





# INDUSTRIAL AUTOMATION

Product Guide

# 50+ YEARS OF EXPANSI



**Datalogic Group** is a global leader in the automatic data capture and factory automation markets. It is well known around the world for designing and producing barcode readers, mobile computers, sensors for detection, measurement and safety, RFID, machine vision and laser marking systems. Datalogic solutions help customers increase the quality of their processes in the Retail, Manufacturing, Transportation & Logistics, and Healthcare industries.

The Group has a rich history of over 50 years, during which enormous successes have been achieved: 8 R&D centers and 3 DL Labs in Italy, USA, Vietnam, and China; 11 manufacturing and repair facilities in the USA, Hungary, Slovakia, Italy, China, Vietnam, and Australia; a portfolio of around 1,200 patents and patent applications in multiple jurisdictions; thousands of prestigious partners and customers spread across five continents.

Datalogic Group has offices in 29 countries worldwide, with headquarters in Bologna, Italy. It is through the close cooperation of more than 3,000 employees that Datalogic can boast some of the most remarkable automatic data capture and factory automation solutions available in the market today.



## FOUNDATION

- Established in Bologna

1972

## SENSOR

- DATALOGIC develops photoelectric sensors for Packaging Machinery

1974

## BARCODE

- DATALOGIC introduces the first stationary barcode reader manufactured in Europe



1984

## AUTO ID

- DATALOGIC installs the first automatic barcode reading station in airport (Milan, Italy)



1989

## HANDHELD READER

DATALOGIC develops the first handheld linear imager for barcode reading



## EXPANSION

- Escort Memory Systems Inc.
- IDWare mobile Computing & Communications

1997-1998

## LISTING

- Listed on the STAR segment of the Italian Stock Exchange

2001

## SAFETY LIGHT CURTAIN

DATALOGIC introduces machine safeguarding





# ON

To further strengthen its market position in Industrial Automation, in 2021 Datalogic acquired M.D. Micro Detectors, an Italian company specializing in optical, inductive, capacitive and ultrasonic sensors. This, merged with Datalogic's Sensors & Safety and Machine Vision Business Unit in early 2022, creating a new company and brand **Datasensing**.

Datasensing's Machine Vision, Sensors and Safety portfolio solves the most challenging applications in Factory Automation, specializing in Processing and Packaging machinery, and Automated Material Handling Systems related to Manufacturing Industries such as Automotive, Electronics, Food & Beverage, Pharmaceutical, Home & Personal Care, Paper and Printing, Metal- and Wood-working, Ceramics, Glass, Textiles etc.

With advanced Inspection, Detection, and Protection devices, the Datasensing Mission is to create added value through smart sensing solutions based on sustainable standard and custom products. They are developed with care and leading know how, with the Vision to be the premier partner for innovative sensing solutions for industrial automation.



## VISION

DATALOGIC introduces machine vision technology with a smart camera sensor

## INNOVATION

- Acquisition of Multiware Photonics SA
- Partnership with CAEN RFID Srl



## SAFETY LASER SCANNERS

DATALOGIC develops safety for AGV and robotics

## 2002-2011

### EXPANSION

- Minec AB
- Laservall SpA
- Informatics Inc.
- PSC Inc.
- Datasensor SpA
- Evolution Robotic Retail Inc.
- Accu-Sort System Inc.
- PPT Vision Inc.

## 2012-2015

## 2017-2020

### EXPANSION

- Set up newOne Datalogic
- Acquisition of SOREDI Touch Systems GmbH

## EXPANSION

Acquisition of M.D. Micro Detectors SpA

## 2021

### DATASENSING

DATASENSING is the Datalogic Group company specializing in development, production, and sales of Sensors, Safety, and Machine Vision products



## 2022

### ANNIVERSARY

- 50th Years of innovation

### EXPANSION

- Acquisition of Pekat Vision

# OUR SOLUTIONS

## TRACEABILITY

Product traceability is becoming more and more important in every industry, where the identification of items along every manufacturing and intra-logistic process is required, from raw material receiving to finished good shipment whilst passing through work-in-progress management and monitoring. Datalogic provides a wide portfolio of products and solutions to solve all traceability needs.

## INSPECTION

Machine vision is an indispensable tool for controlling the quality of processes and products in factory automation and intra-logistics. For this purpose Datasensing offers smart cameras, industrial cameras, vision processors and software tools suitable to read codes or characters (OCR), recognize patterns, detect defects, locate parts, guide robot arms, and control assembly and manufacturing lines.





## DETECTION

Photoelectric, inductive, capacitive, and ultrasonic sensors are essential in industrial automation to detect the presence of objects or parts, inspect their integrity or correct assembly, and measure dimensions, distance, or positioning. Datasensing sensors are available in many different lines, models and functionalities, sensing the smallest or fastest moving objects, even with transparent or shiny surfaces.

## PROTECTION

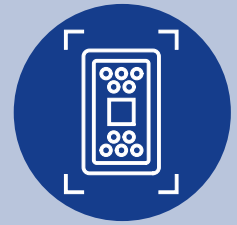
Safety devices are mandatory for operator protection in potentially hazardous areas, plants or machinery. Datasensing safety light curtains are used for the detection of finger, hand, arm, body, or presence detection in fixed applications; whereas safety laser scanners are recommended for area protection in static or dynamic applications, such as robotic cells and automated guided vehicles (AGV).



# TRACEABILITY







# STATIONARY INDUSTRIAL SCANNERS

**Stationary industrial scanning solutions** are specifically designed for applications that are not permanently monitored by operators and are used in a wide variety of industries.

With Datalogic's versatile portfolio of stationary industrial scanners, customers can get a solution for a full array of barcode reading needs. From printed 1D and 2D barcodes, to Direct Part Marking (DPM), to Digimarc™ packaging, Datalogic offers a solution for nearly every barcode reading application. Whether your application requires image-based, single-plane, omnidirectional, or line scan barcode reading capabilities, Datalogic has you covered.

Stationary industrial scanning allows innovative companies to increase throughput, improve accuracy, and add a high level of traceability to their manufacturing, warehousing, logistic, and distribution processes. Since 1972, Datalogic has helped you maximize your organizations capabilities with innovative stationary industrial scanning technologies.

## Datalogic stationary industrial scanners product range



1D SCANNERS



2D SCANNERS



DIMENSIONERS



CONNECTIVITY



SYSTEM INTEGRATION



SOLUTIONS



SOFTWARE AND TOOLS

# 1D SCANNERS

## APPLICATIONS

### TC1200

- Access control systems
- ATL (Automated Tape Libraries)
- Self service systems (ATM, kiosks)
- OEM integration in automatic machines
- Game automation (Lotto, Lottery, etc.)
- Chemical and blood analysis machines
- Print & apply systems
- Shipping & Receiving



## HIGHLIGHTS

- Embedded code reconstruction software
- Very high density code reading (up to 0.1mm / 4mils)
- Scanner and scan engine version
- No moving part (MTBF>200.000 hours)
- Designed for OEM integration

## TECHNICAL DATA

- CCD reader
- Scan rate: up to 320scans/s
- Reading range: 50 to 430mm
- Max. resolution: 0.1mm (4 mils)
- RS232 and USB model
- Power supply: 5VDC, 2W max.

### DS2100N/DS2400N

#### Logistics automation

- Tote reading
- Conveyor sorting
- Picking systems
- Automated storage and retrieval systems

#### Automated Shopfloor

- Item and part tracking
- Process control and packaging
- Packaging and compliance

#### OEM

- High speed document handling machines
- Print & apply systems



- Embedded Ethernet connectivity
- Two Profinet Ports (MRP supported)
- M12 rotating connector
- Compact dimensions
- Excellent performance on low quality and damaged labels
- DS2100N: Up to a 300 mm (11.8 in.) reading distance
- DS2400N: Up to a 600 mm (23.6 in) reading distance
- Oscillating Mirror (OM2000 Accessory)

#### DS2100N

- Scan rate: up to 1000scans/s
- Reading range: 50 to 300mm
- Max. resolution: 0.12mm (5mils)
- Power supply: 10 to 30VDC, 4W max.
- Protection class: IP65
- I/O: 2 inputs, 2 outputs; optocoupled

#### DS2400N

- Scan rate: up 1000scans/s
- Reading range: 70 to 600mm
- Power supply: 10 to 30VDC, 4W max.
- Protection class: IP65
- I/O: 2 inputs, 2 outputs; optocoupled
- Operating temperature: -35°C to 45°C (subzero model), 0°C to 45°C (standard model)

### DS5100

- Automotive: WIP Control, Parts Traceability
- Food & Beverage: Shipping Process, End of Line Palletizing
- Pharmaceutical: Secondary Package Control
- Warehousing: Tote Tray Identification, Automatic Picking Process Control
- Sorting on logistic and distribution lines
- Print & Apply



- Selectable focus
- Display and multi-language messages
- Single/Double Ethernet port
- Integrated oscillating mirror models
- Profinet (MRP supported)
- Compatible with SC5100/DS8110/DX8210

- 800-1000 scans /sec
- 2 inputs + 2 outputs
- RS232 + RS485 serial port, Ethernet, Profinet
- Typical reading range of 200 – 1350 mm
- Subzero ver. up to -35°C (-31°F)
- Power supply: 10-30 Vdc
- Protection class: IP65

### DS8110 linear barcode scanner DX8210 omnidirectional barcode scanner

- Airport Baggage Handling
- Parcel Sorting
- Retail Distribution Center
- Loading/Unloading System



- Top class reading performance
- Excellent performance on Low quality code
- DST (Digital Signal Technology) stable performance at any operative conditions
- Multi laser ASTRA G3, electronic focusing
- Ease of use and ease of installation
- e-GENIUS web browser programming tools
- Ease maintenance and automatic replacement
- Ready for Redundant Layout
- Minimum Object gap (50mm) for Maximum throughput

#### DS8110 linear barcode scanner

- Scan pattern type: linear
- Scan rate: 1000 scans/s
- Reading range: 500 to 1900mm
- Resolution: min 0.25 mm (10 mils)/max 0.50 mm (20 mils)
- Dimensions: 216 x 96 x 127 mm [8.5 x 3.8 x 5 in]
- Protection class: IP65
- Operating temperature: 0°C to 50°C

#### DX8210 omnidirectional barcode scanner

- Scan pattern type: X-Pattern
- Scan rate: 1000scans/s
- Resolution: min 0.25 mm (10 mils)/max 1.0 mm (40 mils)
- Dimensions: 381 x 328 x 92.5 mm [15 x 13 x 3.6 in]
- Protection class: IP65
- Operating temperature: 0°C to 50°C

## APPLICATIONS

### BLADE

#### Logistics automation

- Tote reading
- Conveyor sorting
- Picking systems
- Automated storage and retrieval systems
- Sorting on logistic and distribution lines
- Parcel sorting

#### Automated Shopfloor

- Item and part tracking
- Process control and packaging
- Packaging and compliance

#### OEM

- Print & apply systems
- Laboratory automation



## HIGHLIGHTS

- 1D code reading
- Embedded Ethernet connectivity
- Two Ports Profinet and ETH-IP
- M12 rotating connector
- Compact dimensions
- Excellent performance on low quality and damaged labels
- BLADE 100: Up to a 310 mm (12.2 in.) reading distance
- BLADE 200: Up to a 600 mm (23.6 in.) reading distance

## TECHNICAL DATA

### BLADE 100

- Reading range: 40 to 310mm
- Max. resolution: 0.12mm (5mils)
- Power supply: 10 to 30VDC
- Protection class: IP65
- I/O: 2 inputs (optocoupled; NPN/PNP); 2 outputs
- Operating temperature: 0°C to 50°C
- Embedded Profinet, Ethernet-IP
- Embedded TCP/IP

### BLADE 200

- Reading range: 40 to 600mm
- Max. resolution: 0.12mm (5mils)
- Power supply: 10 to 30VDC
- Protection class: IP65
- I/O: 1 input (optocoupled; NPN/PNP)
- Operating temperature: 0°C to 50°C
- Embedded Profinet, Ethernet-IP
- Embedded TCP/IP

# BLADE HIGHLIGHTS



## Performance

- C-MOS Sensor (1920x128)
- HW acceleration HDR improvement
- Illuminator with TIR Lenses (Red Color)



## Certifications

- CE, KCC, FCC, NOM, BIS



## Industrial Strength

- IP65
- Operating Temperature: from 0 to 50°C
- Shock & Vibration Tested



## DL.CODE software

- DL.CODE Config Tool
- Multi-Code settings and Autolearn
- High-visibility feedback for good or no read
- Web Monitor
- Enhanced: New X-PRESS™ interface with 5 LEDs and Backup/Restore function



## Solutions

- MicroSD CARD and BM100 for Fast Replacement
- Availability:
  - Blade100 Fixed focus for low range
  - Blade100 High-Resolution
  - Blade200 with 3 points Adjustable focus for Medium and High Range
- Compact dimensions (Same as DS Laser Scanners) and rotating connector for easy integration
- Mixed ID-Net (With Matrix and DS)



## Industrial Connectivity

- M12 17pin DS2K connector
- HMS NP40 Module for Certified Fieldbuses
- Industrial connectivity:
  - Serial: RS232 on Blade100
  - Programmable Serial (RS232/422) on Blade200
  - Ethernet-IP embedded models
  - PROFINET 2 ethernet ports models available (Profinet Conformance Class B)
  - Modbus/TCP/IP Models



# 2D SCANNERS

## APPLICATIONS

### MATRIX 120™

#### Manufacturing

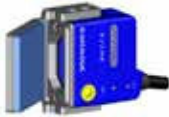
- Electronics: Track and trace PCB board manufacturing
- Print & Apply: label verification
- Food & Beverage: traceability
- Automotive: End of line, tire finishing and inspection

#### OEM

- Kiosks: ticketing machine

#### Healthcare

- Clinical Lab: vials identification
- Chemical and biomedical analysis machine



MATRIX 120™  
deflection mirror  
accessory



## HIGHLIGHTS

- Ultra compact dimensions and short cable versions for easy integration and ideal to mount on robotic arms
- External smart user selectable focus for high application flexibility
- ESD Version for electronic applications
- Polarized Version for reflecting surfaces
- Wide angle models for proximity reading
- New flexible cables suitable for robotic arms applications
- 90 degree deflection mirror for compact installation, for Matrix 210N easy replacement

## TECHNICAL DATA

- WVGA for standard applications and 1.2MP models for high resolution codes
- Glass free protection window for application in the food industry
- Embedded Ethernet connectivity
- Serial and USB on the same model
- Protection class: IP65
- Operating temperature: 0°C to 45°C (32°F to 113°F)
- Supply Voltage: extended range 5 to 30 Vdc

### MATRIX 220™

#### Manufacturing

- Electronics: Tracking/tracing of electronic products and components, DPM barcode reading
- Automotive: DPM code validation after marking, work-in-progress control, parts and assembly traceability
- Packaging: Primary packaging barcode reading, package traceability, food and beverage application

#### Document handling

- Fast decoding for high speed applications

#### Logistics Automation

- Carton and tote traceability
- Automated warehousing



MATRIX 220™  
cover ESD and  
YAG protection accessories



- Compact dimension and rotating connectors for easy integration
- White, red and blue light All-In-One DPM illuminator for strong DPM reading performance including diffuser and polarizer in the same model
- Top performing High Power Illuminator models for challenging high speed applications
- Smart electronic focus control for high reading flexibility
- ESD and YAG cut filter protection as front cover accessory for extreme flexibility, reducing the number of models and simplifying the stock management
- Flexible cables suitable for robotic arms applications

- Multicore image processing platform excellent for high speed applications
- Hardware Acceleration to speed up algorithms and improve decoding capabilities
- 1.2 MP high resolution image sensor
- High Dynamic Range to improve image quality and contrast
- OPC UA protocol for Industry 4.0
- Power over Ethernet (PoE) option available
- Protection class: IP65 and IP67 extreme industrial grade for harsh environments
- Operating temperatures: -10 °C to 50°C (14°F to 122°F)

### MATRIX 320™

#### Manufacturing

*Automotive, Food & Beverage, Pharmaceutical, Electronics, General Manufacturing*

- Direct Part Marking Reading
- Component and Part Traceability
- Wip Traceability (Automatic)
- Secondary Packaging Traceability
- End of Line Traceability

#### Logistics Automation

*Intralogistics, Automated Warehouse, Distribution, 3PL, Retail, Transportation and Logistics*

- Inbound, Pallet Picking (Forklift)
- Print & Apply verification (Re-labelling)
- Depalletizing, Part Traceability
- Order Fulfillment (Automatic, Manual)
- Palletizing (Automatic, Manual), Cage Preparation
- Pallet Traceability, Pallet Wrapping
- Inbound, Pallet Picking and retrieval for outbound (Forklift)
- Reverse Logistics



- Innovative 2MP sensor performs outstanding Depth of Field (DOF) and amazing Horizontal Field of View (FOVh) as a traditional 3MP sensor
- Liquid lens (only 2MP) electronic focus control for extreme flexibility in production
- C-Mount lens (2 and 5MP) for maximum optical configurability, high intrinsic DOF, highest flexibility in the selection and combination of the parts to solve application requirements, reducing feasibility time and cost
- Smart configurable lighting solutions
- New UHP (Ultra High Power) illuminator for challenging applications in term of high speed and code resolution (only on 5MP)
- Packtrack capability to minimize the gap between objects on conveyor and increase the system productivity

- Sensor: **2.0 Mpixel** (1920 x 1080) 16:9 form factor - 1/3" CMOS global shutter, 60 frames/s ; **5.0 Mpixel** (2560 x 1936) - 1/1.8" CMOS global shutter, 25 frames/s

#### Liquid Lens models (2MP only)

- Electronic focus control on Liquid Lens: 6mm (48°), 9mm (34°), 16mm (20°)
- Internal illuminators colors: Blue, Red, White lights
- Internal illuminators power: High Power 14 LEDs and Very High Power 36 LEDs

#### C-Mount models (2 and 5MP)

- C-Mount high quality lenses: 4mm (68°) [only 2MP], 6mm (48°) [only 2MP], 8mm (50°), 12mm (34°), 16mm (25°), 25mm (16°), 35mm (12°), 50mm (8°)
- Internal illuminators power: Very High Power 36 LEDs and Ultra High Power 72 LEDs [only 5MP]
- Smart illuminator adapter for live quick and easy C-Mount lens setup

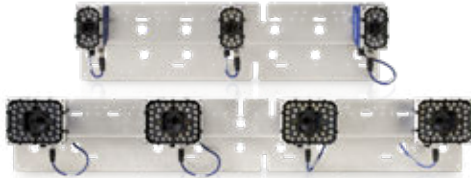
## APPLICATIONS

### STS320™

#### Factory Automation / Manufacturing

Automotive, Tires Manufacturing and Tires Distribution Center

- Tire and Wheel identification
- Tire tracking and traceability both in Green Vulcanized Tires (curing press) and Finished Tires
- High speed sorting on omnidirectional conveyors
- Bottom (under belt) reading



