- 2 mm, repeatability ≥ 0.2 mm
- Measuring ranges from 0.05 m to 80 m on white and up to 14 m on black
- IO-Link V1.1 or Ethernet interface and MQTT with analog and digital output
- Intuitive configuration via SOPAS ET
- User-friendly TFT color display
- Proven metal housing

Visit www.sick.com/Dx80 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.





LIDAR SENSORS

multiScan166

Compact 3D LiDAR sensor with high detection reliability under harsh ambient conditions

Reliable object detection and precise environment detection in harsh environments: The multiScan166 3D LiDAR sensor for indoor and outdoor use. New: Long range, large opening angle and high resolution in one sensor.



AGVs, AMRs, mobile platforms and service robots



Automating mobile outdoor applications

PRODUCT DESCRIPTION

The multiScan100 3D LiDAR sensor generates a large 3D point cloud in which objects and people can be detected. The point cloud makes the multiScan100 suitable for large-scale environmental detection and thus also for large working machines. The sensor can be used in mobile and stationary applications and reliably detects fall edges and protruding obstacles. multiScan100 can be individually configured and easily integrated into applications. With the introduction of the multiScan166, it is no longer necessary to choose between high-resolution screening systems or a long range, but the special features of the existing multiScan100 variants can be combined in one device. In addition to the device, there is a continuously growing, modular software kit with apps and software add-ons. A system connector for the common interfaces ensures fast and flexible sensor implementation.

APPLICATION EXAMPLES



To avoid collisions in complex or unstructured environments (e.g. with protruding objects or low ceilings), 3D LiDAR sensors are suitable. Thanks to their precise 3D point cloud and multi-echo technology, they detect obstacles in harsh environments.



Contour guidance, volume and quantity detection for mobile machines.

BENEFITS

- Using 16 scan layers, people and objects can be identified in detail and represented by the 3D point cloud
- Detection of large areas through 360° horizontal aperture angle and large vertical aperture angle
- Unique combination: Long range up to 62m and two high-resolution screening ranges with 0.125°
- Precise fine positioning through high measurement accuracy with low measurement noise
- Long service life, even in harsh environments, thanks to rugged design
- Individual configuration possible thanks to apps and software add-ons whose measurement data the sensor evaluates directly

FEATURES

- 16 scan layers, vertical aperture angle with 65°
- Horizontal aperture angle of 360°
- High-resolution 0° scan layer
- High measurement accuracy and low measurement noise
- Rugged design
- Multi-echo technology
- Selection of apps and software add-ons
- System plug, flexible mounting

Visit www.sick.com/multiScan100 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.

