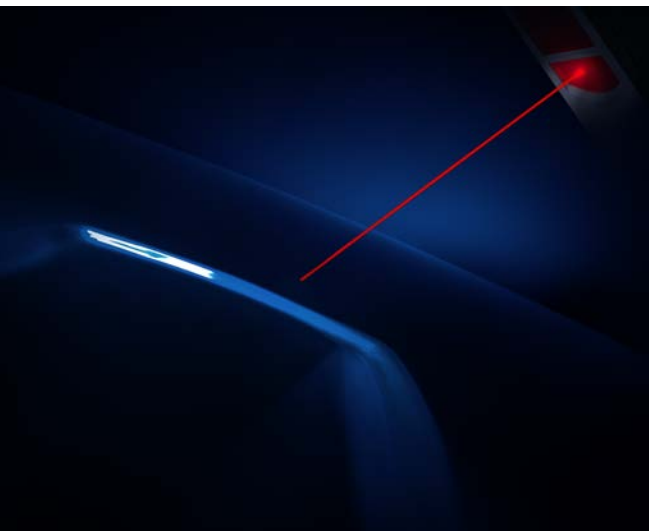


SICK.COM



THE INNOVATIONS MAGAZINE

SICK INNOVATIONS

Issue June 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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MOTOR FEEDBACK SYSTEMS

ENS/ENM35

Motor feedback system with HIPERFACE DSL® for compact servo drives

The ENS/ENM35 precisely measures position and speed in servo drives and transmits the data via HIPERFACE DSL®. Optical scanning and a battery-free multiturn gearbox ensure maintenance-free operation—ideal for dynamic applications with limited installation space.



ENS/ENM35 is integrated directly into servo motors and provides the controller with all relevant position information for a precise drive control system.

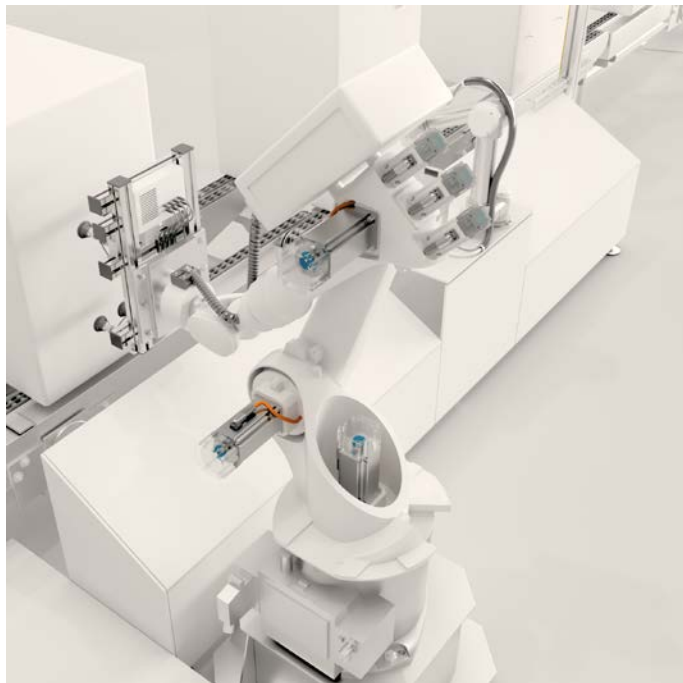


The optical scanning system of the ENS/ENM35 offers precise position detection and speed recording in demanding dynamic applications.

PRODUCT DESCRIPTION

The ENS/ENM35 is a compact motor feedback system for precise position and speed measurement in servo motors and is suitable for dynamic automation applications and drive technology. The digital HIPERFACE DSL® interface enables a single-cable connection between motor and drive, reduces installation effort, and saves space. ENS/ENM35 combines optical scanning technology with a mechatronic, battery-free multiturn drive – for maintenance-free and reliable operation. The integrated calibration function reduces position errors caused by installation tolerances almost entirely and ensures high accuracy in dynamic applications.

APPLICATION EXAMPLES



Using only two wires in the motor cable, the HIPERFACE DSL® interface of the ENS/ENM35 enables precise positioning of the robot.



