MANUFACTURING

Industry Guide

DATALOGIC
EMPOWER YOUR VISION

Datalogic at a glance

Datalogic is a global technology leader in the **automatic data capture** and **factory automation markets**, specialized in the designing and production of **barcode readers**, **mobile computers**, **sensors** for detection, **measurement** and **safety**, **RFID**, **vision** and **laser marking systems**.

Closeness and timely response to every customer requirement, together with continuous innovation and high quality offering, are the distinctive elements at the base of Datalogic success for over 40 years. Its cutting-edge solutions help to increase the efficiency and quality of processes in the **Retail**, **Manufacturing**, **Transportation & Logistics** and **Healthcare** industries, along the entire value chain.

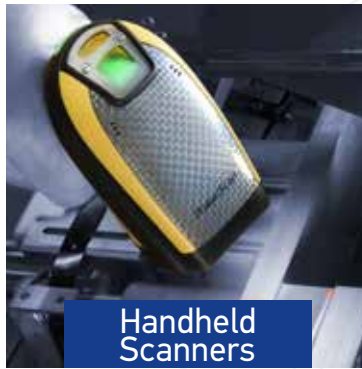## DATALOGIC TARGET INDUSTRIES
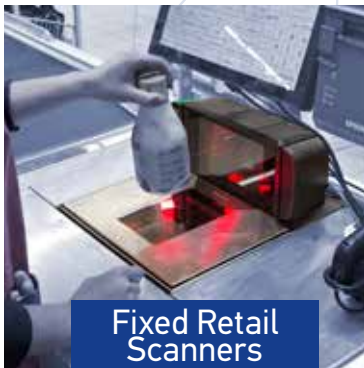
RETAIL
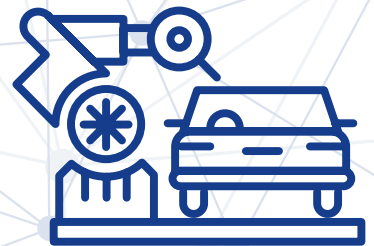
MANUFACTURING

TRANSPORTATION & LOGISTICS

HEALTHCARE

DATALOGIC PRODUCTS

Handheld Scanners

Fixed Retail Scanners

Mobile Computers

Stationary Industrial Scanners

Laser Marking Systems

Machine Vision

Sensors & Safety

OEM Barcode Readers

RFID Systems

CUSTOMER SERVICE

Datalogic's Customer Service offers a wide and complete range of post-sales services. It is organized in three levels of support, in order to guarantee the most appropriate professional assistance based on the specific problem. Datalogic's Customer Service can deploy in each territory a team of multi-lingual professionals, with a broad technical expertise across the whole product range.

Our standard service portfolio includes: warranty extension, fast turnaround time for repairs, 24/7/365 phone support, next day on-site intervention and site audits. Datalogic can tailor the service offering to your specific needs.

Our experts will support every stage of your projects, from feasibility study to extended post-sales support, performing, when necessary, root cause analysis and remediation.

EASEOFCARE
Service Programs

Datalogic's EASEOFCARE Service Programs provide superior life-cycle support to ensure that products are always operating at peak performance. A variety of Service Programs are available to match your business requirements:

FAST REPAIR TURNAROUND (OVERNIGHT/2 DAYS)

ACCIDENTAL DAMAGE COVERAGE

BOTH WAYS FREIGHT PAID BY DATALOGIC

DATALOGIC SHIELD FOR MOBILE PRODUCTS INCLUDED

3-5 YEARS CONTRACT SERVICE OPTIONS

Please contact your sales representative to find out what type of services are available in your region.

www.datalogic.com

Value Proposition

> " *We provide a unique portfolio of smart, interconnected devices able to protect, identify, sense, check and mark.*

Manufacturing Industry

AUTOMOTIVE

Automotive manufacturing relies on a coordinated effort of manual and automated systems to deliver productivity, total quality and traceability. Datalogic delivers vision detection, safety and inspection systems that keep production moving.

- **PowerTrain assembly**
- **Interiors (texturing) assembly**
- **Suspensions & braking system assembly**
- **Exteriors assembly**
- **WIP traceability**
- **Direct Part Marking (marking and reading)**
- **Supplier components tracking**

TIRES

Automated systems in tire production for sorting and shipping are necessary to keep tire production on track, on schedule, and properly stored. Datalogic industrial barcode readers, machine vision and mobile computers collect and transmit data to enterprise systems seamlessly maximizing efficiency.

- **Tire assembly tracking**
- **Tire traceability and sorting on conveyor**
- **Tire traceability in process machine**
- **Quality inspection**

ELECTRONICS

Electronics depends on machine vision for inspection and quality throughout the manufacturing process for PCB component placement, marking identification, connector assembly inspection, and more. Datalogic keeps electronics manufacturers moving at peak performance.

- **Board assembling and testing**
- **Device assembling and testing**
- **Personalization and branding**
- **Device packaging and warehousing**
- **Labeling and DPM verification and tracking**
- **Wafer marking**
- **Machine set-up - component reel identification**

PACKAGING

Food, beverage, pharma and consumer packaged goods move through the manufacturing process under the watchful eyes of Datalogic vision systems, sensors and safety devices. Datalogic technology detects object presence, safeguards workers with light curtains, assures product quality with vision sensors, and identifies items using laser marking.
Food and product safety are assured by fixed industrial and handheld barcode readers, scanners, and mobile computers that track items through the manufacturing process and on to distribution.

- **Primary packaging tracking**
- **Cartoning traceability**
- **Bundling/Tray packing/Shrink wrapping traceability**
- **Case packing traceability**
- **End-of-Line/Palletizing/Wrapping/Robotics traceability**
- **Printed label verification**

INTRALOGISTICS

The Manufacturing process ends with intralogistics applications requiring safety, detection, inspection and identification solutions to prepare goods for material handling, from inbound logistics to warehousing and from warehousing to outbound logistics, before entering the distribution and retail supply chain.