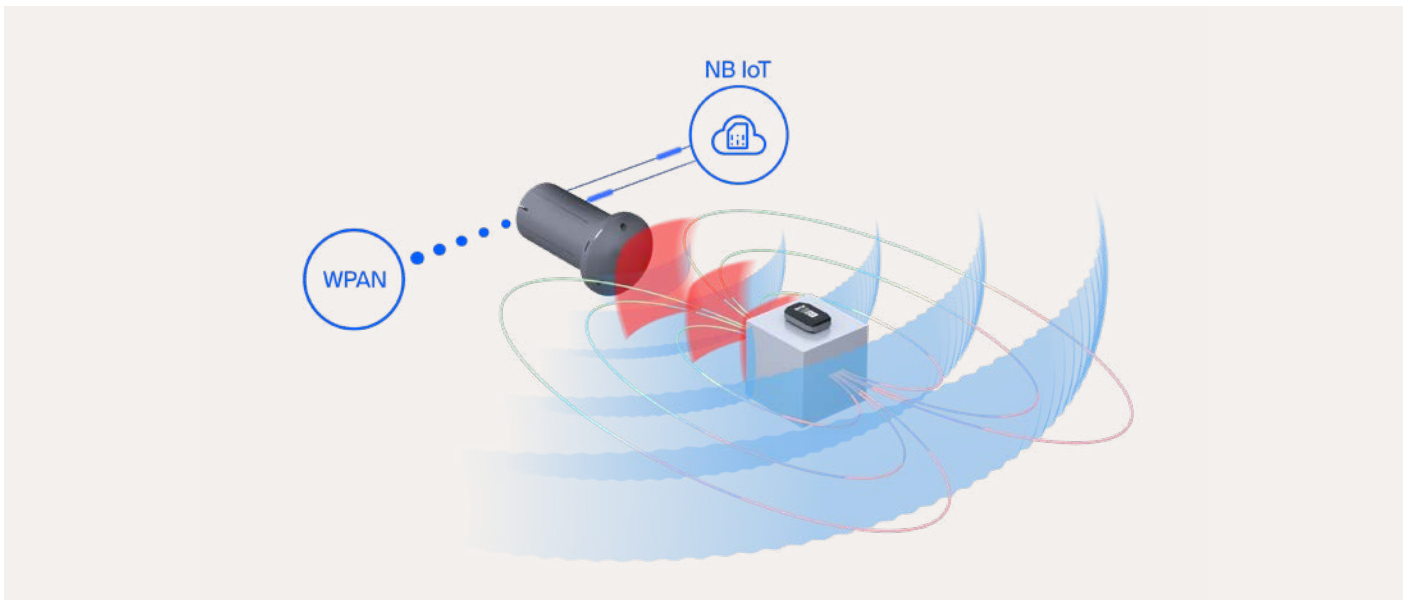


LOCALIZATION SYSTEMS

OccupID System

Storage space occupancy detection and object identification in production and logistics

Transparency in production and logistics: The OccupID System intelligently monitors the occupancy of storage spaces and makes material and object movements traceable at all times.



Functionality OccupID System: Object detection using radar and magnetometer sensors, identification via WPAN ID, and reliable data transmission with NB-IoT

PRODUCT DESCRIPTION

The OccupID System localization system clearly detects and identifies vehicles, material carts, pallets and other objects and transmits the data to CorivaHub. Thanks to radar and magnetometer sensors and WPAN-ID, this is done by non-contact means. In production, logistics and truck loading zones, the system reliably detects occupied areas and provides precise information about the objects. It can be used indoors and outdoors and can be flexibly mounted on walls and ceilings or other infrastructure. Thanks to intelligent occupancy detection, the OccupID System enables transparent monitoring of object and material movements, ensures more efficient use of space, and supports the automation and optimization of material flows – for more productivity and less downtime.

APPLICATION EXAMPLES



Production: Industrial space occupancy detection and object identification



Logistics: Storage space occupancy detection indoors and outdoors

BENEFITS

- Precise occupancy data enables efficient use of industrial and logistics space
- Reduced manual checking effort, incorrect occupancies, downtimes and waiting times
- Traceability of objects and transparency of operating processes as a basis for data-based decisions
- Quick and easy commissioning

FEATURES

- Non-contact object detection of vehicles, material carts, pallets and other objects via magnetometer and radar
- Unique object identification with WPAN ID
- Processing and visualization of data from the OccupID System in CorivaHub
- Battery-powered for longer uptimes – without external power supply
- Reliable and energy-efficient data transmission over long distances thanks to wireless NB-IoT technology
- Rugged sensor technology is suitable for use in indoor and outdoor areas
- Flexible mounting options

Visit www.sick.com/OccupID_System for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



