AIRPORTS
Solution Guide

◆DATALOGIC
EMPOWER YOUR VISION
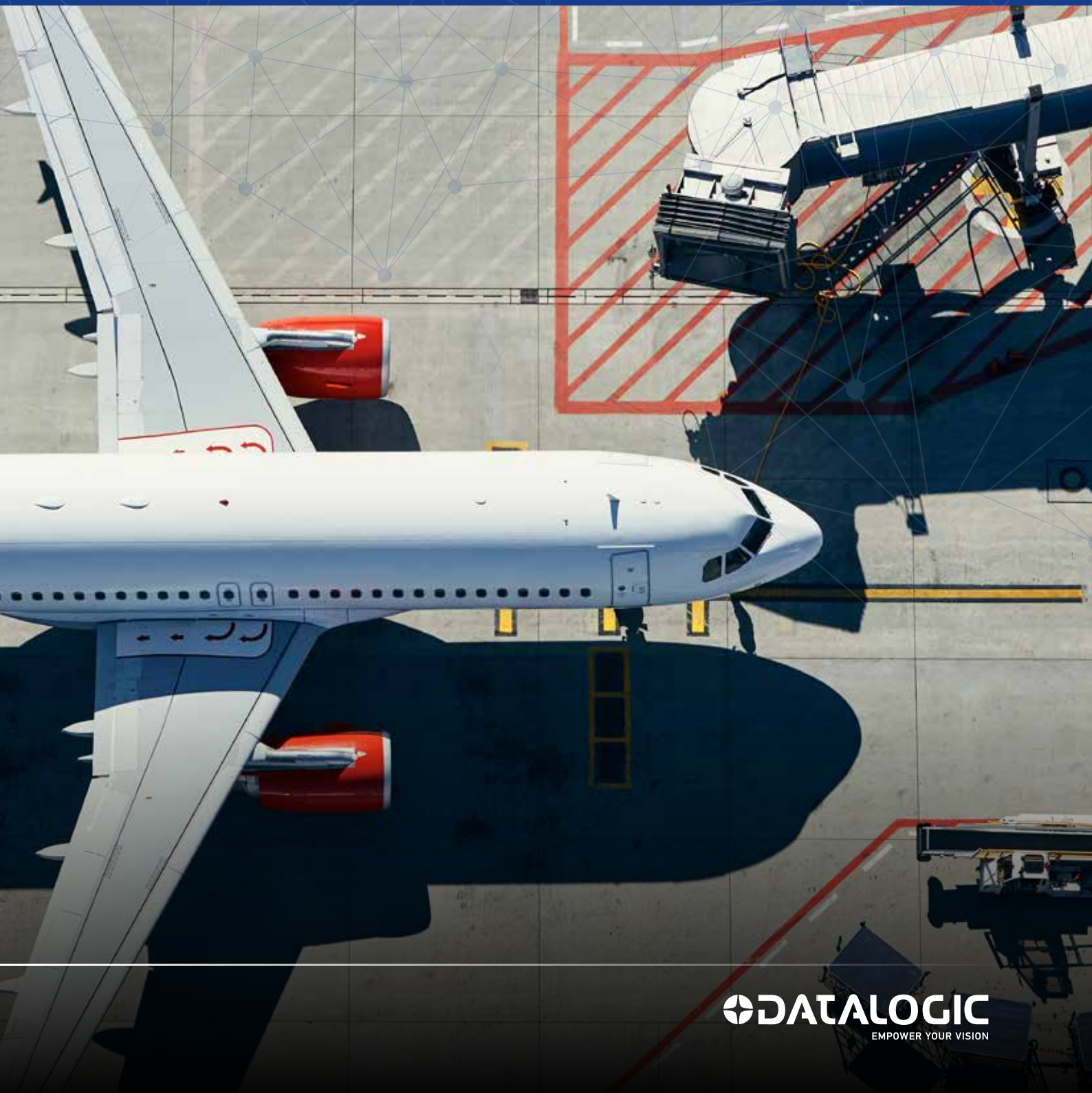
PIONEERING BAGGAGE HANDLING SYSTEMS

Datalogic has been one of IATA's members, that defined the Standard Label used today in Airports (IATA Resolution 740) and has been chosen to define the Achievable Read Rate of a barcode reading system in real conditions (IATA report dated 23rd January1995).

Datalogic has always been a Baggage Handling System (BHS) pioneer: the company installed the first Automatic Reading Station for baggage handling in Europe (**Milan – Linate, 1984**). Since then, over 870 Datalogic reading systems have been installed in more than 200 airports across 5 continents (including Tokyo, Dubai, Hong Kong, Sidney, Paris, London, Kuala Lumpur, Chicago, and Atlanta), guaranteeing a fast, reliable and efficient service. Every day we work with our partners to minimize baggage loss, reduce delivery times, improve accuracy, and increase passenger satisfaction.