- **Label reading and verification**
- **Parts/boxes identification/traceability**
- **Palletizing**
- **Warehouse management**
- **Sorting and shipping**

AUTOMOTIVE

MARK AND READ

Datalogic delivers solutions for Direct Part Marking (DPM) with laser marking systems that etch barcodes directly on parts. Machine vision, handheld and fixed scanners are used for DPM code/text identification for verification and item traceability purposes.

TRACEABILITY

Automotive parts require end-to-end traceability. Datalogic industrial handheld scanners, smart cameras and fixed readers scan parts and components during vehicle assembly.

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WORK IN PROGRESS TRACEABILITY

Work In Progress (WIP) is traced using Datalogic fixed readers, machine vision and industrial handheld scanners along the entire production process.
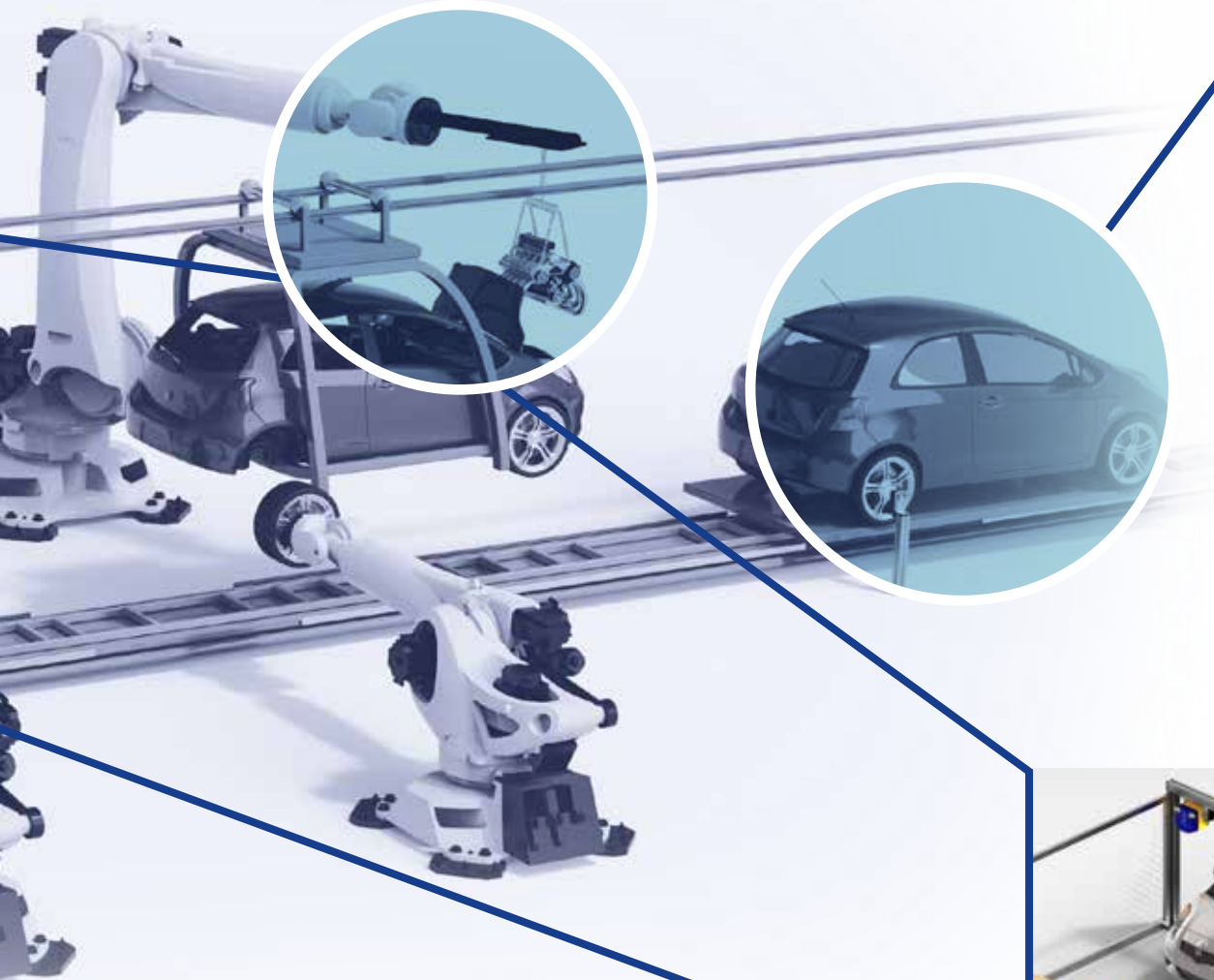
ASSEMBLY VERIFICATION

Smart cameras and machine vision from Datalogic detect, inspect, and verify component presence and position eliminating for manual inspection.

ROBOT SAFETY

Datalogic solutions for safety deliver access control and operator protection in robotic work cells through safety light curtains and safety laser scanner.

TIRES

FINAL FINISHING AND INSPECTION

Tires are identified and tracked as they progress through rough manufacturing and into final finishing and inspection stations.


TIRE HEIGHT MEASUREMENT

The height of the tire is measured to ensure the correct handling in the production processes. The DS2 Area Sensor is able to measure the height of the tire and send the data to the system.
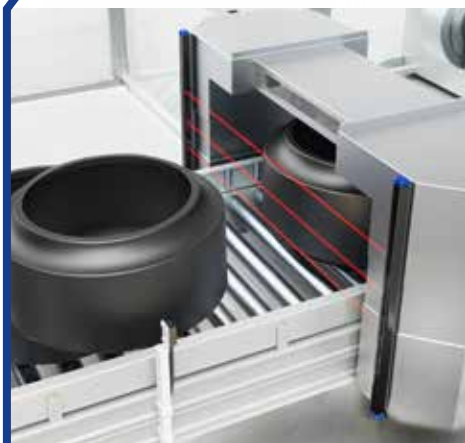

HAZARDOUS AREA PROTECTION

The Laser Sentinel protects the hazardous area in front of tire vulcanizing machines. Because of the two protective fields, the Laser Sentinel can independently manage the slow down and the stopping of the robot arm.