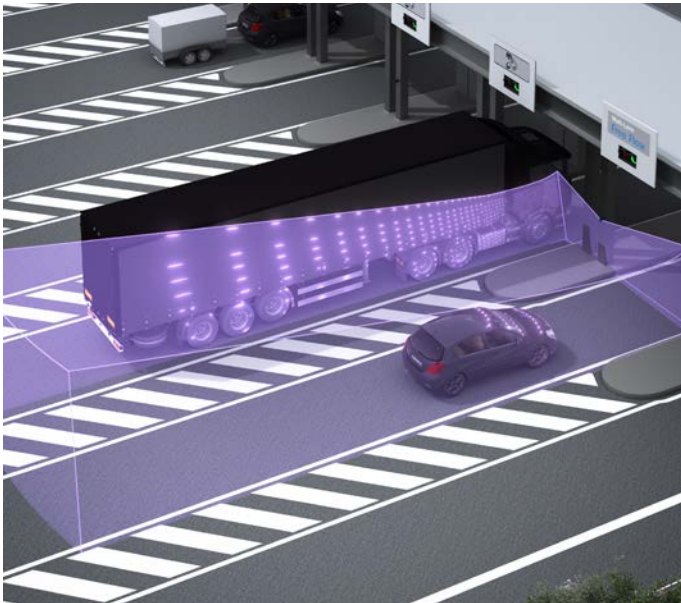


PROFILING SYSTEMS

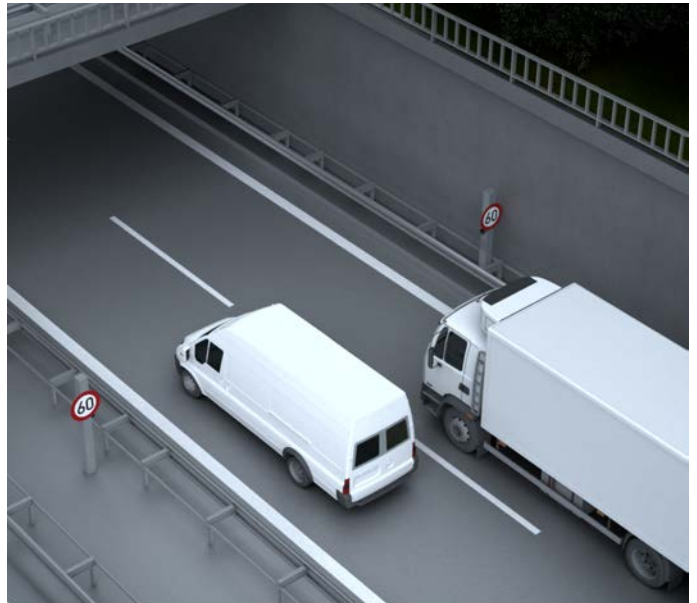
Axle Classification System

Axle counting and vehicle classification at toll stations

Axle counting and vehicle classification based on 3D LiDAR sensor data at toll stations – using fewer sensors to transition from conventional toll stations to toll collection in free-flowing traffic.



Classification and axle counting at toll stations



Mobile installation for traffic management or toll station inspection

PRODUCT DESCRIPTION

The Axle Classification System reliably classifies vehicles (such as motorcycles, cars, trucks, buses) and outputs the number and type of axles. Based on the 3D LiDAR sensor data and the point cloud, it uses Deep Learning to determine the vehicle class. The system can distinguish between raised axles and single and dual tires, as well as count the axles at speeds of up to 60 km/h. In this way, it supports for example the transition from conventional toll stations to toll collection in free-flowing traffic. The 3D LiDAR sensor is mounted in the middle between the lanes (e.g. on an island) and thus covers two lanes. When positioned to the side or in a mobile installation at the roadside, it detects one lane.

BENEFITS

- Cost-effective due to small number of devices required
- Flexible installation depending on conditions of use
- Facilitates the transformation from attended toll stations to free flow
- Easy maintenance and cleaning

FEATURES

- Monitoring of up to two lanes using just one 3D LiDAR sensor (instead of multiple light grids)
- Measurements possible in both directions of movement (in or against the direction of travel)
- Accurate vehicle detection at passing speeds of up to 60 km/h
- Easily accessible installation height (without ladder, lifting platform or lane closure and road works)

Visit www.sick.com/AXC for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.