## HIGHLIGHTS

- Outstanding reading performance
- Compact and out of the box solution fully pre-assembled, for the quickest installation on the field
- Run time diagnostics and unreadable code classification to increase the overall productivity
- Live and high-speed image saving for post processing analysis
- Web Mosaic view to monitor all the readers

## TECHNICAL DATA

- Extra-large Field of View (FOV) and increased Depth of Field (DoF)
- Configurable 360 degree multicolor visual feedback, green spot and Red spot LEDs
- Standard and high resolution models, standard and long range, top and bottom reading models
- Sulfur gas resistance available for all the models according to ISO EN 60068-2-43
- Protection class: IP65 and IP67 top industrial grade for harsh environments
- Operating temperature: -10 to 50°C (14 to 122°F)

# THE POWERFUL MATRIX FAMILY



## Ease of setup and use

- Patented **Green spot** and **Red spot**
- **Aiming system** for quick setup during installation
- **X-PRESS™** intuitive Human Machine Interface with Push Button
- **7 LEDs** (Status, Communication, Trigger, Good, Read, Ready, Power on, Network) for easy of use and setup



## Top Industrial grade

- **Extreme Industrial grade**, IP rate and wide operating temperature range for harsh environments
- **Sulfur gas resistance** according to ISO EN 60068-2-43 to safely work in the green tires vulcanization process environment



## On Board Full Industrial Connectivity

- Embedded on board Ethernet protocols: **TCP/IP, UDP, FTP** and **Fieldbus PROFINET IO, EtherNet IP, Modbus TCP**
- **Serial RS232**
- **USB HID** keyboard emulation through converter cable
- **ID-NET™** reader clustering/networking on single side and multi-side applications



## Rotating connectors

- **Rotating connectors** for compact and flexible installation



## Web Interface

- **DL.CODE Web Monitoring** for remote access to the reader from any mobile device
- **DL.CODE Web Device Discovery** to quickly access all the readers in the network
- Integration in **WebSentinel Plus** supervisory software and **WebSentinel Plus Investigator**
- **Web Mosaic view** to monitor all the readers



## DL.CODE software

- **DL.CODE™ configuration software** is a market recognized standard in ease of installation and configuration, compatible with latest Windows OS version

## MATRIX PREMIUM VERSION

The **Matrix 220X and 320X Premium** are designed for superior performance, thanks to a new quad-core image processing platform that can double the processing power and halve the decoding time compared to the standard version. The main customer benefits of this increased computing power translate into increased throughput, and efficiency, as well as faster handling during multi-recipe mode. The Matrix Premium can capture and process **twice as many images as the standard version in a given time period.**



# 2D SCANNERS

## APPLICATIONS

### AV500/AV900

#### Transportation and Logistics

- Automated sorting
- Manual sorting
- Dimension Weigh Scan System
- Non conveyable Auto dimension systems
- Carton and tote traceability
- OCR and Videocoding
- Extended ID and image saving

#### Distribution & Retail

- Order fulfillment and verification
- Multimedia sorting
- Reverse Logistics process

#### Airports

- Baggage handling systems
- Automated tag reading



## HIGHLIGHTS

- High performance camera (5MP AV500, 9MP AV900) with integrated image processing system
- Patented dynamic, sequential or adjustable focus system offering extended depth of field
- Continuous, no-flashing white or red illumination
- Image saving to external locations through the dedicated high speed Gigabit Ethernet port
- New generation decode algorithm to read very bad quality label
- Multiple format Image saving from full definition to highly compressed JPG
- Patented PackTrack allows for item spacing of >50mm (2 in) for maximum throughput

## TECHNICAL DATA

- Sensor: CMOS 5MP (AV500), 9MP (AV900)
- Max image Acquisition = 32 frames/s
- Readable symbologies: all standard 1D and 2D codes
- Connectivity: 2 Ethernet TCP/IP, 2 serial communication interfaces
- Protection class: IP65
- Operating temperature: 0°C to 50°C
- Factory warranty: 2 years

# AV900 HIGHLIGHTS



## Excellent performance

- 9 Mpx CMOS sensor
- 32 fps
- Intel Pentium QUAD core
- 8GB system RAM
- Real time clock
- eMMC Flash 16GB
- 48 LED high-power integrated lighting system for long range reading distance
- Excellent decoding performance on 1d and 2d codes
- New Improved decode engine



## Ease of setup and use

- X-PRESS™ interface for easy and intuitive setup
- e-GENIUS browser based configuration to configure reader's parameters
- Laser Aiming system on all models
- Green spot for immediate good reading feedback
- I/O for external speaker/beeper



## Industrial connectivity

- Embedded Industrial Fieldbus Ethernet/IP, TCP/IP, protocols to avoid the need of external switch and converter
- Communication interfaces including two Ethernet TCP/IP, two serial communication interfaces.
- SyncNet Technology with Master/Slave, Ethernet Point-to-Point



## Highest flexibility

- Variable dynamic focus
- Dynamic mode
- Sequential mode
- SW fixed mode
- 16 mm and 25mm and 35 focal length options
- Red or White LED illumination
- Pulsed for multiple camera systems



## Industrial strength

- IP65 industrial grade design for harsh environments
- Operating temperature: 0 °C to 50 °C / 32 °F to 122 °F





# 2D SCANNERS

## APPLICATIONS

### AV7000™

#### Transportation and Logistics

- Postal and courier express sorting
- Revenue recovery
- Reverse logistic processes
- OCR and Videocoding
- Extended ID and Image saving

#### Distribution & Retail

- Large distribution centres
- Receiving / shipping systems
- Multimedia sorting



## HIGHLIGHTS

- Single view high quality picture on large conveyor (1400 mm/55 inch)
- Excellent reading performances on high speed conveyors: 4.8m/s (945fpm)
- Patented Pulsed Lighting System to reduce reading station footprint 2.2m (7ft)
- Patented Autofocus System offering extended DoF
- Patented Digital Zoom technology assuring constant DPI resolution
- New generation decode algorithm to read very bad quality label
- Multiple format Image saving from full definition to highly compressed JPG
- Integration with dimensioning and scale system

## TECHNICAL DATA

- CMOS linear sensor: 8192 pixels
- Image resolution: 110-260DPI (application dependant)
- Scan rate: 33KHz
- Readable symbologies: all standard 1D and 2D codes
- High quality Image for OCR and Videocoding
- Connectivity: RS232/RS485, Ethernet
- Video output: Gigabit Ethernet, CC-Link
- Protection class: IP65
- Operating temperature: 0°C to 50°C
- Factory warranty: 2 years

# AV7000 HIGHLIGHTS



## Advanced reading performance

- **8K linear CMOS sensor**
- **33Khz line rate** enables excellent read rate for belt speeds up to 4m/s
- **Next generation decode engine** with innovative region of interest algorithm for excellent decode speed
- **Patented dynamic zoom feature** for increased focus range



## Ease of setup and use

- **X-PRESS™ interface** for easy and intuitive setup
- **e-GENIUS browser** based configuration to configure readers performance
- **Dynamic calibration** for optimized and expedited installation



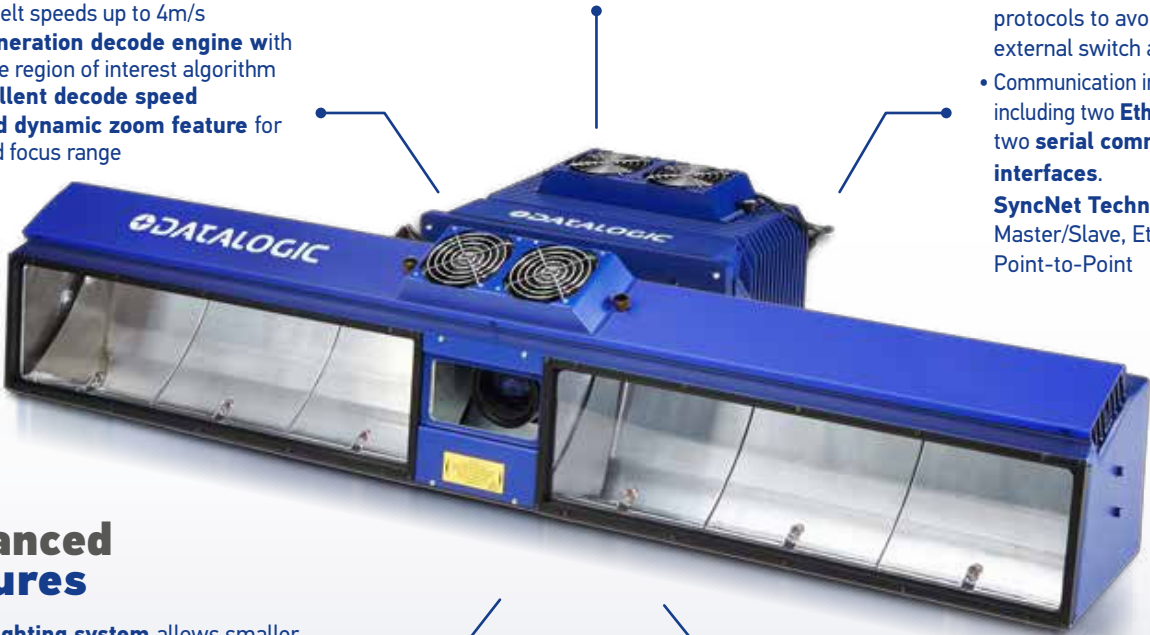
## Industrial connectivity

- Embedded Industrial Fieldbus **Ethernet/IP, TCP/IP**, protocols to avoid the need of external switch and converter
- Communication interfaces including two **Ethernet TCP/IP**, two **serial communication interfaces**.
- **SyncNet Technology** with Master/Slave, Ethernet Point-to-Point



## Advanced features

- **Pulsed lighting system** allows smaller footprint solution
- **PackTrack** enables very close gaps between items
- **Digital Zoom** improves images for OCR and image saving
- **Red or white illumination**
- **Seamless integration** with other datalogic devices for **completed solution**



## Industrial strength

- **IP65 industrial grade design** for harsh environments
- **Operating temperature:** 0 °C to 50 °C / 32 °F to 122 °F

# DIMENSIONERS

## APPLICATIONS

### DM3610 1-Head Solution

- Parcel revenue recovery
- Distribution Center spatial management
- Automated shipping and manifesting systems
- Trailer load planning



## HIGHLIGHTS

- NTEP, OIML and MC certified for Legal for Trade applications on belt conveyors
- NTEP and OIML certified for Legal for Trade applications on cross-belt
- Works for cuboidal
- Works for singulated and non-singulated package flows

## TECHNICAL DATA

- Only cuboidals
- Singulated (spacing >20mm)
- Accuracy (L x W x H) = +/-5mm x +/- 5mm x +/- 2mm at transport speeds up to 3.1 m/s
- Maximum box size 2500x1200x900mm
- Operating temperature: 0°C to 50°C
- Protection class: IP 65
- Factory warranty: 2 years

### DM3610 2-Head Solution

- Parcel revenue recovery
- Distribution Center spatial management
- Automated shipping and manifesting systems
- Trailer load planning



- NTEP and OIML certified for Legal for Trade applications on belt conveyor and cross-belt
- Works for cuboidal and irregular package flows
- Works for singulated and non-singulated package flows
- Reduced shadowing

- Cuboidals and Irregulars
- Singulated (spacing > 25mm)
- Maximum box size 2500x1600x1000mm
- Operating temperature: 0°C to 50°C
- Protection class: IP 65
- Factory warranty: 2 years

# SYSTEM CONTROLLER

## APPLICATIONS

### SC5100

- Parcel Sorting
- Small Package / E-Commerce
- DWS
- Airport BHS
- Distribution centers
- Irregulars / Extra large / Pallets
- Loading / Unloading



## HIGHLIGHTS

- Laser (DS-DX), Imagers (AVs), Dimensioner Native Integration
- 4 GB ETH embedded switch
- RFID scale and 3rd Party Integration
- Industrial Grade protection (IP65, no need for added enclosure)
- 5 inch Graphical Color display and Clear Status LEDs
- Supports Full Redundant Layout
- Support to Legal For Trade DWS Systems (provide Alibi for scale, DWS systems)
- Built-in Ethernet, Ethernet/IP and optional Profibus and Profinet models
- Access locally or remotely from one point all the connected components

## TECHNICAL DATA

- Power supply: 24 VDC +/- 20%
- Serial Main (isolated) RS-232/ RS-422 full-duplex: 1,200 to 115,200 bits/s
- Serial Aux RS-232: 1,200 to 115,200 bits/s
- EBC and SyncNet Internal Network: 100 Mbit/s
- Inputs (main): 3 polarity insensitive optocoupled inputs: Trigger, Encoder/Tachometer, IN3
- Outputs (main): 3 optocoupled outputs
- LCD display: 5 inch graphical color
- Keypad: 5 keys
- Configuration modes: e-Genius
- Parameter storage: Non-volatile extractable SD card
- Operating temperature: 0 to 50 °C
- Protection Class EN60529: IP65
- Mechanical dimensions: 349 x 175 x 89 mm / 13.75 x 6.89 x 3.5 in

# CONNECTIVITY

Wide range of connectivity for the identification product range with standard IP65 (NEMA4) protection class and operating temperature up to 50°C.

## CBX SERIES



- Simplified wiring to speed up installation
- Scalable and modular connectivity
- Base and extended models
- Modular fieldbus connectivity
- Optional backup/restore module
- Optional display
- Low temperature model

## QL SERIES



- Easy, fast, modular and cost-effective solution with "plug-in connection"
- Ethernet TCP/IP and EtherNet IP (QL500)

## EBC CONNECTION BOX



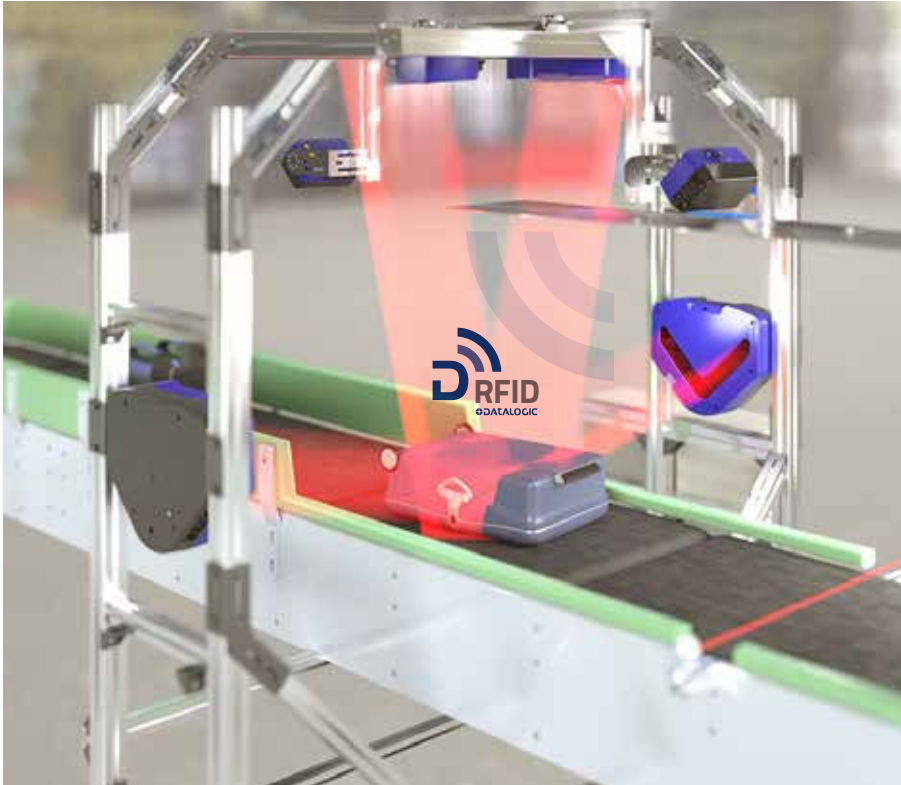
- Complex applications and upgrades can be easily solved with reduced investments
- Allows SIS product interoperability in EBC network through SC5100 controller
- For smart hybrid system integrating different SIS product lines Matrix, AV line (AV500/AV900) and DS Laser Scanner

## BHS (BAGGAGE HANDLING SYSTEM)

Datalogic is one of the leaders when it comes to **Baggage Handling System (BHS)** solutions.

There is a complete range of readers, scanners, and **RFID-based solutions** to cover every technological need. The modular design of Datalogic products allows for easy customization, for both software and hardware. For instance, in scenarios where reduced clearance is required, Datalogic provides specific accessories to ensure short-distance reading is handled with ease.

This is just one of many examples of **airport-specific solutions** provided by Datalogic. Others include check-in counters, baggage arrival tracking, and baggage reconciliation.



### **AUTOMATIC BAGGAGE IDENTIFICATION: LASER TECHNOLOGY**

Automatic Tag Reading (ATR) systems are able to detect both Barcode label and RFID tag

- **Barcode Laser Technology:** a cost-effective and reliable solution which is able to guarantee good performance especially on check-in labels. Reading performances are compliant with IATA 1740 a recommended practice

### **AUTOMATIC BAGGAGE IDENTIFICATION: RFID TECHNOLOGY**

- **RFID Technology:** this solution provides highest read rate even when tag is not visible to laser view line. Optimized antenna and tracking software deliver unsurpassed performances with tag compliant to IATA1740c RFID recommended practice



### **AUTOMATIC BAGGAGE IDENTIFICATION: IMAGING TECHNOLOGY**

ATR imager-based barcode readers provide the highest level of performance even on damaged labels. Optional RFID technology helps to provide highest reading rate (not directly visible label) by adding BHS RFID KIT.

### **A** OCR IATA label recognition

Camera technology is capable of value added image based functionalities such as supporting OCR and Videocoding.



# SOLUTIONS

## PARCEL IDENTIFICATION

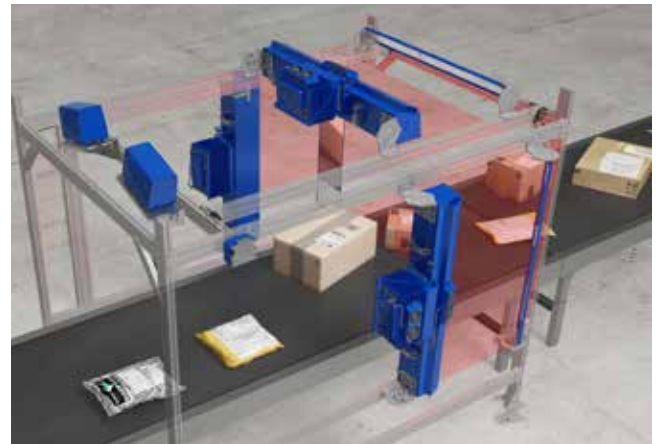
### INBOUND (DWS: DIMENSION WEIGH AND SCAN)



Unloaded parcels are dimensioned and weighted; thousands of parcels are automatically handled and classified based on dimensions and weight. The captured data can be used for quality checks or storage optimization. The DM3610 in combination with the AV900 is the perfect solution.

