

IDENTIFICATION SOLUTIONS

OVERVIEW OF THE PRODUCTS

Image-based code readers, fixed mount barcode scanners, RFID, mobile handheld scanners, magnetic-coded identification





RFID, laser-based barcode scanners, and image-based code readers: To provide genuinely efficient solutions for identification tasks, you need more than just one type of technology. With SICK you have the choice: For decades, SICK has been a pioneer in machine vision solutions, a market leader in industrial code reading, and an innovator of RFID technology. Whether used individually or combined in an application – SICK employs three technologies to provide reliable and efficient solutions to your identification tasks. And one thing's for certain – your requirements come first.







We offer the right solution for every requirement: image-based code readers, laser-based barcode scanners, and RFID technology.

[→] www.sick.com/more-than-a-vision



As a global company, we are at your side. Our services comprise accurate analysis of your requirements, technical and systems expertise, strong products, and comprehensive local support – wherever you are in the world.

As the market leader in automated identification, SICK can advise you on finding the right technology for your application. Whether laser, camera, or RFID: All three technologies can be combined in one system if required. You can obtain complete system solutions and customized combinations direct from SICK. What's more, you can combine our identification technologies and enhance them with additional sensors from our extensive SICK portfolio – providing you with a customized solution from a single source. And what if your requirements change? No problem. Thanks to their modular architecture, our systems are flexible and can be expanded and adapted to any new task.

The best solution is always individually and precisely tailored to your requirements. With SICK, your visions become reality.



YOUR ADVANTAGE: THREE TECHNOLOGIES FOR ANY APPLICATION

RFID



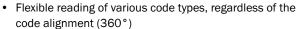
- Reliable identification of concealed or contaminated objects, as no visual contact with the RFID tag is necessary
- Identification of large objects with undefined tag position due to large reading distances and reading field widths
- · Reads and writes data
- High level of counterfeit protection and data protection due to encrypted data transmission
- Industry 4.0 ready (MQTT, OPC UA, HTTPS, ...)

Image-based code readers





OCR

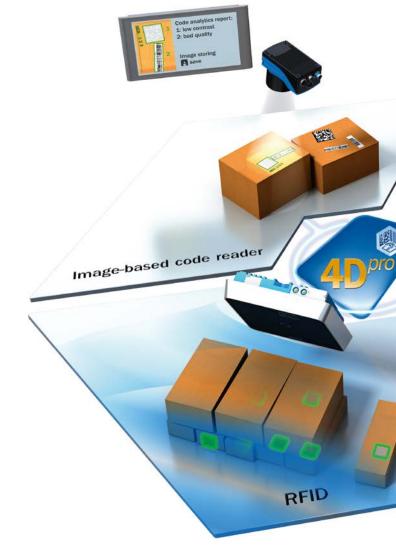


- Monitoring of code qualities to optimize processes by using code analytics in the device
- Subsequent image analysis as images of identified objects are stored
- Reading, evaluation, and analysis of severely damaged codes due to corrective image processing algorithms

Laser-based barcode scanners



- Code identification at various distances and with different object sizes due to a large depth of field with just one device
- A single device also provides coverage of wide reading areas due to a large aperture angle
- High read stability even in varying ambient light due to outstanding ambient light immunity
- Low commissioning costs as auto-focus function means setup couldn't be simpler



4Dpro - ONE CONCEPT FOR ALL TECHNOLOGIES



To provide you with the flexibility you need, SICK has developed a concept enabling you to interchange and network our identification sensors across all the different technologies. Whichever solution you choose, you can be sure of a flexible future with the 4Dpro platform from SICK:

→ www.sick.com/4Dpro

- Standardized connection technology and cloning function for flexible device replacement
- Low level of training required thanks to standardized configuration software and user interface
- Standardized accessories concept for a compact choice of components



SERVICES, SYSTEMS, AND TAILORED SOLUTIONS

Three visions - one guarantee



Based on over 70 years of practical experience, SICK offers standardized services for a fixed price, such as regular performance checks to prevent unwanted downtime. Professional commissioning and maintenance of devices ensures optimum performance. With an extended warranty, customers can even secure their investment for up to five years. Customer-specific services such as pre-configuration, upgrades, engineering, and training complete the service portfolio.