With precise speed and position measurement, the ENS/ENM35 efficiently controls the servo motor and synchronizes it with the following process steps.

BENEFITS SUPPORTED BY FEATURES

- **Maintenance-free and long-term availability**
Mechatronic, battery-free multiturn system: Battery does not need to be replaced, and automatically meets IATA air freight requirements.
- **Fast integration into existing HIPERFACE DSL® systems**
Backwards-compatible thanks to a standardized mechanical and electrical interface – easy integration into existing HIPERFACE-DSL® systems.
- **Space-saving design**
Flat housing design – suitable for compact motors and limited installation space.
- **High productivity**
Low self-heating and a wide temperature range increase motor performance and machine productivity.
- **Continuous data availability**
Digital interface enables real-time sensor data access and stores application-specific information.
- **Precise position detection for dynamic applications**
Optical sampling system with resolution of 24 bits and 4,096 revolutions for multiturn design.
- **Provides long-term protection for your systems against cyberattacks**
Cybersecurity certification in accordance with IEC 62443-4-1 – a secure component for asset protection that will remain effective well into the future.

Visit www.sick.com/ens_enm35 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.



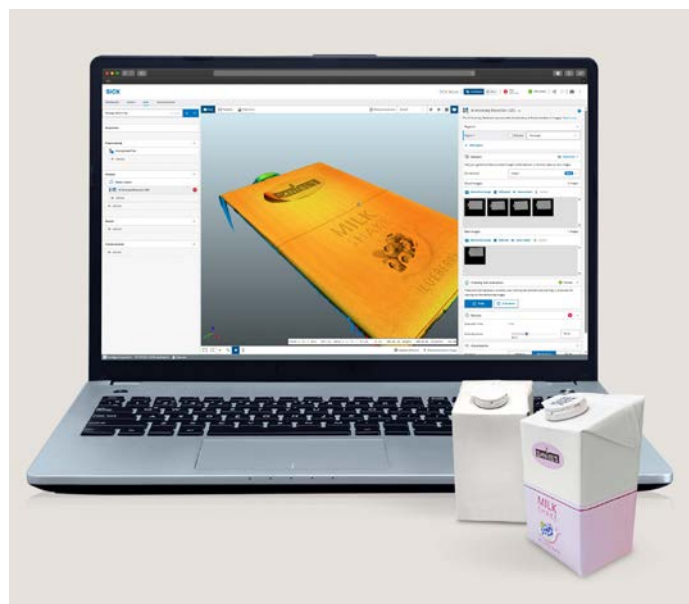


APPLICATION SOFTWARE

AI for 3D with SICK Nova

Artificial intelligence for 3D – where height meets intelligence

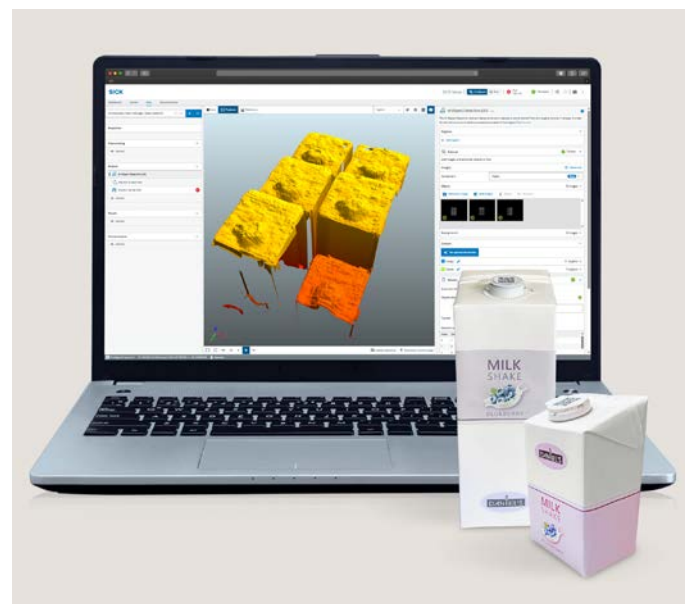
By combining AI with true height-based understanding, AI-supported 3D vision goes beyond traditional 3D imaging and adds inspection capabilities to the third dimension. The teach-by-example approach using sample images significantly reduce setup effort.