Inbound areas are also dedicated to returned items that are traced and positioned into the warehouse, once accepted by the quality check process.

### HIGH-SPEED SORTING



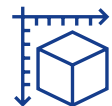
High-speed sorting is the core application in a logistic hub, where several thousands of items are sorted hourly, on a 24/7 basis. A multi-side reading station, based on the AV7000 is the state-of-the-art solution for this type of applications. The AV7000, in combination with the DM3610, offers high-speed parcels reading and dimensioning.

## PARCEL NON-CONVEYABLE (MFDS: MASS FLOW DETECTION SYSTEM)



### Detect

items when touching or running side by side on large conveyor belts (up to 1.5 m)



### Dimension

items, regular or irregular shaped, LFT certified measurements

- Items are DETECTED and DIMENSIONED with the recognized DM3610 LFT measurement system enhanced with advanced 3D analysis to separate irregular shaped objects that are touching
- MFDS makes it possible by automating the measurement of a Non-Singulated, Large Items flow and providing LFT data which can be legally used for the invoice.



### Decode

barcode information on labels and merge it to the respective item

- mixed technology (SIS area imaging and laser) to capture barcode information (both 1D and 2D codes).
- Identification via barcode essential to allow revenue recovery



### Depict

items by capturing and saving respective images

- MFDS can generate two images for each parcel:
- High-resolution greyscale images from the AV900 are used to create a single top view of each item.
- A low-resolution color image enriched with bonding box (created using 3D measured data).

# SOFTWARE AND DIGITAL TOOLS

## SOFTWARE PARCEL ANALYSIS

Extract valuable information from images and 3D data to help the optimization of parcel sorting processes.



### OCR

Parcel identification systems are ready to provide info to OCR software.



### HAZMAT

Datalogic provides software to recognize standard hazardous materials label.



### SHAPE DETECTION

Classification of various parcel shape (carton boxes, plastic bags, irregular items, flat/envelopes, tires...).

## WEBSENTINEL™ SOFTWARE SUITE

### WebSentinel™ PLUS

WebSentinel Plus is a supervisory software solution for monitoring operational activities of reading devices through a single web browser based interface. It collects data from scan points over Ethernet network, presents the information flow and updates the database. Diagnostics and tracking reports are available periodically or on demand.



#### APPLICATIONS

- Transportation and logistics (postal and couriers)
- Distribution & retail (warehouse and distribution centers)
- Airport baggage handling
- Automated warehouse intralogistics
- Factory automation work in progress traceability
- Tracking and traceability for tire manufactures
- Factory automation work in progress traceability

#### HIGHLIGHTS

- Real-Time Performance at a glance
- Main dashboard with reading performances, package activity and device diagnostics
- Complete control from enterprise to device
- Database searches and reporting
- Image file browsing for imager devices
- Configurable alarm & event notification via email
- Individual user accounts with configurable roles and privileges
- Web-based client
- Cross platform server application (Windows and Linux OS)



### WebSentinel™ PLUS INVESTIGATOR

INVESTIGATOR is an upgrade to the WebSentinel Plus, suitable for Datalogic 2D Scanners (AV and Matrix series).

INVESTIGATOR extracts value from parcels data by performing 'No Read' image analysis and providing automated recognition of the main 'No Read' root cause (no label, damaged label, obscured label, etc.).



#### APPLICATIONS

- Transportation and Logistics (Postal and couriers, 3PL)
- Retail and E-Commerce (Distribution centers, Fulfillment)
- Intralogistics (Automated Warehousing)
- Automatic Warehousing
- Factory Automation (work in progress Tracking, Traceability)

#### HIGHLIGHTS

- Full integration within Websentinel Plus platform
- No Read Root Cause Automated aggregation in classes
- Printing Quality Trend evaluation
- Reporting trends by day/hour
- Analysis Result at Parcel Level
- Quick drill down to Image level





# TRACEABILITY







# LASER MARKING SYSTEMS

## A Comprehensive Product Range combined with Excellent Laser Marking Manufacturing Expertise

Over 20 years of experience in the production of industrial laser sources has enabled Datalogic Laser Marking to create the most comprehensive product portfolio in the marketplace by offering solutions throughout a wide range of applications.

Laser Marking products provide value-added marking solutions for the Automotive, Aerospace, Industrial Electronics, Metal Tooling, Precision Mechanics and Medical & Surgical devices.

Laser Marking products are offered in the three main laser technologies: Fiber Laser, Solid State Laser and CO<sub>2</sub> Laser and cover a wide range of applications on almost any material, fulfilling every customer need for permanent marking.

Powerful, best-in-class control software operates with any model configurations and laser technologies: a unique HMI control platform, easy to use and install, with enhanced customization capabilities and industrial-grade interfaces.

Several accessories are available to add functionalities, to simplify integration and to allow quick maintenance and troubleshooting.

## Datalogic laser marking systems product range



SOLID STATE LASER MARKER



CO<sub>2</sub> LASER MARKER



FIBER LASER MARKER



SOFTWARE AND TOOLS

# LASER MARKING PRODUCTS & SOLUTIONS

## SOLID STATE LASER MARKER VLASE SERIES

The long history of market-leading Solid State technologies has enabled Datalogic to create the most comprehensive product portfolio in the marketplace by offering solutions with a wide variety of applications in multiple wavelengths.

DL product portfolio offers industrial grade solutions for Infrared and UV in a wide power range.

### Solid State key features:

- Best-in-class laser peak power
- Two different wavelengths for best results even on highly reflective or high-stability materials
- Excellent beam quality and marking accuracy
- Low thermal footprint to ensure high contrast on thermoplastic materials and low impact on thermal sensitive components

## FIBER LASER MARKER UNIQ & AREX400 SERIES

Innovative design and performances combined with state-of-art technology, for the most demanding applications and industries. Datalogic's AREX 400 and UniQ product lines are robust reliable and cost effective. Fiber laser technology is the solution of choice for high-end applications where speed, quality and efficiency are critical.

Fixed pulsewidth models (100 ns) ensure great thermal effect on metal marking materials, for high efficiency metal annealing and engraving.

Adjustable pulsewidth model (4 - 250 ns) based on MOPA technology offers the highest level of flexibility on heat-sensitive materials, and ensure the highest contrast on thermoplastic materials.

### Fiber Laser key features:

- Ultra-compact, rugged IP64 scanhead fully protected against dust, water and oil droplets
- Low noise level
- Fast turn-on time, zero warmup
- High stability, reliable process
- Excellent on metal and plastic surfaces

## CO<sub>2</sub> LASER MARKER EOX SERIES

CO<sub>2</sub> laser technology is still the best solution to provide permanent laser marking for industrial traceability and coding on paper, carton, organic materials, coated/painted materials and plastic.

Long wavelength (10.6 μm) ensure good results even on glass, rubber, food, wood and many other materials.

### CO<sub>2</sub> Laser key features:

- Excellent on paper, cardboard, wood and plastics
- Marking on the fly compatible with variable speed
- Suitable for coding from medium to high throughput production lines

## ONE-RACK marking controller

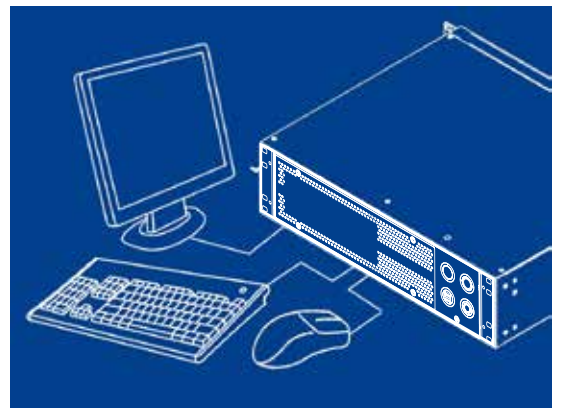
Laser marker setup and operation are made easy with the Embedded Marker Controller platform (EMC) and LIGHTER Suite.

One single rack, 19 inch, 2.5 U, offers standardized design and I/O connections to enable integrators to freely choose between Datalogic's three main laser technology (DPSSL, FIBER, CO<sub>2</sub>) without any connections or wiring hassle.

"One-rack" design drastically simplifies laser integration.

All you need for your marking application is now included: 100-240 VAC power supply, Embedded Laser controller with 4 independent axis controls (X,Y,Z, Rotating axis) to implement multi-layers and rotating marking, dedicated encoder input is applied for Marking On Fly (MOF) even in variable speed conditions.

All the units are equipped with Teamviewer host to ensure real time remote support by Datalogic.



# LASER MARKING SOFTWARE

**Lighter, the laser marking software for all laser marking products**



LIGHTER is a versatile laser marking Software Suite dedicated to OEMs and Machine builders to develop a complete and cost-effective Laser Marking Station, based on embedded hardware and software resources.

With its innovative software functions, LIGHTER Suite

represents an important step ahead in marking software arena by setting new standards for quick integration and ease of use.

LIGHTER Suite combines advanced graphical and editing features, laser controls configuration and diagnostic with a production-oriented interface for easy and safe daily marking operations.

Lighter Suite is composed by a **Laser Editor**, a powerful and intuitive software to create, import or edit vectorial graphics, logos or serialization codes, and **Laser Engine** a robust and reliable marking process manager to execute stored layouts and programs.

Available with the LIGHTER software suite the new **MARVIS**

**(Mark Read Validate Integrated Solution)** is Datalogic's solution for

laser marking parts traceability.

**LIGHTER MARVIS™** represents an important step ahead in the MARK & VALIDATE application setting a new standard in term of ease integration and ease of use.

Thanks to innovative approach, LIGHTER MARVIS merges the capability to control both the full family of DATALOGIC Laser Markers and the entire family of MATRIX code readers, in a user-friendly, simplified, fully graphical interface.

## Advanced Editing and Formatting Functions

- Wide coding library with 100+ different 1D and 2D code symbologies and sub-types
- Import bitmap and vector formats DXF, DWG, PLT, PDF, AI, SVG, BMP, JPG, GIF, TIFF, PNG and many more
- Windows® True Type import tools
- Contextual Property Browser for quick and easy settings of graphics and laser parameters
- Advanced editing tools and Node Editor
- Filling and hatching of objects and pattern structures with various styles
- Date, time, shifts, workpiece serialization
- Array Marking
- Extended layer in combination with Axis controller
- Grey Tone marking

## Automation Capability

- 4 independent Mechanical axis control (X,Y,Z,R)
- User controlled general purpose I/O
- Built-in-marking on the fly
- Sequential programming
- ID code reader integration with LIGHTER MARVIS option

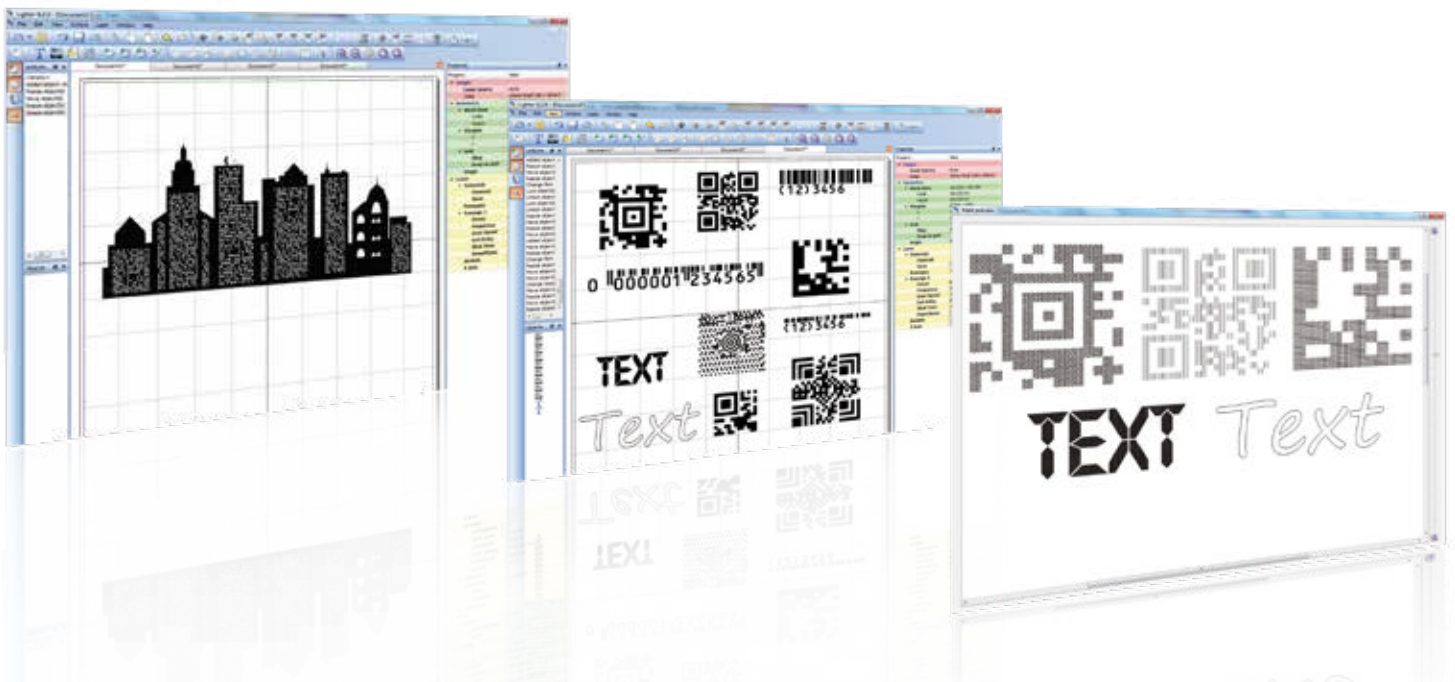
## Programmable Interface and Protocols

- Built-in IDE (Integrated Development Environment) based on JavaScript provides users a full set of tools to be used for extremely flexible customization.
- ActiveX support to create customized applications and user interfaces via Ethernet.
- RS232, TCP/IP, EthernetIP and Profinet embedded support.

## Software Upgrades

Datalogic is committed to preserve the value of your laser investment keeping your system updated.

Regular updated and new features are available on our web site.





# VLASE SERIES

**VLASE** combines the long production experience of high-performance and quality Diode Pumped Solid State (DPSS) laser sources with the flexibility and performances of EMC controller.

VLASE laser markers use the **state-of-the-art End Pumped Coupling Technology**, the most efficient and reliable solution for diode pumped solid state laser sources to provide **excellent beam quality, high peak power and short pulse-width**.

Solid State laser technology is recognized as the best solution to ensure high marking quality results even in difficult application such as high reflectivity or heat-sensitive materials, un-doped or high-stability plastic and hard-to-mark components.

**Designed for demanding 24H7 processes**, VLASE Series offers unparalleled performance and represents the ideal solution for direct part marking in any market segment including automotive, electronics, packaging, as well as in medical surgical tools marking and other applications.



## VLASE IR

The VLASE IR is a DPSS air-cooled laser marking source at 1064nm, available in 10 and 20W power classes..

Excellent beam quality, necessary for marking a broad range of materials, is one of the leading characteristics of the VLASE IR laser sources.

## VLASE UV

The VLASE UV source exploits the extensive experience and success of the DPSS family and is based on the optomechanical architecture of Third Harmonic Generation (THG).

The VLASE UV wavelength produces reduced heat affected zones (HAZ) in comparison with longer laser wavelengths.

The superior performance of this laser source makes it ideal for the demanding marking and material process applications, such as glass and nondoped plastics in automotive, healthcare, aeronautic, solar & electronics among many other applications.

## APPLICATIONS

- Metal marking: stainless steel, iron, titanium, carbide, (bare, coated, anodized)
- High reflectivity metals: brass, gold, silver
- Thermoplastics (ABS, PC, PA)
- Color-enhanced plastics

## APPLICATIONS

- High stability, "non-doped" plastic marking
- Medical & surgical plastic marking
- Silicon scribing
- Ceramic & glass marking
- Luxury goods

## TECHNICAL DATA

		VLASE IR 10	VLASE IR 20	VLASE UV 3
<b>Wavelength</b>	[nm]	1064	1064	355
<b>Nominal power</b>	[W]	10	20	3
<b>Repetition rate range</b>	[KHz]	10 ÷ 200	20 ÷ 200	20 ÷ 80
<b>Standard marking area</b>	mm <sup>2</sup>	50x50, 100x100, 110x110, 140x140, 180x180	50x50, 100x100, 110x110, 140x140, 180x180, 220x220, 285x285	60x60, 110x110
<b>Communication</b>		Ethernet TCP/IP, Profinet IO, EtherNet/IP, RS-232		

# UNIQT<sup>™</sup> SERIES

## UniQ<sup>™</sup> - Compact, Powerful, integrated: unique!

UniQ laser marker is a revolutionary and innovative approach to fiber laser marking: For the first time on the market, **no external controller or power supply** is needed, **no fiber delivery constrains**, no fiber length or bending radius limitations.

A mechanical design and high-quality components provide an **IP54 degree of protection** for harsh environment and industrial application.

UniQ laser marker works seamlessly with Datalogic's Lighter Suite, providing a user-friendly, powerful interface and complete software tools, and is fully compatible with other Datalogic's laser control interface.

UniQ laser marker provides an extremely compact and flexible solution for manufacturing industries where the ease of use, dimensions and price/power ratio are the most important buying criteria.

Built in SLO (Safe Laser Off) system to quick and easy integration in EN13849-1 compliant installation, ease of maintenance and improved safety features keep overall operating and installation costs lower than any other laser marking system.



## APPLICATIONS

- DPM ( Direct part marking ) on plastic and metal materials in automotive, electronics and healthcare industries
- Laser Annealing on high precision metal components

## TECHNICAL DATA

		UNIQT
<i>Technology</i>		Fiber
<i>Wavelength</i>	[nm]	1060-1070nm
<i>Nominal power</i>	[W]	15
<i>Standard marking area</i>	mm <sup>2</sup>	50x50, 100x100, 140x140, 180x180
<i>Communication</i>		Ethernet TCP/IP, Profinet IO, EtherNet/IP, RS-232



# AREX 400 SERIES

The **AREX 400 Series** is the latest release of Datalogic best-selling fiber laser markers dedicated to direct part marking (DPM) in the Automotive, Electronics, and Precision Mechanics industries.