Three visions - one system

Thanks to their modular architecture, sensor systems from SICK can be expanded flexibly and adapted to your requirements. Whether laser, camera, or RFID: All three technologies can be brought together in one system solution if required. In such cases, the customer interface is completely independent of the technology used. This means that various reading tasks and optical identification procedures can be completed with one system. These include top reading with image-based code readers, side reading with a laser scanner and sensors from the Lector® series, or the ability to detect totes and perform optical identification at the same time with the aid of RFID.

Tailored sensor functions with SICK AppSpace

Finding an identification solution that's tailored to your requirements – sounds time-consuming and difficult, or even impossible, doesn't it? Not if you decide on the SICK AppSpace eco-system, which can even be combined with your application as an option. Here, application developers define the solution themselves: Intelligent software tools, high-performance programmable devices, and a dynamic developer community create a solid foundation for designing customized sensor solutions. This enables completely new and adaptive solutions for automation applications.



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Magnetic-coded identification		8)

¹⁾ For details see the reading field diagram online | ²⁾ Depends on the product variant | ³⁾ During teach-in | ⁴⁾ For parameterization only | ⁵⁾ Depends on the lens and illumination unit ⁶⁾ Depends on the application and the transponder used | ⁷⁾ Adapter cable required | ⁸⁾ In gateway mode only ⁹⁾ Can be extended to larger distances if using an external illumination unit

IDENTIFICATION SOLUTIONS Selection Guide

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1D, 2D and DPM code identification using a compact camera - ideal for miniature codes as well



Lector62x

1D, 2D and DPM code identification using a compact camera - suitable for small codes

Possible fields of application

- · Electronics and solar industries: PCB, component and device identification
- Consumer goods industry: serialization and package content monitoring
- Storage and conveyor systems: container identification
- Automotive industry: production control and traceability of devices
- Automotive industry: production control and traceability of devices
- Consumer goods industry: date code inspection, serialization, and package content monitoring
- Storage and conveyor systems: container identification

Automotive and parts suppliers

· Electronics and solar industries: PCB, glass, and wafer identification

Example application

Electronics

Identification of DPM codes on printed circuit boards







Lector63x

1D, 2D and DPM code identification using a camera for mid-range reading distances



Lector64x

1D, 2D and DPM code identification using a camera – detects diverse, far away objects

- Presentation camera, manual package sorting
- Automated sorting systems used by courier, express and postal service providers as well as in retail
- Aggregation of food and pharmaceutical packaging
- Track and trace in automated packaging machines
- Scanning from a large distance for traceability in the automotive industry
- Tire identification
- Scanning of small codes in the electronics and solar industry

- · Presentation camera, manual package sorting
- Material handling in automated sorting systems used by courier, express and postal service providers as well as in retail
- · Tire identification
- · Aggregation of food and pharmaceutical packaging
- Identification of codes, tracking of serial numbers and manufacturing dates in pharmaceutical distribution contexts

Courier, express, parcel, and postal



Sorting of small parcels by hand



→ www.sick.com/Lector63x

Tires



Spotting



→ www.sick.com/Lector64x



Lector65x

1D, 2D and DPM code identification using a camera – detects diverse, far away objects



Lector85x

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

Possible fields of application

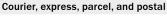
- Material handling in automated sorter systems used by courier, express and postal service providers as well as in retail
- Presentation camera, manual package sorting
- Tire identification
- Aggregation of food and pharmaceutical packaging
- Identification of codes, tracing of serial numbers and manufacturing dates in the pharmaceutical distribution sector
- Retail and warehousing: Code identification in sorting and picking processes, recording of incoming and outgoing goods
- CEP industry: Code identification, for instance on letters, parcels, flats
- Airports: Code identification on baggage and freight items; automatic sorting and warehousing