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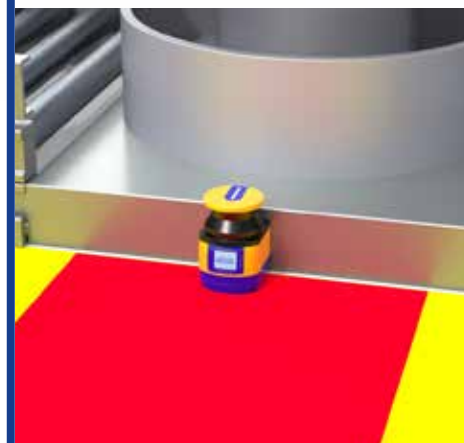
SORTING

Barcodes are identified to correctly direct tires to a distribution network or their final destination.

FINAL INSPECTION

Tires are manually identified by operators using handheld bar code readers.
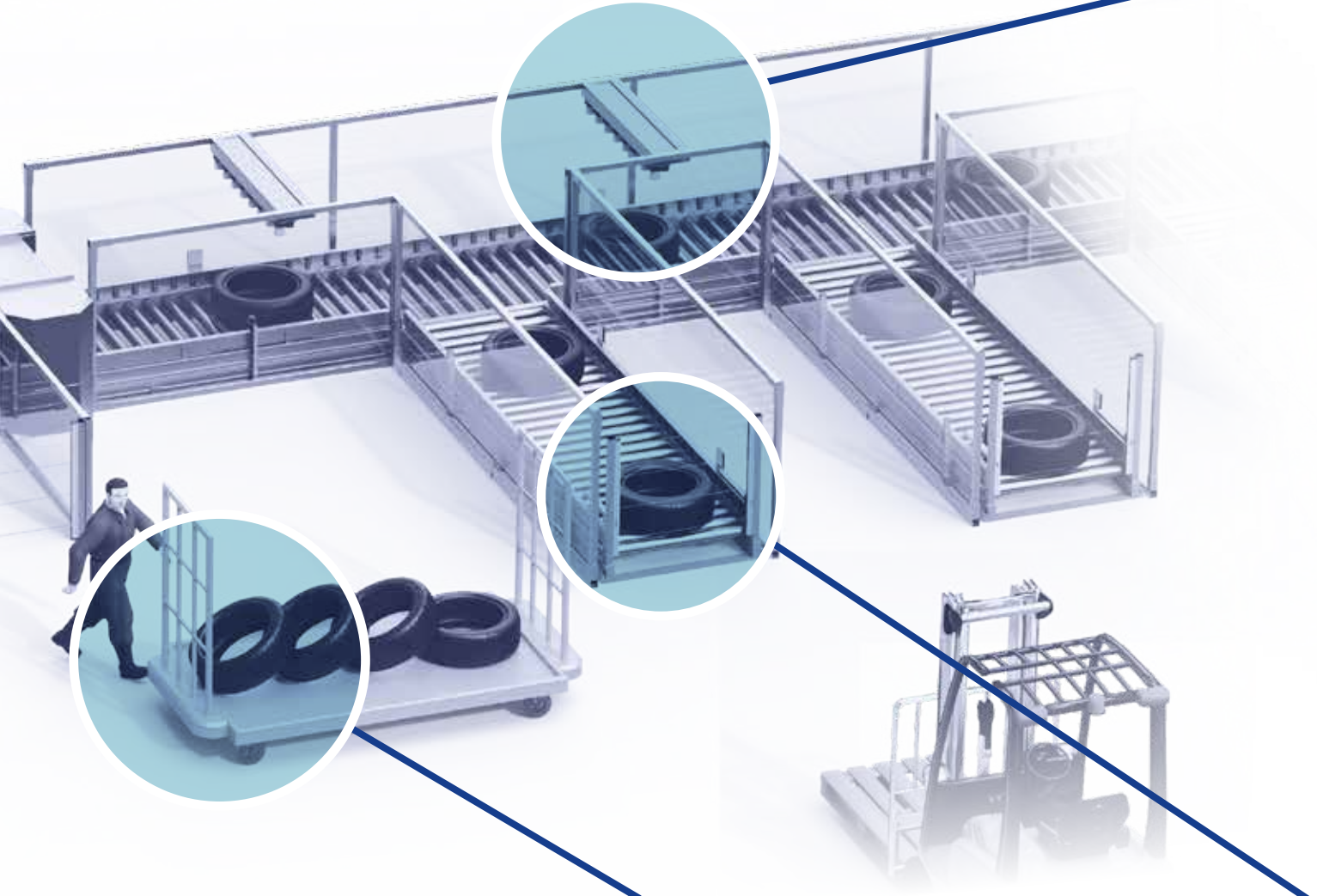
SORTING AREA PROTECTION