Thanks to its exceptionally small and robust scanner head machined from solid aluminum, the AREX 400 laser markers are unbeatable in tight space installations where a small footprint is mandatory and reliability is a must.

The head can be installed onto robot arms or other moving fixtures thanks to the robotic-grade umbilical cord (length 3 m).

AREX 400 now incorporates Datalogic's patented 'Green Spot' technology, the award-winning programmable visual indicator for immediate good read feedback directly on the scanning area.

The totally new embedded controller is now offering improved computing performances, built-in SLO (Safety Laser Off), cost-effective native communication protocols (TCP/IP, Ethernet IP, Profinet, RS-232), and quiet operations down to 65 dB.

AREX 400 Series includes 6 different fiber laser sources, from 10W to 100W and 20W M.O.P.A. on one single unified platform.

AREX 400 design and configuration dramatically simplifies and speeds up machine design and system integration.



## MOPA fiber laser technology



M.O.P.A. (Master Oscillator Power Amplifier) fiber laser technology offers a higher level of parametric flexibility thanks to the capability to adapt laser pulse duration on a wider range of repetition frequency. The capability to adjust pulse width allows to minimize the material's heat affected zone (HAZ) and to avoid unwanted thermal effect induced in sensitive materials, especially plastics. High pulse-to-pulse stability ensure high contrast stability even on difficult materials.

## APPLICATIONS

- High contrast DPM (Direct Part Marking) on metals in automotive, electronics and healthcare industries
- Deep Engraving on metal
- Annealing & color marking on metals components in aerospace precision mechanic industry
- Color change on industrial plastics (PC, ABS, PA, PBT) with M.O.P.A. adjustable pulsewidth
- Label and dot-peen Replacement
- High quality Branding and texturing on electronics devices



## TECHNICAL DATA

		AREX 410	AREX 420	AREX 420MW	AREX 430	AREX 450	AREX 401
<b>Nominal average power</b>	W	10	20	20	30	50	100
<b>Pulsewidth</b>	ns	~ 100	~ 100	Adj 4 ÷ 250	~ 100	~ 100	~ 100
<b>Standard marking area</b>	mm <sup>2</sup>	50x50, 100x100, 140x140	50x50, 100x100, 140x140, 180x180, 220x220, 285x285 Adj 4 ÷ 250		100x100, 180x180, 210x210	100x100, 180x180, 210x210, 285x285	100x100, 160x160, 180x180, 210x210, 285x285
<b>Communication</b>		Ethernet TCP/IP, Profinet IO, EtherNet/IP, RS-232					
<b>Head dimensions (HxWxD) &amp; weight</b>		96 x 90 x 326 – 3.5 kg					
<b>Controller dimensions (HxWxD) &amp; weight</b>		113 x 432 x 434 – 17.5 kg					158 x 432 x 434 – 23.5 kg



# EOX SERIES

**EOX** is the **CO2 Laser** family for **laser coding and marking** applications. The EOX family offers high-quality permanent marking on a wide range of materials including paper cardboard, wood, plastics and painted metal. Combining excellent laser beam quality and advanced control unit, the EOX family is suitable for accurate industrial traceability as well as high productivity coding applications.

CO2 laser family is available in two power levels, **10W and 30W**, with the same marking platform but with different mechanical configurations. 10W versions are offered in an **all-in-on enclosure** with very compact dimensions. 30W versions combine of a **marking head** with a **control rack** equipped with power supply and control unit.

Both 10W and 30W versions provide **and encoder and photocell ports, which are typically required in Marking On the Fly (MOF) mode** for coding applications on moving pieces. Advanced MOF features offer complete synchronization between beam deflection and object movement even in accelerated or start-stop movement conditions. **MOF works in continuous production lines with linear speeds up to 75 m/min and up to 4 pcs/s (depending on size/number of digits), with or without an encoder.** A CO2 marking system is characterized by low cost of operation coding applications, due to low maintenance and no requirement for expensive consumables.

EOX meets flexibility requirements with marking areas of 70x70 mm<sup>2</sup> or 140x140 mm<sup>2</sup> (focal lens dependent). Reliable and safe, EOX family provides a clean technology with short return of investment and minimal maintenance.

## EOX 30



## EOX 10



## APPLICATIONS

- Coding and marking applications in food, packaging, pharmaceutical, and electronics industries
- Marking on organic materials (paper, carton, wood)
- Marking on thermoplastic, painted and coated metals, glass

## TECHNICAL DATA

		EOX 10	EOX 30
<b>Wavelength</b>	[µm]	10.6	
<b>Nominal power</b>	[W]	10	30
<b>Communication</b>		Ethernet TCP/IP, Profinet IO, EtherNet/IP, RS-232	
<b>Head dimensions &amp; weight (LxWxH)</b>		598x180x180 mm - 17 kg	598x180x180 mm - 17 kg
<b>Controller dimensions &amp; weight (LxWxH)</b>		-	335x430x88.5 mm - 9kg

# TRACEABILITY





# HANDHELD AND WEARABLE SCANNERS

Datalogic's **Handheld Scanner** product line offers products and solutions for automatic data capture and factory automation throughout the customer's entire value chain in the Retail, Manufacturing, Transportation & Logistics and Healthcare industries. The wide range of general purpose handheld readers offer a variety of choices for most data collection activities. Product sets propose corded and cordless options together with best in class reading technologies, ready to solve current and future needs and applications.

Datalogic's PowerScan industrial handheld readers are data collection's definitive example of ruggedness and durability, coupled with outstanding performance and unyielding reliability.

## Datalogic handheld scanners product range



**INDUSTRIAL  
HANDHELD  
SCANNERS**



**WEARABLE  
SCANNERS**



# INDUSTRIAL HANDHELD READERS

## APPLICATIONS

### POWERSCAN 9500 DPM

#### Manufacturing Shop Floor

- Work-in-Progress
- Sub-Assembly
- Component Tracking
- Quality Control
- Time and Cost Analysis
- Line Inventory Control



## HIGHLIGHTS

- Ideal for DPM Lite applications
- Omnidirectional reading on 1D and 2D DPM codes
- Bluetooth and proprietary Datalogic STAR bidirectional Radio system
- Multiple connectivity including Ethernet and Industrial Ethernet
- Superior Good Read feedbacks with 3GL technology and Green Spot
- Real time feedbacks with 4-Keys keypad option

## TECHNICAL DATA

- Imager sensor: 864 x 544
- Illumination: white LED
- Scanning Resolution (Min): 1D Codes 2.5 mil - 2D Codes 4 mil
- Interfaces: RS-232 / USB / Keyboard Wedge Multi-Interface
- Input Voltage: Corded models 5 VDC +/- 10%; Cordless models 5 - 30 VDC ± 5%
- Water and Particulate Sealing Rating: IP65
- Operating temperature: -20 to 50 °C / -4 to 122 °F

### POWERSCAN 9600 Standard Series

#### Manufacturing Shop Floor

- Work-in-Progress
- Sub-Assembly
- Component Tracking
- Quality Control
- Machine Replenishment / Configuration
- Line Inventory Control



- Standard Range (SR), High Performance (HP) for standard / high resolution codes, Document Capture (DC) for scanning and color image capture
- Wireless Charging reducing total cost of ownership
- Modular cradle design for multiple connectivity, comprising Ethernet and industrial fieldbus
- Bluetooth and proprietary Datalogic STAR bidirectional Radio system
- High visibility OLED Display with 4-Keys / 16-Keys keypad options
- Smart batteries and diagnostics

- Imager sensor: 1280 x 800 (single camera for SR, double camera for HP and DC)
- Illumination: white LED (adjustable)
- Print Contrast Ratio (Minimum): 15%
- Scanning Resolution (Min): SR 3 mil - HP 2.5 mil
- Interfaces: RS-232 / USB / Ethernet and Industrial Protocols
- Extended Input Voltage: 5 - 30 VDC ± 5%;
- Water and Particulate Sealing Rating: IP67 and IP65; cradle IP65
- 10 million hits trigger
- Operating temperature: -20 to 50 °C / -4 to 122 °F
- Datalogic's 3GLTM (3 Green Lights) technology and loud beeper for good-read feedback

#### Warehouse and Logistic Centers

- Shipping / Receiving
- Parcel Preparation
- Picking / Put Away

### POWERSCAN 9600 DPX Series

#### Manufacturing Shop Floor

- Work-in-Progress
- Sub-Assembly
- Component Tracking
- Quality Control
- Line Inventory Control



- Excellent DPM reading capabilities for different marking technologies (laser etching, dot peening, inkjet printing, electrochemical etching)
- Omnidirectional reading on 1D and 2D DPM codes
- Wireless Charging reducing total cost of ownership
- Modular cradle design for multiple connectivity, comprising Ethernet and industrial fieldbus
- Bluetooth and proprietary Datalogic STAR bidirectional Radio system
- High visibility OLED Display with 4-Keys keypad option
- Smart batteries and diagnostics

- Imager sensor: 1280 x 800
- Illumination: white, red, and blue LED
- Scanning Resolution (Min): 1D codes 2 mil; 2D codes 4 mil
- Interfaces: RS-232 / USB / Ethernet and Industrial Protocols
- Extended input Voltage: 5 - 30 VDC ± 5%
- Water and Particulate Sealing Rating: IP67 and IP65; cradle IP65
- 10 million hits trigger
- Operating temperature: -20 to 50 °C / -4 to 122 °F
- Datalogic's 3GLTM (3 Green Lights) technology and loud beeper for good-read feedback

### POWERSCAN 9600 AR Series

#### Warehouse and Logistic Centers

- Shipping / Receiving
- Inbound / Outbound
- Parcel Preparation
- Order Fulfillment
- Picking / Put Away



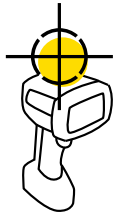
- Auto Range optics from contact up to 20+ m / 65+ ft with fast autofocus scan engine
- Sharp aiming system for indoor and outdoor applications
- Scanning capabilities even in challenging conditions (e.g. damaged barcodes or through shrink wrap)
- Bluetooth (direct pairing with host) and proprietary Datalogic STAR bidirectional Radio system
- Wireless Charging reducing total cost of ownership
- Modular cradle design for multiple connectivity, comprising Ethernet and industrial fieldbus
- High visibility OLED Display with 16-Key keypad option
- Smart batteries and diagnostics

- Imager sensor: 1280 x 800
- Aiming: 650 nm VLD
- Illumination: red LED reading light
- Scanning Resolution (Min): 1D codes 2.5 mil; 2D codes 5 mil
- Interfaces: RS-232 / USB / Ethernet and Industrial Protocols
- Extended input Voltage: 5 - 30 VDC ± 5%
- Water and Particulate Sealing Rating: IP67 and IP65; cradle IP65
- 10 million hits trigger
- Operating temperature: Corded models -30 to 50 °C / -22 to 122 °F; Cordless models -20 to 50 °C / -4 to 122 °F
- Datalogic's 3GLTM (3 Green Lights) technology and loud beeper for good-read feedback

#### Manufacturing Shop Floor

- Intralogistics
- Work in Progress (WIP)
- Traceability
- Inventory
- Material handling

# THE POWERSCAN DPX SERIES



## Centre of Gravity Design

The new scanner has a well-balanced weight reducing fatigue on the operator's wrist

## Ultra-robust Design

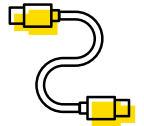


New ultra-robust design and top-class IP ratings. Designed to resist more than 50 drops at 2.5 m / 8.2 ft and is sealed to IP67 and IP65



## Designed for Mobility

The Datalogic STAR radio is a narrow band two-way radio that allows no interference with existing systems like Wi-Fi or Bluetooth®



## Connectivity

USB and RS-232 Multi-interface, Ethernet and Industrial Ethernet embedded. Easy system integration



## OLED Display

New OLED display with selectable dark on white or white on dark backgrounds for better visibility



## Modularity

Modular design allows interface expansion to both cordless and corded devices



## Radio range high/low Speed to optimize tx speed/range

The new antenna design allows the user to reach twice the radio range with respect to the existing PowerScan 9500 series



## Inductive, contactless charging technology

Battery contacts and pins often get dirty, bent, or broken. Wireless charging technology removes a key point of failure in Industrial and Retail functions

## POWERSCAN 9600 DPX SERIES

PowerScan 9600 DPX Series is the industrial handheld solution for traceability of DPM and label-based codes, targeting mainly traceability applications in Automotive, Aerospace, Tires and Electronics but used also in Healthcare for medical device tracking in hospitals.

The Datalogic 4D autolearning system automatically sets up the best acquisition parameters and decoding algorithms, without the need to configure the scanner for every application.

# WEARABLE SCANNERS

## APPLICATIONS

### CODISCAN

- **Transportation & Logistics** ~ Warehouse management: Picking, packing, sorting, put away, shipping/receiving
- **Retail** ~ Click and collect, order fulfillment, receiving, back of store warehouse management
- **Manufacturing** ~ Parts and assembly's traceability, finished goods verification, inventory management



## HIGHLIGHTS

- **Productivity & accuracy:** saving 4 seconds per scan avoiding useless motions with up to 33% less errors
- **Ergonomics:** compact design & multiple mounting options for better usability
- **Easy to use:** adjustable hand trigger, multifunctional key, Aladdin mobile app
- **Streamline connectivity:** bluetooth 5.2 reliability, BLE + BT Classic, gateway for up to 7 device connection and wi-fi capabilities
- **Proven reliability, lower TCO and sustainability:** enterprise rugged device, washable & separable hand trigger, EOC on battery

## TECHNICAL DATA

- Minimal footprint, 44 grams
- 16 hours, 12.000 scans operating time with 2 hours single charge
- Smart aiming system, green spot, high visible LEDs
- Bluetooth 5.2: autoconnection, BLE, BT classic, batch mode
- Multiple mounting options: hand, neck/belt/pocket
- Adjustable hand trigger with separable electronics from fabric
- 1000 tumbles, 1,8 mt multiple drops, IP54, 5M hits trigger
- Multiple charging options: 1-slot, 2-6 slots, 12-slots
- Modular upgradable charger: from 2 to 6-slot
- Aladdin android mobile app: easy pairing, firmware updt
- Sustainability: hand trigger disposal, recycled packaging

## CODISCAN HIGHLIGHTS



### SLIM, light, portable: unfold massive productivity

With a minimal footprint and a lightweight feel, the new CODiScan enables a comfortable and non-intrusive hands-free solution that allows workers to be faster improving the quality of their work.



### No downtimes to reach your targets

CODiScan runs up to 16 hours and 12,000 scans with a single 2 hour charge using different charger options. A multi-functional key allows workers to use the same device in different mounting options and easily check the battery status, connectivity, and other custom functions.

### Cutting-edge innovation to assist your worker



A complete set of good-read feedback helps the worker speed up operations:

- High visible LEDs on the device
- Datalogic's Green Spot to see the feedback directly on the scanned item
- Vibration and audio complete an advanced set of feedback notices



### Easy to use, easy to config, easy to dispose



CODiScan come with the Datalogic Aladdin™ software suite and can be paired to any Android™ mobile computer through the Aladdin App, allowing easy pairing, firmware updates, main parameters and symbology settings.



# WEARABLE SCANNERS



## CODiScan accessories

### Base Stations/Chargers



• Chargers, 1X, 1 Slot

### MODULE FEATURES



2X



4X



6X



• Chargers, 12X, 1 piece charger - 12 slots



### MODULARITY SYSTEM

• Chargers, 2X, 2 slots up to 6 slots:  
1-piece modular 2 slot-charger – up to 6 slots using same power supply

### Miscellaneous



• Right Hand Trigger -  
Adjustable Multisize - 1 pc



• Lanyard - Extensible with  
Holder for Neck/Belt



• Gateway Connect USB -  
Bluetooth-Wi-fi



Spares available for electronics, fabric and straps



# INSPECTION







# MACHINE VISION

## Machine Vision offers the widest range of smart devices for in-line automated inspection and factory automation

Smart cameras and industrial vision processors offer multiple solutions covering a wide range of performance and price point requirements.

Machine vision solutions can be used to identify parts through barcode, by reading characters (OCR), or recognizing patterns; detecting defects and locating parts; guiding robot arms; and helping control the processes of the manufacturing line.

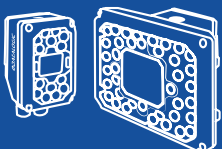
Smart cameras provide the flexibility of a full-blown vision system packed into a compact housing, thus simplifying the device integration on the machine.

Industrial vision processors and cameras offer cutting edge image processing **capabilities**, vision processors enable high-end multi camera machine vision solutions.

The easy and intuitive IMPACT configuration software is common to all smart cameras and industrial vision processors. It features over 120 inspection tools and controls to create unique inspection programs and develop user interfaces quickly and easily.

Available as standalone software or embedded in GPU-based industrial controllers, PEKAT VISION's deep learning enables highly advanced quality control that can be configured in minutes.

## Datasensing machine vision product range



SMART CAMERA



INDUSTRIAL VISION PROCESSOR



INDUSTRIAL CAMERA



ACCESSORIES



DEEP-LEARNING SOFTWARE



# SMART CAMERAS

## APPLICATIONS

### P2X

- Packaging machinery
- Robot guidance
- Electronics
- Automotive



## HIGHLIGHTS

Industrial smart camera providing exceptional inspection performance in a compact housing. State-of-the-art CMOS imagers with resolutions up to 2MP deliver maximum image quality.

## TECHNICAL DATA

- Imagers: WVGA and 2MP, CMOS mono or color
- Lens options: Micro-video (6, 8, 12.5 and 17.5mm) or C-Mount
- Illuminators: Red, Blue, Infrared, White (polarized versions available)
- Digital I/Os: 2 IN / 3 OUT
- Connectivity: PROFINET, EtherNet/IP, ModBus, RS232, Ethernet TCP/IP
- Rotating connectors for straight vs 90° mounting
- IP67 rated housing
- Configuration through IMPACT Software including advanced algorithms

### P3X

- Electronics
- Robot guidance
- Automotive



High-end smart camera providing state of the art computing performance. With resolutions up to 5MP, P3x enables high-accuracy quality inspection and measurement applications.