Example application

Health care manufacturing



Multifunctional code reading





Identification of flats using cameras



→www.sick.com/Lector85x



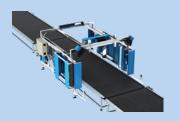
Detailed information

→ www.sick.com/Lector65x



Lector Identification System

Fast image-based code reading and assignment with small object gaps



ICR identification system

Efficient sorting of objects at the highest conveyor speeds

- Single-side reading or multi-side, omnidirectional code reading and assignment to the object
- Automated object identification for efficient sorting and picking processes
- Easy upgrading of laser-based systems to optimize the read rate and to add a 2D code reading capability
- Challenging code reading for optimizing sorting processes in the fields of transport and logistics
- Image acquisition and storage for OCR, video coding, archiving and machine vision applications

Retail and warehousing



Image-based object identification on multiple sides



→ www.sick.com/Lector_Identification_System

Retail and warehousing



Image-based object identification with detection of hazardous material symbols



→ www.sick.com/ICR_Identification_System



1D code identification using a compact CMOS line sensor for short reading distances



CLV61x

1D code identification with easy to integrate IO-Link or dual port scanner

Possible fields of application

- Medical technology: clinical analysis
- Identification of barcodes immediately after printing
- Automated object identification in applications with very little space, such as reading barcodes in rolls of film
- OEM applications such as FOUP ID, overhead transport systems, ticket or cash register systems, or integration on a robot arm
- Warehouse conveyor technology: container identification on conveyors, positioning and storage location identification, pallet identification
- Food and beverage: legibility checking of barcodes after printing, barcode identification in packaging and secondary packaging processes
- Medical technology: clinical analysis

Example application

Health care manufacturing



Identification of rack codes and level measurement of test tubes in the Single Lane Analyzer



→ www.sick.com/CLV60x

Storage and conveyor technology



Printing, attaching and identifying barcodes



→ www.sick.com/CLV61>

Detailed information



CLV61x Dual Port

The network professional

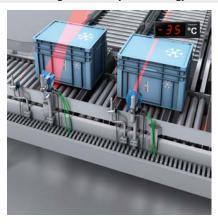


CLV62x

1D code identification using a rugged scanner with flexible interface concept

- Warehouse conveyor technology: container identification, picking station, cold storage
- Warehouse conveyor technology: picking station, container and pallet foot identification
- Food and beverage: inspection of barcode for legibility after printing, barcode identification in packaging and secondary packaging processes
- Medical technology: clinical analysis
- Aggregation of food and pharmaceutical packaging

Storage and conveyor technology



Scanning of codes on the sides of containers using fixed mount barcode scanners, including in deep freeze applications



→ www.sick.com/CLV61x_Dual_Port

Storage and conveyor technology



Identification of barcodes on pallet foot



→ www.sick.com/CLV62x





CLV63x

1D code identification using a rugged scanner with flexible interface concept

CLV64x

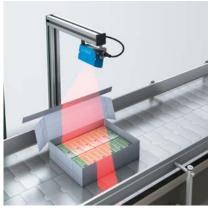
1D code identification using a scanner with dynamic focus

Possible fields of application

- Warehouse conveyor technology: container identification, identification of secondary packaging, pallet foot identification
- Consumer goods industry: serialization and package content monitoring
- Aggregation of food and pharmaceutical packaging
- Food and beverage: identification in washdown zones
- Food, beverages: barcode identification in packaging and repackaging processes and identification in washdown zones
- · Aggregation of food and pharmaceutical packaging
- Warehouse conveyor technology: barcode identification of objects on pallets
- Medical technology: clinical analysis
- Identification of test tubes in transport racks

Example application

Food and beverage



Examination of product packaging using barcodes

Food and beverage



Reading of barcodes on transport crates



→ www.sick.com/CLV64x



CLV65x

1D code identification using an auto focus scanner for long reading distances



CLV69x

1D code identification with auto focus scanner and tracking function for high throughput



CLV Identification System

1D code identification for an optimal object flow

- CEP industry as well as retail and warehousing: Material handling in automated sorter systems
- Airports: independent bag drop by passengers
- Warehouse conveyor technology: barcode identification of pallet feet and objects on pallets
- Industrial trucks: barcode identification of goods and pallets
- Courier, express, parcel and postal services (CEP)
- Airport luggage identification ALIS applications
- · OMNI-directional barcode reading
- Integration in RFID hybrid systems and high-end camera tunnels
- · Pallet identification