Datalogic remains a leader in the airport solutions market, offering breakthrough technologies from laser readers to vision systems.
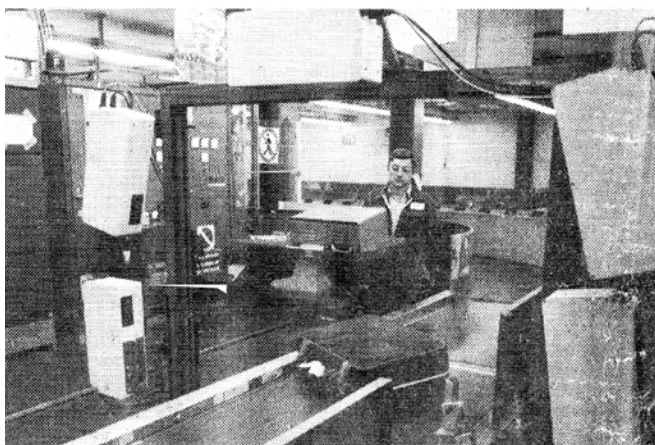
PRODUCTS AT A
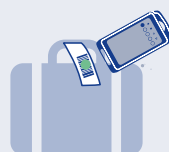
MOBILE COMPUTERS
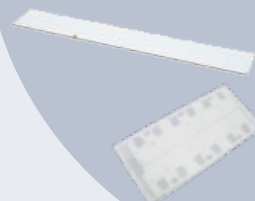Smart, open, rugged palmtop or pistol-grip devices

We p
Custom
center
best

RFID
Easy to install RFID antennas without shielding

DATALOGIC SOLUTIONS FOR AIRPORTS

End-to-end traceability is one of the biggest challenge that airlines, airports and airground handlers are facing; offering a better service to their customers and increasing the passenger satisfaction.

The number of mishandled bags has been reduced year over year, but the related costs are still significant for airlines and airports. The new IATA 753 regulation requires airline members to track baggage from the bag check-in to the passenger pickup. This means airlines and airports need to upgrade their BHS systems by adding more tracking points along every step of the bag's journey.

Datalogic can help airlines and airports to cover the gaps in bag traceability by offering complete solutions meeting the new IATA standard. In addition to handheld readers for bag check-in and mobile computers for the bag reconcilization process, Datalogic offers baggage tracking solutions on automated belts using stationary industrial barcode reading technology . Not only are these solutions easy to implement, they are highly customizable to fit all material handling requirements.

FOR AIRPORTS
GLANCE

ut our
er at the
offering
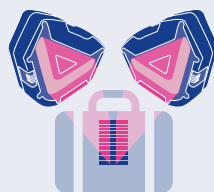quality

HANDHELD SCANNERS

Industrial rate, durable build handheld barcode readers

STATIONARY INDUSTRIAL SCANNERS

LASER: State-of-the-art digital laser scanner with highest depth of field

IMAGER: 5-9 MP camera readers, image output and highest performance on damaged codes