PROFILING SYSTEMS

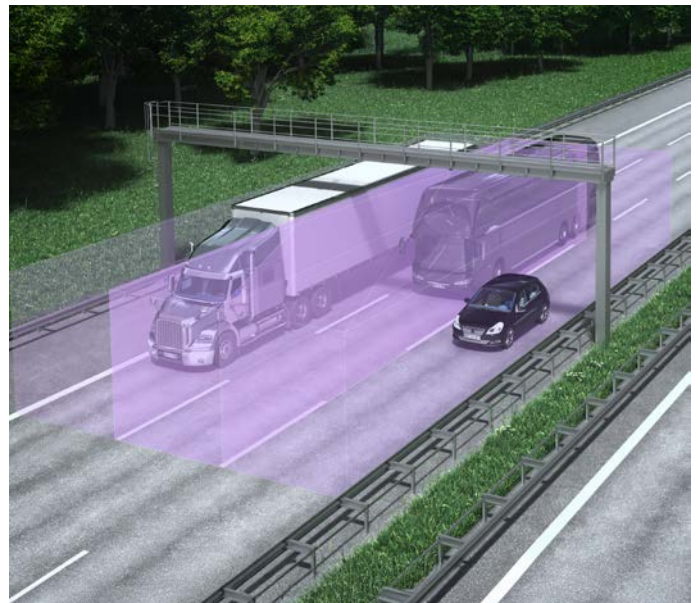
Multi-Lane Profiling System

Reliable profiling and tracking of vehicles

Flexible profiling and tracking of vehicles in multi-lane, free-flowing traffic based on 3D LiDAR sensor data – position determination, classification, or triggering of additional devices (such as cameras).



Profiling and tracking of vehicles across two lanes using a single sensor



Coverage of three lanes with two LiDAR sensors

PRODUCT DESCRIPTION

The Multi-Lane Profiling System offers flexible options for vehicle profiling in multi-lane, free-flowing traffic. One 3D LiDAR sensor covers two lanes. Based on the sensor data and the acquired point cloud, the system can classify vehicles using Deep Learning (e.g. Swiss10 or TLS8+1) and determine their position. It also tracks vehicles across multiple lanes, records speeds and provides precise trigger information (e.g., for triggering third-party devices such as cameras for license plate recognition).

BENEFITS

- Low infrastructure costs (sensors and gantries)
- Reliable triggering of other devices, e.g. ANPR cameras
- Demand-oriented system design

FEATURES

- Smaller number of sensors and gantries for mounting than with previous solutions
- Precise detection and reliable tracking thanks to 3D LIDAR technology – even with lane changes
- Different system variants – the number of sensors and system performance can be adapted to requirements

Visit www.sick.com/MLPS for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.