1D code identification in all areas of conveying technology

Industrial vehicles



Goods identification and traceability with fixed mount barcode scanners



→ www.sick.com/CLV65x

Retail and warehousing

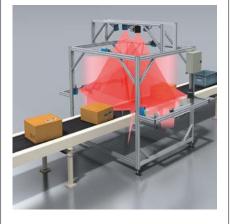


Identification of loaded pallets using barcodes



→ www.sick.com/CLV69x

Courier, express, parcel, and postal



Reading of barcodes during receipt and dispatch of shipments



→ www.sick.com/CLV_Identification_System



Mobile 1D code identification for standard applications



IDM16x

Mobile 1D code identification for standard and industrial applications

Possible fields of application

- Manual identification of test tubes in clinical analysis and the pharmaceutical industry
- · Safe and easy process control and machine setting by reading barcodes on documents or displays
- Supports manual processes such as incoming goods, order picking or dispatch in warehouses and distribution centers
- Manual scanning for production control and traceability of products or components in the automotive, electronics, solar and consumer goods industries

Machine tools

Example application

Food and beverage

Changeover of machinery to a new product





Detailed information





IDM24x

Mobile 1D and 2D code identification for standard applications



DM26x

Mobile 1D and 2D code identification for standard and industrial applications

- Point of sale, service (retail, check-in counters)
- Clinical analysis (identification of test tubes)
- Office environment (document capture)
- Warehouse (document and packet capture)
- Automotive and electronics industry (component identification)
- Production control and traceability of products or components in the automotive, electronics, solar and consumer goods industries
- Warehouses and distribution centers, e.g., for incoming goods, order picking and dispatch

Electronics



Mobile identification at pick-and-place setup stations



→ www.sick.com/IDM24x

Rubber and plastics



Mobile material identification



→ www.sick.com/IDM26



HW199x standard range

Mobile 1D and 2D code identification for read ranges up to 16 m



HW199x long range

Industry-grade area-imaging scanner with huge reading distance

Possible fields of application

- · Production control and traceability of products or components in the automotive, electronics, solar and consumer goods industries
- Warehouses and distribution centers, e.g., for incoming goods, order picking, and dispatch
- · Manned forklift truck applications: Reading of barcodes from a distance, on pallets in high-bay warehouses or on stacked containers in marshaling yards or ports
- · Universal device for all tasks in a distribution center or warehouse

Industrial vehicles

Example application

Courier, express, parcel, and postal

Manual object scans



Barcode goods identification in varying load carriers



Detailed information



→ www.sick.com/HW199x



ZI36x8

Mobile 1D code identification for demanding industrial applications



ZS36x8 SR

Mobile 1D, 2D code identification for demanding industrial applications



ZS36x8 DPM

Mobile 1D, 2D and DPM code identification for demanding industrial applications

- Supports manual processes such as incoming goods, order picking or dispatch in warehouses and distribution centers
- Manual scanning for production control and traceability of products or components in the automotive, electronics, solar and consumer goods industries
- Production control and traceability of products or components in the automotive, electronics, solar and consumer goods industries
- Warehouses and distribution centers, e.g., for incoming goods, order picking, and dispatch
- Automotive industry: Reading of needled or lasered DPM codes, 1D and 2D codes
- Identification of etched DPM codes on glossy surfaces, e.g. devices, gear wheels, rings
- Detection of printed or thermally-coated DPM codes on glossy printed circuit boards and other electronic components



Mobile identification at test stations



Mobile identification of battery cells

Automotive and parts suppliers



Mobile identification of DPM codes on electronic components



→ www.sick.com/Zx36



→ www.sick.com/Zx36



→ www.sick.com/Zx36



RFH5xx

HF transponder identification using a small RFID read/write device for close ranges



RFH6xx

HF transponder identification using an RFID read/write device for high process speeds