The safety light curtain with integrated muting function is used to protect the sorting area. The muting function allows tires to be taken by a forklift for handling and warehousing management.
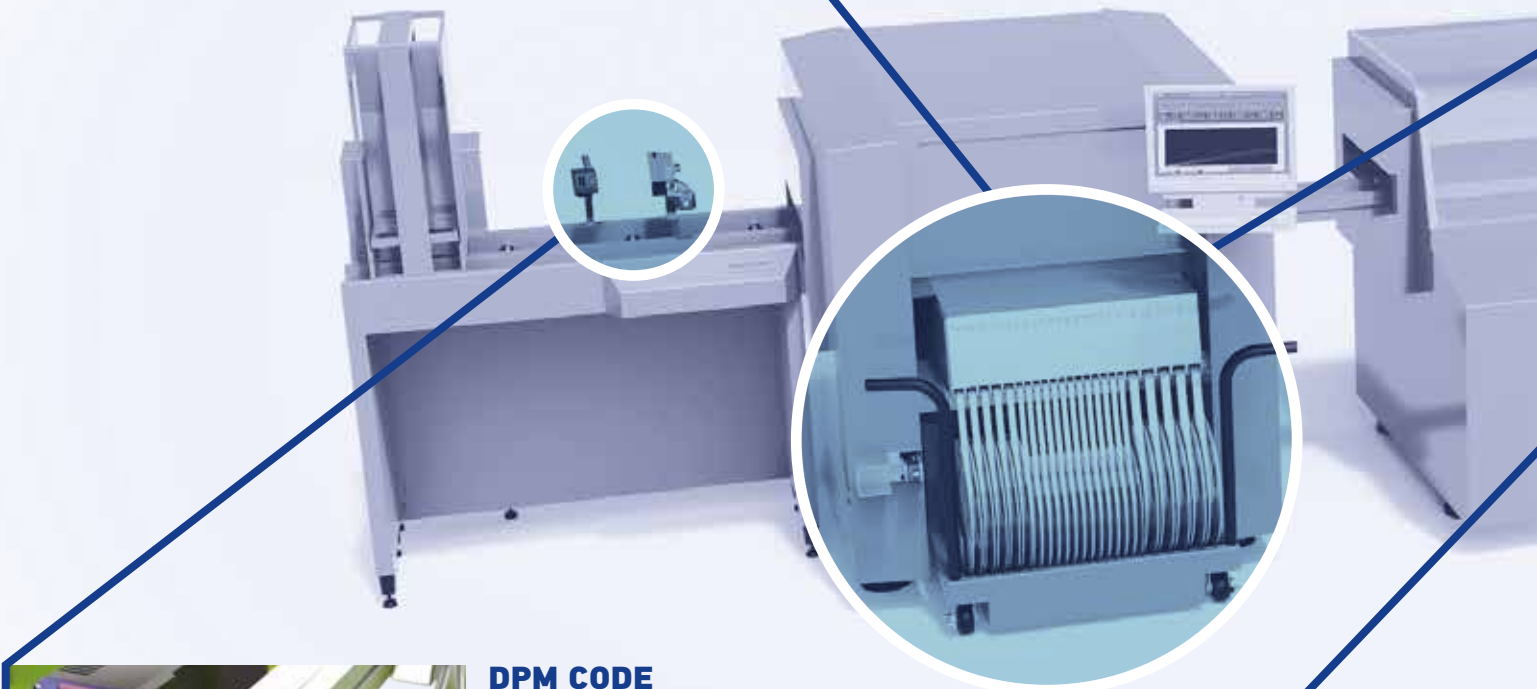
ELECTRONICS

COMPONENT IDENTIFICATION

Handheld Datalogic scanners identify the component cartridge and the appropriate insertion location ensuring proper setup.

DPM CODE MARK & READ

Direct Part Marking (DPM) etched directly on materials are validated by Datalogic image-based scanners ensuring code readability and assembly traceability.

INSPECTION

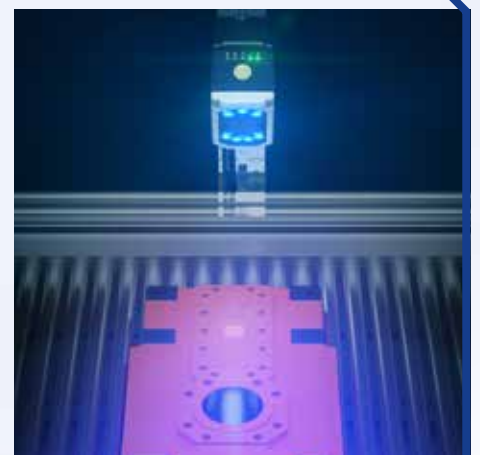Machine vision from Datalogic inspect position, alignment, and assembly with high-accuracy measurements.

DATALOGIC

MACHINERY SAFEGUARDING

Safety light curtains from Datalogic maximize production while protecting operators from harm.

LASER MARKING

A wide variety of materials including plastic, aluminum, stainless steel and titanium are permanently marked by Datalogic laser marking systems.
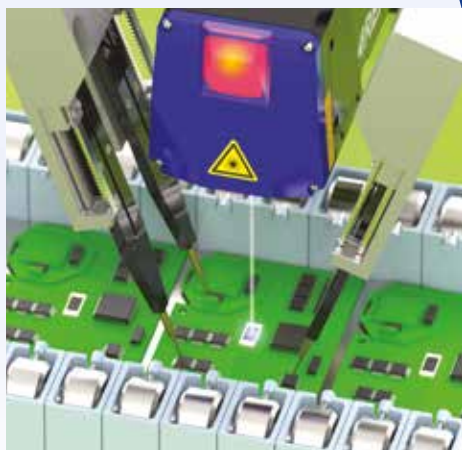

PCB AND COMPONENTS TRACEABILITY

Parts and subassemblies are continuously tracked by smart cameras, machine vision and fixed readers from Datalogic throughout the production process.