- Imagers: WVGA, 2MP and 5MP, CMOS mono or color
- Lens options: Micro-video (6, 8, 12.5 and 17.5 mm) or C-Mount
- Illuminators: Red, Blue, Infrared, White (polarized versions available)
- Digital I/Os: 2 IN / 3 OUT
- Connectivity: PROFINET, EtherNet/IP, ModBus, RS232, Ethernet TCP/IP
- Rotating connectors for straight vs 90° mounting
- IP67 rated housing
- Configuration through IMPACT Software including advanced algorithms

## P3X HIGHLIGHTS



### Excellent performance

- **State-of-the-art** embedded computing platform delivering high inspection rates
- **qHD (960x540), 2MP (1920x1080) and 5MP (2560x1936)** resolution models available in monochrome and color
- **Powerful integrated illuminators** to cover wide Field-Of-View even in case of long operating distances



### Ease of setup and use

- **Powered by IMPACT software**, offering more than 100 different inspection tools
- **Easy-to-use** drag&drop graphical user interface not requiring any programming skill
- **Integrated 360°** configurable visual feedback
- **Embedded accelerometer** for bump or device misplacement detection
- **Built-in web server** offering Web HMI to monitor smart camera results



### Industrial connectivity

- **PROFINET, Ethernet/IP and ModBus Embedded Industrial Fieldbus** protocols to avoid the need of external switches or converters
- **Ethernet TCP/IP, HTTP and serial communications**
- **Image saving on remote host** through sFTP protocol



### Highest flexibility

- **Interchangeable field-replaceable illuminators** available in different sizes and colors (e.g. red, white, blue, IR)
- **Micro-video** (6, 8, 12.5 and 17.5mm) or C-Mount lens options
- **Interchangeable optical filters and front covers** to optimize image quality



### Industrial strength

- **IP65/IP67** industrial grade design for harsh environments
- **Operating temperature:** -10° C to 50° C / 14° F to 122° F

# INDUSTRIAL VISION PROCESSORS

## APPLICATIONS

### MX-E

- Electronics
- Robot Guidance
- Packaging machinery



## HIGHLIGHTS

Industrial Machine Vision Processors providing the highest performance in image processing with unmatched flexibility through GigE multi-camera connectivity support.

## TECHNICAL DATA

- 3 different computing power models: MX-E25 (entry level), MX-E45 (midrange), MX-E90 (high-end)
- Support from 2 to 8 independent GigE cameras simultaneously connected
- Digital I/Os: 16 IN / 16 OUT (NPN or PNP)
- Connectivity: PROFINET, EtherNet/IP, ModBus, RS232, Ethernet TCP/IP
- Configuration through IMPACT Software including advanced algorithms
- State-of-the-art Windows 10 IoT operating system

### MX-G2000

- Automotive
- Electronics
- Pharmaceutica
- Food & Beverage



Industrial vision processor with PEKAT VISION deep learning that enables advanced machine vision applications for factory automation. The MX-G2000 integrates the 12th generation INTEL chipset and NVIDIA RTX GPU providing the highest computing power to run both PEKAT VISION deep learning and IMPACT rule-based algorithms.

- Rugged, industrial, GPU-powered vision processor
- Running both PEKAT VISION (deep learning) and IMPACT (rule-based) machine vision software
- Training and inference on the edge, no need of additional PC, Server or Cloud computing
- Compatible with a wide range of cameras from VGA up to very high resolution
- Supporting up to four Power over Ethernet (PoE) camera ports – PoE compliant cameras
- Integrated Profinet and Ethernet/IP industrial fieldbus
- 16 IN + 16 OUT software configurable digital I/Os that can work either PNP or NPN mode

## MX-G2000 HIGHLIGHTS



### Ultimate processing power

- **Integrated NVIDIA GPU and INTEL 12th gen CPU**
- Running both **PEKAT VISION deep learning and IMPACT rule-based algorithms**
- **Powering** up to 4 fully independent GigE cameras
- **16 + 16** digital configurable input and outputs
- **Large SSD** to store training images



### Ready out of the box

- **All-in-one** machine vision industrial controller
- **Possibility to train deep learning on board** with no need of connection to external servers or cloud
- **Lifetime licenses** not requiring any additional subscription or recurring fee



### Deep learning and rule-based combined together

- **Anomaly detection and surface inspection modules** to detect even the smallest quality defects
- **Object detection** and classification modules to identify parts
- **OCR and 1D/2D** barcode readers
- **Robust pattern** matching for robot guidance applications
- Wide set of **pre-processing algorithms** to enhance image quality and product features
- **Color tools** to analyse color information
- **Logical tools** to combine input/output data



### Industrial connectivity

- **PROFINET, Ethernet/IP and ModBus Embedded Industrial Fieldbus protocols** to avoid the need of external switches or converters
- **Ethernet TCP/IP, HTTP and serial communications**
- **Image saving** on remote host through sFTP protocol



# INDUSTRIAL CAMERAS

## APPLICATIONS

### E/M DIGITAL CAMERAS

- Electronics
- Robot Guidance
- Packaging machinery



## HIGHLIGHTS

Range of GigE industrial digital cameras featuring latest CMOS imagers with resolutions from VGA up to 5MP.

## TECHNICAL DATA

- Resolutions ranging from VGA up to 5 MP, available both in monochrome or color
- Linescan cameras with resolution from 2K up to 8K pixels
- Industry-proven GigE Vision connectivity standard
- Compact dimensions simplifying mechanical installation
- C-Mount lens support for extreme mounting flexibility

# ACCESSORIES

## ACCESSORIES



Wide range of illuminators, lenses, filters, mounting unit and cables for vision sensors and cameras to fit any application.

- Spot, ring, linear, backlight, dome, co-axial illuminators available with different color wavelengths
- Micro-video, C-Mount, F-Mount and telecentric lenses
- Selections of optical filters to be mounted on camera lenses

# DEEP-LEARNING SOFTWARE

## DEEP LEARNING SW

- Automotive
- Packaging
- Electronics

[www.pekatvision.com](http://www.pekatvision.com)



A state of the art software solution for industrial visual inspection and quality assurance based on proprietary advanced deep-learning algorithms and neural networks.

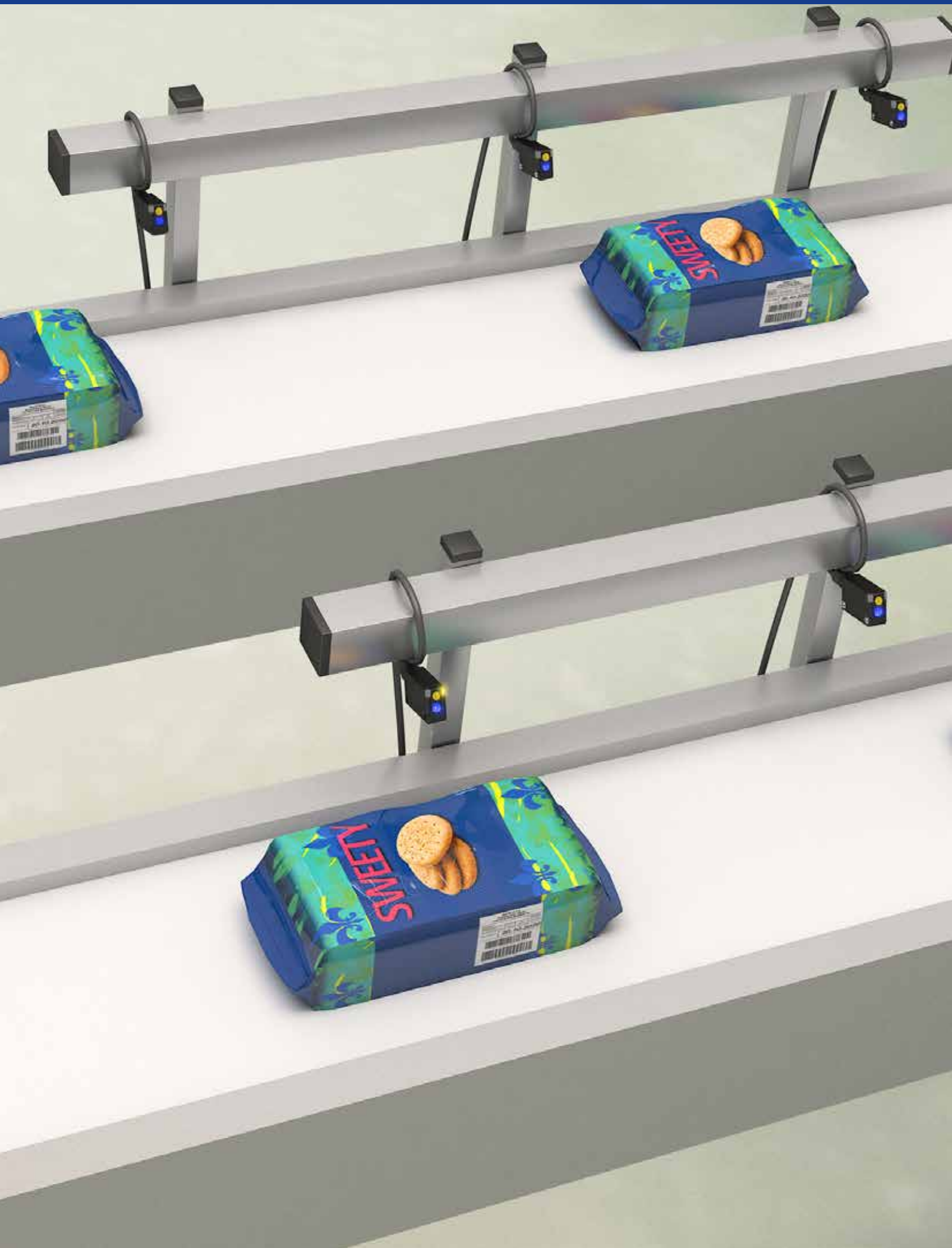
- Ease of use and wide hardware compatibility
- Universal application
- Fast integration
- Anomaly detection
- Surface quality inspection
- Object detection & classification
- Text reading & verification







# DETECTION





# SENSORS

**Sensors are essential in industrial automation to detect the presence of objects or parts, inspect integrity or correct assembly, and measure dimensions, distance or positioning**

Photoelectric sensors are diverse and available in many different sizes and versions.

Functionalities, include detection of small or fast-moving objects, with clear or shiny surfaces, color or invisible fluorescent marks, and include dimension or distance measurement.

Inductive proximity sensors are specific to metal parts detection at short distance, and in harsh environments that include dust, liquids, oil or grease.

Capacitive sensors are used for detecting liquids or powder, including within opaque and non-metal containers.

Ultrasonic sensors are suitable for transparent object detection (plastic film, glass, labels), with distance measurement capability.

Accessories include brackets and cables, IO-Link Master, fiber optics and reflectors for photoelectrics.

Manufacturing applications are widespread within automotive and electronics plants; food & beverage and pharmaceutical, processing and packaging machinery; woodworking, metalworking, textile, ceramic, glass, stones, paper, etc.

Logistics applications are automated material handling, conveyors, storage and retrieval, automated warehouses, distribution centers.

## Datasensing sensor product range



PHOTOELECTRIC



INDUCTIVE



CAPACITIVE



ULTRASONIC



SPECIALITY



ACCESSORIES



# PHOTOELECTRIC SENSORS

## SMART SENSORS

### APPLICATIONS SMART-VS

- Processing and packaging
- Transport and handling lines
- Assembly lines
- Food & Beverage
- Bottling lines
- Machines for the Cosmetic and Pharmaceutical sector



### HIGHLIGHTS

The smart vision sensor series enabled with A.I. and empowered by machine learning assisted setting algorithms. Smart-VS is available as Standard and Plus models with extended features. Simply clever solution for all your presence and orientation object detection applications.

### TECHNICAL DATA

- No vision tools or special skills required
- Easy WEB server GUI for setting e monitoring
- Deterministic response time up to 20ms (Plus version)
- 50...150 mm detection distance
- 50...400 mm detection distance (Plus version)
- Easy TEACH-IN Set-up
- Automatic focus control during teach
- Smart-VS Plus model available to handle more images and more connectivity features

## SMART-VS HIGHLIGHTS



### Advanced detection performance

- **High sensitivity** CMOS sensor
- **High Immunity** to ambient light
- **No variation of response time** with changes in surrounding application conditions
- **Fast and deterministic response time**
- **Sizable ROI** for precise detection
- **Multiple recipe handling**
- **Auto focus and auto exposure** features
- **High tolerance for object positioning**



### Ease of setup and use

- **First vision sensor on the market with photocell-like TEACH-IN push button**
- **No need of special vision tool skills**
- **Easy and comprehensive WEB server GUI** for a simple setting and accurate monitoring



### Industrial connectivity

- **Embedded Ethernet TCP-IP** interface
- **Ethernet protocol** for remote setting, monitoring and maintenance
- **Configurable I/O interface** through WEB server GUI
- 3 configurable **PNP,NPN,PP** output types
- **2 opto-isolated input** for sensor trigger and remote teach



### Advanced features

- **Powerful white polarized illuminator**
- **RED led pointer** to help object alignment
- **Green/Red Spot** to improve detection monitoring
- **Customized Machine Learning Algorithm**
- **Three class detection**
- **Trigger assisted by machinery**



### Industrial strength

- **IP65** industrial grade design for harsh environments
- **Operating temperature:** 0 °C to 50 °C / 32 °F to 122 °F

# PHOTOELECTRIC SENSORS

## TUBULAR

### APPLICATIONS

#### S5N/S5

- Processing and Packaging
- Conveyors, material handling
- Ceramics intralogistics
- Automated warehousing



### HIGHLIGHTS

The first tubular sensor line with all optic functions and IO-Link V1.1 smart sensor profile on the market, a reference point for the Industry 4.0. Stainless steel AISI 316 L IP69K ECOLAB and Diversey models (S5N...NA...) are also available.

### TECHNICAL DATA

- Diffuse proximity up to 700 mm
- Background suppression up to 150 mm
- Contrast sensor 10 mm  $\pm$ 2 mm
- All the optic functions are available
- Robust EMI immunity
- Improved ambient light immunity
- M18 flat plastic with universal mounting
- Available in M18 metal housing
- Axial or radial optics, cable or connector
- Standard 4-wire NO-NC NPN or PNP output
- Complete configuration of the NPN/PNP output and L/D models (S5)
- IO-Link V1.1 COM 2 Smart sensor profile
- INOX AISI 316 L models are available
- S5N...NA compliant with Ecolab and Diversey

#### DM

- Packaging line
- Assembly machine



M12 Photoelectric Sensors with different models with Teach-in button for easy adjustment.

- Infrared emission
- Diffuse up to 300 mm
- Polarized 2.5 m
- Through-beam 4m
- PNP or NPN output with remote Teach-in
- Cable 2 m or M12 plug connection
- 4 wires selectable NO/NC output
- M12 metallic housing

#### SS/FA/FAL/FF

- Ceramic intralogistic
- Processing and Packaging
- Wood and glass industries
- Assembly machine
- Conveyor line



Wide range of models of M18, photoelectric Sensors: general purpose, laser emission for harsh environments and food and beverage, ECOLAB and DIVERSY tested.

- Red, infrared and laser emission
- Models with and without adjustment
- Adjustment trimmer, teach in button and Innovative inductive Teach-in function through sensors's housing (FF)
- Diffuse up to 1.5 m
- Polarized up 4,5m and 30m (Laser)
- Through-beam up 20m and 50m (laser)
- For transparent objects up 1,5m
- Background Suppression up to 300 mm (laser emission 150 mm)
- Available with plastic and metal housing
- AISI316L Stainless steel housing (FF)
- IP67- IP68, IP69K (FF)
- Axial or right angle opticals
- Ecolab and Diversey certification
- M18 or smooth housing

## SUB-MINIATURE

#### SM-ALL

- Processing and Packaging
- Electronics assembling
- Small appliance and vending machines



The subminiature photoelectric sensor with all universal optic functions. Precise and effective detection even in challenging applications for compact machineries with narrow spaces.

- Fixed focus proximity 15, 20, 30, 50 cm
- 1.5 m retroreflective and 1 m polarized retroreflective
- 2 m through beam models
- NPN or PNP output with NO-NC output
- 4 wires connection with 2 m Cable
- IP67 Plastic subminiature case

# PHOTOELECTRIC SENSORS

## MINIATURE

### APPLICATIONS

#### S100

- Processing and Packaging
- Conveyor lines, material handling
- Automated warehousing



### HIGHLIGHTS

Universal miniature photoelectric sensor with best price on the market, standard miniature dimension and universal mounting feature for quick and easy mechanical and electrical installation.

### TECHNICAL DATA

- Through beam 12 m
- Retroreflective 7 m
- Polarized retroreflective 3 m and 5.5 m
- Diffuse proximity 30 and 50 cm
- Fixed focus 70 mm
- Background suppression 100 mm and 200 mm
- NPN or PNP output with L/D input
- 2 m cable or M8 connector version
- IP67 plastic miniature case
- M3 x 2 slotted holes on the back side
- M3 threaded holes on the front side

#### S3N

- Conveyor and logistic lines
- Food, cosmetic and Pharma industries
- Wood and glass industries
- General purpose
- Processing and Packaging
- Electronics assembling
- Small machinery and access control



S3N series delivers top performances in a very rugged and miniaturized standard housing. Complete solution for any detection application in any automation industry, including the fastest and most precise miniaturized contrast sensor on the market.

The series is available with trimmer adjustment and Teach-in models with complete connection output including M8 and M12 pigtail models. The S3N offers high connectivity features thanks to extended state of the art IO-Link communication.

- Bright LED and Safe Laser emission models class 1
- Smart BGS and clear detection functions
- Single, Double trimmer & Push Button models
- Long distance detection models
- Very fast and very precise RGB Contrast sensor up to 60kHz with 4us jitter
- Cable, M8 connector, M8 and M12 pigtail connection
- Rugged IP67 Plastic miniature case
- IO-Link with extended Smart Tasks

#### S3N W03

- Food, cosmetic and Pharma industries
- Processing and Packaging
- Electronics assembling



S3N-W03 is the undisputed fastest and accurate miniaturized contrast sensor on the market thanks to the 60kHz switching frequency and the 4us very low jitter. The shaped and bright RGB emission combines high detection accuracy with high spot visibility. The S3N-W03 is available with a simple and easy TEACH-IN adjustment, M8-4pins connector, pigtails M12 and M8 models and dual channel IO-Link connectivity.

- 60kHz Fastest operating frequency
- 4us high detection precision lowest jitter
- Easy and comprehensive TEACH-IN setting
- 12mm Op.Distance +/-3mm depth of field
- High sensitivity dual lens optic
- Shaped and Bright RGB Emission
- 1x3mm Rectangular spot
- Very complete IO-Link parametrization
- Recipes handling through IO-Link
- Dual channel IO-Link V1.1.3 COM 2

#### QM

- Conveyor and logistic lines
- Food, cosmetic and Pharma industries
- Wood and glass industries
- General purpose
- Automatic machines



Wide range of models of cubic miniaturized sensors.