Height-based inspection ensures reliable evaluation independent of print or color variations, preventing false detections and enabling fast, effortless batch changes.

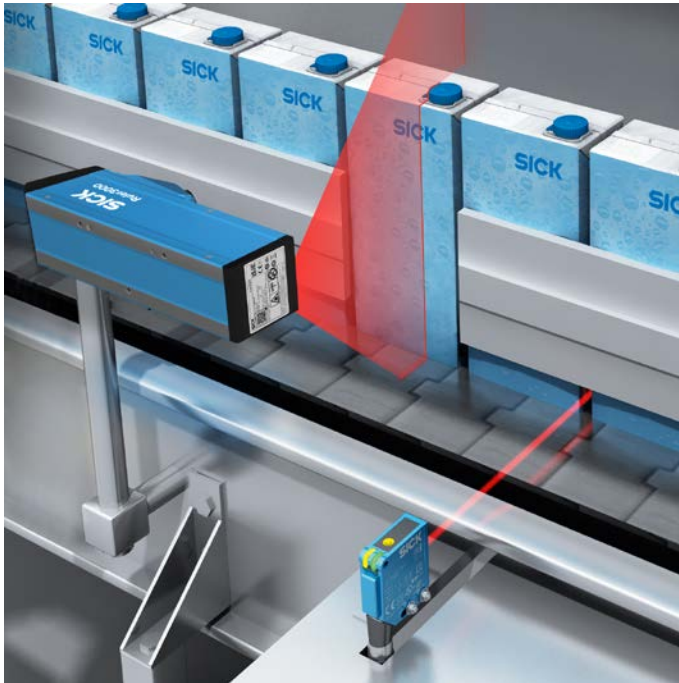
PRODUCT DESCRIPTION

By capturing the height, volume, pose, and true shape of objects with AI tools from SICK Nova Intelligent Inspection toolset, users can solve applications quickly while gaining new levels of inspection abilities. This enables reliable detection even when objects share the same color or pattern. The result is reliable and adaptable inspection performance for demanding industrial applications.



Adding AI to precise height data gives 3D inspection new capabilities, unlocking advanced quality control applications once difficult or impossible to achieve.

APPLICATION EXAMPLES



The Ruler3000 running SICK Nova Intelligent Inspection toolset easily detects defects like dents, deformations or loose labels.



The Visionary-T Mini running SICK Nova Intelligent Inspection toolset ensure that objects in cartons, crates or pallets are positioned correctly, at right quantity and that unwanted objects are not present.

BENEFITS SUPPORTED BY FEATURES

- **Color and contrast independence**
Using height data for inspection ensures reliable evaluation of objects, independent of print or color variations
- **Easily find height-based defects and objects with AI**
By adding AI to precise height data analysis, 3D vision gains new inspection capabilities
- **Expands quality control beyond traditional limits**
Unlock advanced quality control applications that were previously difficult or impossible to achieve
- **Easy setup using teach by example**
The easy to use SICK Nova AI-powered Intelligent Inspection tools are trained using sample images – collect, train and execute

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.



OBJECT DETECTION SYSTEMS

Backup Assistance System based on picoScan100

Active collision warning for manned forklift trucks

The Backup Assistance System is a flexible, cost-effective retrofit collision warning solution for industrial trucks. The new versions, based on the picoScan100 2D LiDAR sensor, offer improved robustness and system availability.