PACKAGING

TRACEABILITY

Throughout production Datalogic fixed scanners track items to guarantee integrity, user safety, and efficient management of recalls.
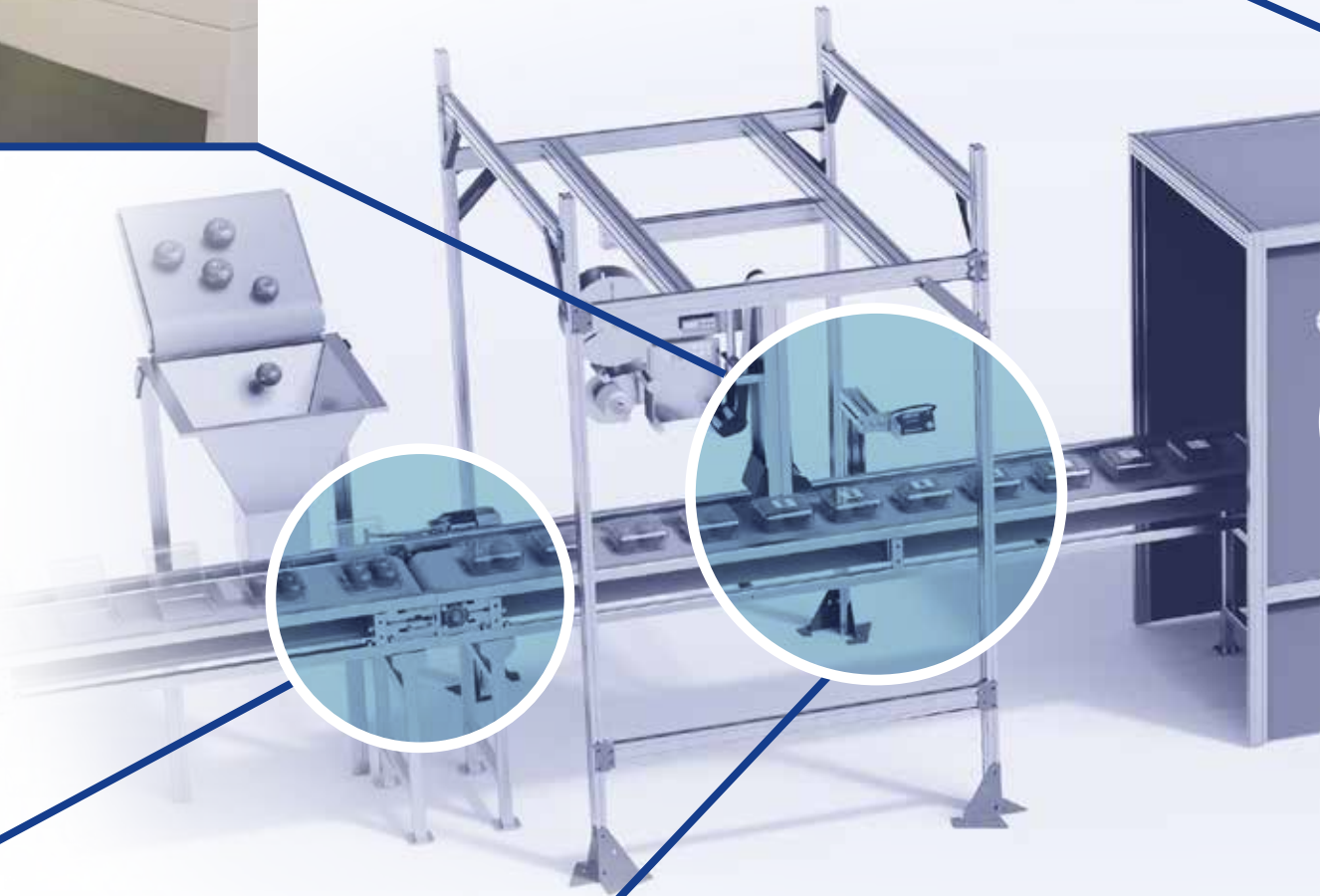
PACKAGING LINE CONFIGURATION

Industrial handheld scanners from Datalogic are used to configure machines for operation by using barcodes.
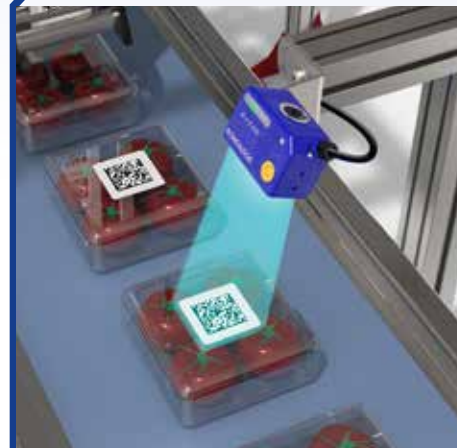
DETECTION

Fast machinery with limited space rely on Datalogic smart vision sensors and miniature photoelectric sensors for small parts detection.

PRINTED LABEL READING

Automatic application of barcode labels are verified by Datalogic ID readers and smart cameras to check data consistency and quality standards.