WHERE DATALOGIC
IMPROVES AIRPORT OPERATIONS

BAGGAGE
RECONCILIATION

DATALOGIC

BAGGAGE SORTING

CHECK-IN & SECURITY CONTROL

CHECK-IN & SECURITY CONTROL

1. MANUAL CHECK-IN

Check-in is the first procedure for a passenger. At the check-in desks, the agent validates the flyers' passport, documents, tickets and then registers the luggage by applying a barcode label. Later he scans the barcode label using a Datalogic handheld reader easily integrated into the check-in desk, providing a quick and efficient scan of the luggage label. Several models with different reading technologies, connectivity, ergonomics and design be selected to meet specific needs.
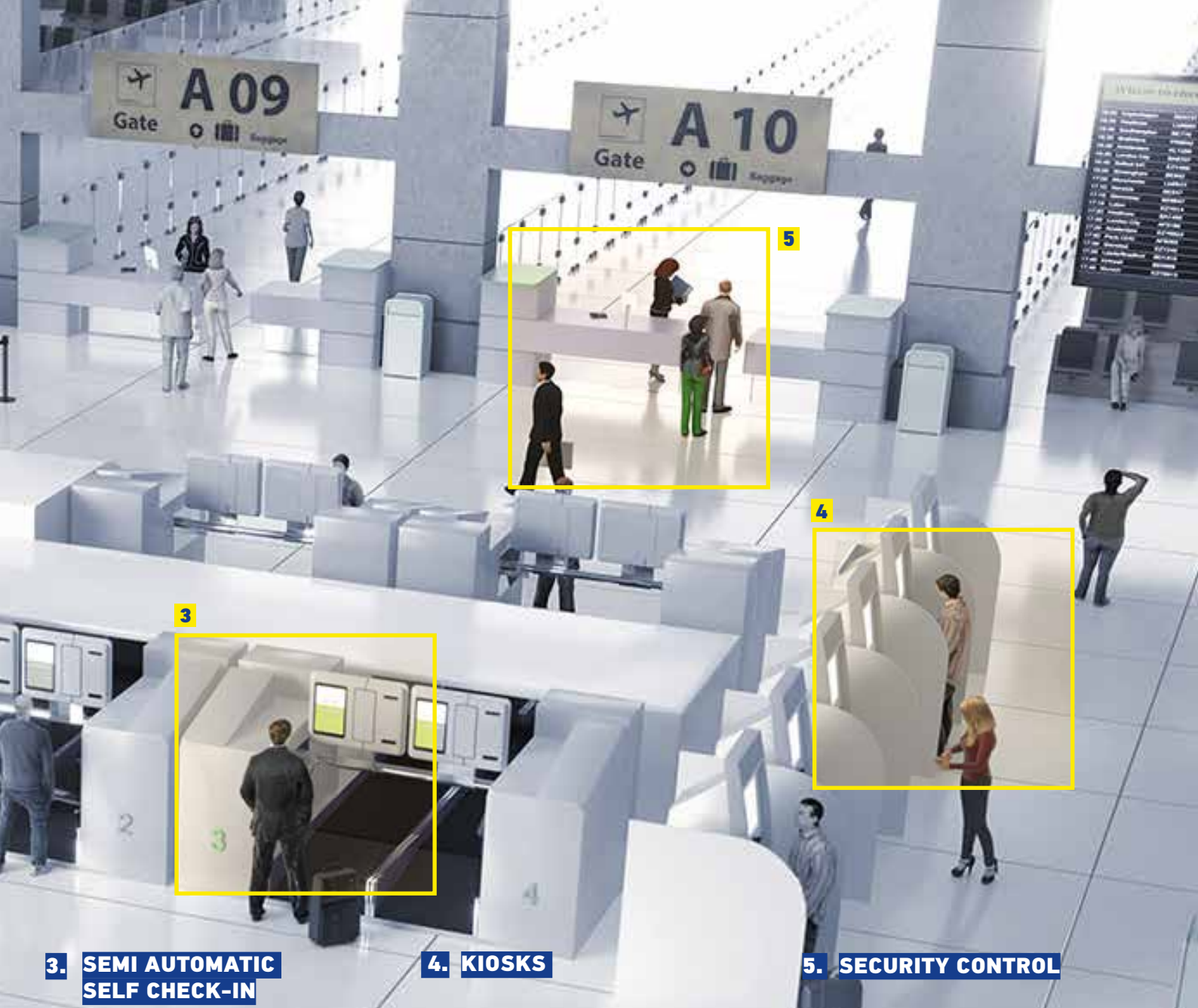
2. AUTOMATIC BAG DROP

Passengers are guided to put their luggage onto a machine belt. The barcode tag on the luggage is automatically identified by stationary industrial scanners (laser or imager) to allow acceptance into the baggage handling system.

DATALOGIC

3. SEMI AUTOMATIC SELF CHECK-IN

Several airlines have a self service kiosks to speed up the check-in and baggage drop-off process, reducing wait times.
A handheld reader is used by passengers during the self check-in process to scan the barcode label attached to their luggage.

4. KIOSKS

With the use of a mobile phone, passengers can now check-in from almost anywhere. By showing the 2D code on the phone screen to the kiosk barcode reader, the boarding pass can be printed.
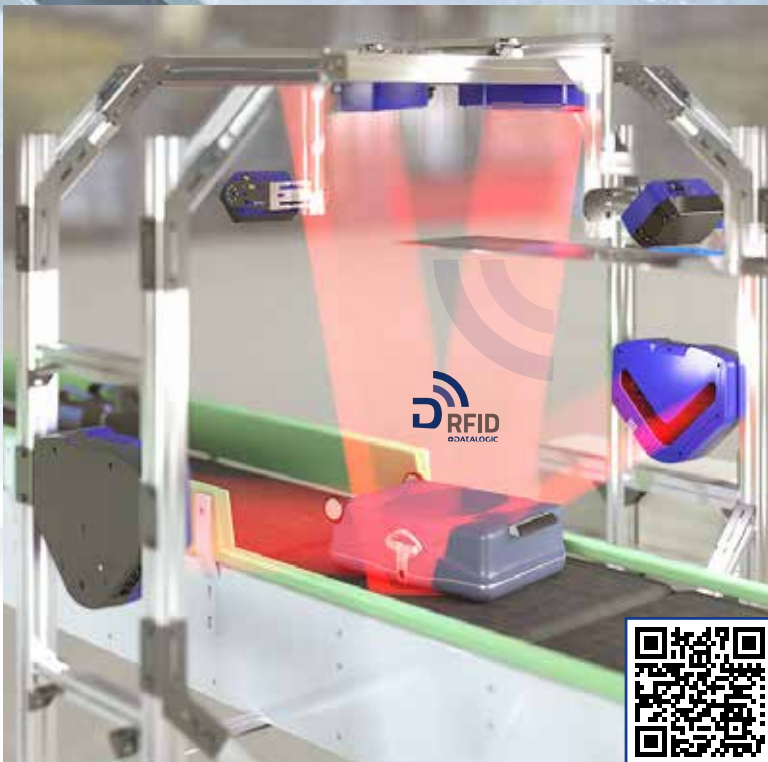
5. SECURITY CONTROL

The boarding pass is manually checked using compact mobile computers during passenger transit from different airports areas.