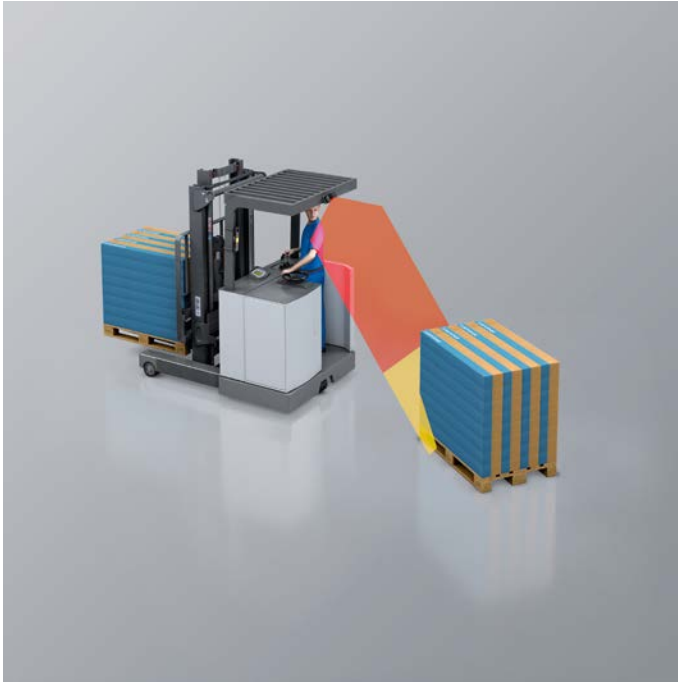


Thanks to flexible mounting options on the vehicle, the monitored area can be adapted and scaled according to the object detection requirements.

PRODUCT DESCRIPTION

The Backup Assistance System (BAS) is a 2D LiDAR-based collision warning solution that helps forklift drivers to reverse safely. It monitors areas behind the vehicle and uses acoustic and visual warnings. These warnings alert the driver to stationary and moving objects. The system only activates in reverse gear to avoid distractions and false alarms when driving forward. An additional 2D LiDAR sensor enables a wider monitoring area. Thus, the BAS can be flexibly adapted to different vehicle types or areas of application. The standalone design makes it a cost-effective retrofit solution for indoor and outdoor industrial environments.

APPLICATION EXAMPLES



The Backup Assistance System reliably detects obstacles in the travel path of the manned forklift truck when reversing.



A system variant with two sensors is well suited for targeted coverage of blind spots.

BENEFITS SUPPORTED BY FEATURES

- **Immediate hazard awareness when reversing**
Detection of objects with a three-stage visual signal and acoustic signals of up to 98 dB
- **Reduced false alarms and less operator distraction**
Automatic system activation only in reverse gear
- **Cost-effective retrofit solution**
No need for reflectors, tags or external hardware installed in the facility, making it easy to deploy across mixed fleets
- **Easy installation and low power demand**
Suitable for most forklift models; low power consumption (approx. 3.5 W) minimizing battery load and downtime
- **Increased safety when reversing**
Large field of view and stable detection of stationary and moving objects
- **Reliable object detection**
High-resolution measurement data from the 2D LiDAR sensor, even in changing environments

Visit www.sick.com/BAS 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.

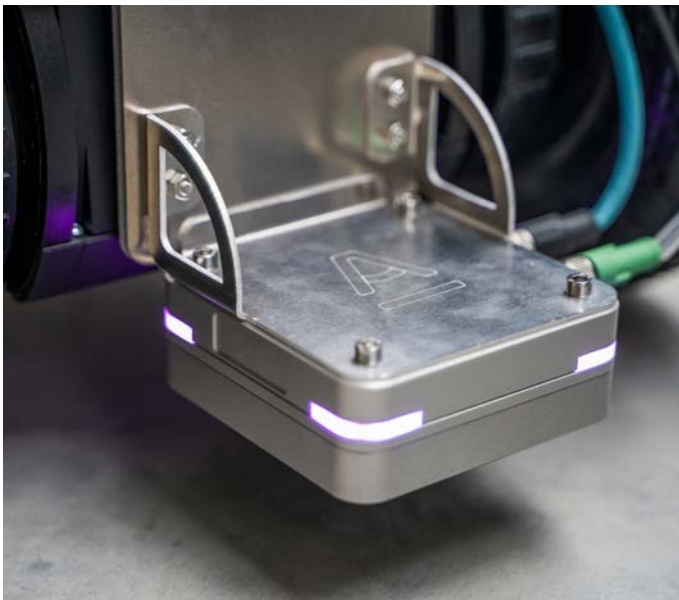


LOCALIZATION SYSTEMS

Triton Floor-LOC and LiDAR-LOC

Reliable localization for mobile robots made simple

Triton Floor-LOC is an image-based localization system for mobile robots in logistics and production with an accuracy in the sub-millimeter range, even in highly dynamic environments. Triton has been integrated into the SICK ecosystem via LiDAR-LOC to get one fused pose output, and can be configured via SOPASair.