DATALOGIC

VERIFICATION, INSPECTION, BARCODE READING

Labels are inspected to make sure they are in the proper position and orientation as well as including the correct barcode and information.
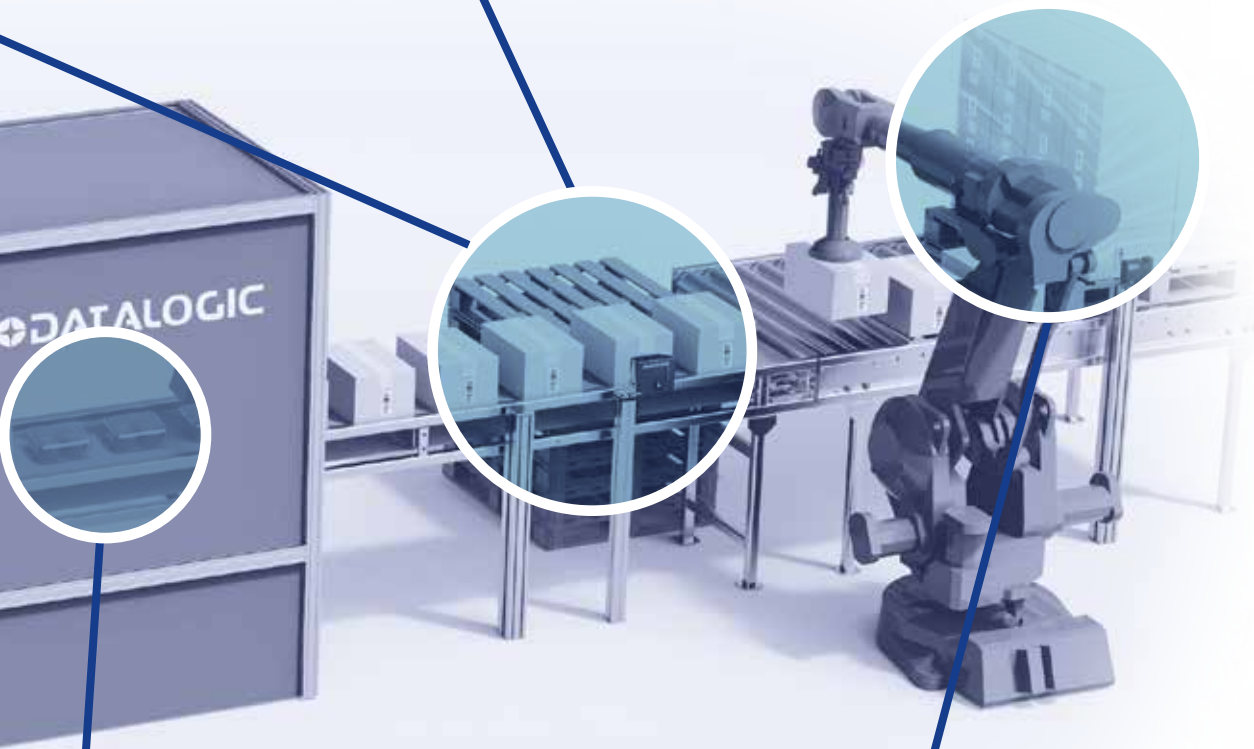
REGISTRATION MARK DETECTION

Packaging machines typically operate on continuous cycle, to package food and non food materials. Contrast sensors are used to detect registration marks on the package in order to synchronize the packaging phases.
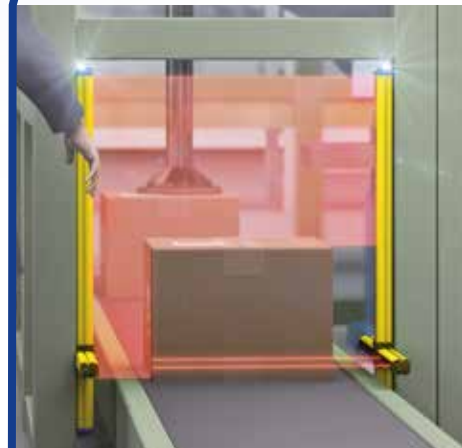
SAFETY

Operator safety is guaranteed by light curtains while the access of material is allowed because of the safety light curtains' muting function.

INTRALOGISTICS

FORKLIFT SOLUTION

Far distance 1D and 2D barcode scanning is enabled by PowerScan™ AR handheld readers. Combined with the SD9030 dongle and Rhino II™ vehicle mount computer, it represents a complete solution for forklifts.
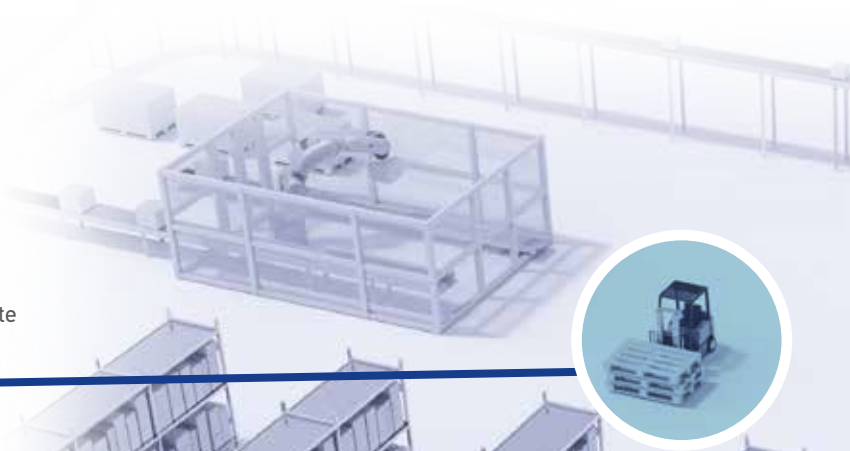
MANUAL INDUCTION

Totes and packages are manually inducted into an automatic warehousing system using Datalogic industrial handheld scanners.
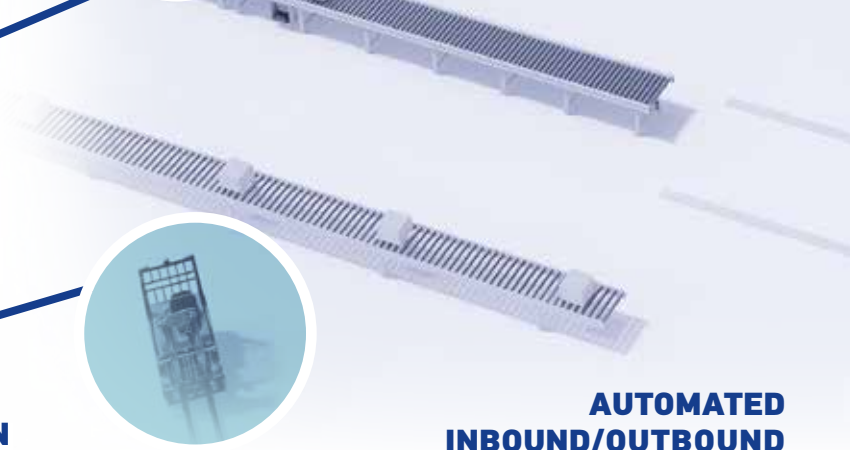
AGF LASER NAVIGATION

Lidar Guidance Scanner allows the navigation of automated guided forklifts (AGF) and laser guides vehicles (LGV) in general, with a 360° scan view and 50 m range, either on artificial landmarks or simultaneous localization and mapping (SLAM).