BAGGAGE SORTING

1. AUTOMATIC BAGGAGE IDENTIFICATION: LASER & RFID TECHNOLOGY

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

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

- **RFID Technology**
  RFID technology 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

DATALOGIC
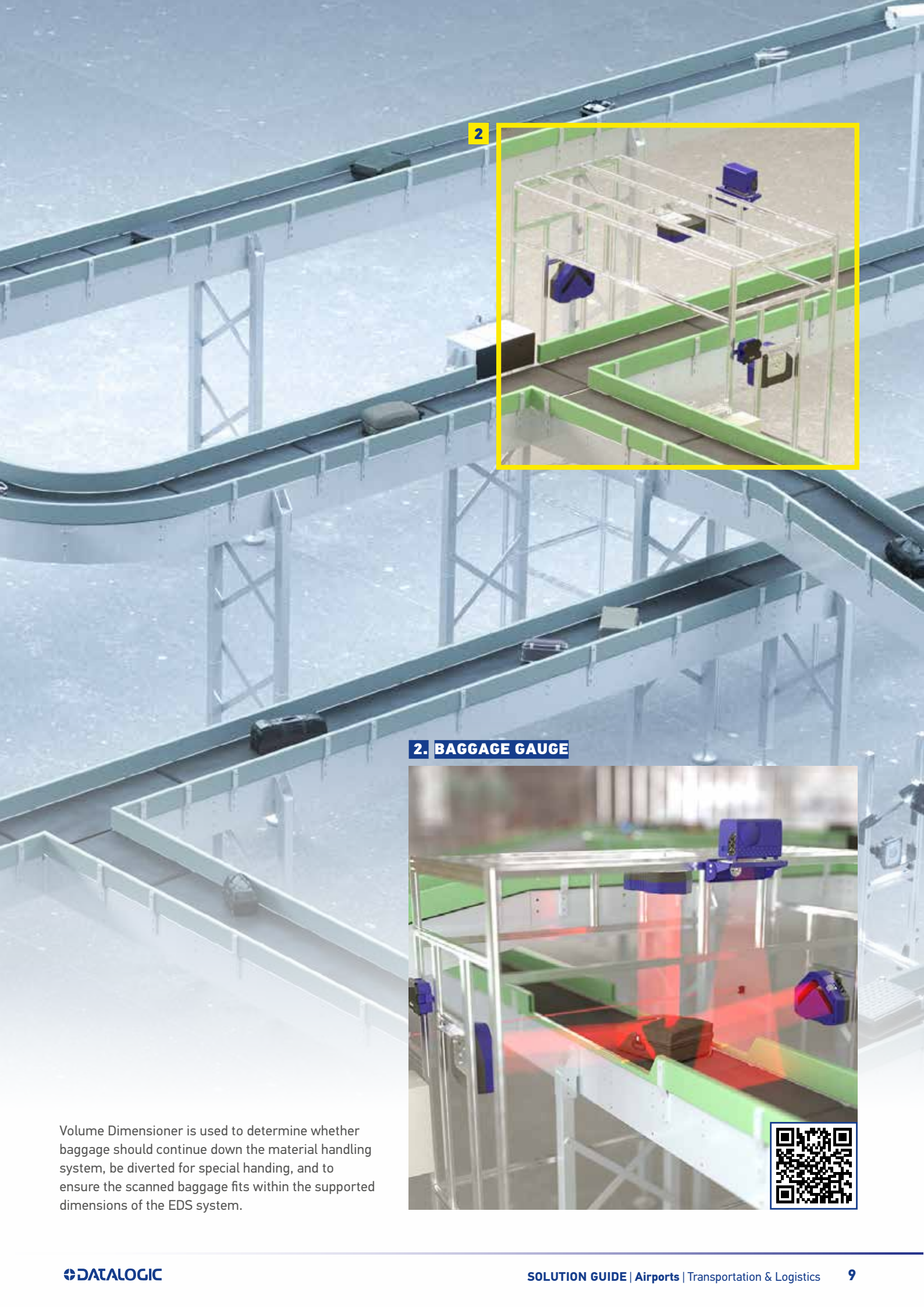
2. BAGGAGE GAUGE
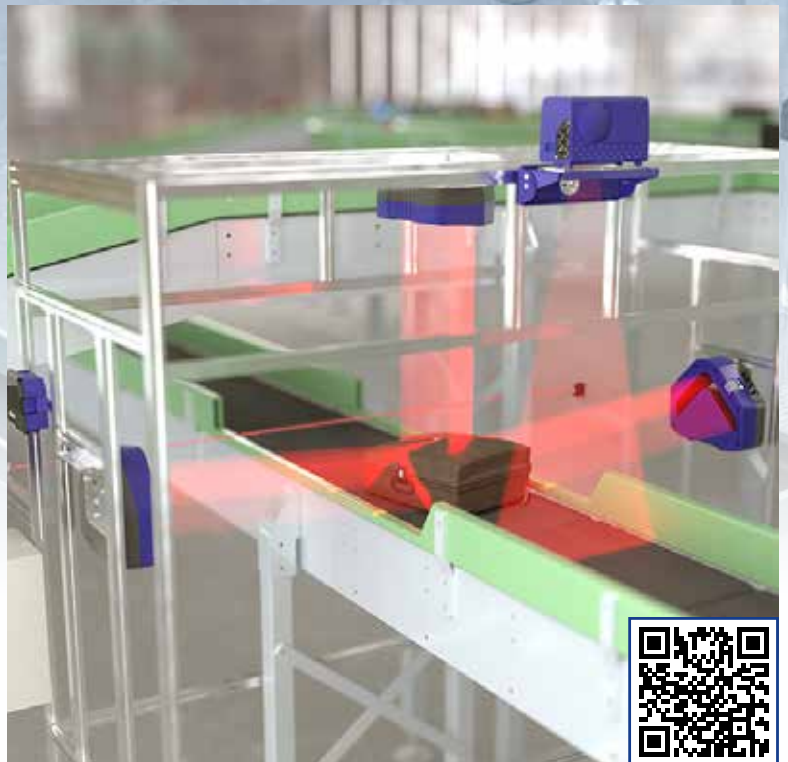
Volume Dimensioner is used to determine whether baggage should continue down the material handling system, be diverted for special handing, and to ensure the scanned baggage fits within the supported dimensions of the EDS system.