Reliable localization of mobile robots using the texture of the floor.

PRODUCT DESCRIPTION

Triton Floor-LOC is an industry-proven localization system for mobile robots in logistics and production. Its image-based technology uses the micro-structures of the floor to continuously determine the position of the vehicle. The localization is based on natural floor features and provides accuracy in the sub-millimeter range, even in highly dynamic environments. Moreover, it does not require any infrastructure. The system continuously self-learns, allowing it to operate with gradual changes to the floor surface. In addition to stand-alone use, Triton Floor-LOC can be used with a LiDAR-based localization solution such as LiDAR-LOC.

APPLICATION EXAMPLES



Triton Floor-LOC on a mobile robot.



Using the LiDAR-LOC platform, Triton Floor-LOC can easily be integrated, tested and commissioned.

BENEFITS SUPPORTED BY FEATURES

- **Precise docking in highly dynamic environments**
Sub-millimeter-accurate localization using camera-based detection of floor textures, which works on concrete and various industrial floors
- **Easy and fast commissioning**
Localization without the need for additional infrastructure such as codes or reflectors
- **User-friendly setup of LiDAR-LOC and Triton Floor-LOC**
Configuration and operation of Triton Floor-LOC and LiDAR-LOC combination via SOPASair user interface
- **Stable operation regardless of floor surface changes**
Continuously self-learning algorithm that keeps the system functional even with gradual changes to the ground surface
- **Economic and easy to integrate localization solution**
Stand-alone and complete localization system in a compact device
- **Versatile use of mobile robots thanks to technology combination**
Increased accuracy and robustness even in dynamic environments through Triton Floor-LOC as a supplement to LiDAR-LOC or other LiDAR-SLAM systems

Visit www.sick.com/triton_Floor-LOC 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.





PHOTOELECTRIC SENSORS

MultiMode - WTMxx

MultiMode: All-in-one photoelectric sensor WTM4FF, WTM4SF, WTM12F, WTM12L, WTM16F, WTM26F

The WTMxx all-in-one photoelectric sensors combine multiple detection modes into a single multi-mode device, reducing the number of variants and engineering effort. PinPoint Pro LED, Dust-Alert, and distance data via IO-Link enable reliable object detection and high availability.



Predictive maintenance thanks to alarm function.



Within the foreground suppression mode, the sensor detects objects with a small distance between object and background. A stable background is required as a reference. The mode is typically used for very flat objects.

PRODUCT DESCRIPTION

The MultiMode photoelectric sensors combine up to five detection functions in a single sensor, offering maximum flexibility with minimal integration effort. Thanks to PinPoint Pro LEDs, these All-in-One photoelectric sensors deliver high detection performance and precise object recognition - even under demanding conditions. The integrated DustAlert function detects contamination early on and enables predictive maintenance. In addition, IO-Link provides continuous distance information for greater transparency and efficiency in the process.

APPLICATION EXAMPLES



The sensor has two independent switching points that can be taught in separately (e.g. standing or lying object).



The Manual/Measuring mode is only available via IO-Link. In this mode, the sensor outputs the distance value to the object (e.g. for monitoring the diameter of a paper roll).

BENEFITS SUPPORTED BY FEATURES

- **Several functions in one sensor**
MultiMode photoelectric proximity sensors are suitable for changing tasks and a wide range of applications.
- **Reduced effort for storage and handling**
One sensor for different detection tasks saves costs and simplifies processes.
- **Fast Distance information via IO-Link**
MultiMode photoelectric proximity sensors enable fast and continuous output of distance values for more transparency in the process.
- **High detection performance**
MultiMode sensors come with an innovative PinPoint Pro LED for precise, reliable results even under challenging conditions.
- **DustAlert – predictive maintenance thanks to alarm function**
MultiMode is the first photoelectric proximity sensor with a configurable warning. DustAlert detects critical contamination states early and avoids unplanned plant downtimes.

Visit www.sick.com/multimode 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”.