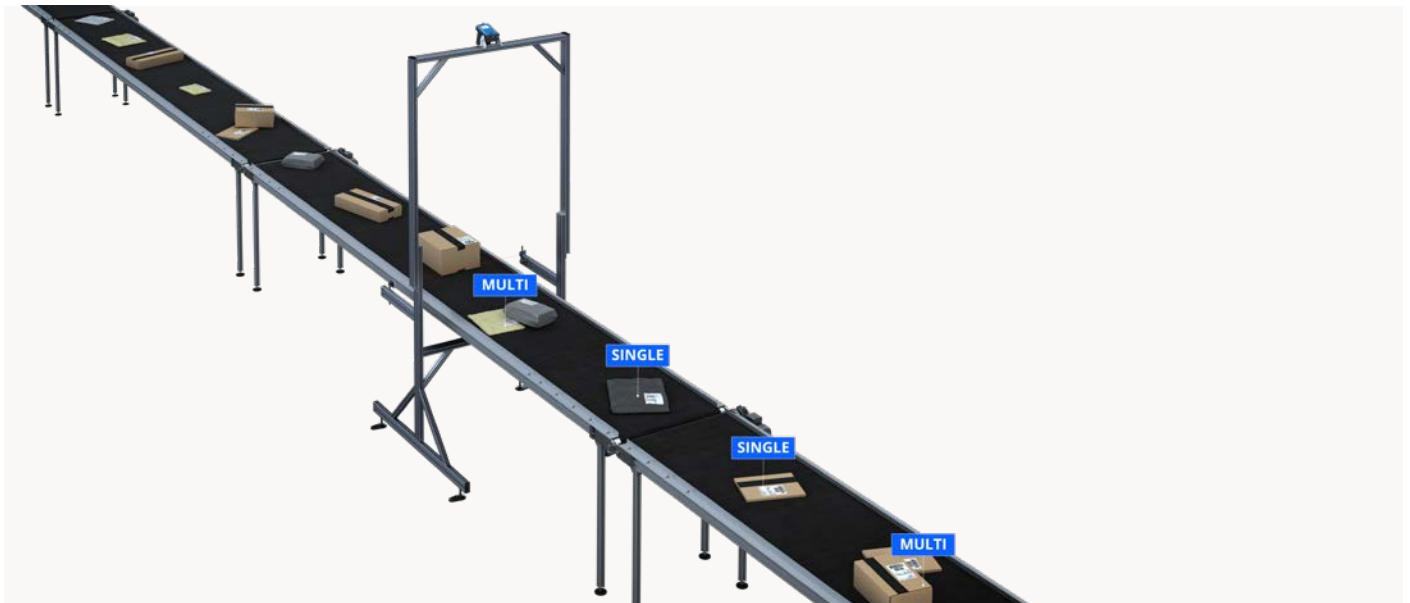


TRACK AND TRACE SYSTEMS

Inspector Logistics System

Compact image processing system for automatic product checking and inspection

Automatic object detection for separation control directly on the camera: The Inspector Logistics System ensures precise sorting and high process reliability in logistics.



Automated detection of singulation errors

PRODUCT DESCRIPTION

The Inspector Logistics System is a solution for automatic item verification and inspection tasks in logistics. It combines an advanced industrial vision sensor with integrated processing capabilities and SICK's Track and Trace Vision Software "Single Item Verification". The software runs directly on the camera, eliminating the need for external computers or servers. It reduces hardware costs, simplifies installation, and saves space. The system enables accurate singulation control of items at inducts. Designed for easy integration and robust performance, it provides a scalable platform for current and future vision-based applications.

BENEFITS

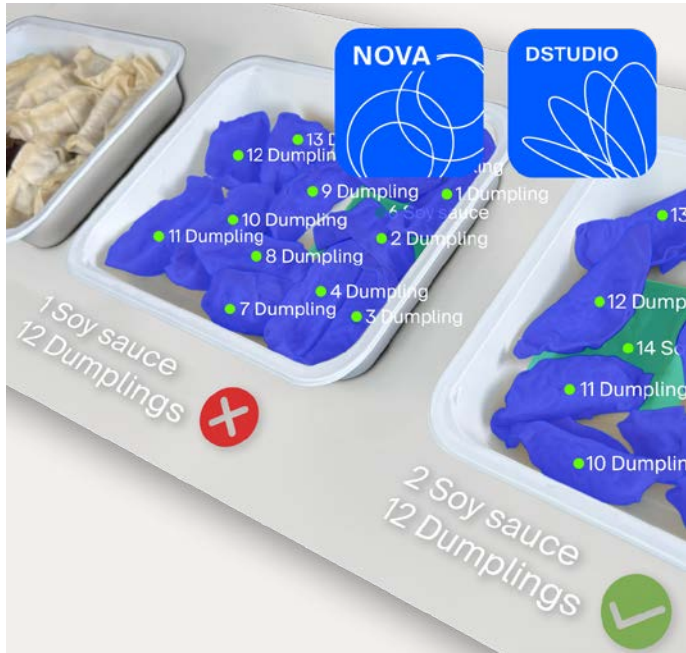
- Lower hardware costs
- Simplified installation and reduced system complexity
- Reliable singulation control for fewer shipping errors
- Increased throughput with fast, automatic item checks
- Scalable platform for future inspection tasks

FEATURES

- Industrial vision sensor with integrated processing
- Track and Trace Vision Software runs directly on the device
- Compact design for space-saving installation
- High-resolution image capture for accurate item checks

Visit www.sick.com/inspector_logistics_system for more information.