AUTOMATED INBOUND/OUTBOUND MATERIAL IDENTIFICATION

Totes and packages are automatically identified for storage into/retrieval from an automatic warehousing system using Datalogic stationary industrial scanners.

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INBOUND QUALITY CONTROL

Datalogic PDAs is the ideal operator companion enabling a wide range of different applications exploiting the power and flexibility of Android OS.

SINGLE ITEM PICKING

In warehouse operations, workers have to track and report the picked parts in real-time through rugged and ergonomic mobile computers like Falcon™ X4 and Skorpio™ X5 or the smallest wearable HandScanner.

AUTOMATED GUIDED VEHICLES

Safety Laser Sentinel avoids any collision by slowing down or stopping the vehicle in the presence of operators or obstacles.

PRODUCT PORTFOLIO

STATIONARY INDUSTRIAL SCANNERS

MATRIX 120™
- Ultra compact dimensions for easy integration
- Smart user selectable focus for high application flexibility
- ESD and Polarized Versions

MATRIX 220™
- All-In-One DPM illuminator for strong
- DPM reading performance
- Smart electronic focus control for high reading flexibility
- New multicore image processing platform excellent for high speed applications

MATRIX 320
- Innovative 2MP sensor (1920 × 1080 pixels with 16:9 form factor) performs outstanding Depth of Field and Horizontal Field of View
- Smart configurable lighting solutions allowing 3 color options in two formats
- New configurable 360 degree multicolor visual feedback

MOBILE COMPUTERS

MEMOR™ K
- Ergonomic, very light weight and pocketable size to read 1D and 2D codes in any direction, and on any surface, including mobile screens
- Easy-swappable battery for a quick replacement
- Enhance productivity all over the store: run simultaneous applications smoothly

MEMOR™ 10
- Slim and ergonomic in a rugged enclosure to endure in demanding environments
- Maximum efficiency with fast-charging wireless technology + SafeSwap™ Technology and Smart Battery Management
- High-res 1D/2D slim megapixel imager (GreenSpot Technology + Dotcode + Digimarc)
- Robust design sustains 1.5m drops / IP65 rating
- 'Android Enterprise Recommended' for rugged devices

MEMOR™ 20
- Largest display in the PDA market at 5.7in FHD for top readability in any environment
- Maximum efficiency with fast-charging wireless technology + SafeSwap™ Technology + Smart Battery Management
- High-res 1D/2D slim megapixel imager (GreenSpot Technology + Dotcode + Digimarc)
- Increased ruggedness sustains 1.8m drops and IP65/67 ratings
- Seamless connectivity with dual SIM over 4G+ network and latest Wi-Fi protocols

HANDHELD SCANNERS

POWERSCAN 9100 SERIES
- Datalogic's new linear imaging technology
- Supports Bluetooth wireless technology SPP and HID profiles
- Ethernet Connectivity (Standard and Industrial)

POWERSCAN 9300 SERIES
- Supports Bluetooth wireless technology SPP and HID profiles
- Piconet with up to 7 scanners connected to the same base station
- Datalogic 3GL™ and loud beeper for good-read feedback
- Operates over a wide range of temperatures

POWERSCAN 9501 SERIES
- New Datalogic proprietary scan engine with extra-long range capabilities
- Fast autofocus system
- Optimized for dark environments
- Ability to scan from LCD screens
- Decodes up to 3 mils

LASER MARKING SYSTEMS

AREX 400
- Ultra compact Scanhead with high protection grade
- High performance embedded controller
- Robotic grade robust flexible conduit, green spot marking confirmation, built-in SLO (Safe Laser Off)
- Full Lighter Software Suite with MARVIS (Mark & Verify) support

VLASE
- High performance Solid State laser source
- High Peak Power up to 60 kW
- Infrared, Green and UV on same platform
- Full Light er Software Suite with MARVIS (Mark & Verify) support

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MATRIX 300N™

- High power illuminators for long range reading distances
- High performance DPM reading
- Both manual and electronic focus control options

AV500/AV900

- High performance camera (5MPx AV500, 9MPx AV900) with integrated image processing system
- Image saving to external locations through the dedicated high-speed Gigabit Ethernet port
- White and Red lighting options

DS5100

- Medium, Long Range, Linear and Oscillating Mirror models, selectable focus for high application flexibility
- Selectable focus system
- Display and multi-language messages

SKORPIO™ X5

- Largest 4.3" high visibility display in its class
- Scan engine: 1D Imager, 2D Imager Standard Range, Mid-Range and near/far Extra-Long-Range Imager
- Handheld and Pistol-grip form with 3 keyboard layouts
- Fully rugged 1.8 m drop and IP65 rating
- Choice between Wireless Charging or Wired versions with dedicated docks

FALCON™ X4

- Choice of windows embedded or Android™ operating systems
- Full-shift hot swappable battery
- Choice of 1D or 2D imagers featuring
- Datalogic's green spot technology, plus new 2D Auto Range option

RHINO II™ and SH15/SH21

- 10 ,12, 15, 21 inch high resolution color display
- Operating System: WEC7, Windows 7 Emb, Windows 10 IoT or Android 7.1
- Capacitive multi-touch screen with gloves support or resistive touch screen for cold/freezer environments