- Red and infrared emission
- Background Suppression up 400 mm
- Diffuse up to 1.5 m
- For transparent objects up to 4 m
- Through-beams up to 30 m
- PNP and NPN -NO/NC output
- 2 m cable, M8 4 poles connectors and pig-tails M12 and M8



# PHOTOELECTRIC SENSORS

MINIATURE

## S3N HIGHLIGHTS



### Ease of use sensor set-up

- **Simple and easy multiple TEACH-IN setting** for background and clear object detection models
- **Undisputed Push Button** tactile feeling for a precise setting operator experience
- **Complete LED signalizations** for standard and IO-Link model monitoring



### Excellent performance

- **Top performances** in a very rugged and miniaturized standard housing.
- **Diffuse proximity** up to 100 cm
- **LED Background suppression** up to 800 mm (on White)
- **Polarized LED** RRX 7 m, Laser 12 m
- **Coaxial RRX** for transparent objects 2 m
- **Through beam LED 15 m and Laser 30 m**
- **Fastest contrast sensor** 60kHz 4us jitter
- **Rugged IP67** Plastic miniature case
- **Mounting threaded** M3 metal inserts



### Industrial connectivity

- Connection with 2 m cable, M8 connector, M12 and M8 pigtail
- IO-Link double channel with smart task



### Highest flexibility

- **Complete optic functions** with RED visible emission LED and Laser class 1
- **Trimmer and Push button adjustable**
- **Available** with wide range of **connection types**
- **High grade of IO-Link** programmability to increase maintenance and monitoring level
- **IO-link dual channel** to allow on the fly sensor setting and monitoring



### Industrial strength

- **IP67** industrial grade for harsh environment.
- **Operating temperature** wide range

# PHOTOELECTRIC SENSORS

## MINIATURE

### APPLICATIONS

#### QF

- Food industries
- Chemical industries
- Process application



### HIGHLIGHTS

Cubic miniaturized IP68/ IP69K photoelectric sensors for harsh environments and food and beverage applications.

### TECHNICAL DATA

- Red and infrared emission
- Diffuse up to 1 m
- Background Suppression up to 200 mm
- AISI316L Stainless steel housing
- IP67, IP68, IP69K degree
- 4 wires PNP or NPN NO + NC outputs

## COMPACT

#### S8

- Processing and Packaging
- Food and Beverage Industry
- Cosmetic and Pharmaceutical industry
- Electronics assembling



The Compact sensor format to solve difficult detection applications (i.e. target objects that are too small, too fast, too clear, too shiny). Performance oriented family available also with AISI 316L housing models.

- Background suppression 50-300 mm, Laser 20-200 mm
- Background suppression for transparent objects with reflective background
- Polarized retroreflective 5 m, Laser 10 m, Coaxial for transparent objects 2 m
- RGB Contrast sensor 6-12 mm, 25 kHz switch. freq.
- UV Luminescence sensor 10-30 mm, 2 kHz switch. freq.
- NO-NC outputs with 2 m Cable or M8 connector
- IP 67 Plastic case and IP69K stainless steel version (ECOLAB and DIVERSEY)
- Compact dimensions (14 x 42 x 25 mm)
- Stainless Steel AISI 316 L models ATEX 3DG

#### S62

- Processing and packaging
- Conveyor lines, material handling
- Automotive assembly, intra-logistic



50 x 50 Standard universal sensor with improved performance and pricing. Wide range of optic functions in a compact industry format with standard 50 x 50 mm housing, mounting holes, installation and wiring.

- Diffuse proximity 90 or 200 cm, Laser 90 cm
- Background suppression 30, 60, 120, 200 cm, Laser 15, 35 cm
- Retroreflex 13 m, Polarized 8 m, Laser 20 m
- Through beam 25 m
- 10-30 Vdc version with NO-NC, NPN or PNP output
- Multivoltage 24-240 Vac/24-60 Vdc with Relay output
- 2 m cable or M12 rotatable connector

## MAXI

#### S300 PA/PR

- End-of-line packaging, palletizers
- Outdoor or indoor gates control
- Manufacturing plants



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

- Diffuse proximity 2 m (-PA), 5 m (-PR)
- Background suppression 2 m (-PA), 2.5 m (-PR)
- Polarized retroreflex 7 m (-PA), 22 m (-PR)
- Through beam 50 m (-PA), 60 m (-PR)
- 10-30 Vdc version with NPN or PNP outputs
- Multi-voltage with Relay output and terminal block
- Configurable timing function for turnON/OFF delay
- IP67 plastic case, fiber glass reinforced
- I/O link connection
- M3 x 4 slotted holes on the back side
- M3 threaded holes on the front side

# PHOTOELECTRIC SENSORS

## APPLICATIONS

### SR21/SR23

- Packaging and labeling machinery
- Print and apply systems



## HIGHLIGHTS

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

## FORK

## TECHNICAL DATA

- Slot width 2 mm or 5 mm and depth 50 mm for normal label or booklet label detection
- Up to 20  $\mu$ s response time and 25 kHz switching frequency
- IR LED emission for label detection on translucent reel
- Red/Green LED emission for color mark detection
- Auto-Set for Teach-in or dynamic threshold setting
- NPN and PNP outputs with M8 4-pole connector
- Compact and robust metal case with IP65 protection
- Ecolab and Diversey certification

### SRF/FC5/FC6/FC7

- Packaging and labels lines
- Beverage and glass industries
- Electronic industries
- Edge detection



Optical slot sensors with high precision, for detection of objects, labels and transparent film.

- Red, infrared and laser emission
- Wide range of models, width 2 mm up 180 mm and depth up 120 mm
- Minimum object detection up 0.05 mm (laser)
- Dynamic and static Teach-in via cable or by buttons
- NPN or PNP output with M8-4 poles
- NPN or PNP Lo/Do output with M8 3 poles

### TL46

- Packaging and labeling
- Food & Bev., Cosmetic, Pharma industry
- Printing machinery



Very high resolution, with White, Red or RGB emissions. Extremely fast response time thanks to new low jitter model ideal for packaging machinery and mark detection synchronization-based equipment.

## COLOUR, CONTRAST & LUMINESCENCE

- Operating distance 6-12 mm (80 mm with acc. lens)
- Bright light emission with Red, White, or RGB LED
- Mark/Background automatic, manual and dynamic setting
- Contrast / Color detection mode
- Trimmer or Teach-in setting with 4 digit display version
- Very fast switching frequency 15, 20, 25, 30 or 50 kHz
- Very high precision model with less than 7  $\mu$ s jitter
- Extended Smart functions and diagnostic with accelerometer models
- Configurable NPN/PNP and 0-5 V analogue output
- Standard metal case with IP67 protection and IP69K

### LD46

- Packaging and labeling
- Food & Bev., Cosmetic, Pharma industry
- Printing machinery



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

- High power UV light emission at 375 nm wavelength
- Operating distance 10-20, 20-40, or 30-50 mm
- Teach-in setting and manual threshold adjustment
- 5 segments bar graph for sensitivity level indication
- Fast response time 250  $\mu$ s and switching freq. 2 kHz
- NPN and PNP outputs and 0-5 V analogue output
- Standard metal case with IP67 protection
- Soiling indicator and Alarm Output.
- Sturdy metal Die-cast zinc IP67 housing



# PHOTOELECTRIC SENSORS

## DISTANCE MEASUREMENT

### APPLICATIONS

#### S67-Y

- Metal working
- Assembly lines
- Automotive industries



### HIGHLIGHTS

Class 2 laser distance sensor based on triangulation with a resolution of 10  $\mu$ m. S67-Y is available as long range (Y13) or Short range (Y03) with analog output.

### TECHNICAL DATA

- Operating distance 50...300 mm (Y03)
- Operating distance 100...600 mm (Y13)
- Resolution of 10  $\mu$ m @ 50mm. distance on white 90% remission. (Y03)
- Response time less than 0.9 ms (Y03)
- Linearity error of +/-0.03 mm @ 50 mm range. (Y03)
- Analog Voltage models with 0V-10V protected output
- Analog Current models with 4-20 mA protected output
- IP67 compact metal housing

#### S65-M

- Presence of all medium and large sized objects on conveyors
- Critical object detection in front of problematic background



Cost effective Long Range Background Suppressor with Time Of Flight (TOF) technology and Infrared emission in a compact and standard 50 x 50 sturdy housing. Equipped with a powerful green pointer for easy target alignment.

- Long Range background suppression detection up to 5 m
- Cost effective solution for precise and reliable detection
- Risk-free Infrared LED emission and embedded green LED pointer
- Glossy and clear object surface detection model available
- Two independent fully programmable outputs
- NPN/PNP or IO-Link connection models
- Rugged plastic housing in compact 50 x 50 x 24 mm format
- Standard M12 8-poles connector

#### S85

- Packaging end of line
- Paper reel unwinding control
- Automated warehousing
- Trans-elevator and crane
- Automotive assembling lines
- Non-LFT measurement in logistic



Long range distance sensor with Time Of Flight technology in diffuse mode. High resolution and accuracy available in two models up 10 m. and up to 20 m. Graphic display model available with Push button TEACH IN Adjustment in a compact sturdy metal housing.

- Time Of Flight (TOF) sensor with Red Laser emission
- Detection and measurement range up to 10 or 20 m
- 1 mm resolution/repeatability and 7 mm accuracy
- 4-20 mA or 0-10 V scalable analog output and 2 push-pull digital outputs
- RS485 serial interface
- Built-in graphic display and push buttons
- PNP switching output and 0-10 V analog output

## AREA SENSORS

#### AS1/DS1

- Processing and Packaging
- Food, Cosmetic and Pharma industries
- Electronics and mechanical assembly
- Conveyor lines and sorting systems



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

- AS1 Area Sensor for small object detection
- DS1 Light Array for small object measurement
- Minimum object detection  $\varnothing$  6 mm or flat 0.2 x 75 mm
- Minimum measurement resolution 7 mm or 4 mm
- Heights ranging from 100 mm (16 beams) to 300 mm (48 beams)
- Standard distance 2 m and Long distance up to 4 m
- PNP switching output and 0-10 V analog output

# PHOTOELECTRIC SENSORS

## AREA SENSORS

### APPLICATIONS

#### BX10/BX80

- Processing and Packaging machinery
- Conveyor lines and Intralogistic
- Metal working



### HIGHLIGHTS

Compact Area Sensors. Detection of small object in the controlled area, crossed beams.

### TECHNICAL DATA

- Control heights up to 90mm
- Standard distance 2 m, models with maximum distance up to 6 m
- PNP and NPN switching outputs
- Models with synchronization by Cable
- Models with IP69K protection degree
- Models with aluminium enclose and air cooling inlet
- ATEX models 2GD and 3GD

#### CX0/CX2

- Processing and Packaging machinery
- Automation Assembly
- General manufacturing



Slim Area Sensors, detection and measurement with crossed and parallel beams.

- Control heights from 160 mm to 960 mm
- Sensing distance up to 6 m
- Pitch 5 mm, 10 mm, 20 mm
- PNP and NPN outputs, 0-10 V and 4-20 mA analogue outputs and PNP and 0-10 V outputs
- Adjustment by teach-in via cable
- Blanking function

#### CR0/CR1/CR2

- Conveyour and logistic lines
- Food, cosmetic and Pharma industries
- Wood and glass industries
- Automatic machines



Retroreflective Polarized Area Sensors.

- Control heights from 69 mm to 310 mm
- Sensing distance up to 4.5 m
- Adjustment with Teach-in button
- Optical pitch 10 mm
- PNP and NPN outputs
- Blanking function

#### S70/S7/FY

- Processing and Packaging
- Electronics assembly
- Pharmaceutical industry



The compact and advanced fiber optic amplifier sensors with competitive price and features, double display, high speed and contrast sensitivity models are also available including IO-Link connectivity.

- Diffuse fiber optics up to 500 mm (S70)
- Through beam fiber optics up to 1800 mm (S70)
- Red or White LED emission for contrast detection
- Double 4-digit display (S70)
- 4-digit display and Teach-in or trimmer setting (S7)
- 10 bits (1024 points) or 12 bits (4096 points) resolution
- Switching Freq. 1kHz, Fast 5 kHz, Ultra-fast 10 kHz and 50 kHz
- NPN or PNP output with 2 m cable or M8 connector
- Configurable timing function for turn-ON/OFF delay
- IP67 plastic case, fiber glass reinforced
- Wide range of optical fibers

## FIBER OPTICS

### OPTIC FIBER

- Beverage & Bottling
- Packaging lines
- Electronics



Complete range of universal plastic and glass optic fibers for coaxial, diffuse, through-beam and area detection.

- Glass and plastic fibres
- Extra-flexible versions
- High-temperature versions (up to 250°C)
- High-efficiency versions
- Focusing, collimating and deviating lenses

## ACCESSORIES FOR PHOTOELECTRIC SENSORS

# PHOTOELECTRIC SENSORS

## ACCESSORIES FOR PHOTOELECTRIC SENSORS

### REFLECTOR



### HIGHLIGHTS

Prismatic and microcube reflectors for photoelectric sensors available in many different shapes, dimensions and efficiency.

### TECHNICAL DATA

- Self adhesive paper for polarised sensors
- Plastic reflectors
- Plastic reflectors with micro prism for laser sensors

# SPECIALITY

### APPLICATIONS

#### INC

- Sluice gates position for water control
- Automotive
- Solar panel position for green energy production



### HIGHLIGHTS

M18 inclinometer sensor with AISI316L full metal stainless steel housing.

### TECHNICAL DATA

- MEMS inside
- Single axis
- 0...360°
- Resolution: 0,025°
- RS485 + analogue output

#### VBR

- Industrial air conditioning
- Escalators
- Optical sorting machines
- Shaft rotation
- Paper & cardboard industry



### HIGHLIGHTS

M18 vibration sensor with AISI316L full metal stainless steel housing.

### TECHNICAL DATA

- MEMS inside
- 3-axes
- Working frequency: 0...400 Hz (VBR1) or 0...1250 Hz (VBR2)
- RS485 + analogue output

#### FL

- Washdown environment (carwash)
- Logistics



### HIGHLIGHTS

Compact cylindrical photoelectric sensor through-beam high power and wide angle use in washdown environment.

### TECHNICAL DATA

- Compact cylindrical body with M18 for fixed
- Through-beam: 2 models
- Standard and high distance, up 30 m
- Plug and play, not adjustment
- Wide beam
- Coded emission anti mutual interference system
- IP69K on optical head

# INDUCTIVE SENSOR

## MINIATURE CYLINDRICAL AND CUBIC

### AA/AB/AC/AD/AES/AHS

- Grippers.
- Electric spindle
- Rotary actuators



Miniaturized inductive sensors from diameter ø3 mm to M8. Where small spaces required small dimensions.

- Sensing distance from 0.6 mm (ø3) to 2 mm (M8)
- Shielded models.
- AISI303 housing.
- NPN or PNP, NO or NC
- IP67 protection degree

### IL5/IL8/IL9/IL1

- Grippers
- Tobacco industry



Cubic inductive sensors: 5 x 5 mm, 8 x 8 mm (with top and centre detection head), 10 x 28 x 16 mm.

- 5 x 5 mm with sensing distance of 0.8 mm and 1.5 mm (IL5 series)
- 8 x 8 mm with sensing distance of 1.5 mm, 2 mm and 2.5 mm (IL8/IL9 series)
- 10 x 28 mm with sensing distance of 3 mm and 6 mm (IL1 series)
- NPN or PNP, NO or NC



# INDUCTIVE SENSORS

## CUBIC SENSORS

### APPLICATIONS

#### IS40

- Processing and Packaging machinery
- Assembling and conveyor lines
- Metal working and machine tools



### HIGHLIGHTS

40 x 40 mm. Versatile and flexible for various applications in the machinery thanks to the connector rotatable in any direction.

### TECHNICAL DATA

- 40 x 40 x 118 mm: terminal block, 15 mm (shielded), 30 mm (unshielded).
- 40 x 40 x 66 mm: M12 plug, 15 mm (shielded)
- PNP or NPN, NO+NC.
- AC/DC, NO or NC
- Models with analogue outputs 0-20 mA: 7...20 mm (shielded)

## STANDARD SENSORS

#### AH/AE/AM/AK/AT/IS

- Processing and Packaging machinery
- Assembling and conveyor lines
- Metal working and machine tools



From diameter  $\varnothing$  6,5 mm to M30. Reliable detection of any metal part.

- Diameters  $\varnothing$  6,5 mm, M8, M12, M18 and M30
- Single and double range
- Shielded or unshielded models
- NO, NC or NO+NC, NPN or PNP output and programmable versions

## MULTIVOLTAGE SENSORS

#### V3/V\*2

- Processing and Packaging machinery
- Assembling and conveyor lines
- Metal working and machine tools



AC sensors with M12, M18 and M30 housing (V\*2 series). AC/DC sensors with M8, M12, M18 and M30 housing (V3 series).

- Shielded and unshielded models
- V\*2 series available with standard distance
- V3 series available with enhanced distance
- V3 series models protected against short circuits in AC and DC

## HIGH PERFORMANCE SENSORS

#### FM/PF

- Processing machines
- Metal working
- Washdown applications
- Application with increased temperature range requirements



From M8 to M30 housing. AISI316L housing full metal body (FM series). (M8-M30) Designed for washdown applications (PF series). (M12-M18)

- Enhanced distance
- FM series: high resistance to impact on the sensors' head (up to IK10 for M30 models)
- PF series: working temperature range -40°C...+80°C and -25°C...+110°C
- ECOLAB and Diversy certifications (PF series) protection degree

# CAPACITIVE SENSORS

## CYLINDRICAL AND CUBIC SENSORS

#### C12/C18/C30

- Level detection
- Detection of composite materials



From M12 to M30. Detection of all types of materials: solids, liquids, powders.

- Plastic and metal housing
- Sensitivity up to 25 mm
- High immunity to EM noises

#### CQ50/CQ55

- Level detection
- Detection of composite materials



CQ50: flat sensor with fixed working distance. CQ55: compact housing with sensitivity adjustment.

- CQ50: designed for civil application. NPN or PNP, NO or NC
- CQ55: designed for industrial application. Enhanced immunity to EM noises

# CAPACITIVE SENSORS FOR HARSH ENV.

## FOOD SENSORS

### APPLICATIONS

#### C18/C30 FT

- Liquid or powder level measurement
- Bottle filling control
- Bottle cap control
- Detection of food presence inside package



### HIGHLIGHTS

M18 and M30 capacitive sensors suitable for applications in food and beverage and pharmaceutical industries.

### TECHNICAL DATA

- PTFE housing FDA compliant
- IP69K and IP68 mechanical protection
- ECOLAB certified sensors
- IO-Link communication
- High EMC immunity

# ULTRASONIC SENSOR

## TUBULAR SENSORS

#### UK1/UK6

- Solar energy
- Wood and glass
- Agriculture
- Zootechnics



M18 ultrasonic sensors, with both standard or short body (where application ask for a limited installation space).