BAGGAGE SORTING

3. AUTOMATIC BAGGAGE IDENTIFICATION: IMAGING TECHNOLOGY

ATR imager-based barcode readers provide the highest level of performance even on damaged labels. Camera technology is capable of value added image based functionalities such as supporting OCR and Videocoding. Optional RFID technology helps to provide highest reading rate (not directly visible label) by adding BHS RFID KIT.

4. TRACKING AND CONTROL

Different types of sensors such as photocells and light curtains are used in baggage handling systems for tracking, height control, and positioning. Encoders are used for conveyor speed measurement.
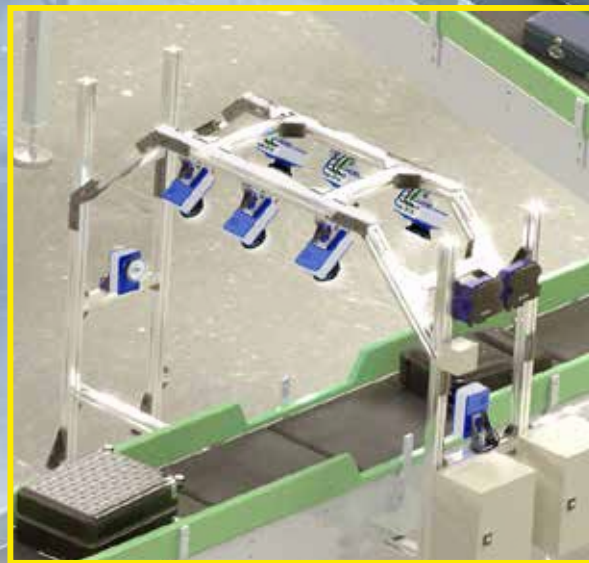
5. BAGGAGE IMAGE CAPTURE
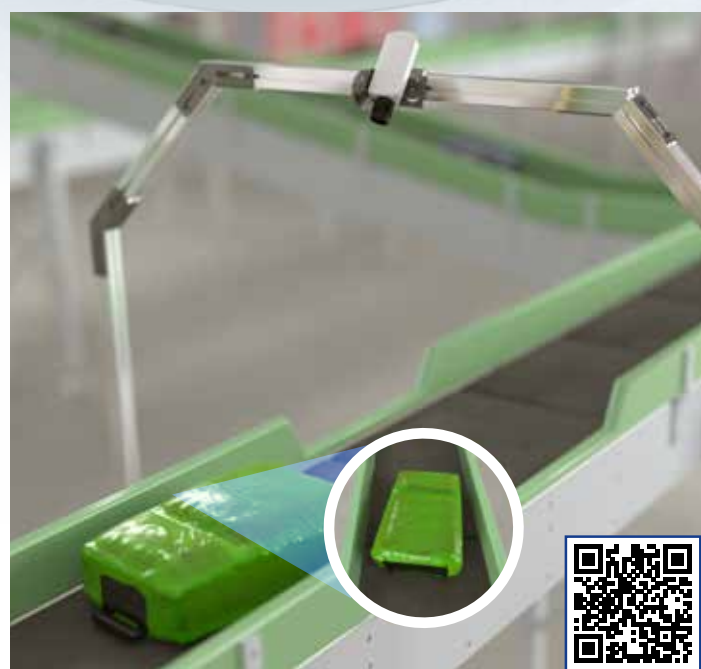
Baggage capture is an optional feature that can be added to any proposed solution. The camera will capture and save a color image into the airport's IT systems for every bag.