HANDSCANNER

- Improves productivity saving 4 seconds per scan
- Improves accuracy: up to 33% less errors
- Improves worker ergonomics: weight savings of up to 1.5 tons per shift
- Best performance: megapixel resolution and ability to capture 1D/2D barcodes

GRYPHON™ 4200 SERIES

- Enhanced reading technology for superior scanning and depth of field
- Intuitive highly visible aimer to easily target the code to be read
- Disinfectant Ready enclosures resistant to harsh chemical cleaning
- Wireless charging (no need for contact cleaning or maintenance procedures)

GRYPHON™ 4500 SERIES

- Ultimate design and undisputed ergonomics
- High-res megapixel sensor for outstanding results
- Wireless charging (no need for contact cleaning or maintenance procedures)

P1X-SERIES

MACHINE VISION

- Right-angle IP67 rated enclosure with rotating connectors
- VGA (640x480) or 1.3 MP (1280x1024) with color or grey-scale imagers
- Embedded interchangeable lenses and illuminators

P2X-SERIES

- Field replaceable illuminators, lenses and filters
- High computing power
- 360° visual feedback

MX-E-SERIES

- Multi-camera vision processors
- GigE Vision camera connectivity
- Four different models with different processing capabilities

SENSORS

SMALL

- The smallest photoelectric sensor with all universal optic functions
- Detection of hard to reach objects or in small spaces

S100 ⬡ IO-Link

- Universal Miniature Photoelectric Sensor
- Cost saving: best price on the market
- Space saving: standard miniature dimension and universal mounting
- Time saving: quick and easy mechanical and electrical installation

S3Z

- High performance in standardized miniature housing
- Replaces larger sensors and fits in limited space in smaller machinery

SENSORS

S70 ⬡ IO-Link

- High resolution, fiber optic sensor detection of small objects through fiber optic cable
- Works in confined spaces and high temperature environments
- Sensor can be installed at distance far from detection object

S8 ⬡ IO-Link

- Extremely high performance
- Solves difficult detection applications (i.e. target objects that are too small, too fast, too clear, too shiny)

S300-PA/PR

- Heavy duty, multi-voltage sensors with terminal block and internal relay
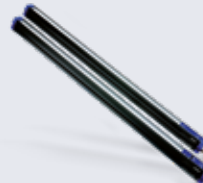- Durability for integration in outdoor applications and harsh environments

SENSORS

AS1/DS1

- High resolution area sensor
- Detection and measurement of small objects crossing the area, even in a random positions

DS2

- Dimensional sensor with extended controlled heights
- Set controls based on height or width measurement and object positioning

S65-M ⬡ IO-Link

- Cost-Effective Long-Range Background Suppressor with Time Of Flight (TOF) technology and Infrared emission
- Risk-free Infrared LED emission and embedded green LED pointer
- Two independent fully programmable outputs

SAFETY AND NAVIGATION

SG4 EXTENDED

- Up to 20m / 65.6 ft operating range and 1800m / 5905.5 ft protected height
- Cascade connection of up to 3 units
- Ethernet Interface for programming, monitoring and error logging

SG4 BODY COMPACT MUTING

- Controlled heights of 500, 800, 900 and 1200 mm [19.6, 31.4, 35.4, 47.2 in]
- Simple configuration through DIP switches
- Integrated muting lamp (only on muting models)

SLIM

- SLIM profile: 15 x 32 mm [0.6 x 1.2 in]
- 34 different protection lengths, with 30 mm [1.1 in] modularity from 150 to 1200 mm
- Cascadable up to 3 units

⬦ DATALOGIC

S45

- High performance sensor with teach-in regulation and rugged plastic housing
- IP69K and Ecolab tested
- All-in-one sensor family with LED and Laser emission for easy mounting and installing

S5N IO-Link

- First tubular sensor line with all optic functions and IO-Link V1.1 smart sensor profile on the market becoming a reference point for the Industry 4.0.
- All the basic optic functions available
- M18 flat plastic with universal mounting or available in M18 metal housing
- Axial or radial optics, cable or connector

S62

- 50x50 Standard universal sensor with improved performance and pricing
- Standardization of the same 50x50mm housing, mounting holes, installation and wiring for all optic functions

TL46 IO-Link

- High resolution, White, Red or RGB emission, very fast response time
- Thanks to its new Low jitter models performs very precisely in packaging machinery and synchronization based mark detection, even in extremely fast processes

LD46

- UV high power emission LED with high sensitivity
- Precise packaging machinery synchronization or material sorting and selection based on luminescent "invisible" mark detection

SMART-VS

- AI enabled
- MLAS - Machine Learning Assisted Setting

- The smart vision sensor enabled with A.I. and empowered by machine learning assisted setting algorithms.
- Simply clever solution for all your presence and orientation object detection applications

S85

- Long distance sensor based on TOF
- Accurate controls based on a target object distance and improved cost saving
- Measuring range up to 10m or 20m [32.8 - 65.6 in]
- 1 mm resolution, 7 mm [0.02 in] accuracy, 1 mm repeatability

SR21/SR23

- High-resolution, very fast response time
- Execution of precise positioning, applying and printing of labels, even when integrated in fast machinery and processes

SRX3

- High resolution, fast response time
- Execution of precise positioning, applying and printing of labels,
- Perfect with any type/format of labels and bearer tapes, transparent on transparent and metallic ink

SG4-H

- Finger protection in applications where high hygienic requirements need frequent cleanings with highly corrosive detergents.
- The first safety light curtain with stainless steel housing and glass.

LASER SENTINEL MASTER/SLAVE

- More than 72 m2 safely monitored, with 5.5 m / 180.4 ft over 275°
- High detection performances in compact size
- Advanced dust filtering

LIDAR GUIDANCE SCANNER

- High precision up to 50 meters
- 360° scan view with 0.06° resolution
- Compact housing 95 x 97 x 116 mm

ODATALOGIC

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