Possible fields of application

- Overhead conveyor for clothes: Identification with RFID
- · Workpiece carrier in assembly lines: Identification with RFID
- Container identification on conveyor systems in intralogistics processes
- · Object identification in overhead conveyors
- Workpiece carrier detection in production
- · Position determination of automatic guided vehicles by reading out transponders recessed in the ground

Example application

Electronics



Identification of workpiece carriers using RFID



Industrial vehicles



Driver assistance in a narrow aisle warehouse with RFID positioning



→ www.sick.com/RFH6xx



RFU61x

UHF transponder identification using a compact RFID read/write device for small scanning ranges



RFU62x

UHF transponder identification using a compact RFID read/write device for small scanning ranges

- Workpiece identification on assembly lines
- Identification of production material in machines
- · Load identification on mobile platforms
- Material procurement in E-Kanban
- · Container identification in conveyor systems
- Workpiece identification on assembly lines
- Load identification on mobile platforms
- Identification of production material in machines
- Container identification in conveyor systems
- Material procurement in E-Kanban

Automotive and parts suppliers



Assembly identification in the production process



→ www.sick.com/RFU61x

Industrial vehicles



Complete tracking of the material flow using an RFID sensor on manned forklift trucks



→ www.sick.com/RFU62x



RFU63x

UHF transponder identification using an RFID read/write device for large scanning ranges



RFU65x

UHF transponder identification using an RFID read/write device for large scanning ranges

Possible fields of application

- Identification of bodyparts in the automotive industry
- Tracing of transport containers in logistics
- · Identification of vehicles at tollbooths
- Identification of trains and cars in rail transport
- · Electronic toll collection

- Final assembly and vehicle delivery in the automotive industry
- Receiving and outgoing goods doors as well as forklift applications in logistics

Example application

Automotive and parts suppliers



Car body identification



→ www.sick.com/RFU63x

Automotive and parts suppliers



Vehicle track and trace in the production and distribution process



→ www.sick.com/RFU65x

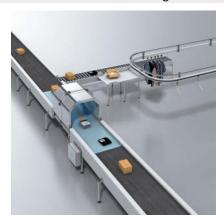


RF Identification System

Flexible design and high throughput in a single system

- Identification of objects in material flows using RFID transponders
- Checking at goods receipt and dispatch
- Traceability of objects along the value-adding chain
- Writing of additional information on the RFID transponder in a dynamic process

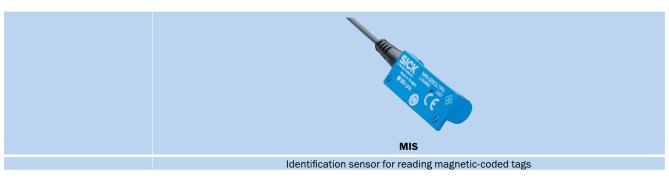
Retail and warehousing



Automated object identification using RFID during picking as well as in goods receipt and goods issue



→ www.sick.com/RF_Identification_System



Possible fields of application

- Easy gripper identification (robotics, handling and assembly technology, consumer goods industry)
- Easy workpiece carrier identification (electronics and solar industry, handling and assembly technology)
- Simple tool identification (machine tools)

Example application

Food and beverage



Gripper change during packaging processes



Detailed information

→ www.sick.com/MIS

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SERVICES FOR MACHINES AND PLANTS: SICK LifeTime Services

Our comprehensive and versatile LifeTime Services are the perfect addition to the comprehensive range of products from SICK. The services range from product-independent consulting to traditional product services.





Consulting and design Safe and professional



Product and system support Reliable, fast, and on-site



Verification and optimization Safe and regularly inspected



Upgrade and retrofits Easy, safe, and economical



Training and education

Practical, focused, and professional

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 11,900 employees and over 50 subsidiaries and equity investments, as well as numerous international agencies, SICK is always close to its customers. An extensive range of products and services creates the ideal basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the 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 SICK a reliable supplier and development partner.

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

That is "Sensor Intelligence."

Worldwide presence:

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

Detailed addresses and further locations → www.sick.com