6. WEBSENTINEL™ PLUS

Websentinel Plus monitor and statistics package equip you control room with Datalogic's supervisor application. Systems and devices are controlled via a web interface providing performance statistics as well as warning and alerts to ensure your system is always running at its best.

BAGGAGE RECONCILIATION

1

1. RECONCILIATION: HANDHELD SCANNERS

Baggage reconciliation, performed with industrial handheld readers as such as Datalogic's PowerScan imagers ensures that luggage is loaded onto the correct aircraft.

DATALOGIC

2. RECONCILIATION: MOBILE COMPUTERS

Baggage reconciliation can be executed at the baggage pick up sites using Datalogic Mobile Computers such as the Memor 11. It can also provide data on incoming and departing flights.

FOCUS ON AUTOMATIC TAG READER SOLUTIONS

Datalogic s' Automatic Tag Reader (ATR) is the high performance solution in baggage tracking & sortation applications. It responds to the key needs of challenging airport applications asking for excellent throughput, reliability and simple maintenance.

Datalogic ATR offers the simplicity of a standard solution in conjunction with very high performance thanks to the use of best in class barcode readers. Continuous uninterrupted operation is provided through the Datalogic Redundant System (REDS). REDS promptly reacts to any system failure, automatically enabling the backup hardware.

All the products are designed to minimize maintenance activities on site and to allow, in case of failure, a complete automatic backup, without any external interaction. Moreover, complete system remote surveillance and control is guaranteed by Datalogic WebSentinel™, a software application that continuously monitors the reading arrays and, upon the occurrence of faulty conditions, immediately notifies the event, even by e-mail.
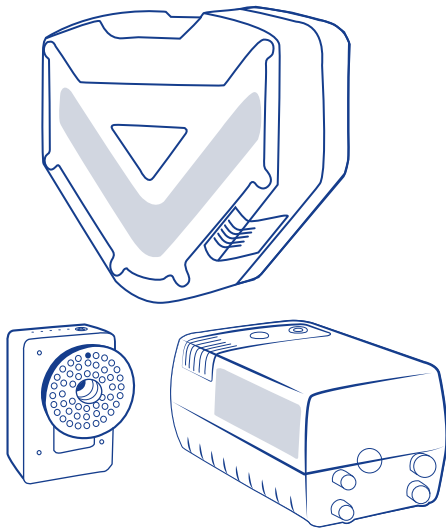
- Highest barcode reading performance through multiple technologies
- Highest reliability
- Modular solution meeting different needs and conditions
- 100% redundant system, completely fault tollerant
- Auto-diagnosis, e-mail error notifications
- Designed for an easy and rapid installation
- Easy to maintain and upgrade
- Zero downtime solution
- Full remote control
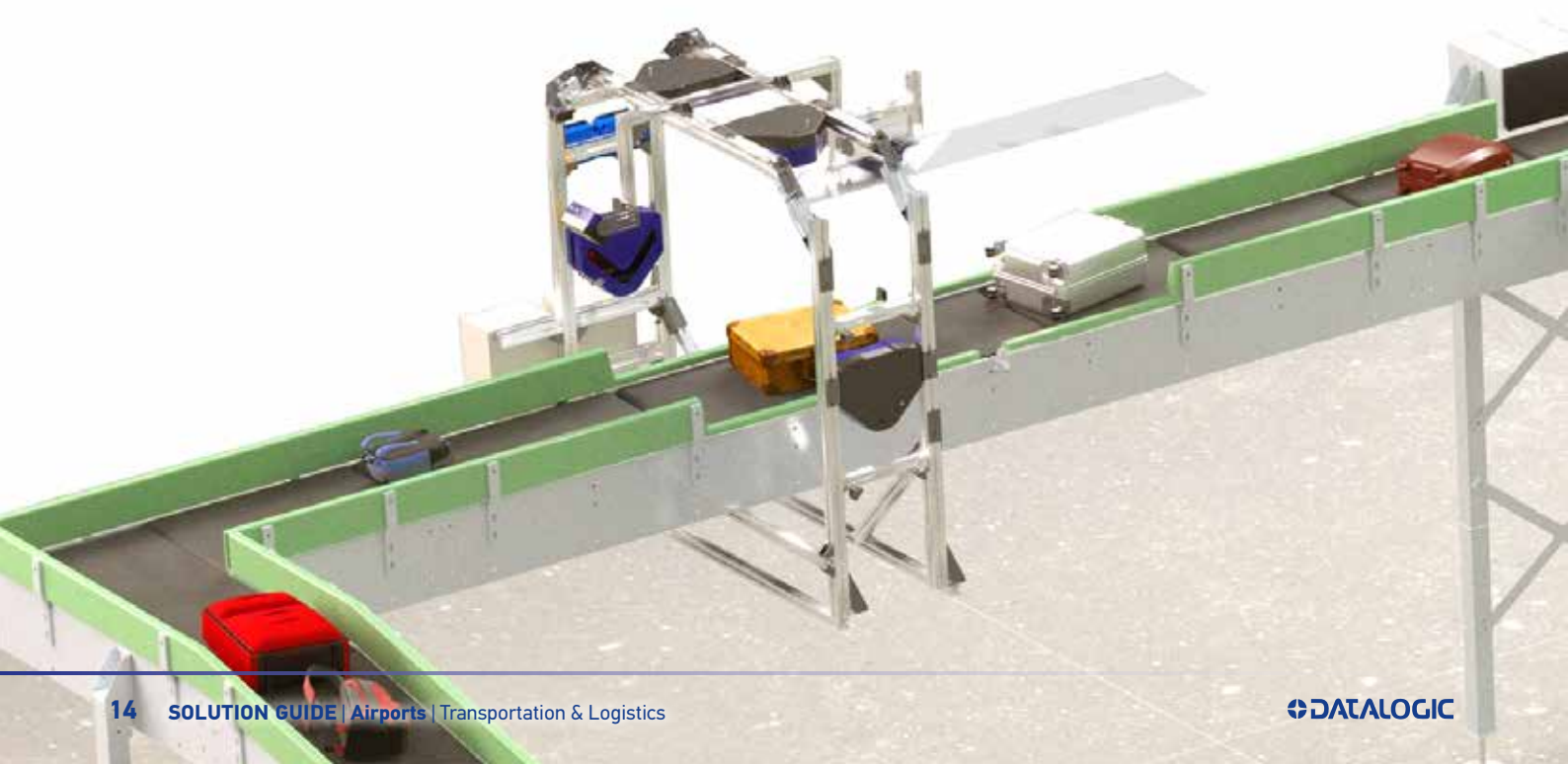
BHS (BAGGAGE HANDLING SYSTEM)