- Sensing distance from 300 mm to 2200 mm
- Plastic housing models and stainless steel models
- PNP, NPN, Analogue (current or voltage), IO-Link outputs, double digital or mixed outputs (standard)
- Adjustment via Teach-in button (standard body) or via cable (short body)
- M12 plug and cable output
- IP67 protection degree

#### UT1B/UT2F/UT5L

- Level detection within tanks and silos
- Agriculture



M30 ultrasonic sensors, from ø30 mm transducer to large front transducer for longer detection distances.

- Sensing distance from 3500 mm to 8000 mm
- Plastic housing models and stainless steel models
- PNP, NPN, Analogue (current or voltage), IO-Link outputs, double digital or mixed outputs
- Models with remote Teach-in and models with the Teach-in button
- M12 plug and cable output;
- IP67 protection degree

#### US18-PA/PR

- Automatic machines
- Assembly lines
- Packaging machines

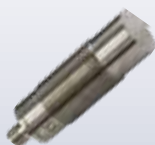


US18-PA/PR series guarantees a small blind zone providing a wide operating range, are available in two different barrel housings with discrete or analog output.

- Sensing distance 30...300 mm
- Analog model resolution: 0.5 mm (SLOW mode), 1 mm (FAST mode)
- M18 tubular plastic housing with axial and right angle sensing
- Discrete bipolar output (1 NPN and 1 PNP) or with 4-20 mA or 0-10 V analog output
- Models with remote teaching and models with the Teach-in button
- M12 plug
- IP67, NEMA 6-P

#### UFT

- Food industry
- Pharma industry
- Chemical industry



M30 full metal ultrasonic sensors for extreme applications (food and pharma, chemical).

- Sensing distance: 2500 mm
- Full metal housing AISI316L stainless steel
- IO-Link adjustment
- PNP, NPN, Analogue (current and voltage) output
- M12 plug output
- IP69K protection degree
- ECOLAB certification

# ULTRASONIC SENSORS

## CUBIC M18 SENSORS

### APPLICATIONS

#### US18/PL

- Packaging machines
- Beverage & Bottling
- Automotive assembling line
- Pharma industry



### HIGHLIGHTS

US18-PL series provides a wide operating range and fast operating frequency, they are available in cubic style with M18 mounting and discrete outputs.

### TECHNICAL DATA

- Sensing distance 50...500 mm
- Repeatability: 0.7 mm
- Cubic housing with M18 right angle mounting
- Discrete PNP or NPN output
- Models with remote teaching and models with the teach-in button
- M12 plug
- IP67, NEMA 6-P rated

#### UQ1

- Solar energy
- Wood and glass
- Agriculture
- Zootechnics



M18 thread + cubic housing ultrasonic sensor with both the advantages of a cylindrical and a cubic sensor for the mounting conditions.

- 300 mm to 1200 mm
- Plastic housing
- PNP, NPN, Analogue (current or voltage), IO-Link outputs, double digital or mixed outputs (standard body)
- Adjustment via Teach-in button
- M12 plug in
- IP67 protection degree

#### FC8

- Packaging and labeling lines
- Detection transparent, opaque and metallic labels
- Double sheet detection



Ultrasonic slot sensors with high switching frequency to detect any type of labels opaque and transparent.

- High resolution up label 2 mm with gap 2 mm
- High switching frequency 1500 Hz
- Dynamic and static teach-in via cable or by buttons
- Aluminium housing
- NPN and PNP output with M8 4-poles
- Rugged and sturdy aluminium housing

#### SRX

- Detection of transparent, opaque, or metallic ink labels
- Double sheet detection
- Adhesive surface detection



SRX-3 introduces state-of-the-art ultrasonic technology able to detect any type of label dispensed on any type of roll support, allowing seamless detection of transparent label on clear roll support or to check single/double clear films.

- Dynamic or static teach models
- Slot size 3 mm
- High resolution up to 2 mm label gap
- M8 connector with PNP or NPN output
- M12 connector with PNP/NPN output and external Teach-in
- Rugged and sturdy aluminium housing

## FORK SENSORS

## ACCESSORIES FOR ALL TYPE OF SENSORS



### MOUNTING

Mounting brackets with different shapes and materials. Optics adapters like shutters, slits, focal lenses and beam adapters.

- Brackets for cylindrical sensors
- Brackets for rectangular sensors
- Shutters, right angle beam adapters and focalizer for optical sensor



### CONNECTION

M8 and M12 standard connectors and cables available with different lengths, materials, poles numbers and configuration.

- M8 and M12 with PVC or PUR cable
- M8 and M12 field attachable connectors
- IP67 and IP69K protection degree
- Models from -40°C to 105°C
- Sensor tester with digital and analogue output



# P R O T E C T I O N





# SAFETY AND GUIDANCE

## **Safety devices are mandatory for operator protection in potentially hazardous areas, plants or machinery**

Safety optoelectronic devices are safety light barriers, curtains, grids, light beams and control units, used for the detection of finger, hand, arm, body, or presence detection in fixed applications.

Safety laser scanners are suitable for configurable area protection or even dynamic applications, in particular robotic cells and automated guided vehicles (AGV).

Safety accessories include cables, connection box, brackets, IP69K protection tubes, lens shield, laser pointer, test pieces.

Manufacturing industry applications include automotive and electronics plants, especially robotic cells; food & beverage, pharmaceutical, chemical goods processing and packaging machines; any machinery used in woodworking, metalworking, textile, ceramic, glass, stones, paper, etc.

Logistics applications include automated material handling, conveyors, storage and retrieval, automated warehouses, and AGV.

Furthermore, logistics applications are integrated by Lidars for guidance and navigation, and encoders for vehicle speed measurement.

## **Datasensing safety and guidance product range**



**SAFETY  
LIGHT CURTAIN**



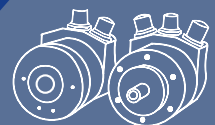
**SAFETY  
LASER SCANNER**



**ACCESSORIES**



**LIDAR**



**ENCODER**

# SAFETY LIGHT CURTAINS

## APPLICATIONS

### SH4

- Automatic machinery
- Material handling
- Processing & packaging machines
- Automotive, metalworking, presses
- Palletizers
- Automatic assembly machines and lines



## HIGHLIGHTS

A complete family of state-of-the-art safety light curtains, covering all resolutions and functionality levels. From basic to wireless programmable models, all needs covered.

## TECHNICAL DATA

- Safety Type 4 (Pl=e, SIL3)
- Resolution Finger 14 mm; Hand 30mm; Body 2, 3, 4 beams
- Zero dead zone on all finger/hand resolution models
- Controlled heights from 300 to 2250 mm (n x 150 mm)
- Operating distance: Finger 10 m; Hand 20 m; Body 70 m
- Basic models: Auto restart, alignment
- Standard models: Auto/Manual restart, EDM, 2 signals T/L muting, DIP-SW configurable
- Advanced models: Partial muting, 4-signals T muting fixed and floating Blanking, wireless diagnostic and programming

### SH4 ACTIVE/PASSIVE

- Automatic machinery
- Material handling
- Processing & packaging machines
- Palletizers



Retroreflector version of SH4 series, with base, standard and advanced functionality, with only one side active, to reduce installation costs in body protection applications.

- Safety Type 4 (Pl=e, SIL3)
- Resolution Body 2, 3, 4 beams
- Controlled heights: 500/800/900/1200 mm
- Operating distance: 2/4 beams: 8 m; 3 beams: 6.5 m
- Basic models: Auto restart, alignment
- Standard models: Auto/Manual restart, EDM, 2 signals T/L muting, DIP-SW configurable
- Advanced models: Partial muting, wireless diagnostic and programming, 4-signals T muting

## SH4 SAFETY LIGHT CURTAIN HIGHLIGHTS



### Performant

- Improved **optical efficiency** and **alignment stability**
- **Extended operating range:** up to 10 m for 14 mm resolution, 20 m for 30 mm resolution and 70 m for 2, 3 and 4 beams models
- **Pigtail with standard M12 connectors**
- **Same profile and brackets for all models**
- **Standard cables**
- Entire pair in same package with brackets



### Complete

- **Four different functionality levels** for any application and customer preferences
- **Finger, Hand and Body protection** all in the same line
- **Emitter and receiver** or **Active and Passive operating principle**
- **Monitored height** up to 2250 mm
- **Zero dead zone**
- **Cascadability** up to three units



### Easy to use

- **Multiple aids for alignment:** alignment mode, intensity level LEDs
- **Innovative integrated LED pointer** for body models
- Integrated laser pointer for finger/hand models



### Resistant

- **Extended operating temperature range** (-30 to +55°C / -22 to 131 °F)
- **IP67** to sustain heavy cleaning
- **High resistance** to vibrations and shocks (class 3M7)

### Flexible



- **Mono- and bi-directional muting** with two or four independent muting signals, for any muting application
- **Partial muting programmable** at beam level
- **New Dynamic partial muting**, for improved safety when material has different heights
- **Fixed or floating blanking**, also in combination with muting



### Wireless

- **Advanced models monitor and program** without cables or interfaces
- **Smartphone, tablet or PC via Wi-Fi** for point-to-point connectivity
- **Free SH4 Designer App** available for Windows, iOS and Android



# SAFETY LIGHT CURTAINS

## APPLICATIONS

### SG2/SG4

- Automatic machinery
- Metalworking, Woodworking
- Manufacturing (textile, ceramics, etc)
- Material handling, assembly lines



## HIGHLIGHTS

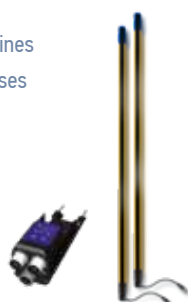
Finger and hand presence safety detection with basic functions  
High reliability, easy installation and alignment, cost effective solution for simple protection needs.

## TECHNICAL DATA

- Safety Type 2 (Pl=c, SIL1); Safety Type 4 (Pl=e, SIL3)
- Resolution Finger 14 mm; Hand 30mm; Pres. 50/90 mm
- Controlled heights from 150 to 1800 mm (n x 150 mm)
- Operating distance: Finger 6 m; Hand 19 m; Pres. 9/19 m
- Auto/Manual restart; EDM; Anti-interference coding
- Easy and cost effective standard M12 5-pole connector

### SG4 EXTENDED

- Processing and packaging machines
- Automotive, metalworking, presses
- Manufacturing assembly lines



Finger and hand safety detection with possibility of configuration of advanced functions through pushbuttons or Graphic User Interface.  
Extended flexibility that fits a diverse range of machine needs, combined with possibility of Ethernet connection for remote monitoring.

- Programmable Safety Light Curtain Type 4 (Pl=e, SIL3)
- Resolution: Finger 14 mm; Hand 30 mm
- Controlled heights from 300 to 1800 mm (n x 150 mm)
- Operating distance: Finger 7 m; Hand 20 m
- Compact; No dead zone; up to 3 cascable units
- Fully programmable: Auto/Man restart, EDM, coding, Muting (T/L, total/partial, with/without timeout, etc.)
- Fixed/floating blanking; reduced resolution function
- Ethernet Port, SG Dongle and Graphic User Interface

### SG BODY REFLECTOR

- Palletizers/depalletizers
- Conveyor lines
- Automated warehousing
- Manufacturing lines

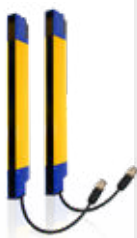


Body safety protection and perimeter access control  
High reliability, easy installation and alignment, cost effectiveness.

- 35 x 40 mm standard compact profile
- 2, 3 or 4 beams for Body protection and access control
- Controlled heights of 500, 800, 900, 1200 mm
- Long operating distance up to 50 m
- Dip-switch configuration of Auto/Man, EDM, Coding
- Muting version with L or T integrated arms and lamp
- Easy and cost effective standard M12 connectors

### SLIM

- Automatic assembly machines & lines
- Primary packaging machinery
- Cutting machinery
- Automatic and semi-automatic quality inspection
- Material handling machinery



Ultra-compact safety light curtain with finger and hand resolution for applications where space saving and mechanical flexibility is a must.

- Safety Type 2 (Pl=c, SIL1); Safety Type 4 (Pl=e, SIL3)
- Resolution: 14/24/34 mm
- Protected height: 150, 210, 270 ... 1200 mm (with 30 mm steps)
- Operating distance: 0.2 ... 6 m
- Outputs: 2 PNP; Output current: 0.3 A max / each output
- Mechanical protection: IP65
- Restart: Manual/Automatic
- Other functions: External Device Monitoring (EDM)

### SG4-H

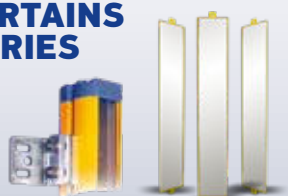
- Liquid filling machines
- Powder filling machines
- Closing and cap sealing machines



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.

- Safety Type 4 (Pl=e, SIL3);
- Resolution: 14 mm
- Protected height: 150/300/450 mm
- Operating distance: 0.2 ... 6m
- Outputs: 2 PNP; Output current: 0.5 A max/each output
- Mechanical protection: IP69K
- Restart: Automatic

### LIGHT CURTAINS ACCESSORIES



Wide range of interfaces and mechanical accessories for mounting and protecting light curtains. Dedicated accessories for quick installation of muting sensors.

- Relay interfaces
- Muting arms
- Protective stands
- Adjustable mirrors stands
- IP69K protections
- Laser pointer



# SAFETY LASER SCANNERS

## APPLICATIONS

### SLS

- Processing machines
- Metal working
- Food and beverage applications
- Application with increased temperature range requirements



## HIGHLIGHTS

LASER SENTINEL is the innovative solution for safe area protection in a large variety of applications in automation and intralogistic industries. It offers a complete and flexible solution for the safeguard of robotic cells, automated guided vehicles and general machinery.

## TECHNICAL DATA

- Type 3 / PL d / SIL 2
- Max. distance: up to 5.5 m (safe) for 70 mm resolution
- Opening angle: 275°
- Minimum response time: 62 ms
- STANDALONE version: - pigtail with M12 connector - up to 6 switchable zone sets
- MASTER-SLAVE version: - M12 connector - rotating connectors for programming and connection to slaves- safe communication between up to 4 scanners - up to 70 switchable zone sets
- Programming, monitoring and measurement data: Ethernet
- Dimensions (w,d,h): 102 , 112.5 , 152 mm
- Auto/manual restart, EDM, partial dynamic muting, override, speed measurement, shut off
- Fast replacement

### SLS PROFISAFE

- Processing machines
- Manufacturing processes protection
- Intralogistic lines protection
- Automated Guided Vehicles (AGV)



LASER SENTINEL is the innovative solution for safe area protection in a large variety of applications in automation and intralogistic industries. It offers a complete and flexible solution for the safeguard of robotic cells, automated guided vehicles and general machinery with Profinet and Profisafe fieldbus integration

- Type 3 / PL d / SIL 2
- Max. distance: up to 5.5 m (safe) for 70 mm resolution
- Opening angle: 275°
- Minimum response time: up to 86 ms
- Switchable zone sets : up to 70
- Simultaneous safety/warning areas : Up to 8
- Programming, monitoring and measurement data: Ethernet
- Fieldbus integration :Profinet and Profisafe
- Dimensions (w,d,h): 112 x 120 x 160 mm
- Auto/manual restart, EDM, partial dynamic muting, override, shut off, dynamic reference points
- Fast replacement

### LASER SCANNER ACCESSORIES



Mounting and protection brackets, together with peripheral modules and interfaces to expand the devices application range.

- Adjusting bracket
- Protective bracket
- Memory module
- Optic window
- Relay interfaces
- Window cleaning-kit

## SLS HIGHLIGHTS

### Complete functionality and flexibility



- Up to 70 programmable zone set - 4 contemporary monitored zone ( 8 for fieldbus model )
- Reference point / dynamic reference point / Reference point matching functions
- Dynamic, partial, total muting; override function
- EDM, shut-off, antitampering functions
- Zone set switching by I/O and/or Encoders Input

### Ease of setup and use



- DL Sentinel programming and monitoring user interface
- High resolution display for immediate feedback about SLS Status and zone where the detection occurs
- Fast replacement in field thanks to backup memory
- Master-remote units simply connection by unique cable

### Industrial connectivity



- Ethernet communication interface with TCP/IP or UDP protocol for DL sentinel and monitoring connection
- Up to 3 OSSD (safety output) and up to 2 warning output contemporary available
- Up to 18 configurable digital I/O
- Industrial fieldbus connection in Profinet and Profisafe

### Excellent performance



- 5.5m x 275° safety zone operating range
- 40m x 275° warning zone operating range
- 30/40/50/70/150 mm detection capability
- Angular resolution 0,1°
- Response time min 62ms scalable up to 5000 ms
- Performance level Pld (EN ISO 13849-1); SIL 2 (IEC 61508), Type 3 (EN61496-1)



### Industrial strength

- IP65 industrial grade design for harsh environments
- Operating temperature range -10°C to 50°C / 14°F to 122°C



## APPLICATIONS

### LGS-N50

- Automated Guided Vehicles (AGV)
- Laser Guided Vehicles (LGV)
- Automated Guided Forklifts (AGF)
- Autonomous Mobile Robot (AMR)



## HIGHLIGHTS

Lidar Guidance Scanner is a compact, rugged navigation Lidar based on time-of-flight (TOF) infrared laser technology for the market of Automated and Laser Guided Vehicles or Forklifts, used for intralogistics and manufacturing.

## TECHNICAL DATA

- SoF technology on infrared laser
- 2D Measurement data for natural or marker navigation
- 360° measurement for all-round scanning
- Differentiation between natural objects and reflectors
- Scanning rate 10/15/20/25 Hz
- Measurement rate 60000 points/s
- Measurement range: 0.2 - 2 m with 1.8% reflectivity / 0.2 - 15 m with 10% reflectivity / 0.2 - 50 m with 80% reflectivity
- Dimensions (w,d,h): 95 x 97 x 116 mm
- Communication interface: IEEE 802.3u 100 Mbps Ethernet
- Configuration software: Any web browser (configuration through web server)

### LGS-N25

- Automated Guided Vehicles (AGV)
- Automated Guided Forklifts (AGF)
- Autonomous Mobile Robot (AMR)
- Agriculture machine, access monitoring



LGS-N25 is a miniaturized rugged navigation Lidar based on time-of-flight (TOF) infrared laser technology for the market of Automated and Laser Guided Vehicles or Forklifts, used for intralogistics, manufacturing, agriculture and work equipment

- ToF technology on infrared laser W
- 2D Measurement data for natural or marker navigation
- Available for outdoor
- 360° measurement for all-round scanning
- Scanning rate 10/15/25 Hz
- Angular resolution : up to 0,25°
- Scan Rate : up to 25 Hz
- Measurement range: 0.1 - 5 m with 2 % reflectivity / 0.1 - 10 m with 10% reflectivity / 0.1 - 25 m with 80% reflectivity
- Dimensions (w,d,h): 65 x 65 x 70 mm
- Communication interface: IEEE 802.3u 100 Mbps Ethernet
- Configuration software: Any web browser (configuration through web server)

### LGS-A10

- Automated Guided Vehicles (AGV)
- Automated Guided Forklifts (AGF)
- Autonomous Mobile Robot (AMR)
- Agriculture machine, access control



LGS-A10 is a miniaturized rugged collision avoidance Lidar based on time-of-flight (TOF) infrared laser technology used for the market of Automated and Laser Guided Vehicles or Forklifts, intralogistics, manufacturing, agriculture and work equipment and more.