ENGINEERING TOOLS

AI Blob Finder (dStudio) and SICK NOVA 2.15

Next Level Object & Defect Detection

Accurately measure, count, and locate even hard to detect objects – powered by pixel precise AI technology. The AI Blob Finder (dStudio) is perfectly suited for demanding quality inspection applications.



Count and measure different types of concealed/overlapping components in ready meal packaging



Measure area of low-contrast or naturally grown materials such as logs and wood

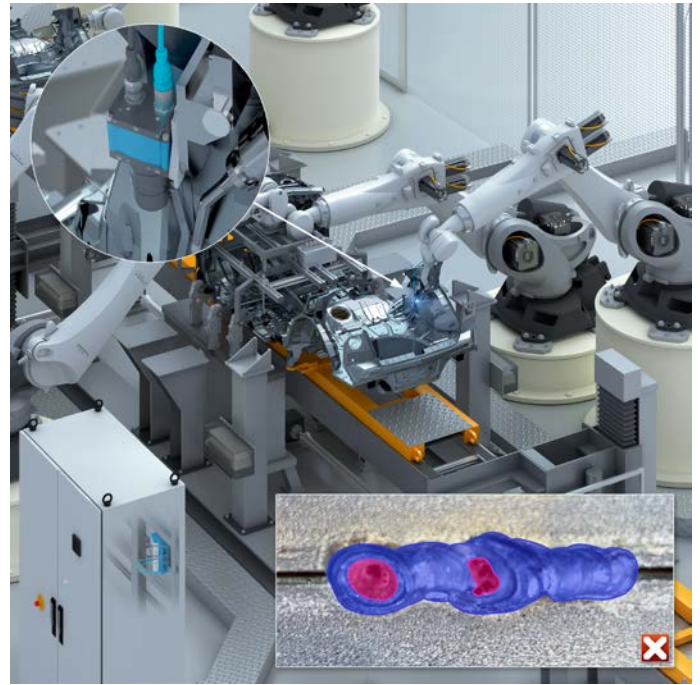
PRODUCT DESCRIPTION

The AI Blob Finder (dStudio) uses instance segmentation to detect and count objects with a trained neural network. With support for measuring object dimensions—length, width, and area—it’s ideal for quality control applications requiring counting, sorting and measuring as well as determining position. The instance segmentation technology identifies and separates each object in an image, pixel by pixel. It not only detects what objects are present (such as apples and peaches) but also outlines each individual object separately—even if there are multiple objects of the same type that overlap.

APPLICATION EXAMPLES



Count and locate transparent, low-contrast, or deformable objects



Measure and find defects on welds

BENEFITS

- Ensure the correct amount of different items with difficult shapes and textures in a batch. Even touching or overlapping objects will be captured individually
- Measure and check different object dimensions such as surface area, height and width to ensure customer satisfaction
- Detect known defects and collect precise information about their size, defect types and number of defect occurrences
- Precise location of objects can be provided to a robot for removal of defective items or other tasks
- No expensive hardware is needed thanks to on-device inference and training in the SICK cloud
- Automated quality analysis to improve production yield and speed – allow more fulfilling assignments for staff

FEATURES

- Pixel precise AI accuracy: Find, classify, locate, measure and count difficult-to-detect objects or defects
- Simple definition of quality criteria through adjustable threshold values
- Fast edge inference is executed directly on SICK device
- Training of neural networks for AI Blob Finder (dStudio) in the SICK cloud
- Easy configuration of machine vision tasks with the SICK Nova
- Runs on a wide range of SICK vision sensors

Visit www.sick.com/SICK_Nova for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



SICK AT A GLANCE

SICK is a globally leading company in intelligent sensors and sensor solutions. With over 10,000 employees, more than 60 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers.

With a unique range of products and services for factory and logistics automation, SICK creates added value along the entire value chain of its customers. In addition, SICK brings extensive industry and application experience as well as a deep understanding of its customers' processes and requirements.

Partnering for the better, optimizing productivity, elevating quality, and protecting health and safety – this is what SICK stands for.

THAT IS “SENSOR INTELLIGENCE”.