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.
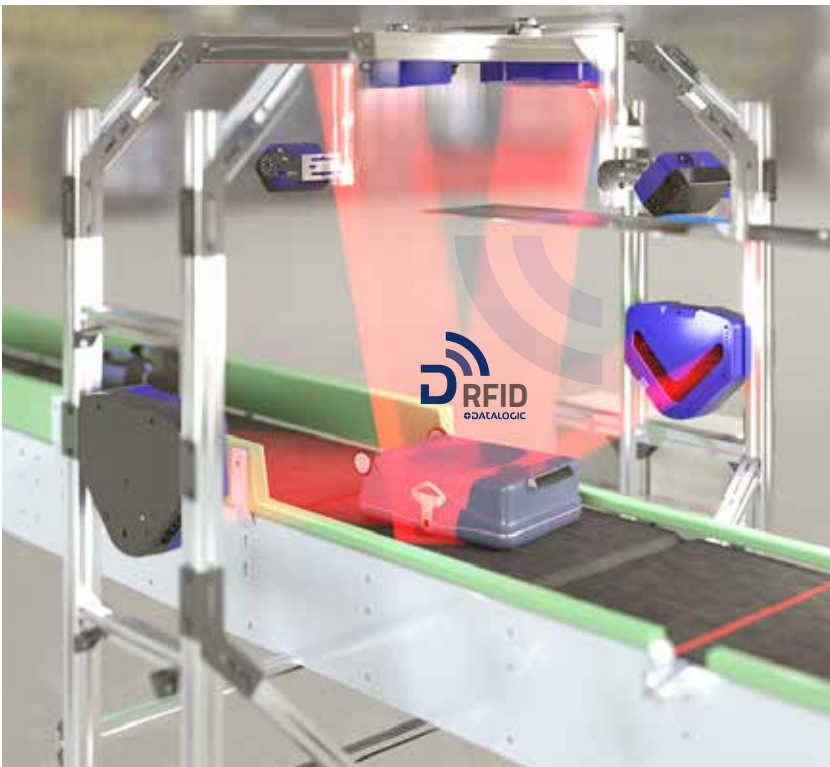
AUTOMATIC BAGGAGE IDENTIFICATION: *LASER TECHNOLOGY*

Cost effective, represents a good price/ performance ratio
with satisfactory reading rate level especially for baggage after check-in.
Compliant to IATA 1740A recommended practice.