- ToF technology on infrared laser
- 2D Measurement data for natural or marker navigation
- Available for outdoor
- 360° measurement for all-round scanning
- Scanning rate 10/15/25 Hz
- Angular resolution : up to 0,25°
- Response time: up to 40 ms
- Up to 3 simultaneous outputs
- Up to 15 different zone set
- Measurement range: 0.1 - 5 m with 2 % reflectivity / 0.1 - 10 m with > 10% reflectivity
- Dimensions (w,d,h): 65 x 65 x 70 mm
- Communication interface: IEEE 802.3u 100 Mbps Ethernet
- Configuration software: LGS-PRO User Interface

# ENCODER

## ENC

- Motion control
- Position and length measurement



Encoder standard industrial line, very effective about price/ performance ratio, high resolution and accuracy. Available with integrated Fieldbus interfaces, offering the highest resolution and accuracy for precision motion control and length measurement.

- AMT series multiturn absolute serie
- AST series absolute single turn series
- ENC41 low cost and effective incremental series
- ENC58 easy motion control incremental series
- OEK-4 easy belt motion control
- IEP58 programmable encoder series
- MW metric wheels up to 500 mm / 10000 PPR = 0.05 mm per pulse



## DATALOGIC & OVERSONIC

Datalogic owns a minority stake in Oversonic Robotics, the innovative software company that is a leader in cognitive computing systems for robotics. The investment is in line with the innovative and technological DNA that has always characterized the Datalogic Group. It is aimed at optimizing productivity and always ensuring worker safety.

Datalogic is committed to investing in cutting-edge industrial innovation, and supports Oversonic Robotics on R&D, Sales, and Marketing. Oversonic Robotics has developed RoBee, the first humanoid robot certified to support work in manufacturing facilities of companies with an Industry 5.0 perspective.

RoBee can easily perform tasks that could otherwise be detrimental to the health of human workers, both physically and mentally. In particular, the RoBee cognitive humanoid robot will provide added value to the manufacturing, intralogistics, and healthcare industries. It combines several technologies, including Datalogic's Safety Laser Scanner, Sensors and Machine Vision systems, to perform complex tasks.

RoBee can move and interact with operators in complete safety while monitoring the environment and ensuring that the assigned path is free of obstacles. While continuing our development in Artificial Intelligence, we are excited to support the growth of Oversonic Robotics software company, in line with our strategy of investing in Industrial Automation and offering cutting-edge solutions to our customers.

For any further information about Oversonic Robotics and RoBee you can contact Datalogic and Datasensing Sales.



## Body

Weight: Up to 120 kg  
 Height: 135 – 200 cm  
 Footprint: 65 cm  
 Reach: 80 cm  
 Payload: 5 kg per arm  
 Transport: up to 50 kg with a cart  
 Total Degrees of Freedom: 39

## Supported end effectors

Mechanical gripper  
 Vacuum gripper  
 Humanoid hand  
 Others

## Manipulation

Accuracy: 2 mm (cognitive) | 1 mm (deterministic) | 0,5 mm (isola)  
 Repeatability: 0,5 mm

## Navigation

Maximum speed: 1.2 m/s  
 Maximum slope: 8%  
 Differential Drive  
 Omnidirectional Drive  
 Sensors obstacle detection and safety (SIL 3)  
 Environment: indoor and outdoor

## Operating T range

5°C / 50°C

## Oversonic

Oversonic Robotics Srl Benefit Corporation is a software company that designs and builds cognitive computing systems, with a particular focus on robotics. The company was founded in 2020 in Besana Brianza (MB), where it has set up its technology and production center and has since expanded to two other locations: a representative office in Milan and an operational one in Rovereto (Trento), within the Polo Meccatronica of Trentino Sviluppo.

## Remote guidance

Oculus Rift  
 Teach pendant

## Connectivity

WiFi 6  
 5G ready

## Self-Charging

Battery autonomy: up to 8 hours  
 Inductive: max 2 hours

## Integrated sensors

Motor controls: power/force feedback  
 Navigation: 3 cameras  
 Vision & video streaming: 4 cameras

## Audio

Speakers included  
 Cardioid microphone included

## GDPR

Compliant

## Predictive Maintenance & Data Analysis

Through OR console

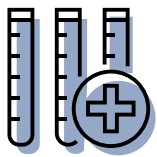
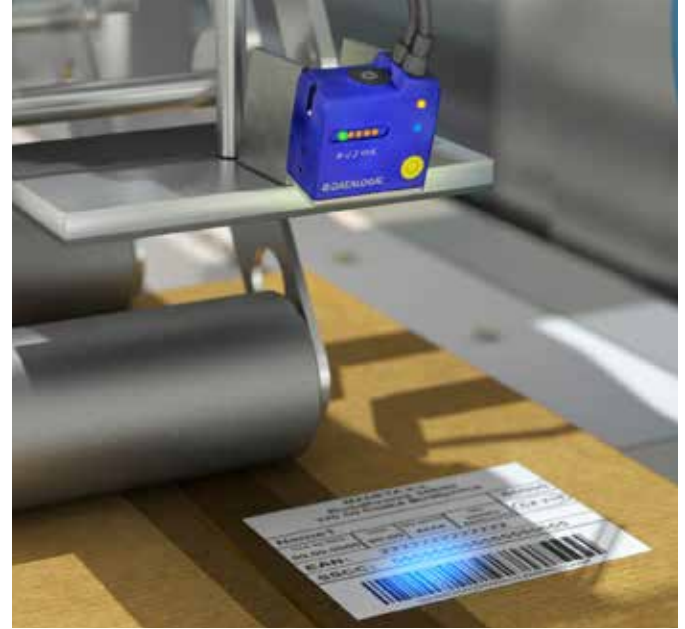


[oversonicrobotics.com](http://oversonicrobotics.com)  
[info@oversonicrobotics.com](mailto:info@oversonicrobotics.com)



Direttiva macchine 2006/42/CE - D.LGS. 17/2010  
 EMC-EMI Compliancy  
 IPX4 Protection





### OEM MACHINE

*Clinical Lab, vials and biomedical machine*

Matrix 120 is excellent for OEM machine integration and in healthcare applications like vials identification, chemical and biomedical analysis machine.



### PRINT & APPLY

*Label verification*

Thanks to its reduced dimensions, Matrix 120 can be easily mounted directly onto label applicators and robotic arms, allowing it double check the applied label and detect errors immediately.

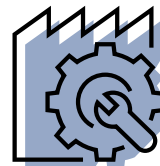
# DATALOGIC SOLUTIONS



### AUTOMOTIVE

*DPM code validation after marking, Parts and assembly traceability*

Complete solutions for Direct Part Marking (DPM) reading, integration of laser marking systems that etch barcodes directly on parts with Matrix 220 or Matrix 320 used for DPM code/text identification and item traceability.



### SHOPFLOOR AND FACTORY AUTOMATION

*Work in progress control tracking and trace, high speed applications*

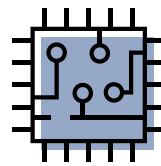
PowerScan 9600, the most reliable range-topping handheld scanner for traceability in shop floor as well as warehouse applications, equipped with wireless charging technology drastically reducing TCO





**FOOD & BEVERAGE -  
PHARMACEUTICAL**  
*Primary packaging*

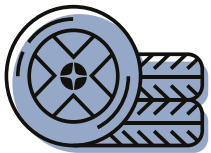
Reading barcodes on round fastmoving objects with random orientation is a challenging task that can be solved using an array of Matrix 220 readers.



**ELECTRONICS**  
*PCB, components and parts  
traceability*

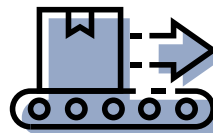
Parts, subassembly and components are continuously tracked by fixed readers like M220 or M320 throughout the production process

**YOU DON'T HAVE TO RESTRICT YOUR POWER OF CHOICE.  
WE HAVE ALL NEEDED TECHNOLOGIES.  
THE BEST SOLUTIONS IS THE ONE TAILORED TO YOUR NEEDS.**



**TIRES**  
*sorting, test and inspection*

STS320 the first-in-class out of the box solution for Tires Industry with outstanding reading performance > 99,9% and W

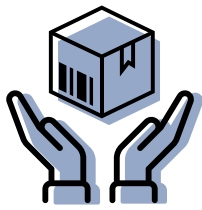


**AUTOMATED  
INTRALOGISTICS**  
*End of line, tote reading,  
secondary packaging, automatic  
order fulfillment and verification*

Blade is the next step beyond intralogistics traceability, to track items to guarantee integrity, user safety, and efficient management of recalls.



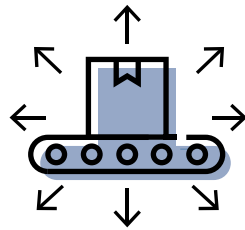




### E-COMMERCE RETAIL LOGISTICS

*Manual sorting, good to person, hands-free, manual order fulfillment*

Perfect for reverse logistics, Hands-free solutions and order fulfillment, Matrix 320 series snappiness and 360 degree visual feedback make e-commerce retail logistic a profitable business.



### DISTRIBUTION CENTER

*Small item sortation, package traceability*

Distribution centers keep products moving with high throughput and quick ROI by relying on top performant industrial barcode readers such as Matrix 320 series.

# DATA LOGIC SOLUTIONS



### BAGGAGE IDENTIFICATION: IMAGING TECHNOLOGY

*baggage tracking & sortation application*

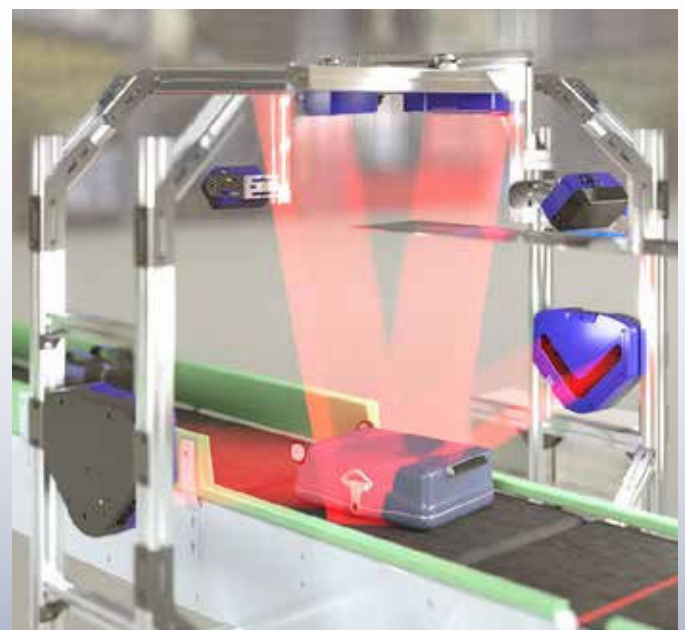
ATR imager-based barcode readers with AV900 provide the highest level of performance even on damaged labels on luggage.



### BAGGAGE IDENTIFICATION: LASER TECHNOLOGY

*baggage tracking & sortation application*

Barcode laser technology with DS8110 and DX8210 represents a cost-effective and reliable solution which is able to guarantee good performance especially on check-in labels.

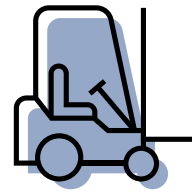




### COMPONENT TRACKING

*Component identification in manufacturing processes*

In the PCB manufacturing process, component identification is crucial: a lot of barcodes need to be identified and have their data collected to ensure efficiency and product quality. PowerScan 9600 DPX is the perfect product for traceability in manufacturing environments.



### PALLET PICKING

*forklift applications*

The Matrix 320 on the approaching forklift efficiently reads labels containing multiple linear or 2D printed codes thanks to the extended depth of field. The Matrix 320 inbuilt Time of Flight sensor is an invaluable new feature, enabling illumination to be activated only when the code is within reading distance.

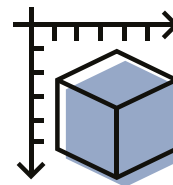
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### HIGH SPEED SORTING

*sorting, field mobility, outbound, parcel detection on belt*

Single or multi-sided scanning tunnels with integrated Datalogic dimensioners, AV7000 linear cameras or laser scanners, identify and sort packages on high speed sorting systems.



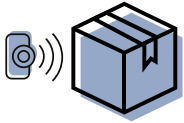
### AUTOMATED SORTING

*inbound, outbound, cross docking*

The core of the automated sorting process is a Datalogic Stationary Industrial Scanner like the AV900, that can identify parcels on sorters running at 2,5 meter per seconds.







### PACKAGING

#### Mark reading for packaging

Mark reading on colored and glossy films can be a complex task in packaging applications. Datasensing offers the highest performance in speed and accuracy with TL46 and the S3N-W, the most accurate and fastest miniaturized sensor on the market.

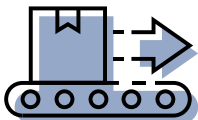


### AUTOMOTIVE

#### Metal part position detection

Inductive sensors are used to detect the position of cams or gear wheel teeth. Thanks to their reliability and high switching frequency, AM series inductive sensors can monitor the various states and positions of a working machine.

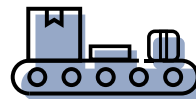
# DATALOGIC SOLUTIONS



### AUTOMATED INTRALOGISTICS

#### Vehicle safety and autonomous navigation

Autonomous vehicles such as AGVs and AMRs are increasingly being used to automate the movement of goods in a flexible way. LGS Lidars and SLS Safety Laser Scanners are used to guide vehicles while avoiding dangerous collisions with operators or other goods or equipment.

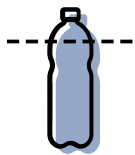


### AUTOMATED SORTING

#### Object detection on conveyors

The wide variety of items that can be sorted on conveyors makes their detection extremely challenging. CR0 polarized area sensors can reliably detect any type of object, including transparent and irregular ones. With only one active unit, the CR0 can be quickly deployed in large installations.

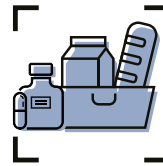




### FOOD & BEVERAGE - PHARMACEUTICAL

#### Level detection

UFT ultrasonic sensors can detect the level of liquids or free flowing materials without direct contact with the targets, regardless of their color or optical properties. Sensor teaching can be done remotely allowing for simple and safe installation even in difficult application scenarios.

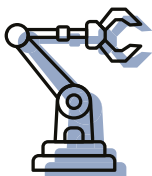


### FOOD & BEVERAGE - PHARMACEUTICAL

#### Presence detection

Thanks to its machine learning-based setup and embedded AI, the Smart-VS is the best-in-class solution for detecting the presence and orientation of objects in any industry, such as packaging, bottling, pharmaceutical, food and beverage, and assembly lines.

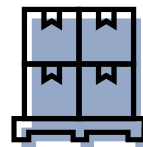
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### SHOPFLOOR AND FACTORY AUTOMATION

#### Machine vision for quality control and robot guidance

Machine Vision is increasingly adopted in factory automation to improve the quality, speed and flexibility of industrial machines. With its modular design, P3x is a powerful vision system packed in a compact, all-in-one smart camera housing.



### PALLETIZING

#### Machinery safeguarding

The extreme flexibility of the SH4 allows the safe passage of material by adapting to its size, direction and speed. For increased safety, the part of the light curtain to be muted can be limited to a fixed area or automatically adjust to the height of the material.



# EASE OF CARE

## **EASEOFMIND: Service programs that meet every need**



Whether you own a small manufacturing plant or manage a large enterprise, know that Datalogic supports you at all stages of product life with a range of customizable Services solutions.

With walkthroughs to ensure every required component is included in your purchase, customized installation to meet your specifications, onsite installation and training, through technical support and product maintenance agreements, Datalogic EASEOF Services means your solution will work at its highest possible efficiency throughout its life.

## **EASEOFBUILD: Personalized solution design and installation**



We work with you to design an installation that works best for your workflow and timing. Datalogic-trained technicians carefully install, configure and commission your solution to ensure optimum performance. During and on completion of installation, we also train your staff in all aspects of system use.

## **EASEOFTRAIN: Maximized benefit through continued training**



Ensure that your operators and onsite IT and maintenance staff are getting the most out of your Datalogic solutions with our customizable training programs. We offer a range of training opportunities: onsite, at our facilities, and at regional training events, or online.

Contact your Datalogic Authorized Reseller for details on upcoming training events and programs.

## **EASEOFPM: Keep equipment in top shape**



Keep your equipment in top operating condition with our onsite preventative maintenance program. PM service not only increases equipment life but ensures that it always operates at peak efficiency and lowest cost. Our Datalogic-trained technicians thoroughly inspect all components, replace parts as needed, and ensure that the entire installation performs to standards.

## **EASEOFSUPPORT: Technical Support that fits your needs**



Get help fast with our 24/7 phone support programs.

Datalogic can tailor a service-level agreement to your specific needs, with worldwide coverage, with add-ons to dispatch a technician should an issue require on-site assistance.

## **EASEOFCARE: Extended service plans that fit your budget**



Your business is not one-size-fits-all, and neither are our equipment service plans. Our EASEOFCARE extended repair subscriptions are flexible, customizable and as responsive as your need. Four convenient offerings cover most every need; if yours are different, let's talk—we can help you with staged spares, wear-parts forwarding, and other solutions that keep your mission-critical operations working as hard as you do.

## **EASEOFDEV: Customized development and management**



Make your Datalogic solution work its hardest for you by using our custom integration and development services. Our experienced developers and Application Engineers will customize your solution, integrating components from different vendors to meet your specific needs, so your solution performs exactly the way you envision.

We work with you through your solution's lifetime to ensure continuing performance through your changing needs.

When it's time to upgrade, we work with you to evaluate where new technology will help you get even better performance, and to ensure that new devices integrate seamlessly with existing solutions.













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