AUTOMATIC BAGGAGE IDENTIFICATION: *RFID TECHNOLOGY*

The highest possible reading rate even when label is not optically visible.
RFID is handled as a subsystem that can be added to any of our Laser or Imaging Based Solutions.
Compliant to IATA 1740C recommended practice.

AUTOMATIC BAGGAGE IDENTIFICATION: *IMAGING TECHNOLOGY*

Bringing the highest achievable performance on barcode IATA tag, increase productivity and reduce to almost zero.
No read reworks due to damaged/dirty label common for transfer baggage.
Imaging technology is also read to provide images for external OCR process.

OCR IATA label recognition

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

LASER+IMAGER+RFID:
THE BEST IDENTIFICATION TOOLSET

Datalogic ATR Solution exploit three available Identification technologies, all in compliance with IATA recommended practices.

You can select among our BHS Solutions (Laser or Imaging or hybrid) the best match for your printed label reading application.

BHS RFID KIT can be optionally added on top of any BHS Solutions when RFID tag is present.

LASER BASED SOLUTION				
Part Number	**Description**	**Barcode**	**RFID**	**Imaging**
932400020	BHS-X4612 LIN-CODE 6-S BELT PNT	x		
932400022	BHS-X4611 LIN-CODE 6-S BELT PBS	x		
932400024	BHS-X4610 LIN-CODE 6-S BELT	x		
932400025	BHS-X4512 LIN-CODE 5-S BELT PNT	x		
932400027	BHS-X3500 T-CODE 5-S TILTTRAY	x		
932400021	BHS-X4611 REDS LIN-CODE 6-S BELT PBS	x		
932400023	BHS-X4612 REDS LIN-CODE 6-S BELT PNT	x		
932400026	BHS-X4610 REDS LIN-CODE 6-S BELT x	x		
932400028	BHS-X4500 REDS LIN-CODE 5-S TILTTRAY	x		
IMAGER BASED SOLUTION				
Part Number	**Description**	**Barcode**	**RFID**	**Imaging**
Ondemand	HS-X5610 IMG 6-S BELT	x		x
Ondemand	BHS-X5610L IMG 5-S 1-L BELT	x		x
Ondemand	BHS-X5610L REDS IMG 5-S 1-L BELT	x		x
Ondemand	BHS-X6610 HD IMG 6-S BELT	x		x
OPTIONS				
Part Number	**Description**	**Barcode**	**RFID**	**Imaging**
Ondemand	BHS Top Imager Kit 4 x AV500[3]	x		x
CAMERA KIT				
9K3L00373	CAM-KIT 5MP,COLOR,ETH,APP			x
RFID				
932400011	BHS RFID KIT (1000 mm Belt Width) [1]		x	
932400012	BHS RFID KIT (1200 mm Belt Width) [1]		x	
932400010	BHS RFID KIT (800 mm Belt Width) [1]		x	
932400013	BHS RFID KIT TAG COLLECT 1,[2]		x	

1 - Optional Kits to be added to BHS solution to read RFID TAG
2 - This version is performing Tag reading without assigning it to exact Baggage (not for Sorting application)
3 - This top imager kit is optional for any laser based solutions

SC5100 CONTROLLER

Standard Control Unit for Ease of Integration/Configuration/Monitoring:

- Results in leaner maintenance and troubleshooting lowering the Total Cost of Ownership (TCO)
- Interact directly with Keypad and Display without the need to open an additional enclosure Higher system availability, higher productivity RFID

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 dashbord 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

PRODUCTS PORTFOLIO

STATIONARY INDUSTRIAL SCANNERS

AV500/AV900

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

DS8110/DX8210

- Ethernet Bus Connections (EBC) for high-speed data transmission and real time synchronization
- Excellent performance on low quality code and unpredictable reading conditions
- Fully redundant configuration and no single point of failure

DS5100

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

HANDHELD SCANNERS

POWERSCAN 9600 SERIES

- Standard Range (SR) and High Performance (HP) for standard / high resolution codes
- 1D/2D Auto Range series, able to scan at very short distances up to very far barcodes
- Wireless charging reducing TCO
- Ultra-rugged design, IP65 and IP67
- Embedded industrial connectivity, modular
- Doubled radio range and OLED display
- Smart batteries and diagnostics

GRYPHON™

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

OEM BARCODE READERS

GRYPHON™ 4500 FIXED SERIES

- Easy to integrate – Compact size
- Easy to use – Superior good read feedback
- Built to last – 5year warranty
- Wide Angle 1 MP optics – High motion tolerance

SENSORS

S3N ◈ IO-Link

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

S5N ◈ IO-Link

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

S100 ◈ IO-Link

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

S85

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

◆DATALOGIC

SC5100

- Laser (DS-DX), Imagers (AVs), Dimensioner Native Integration
- 4 GB ETH embedded switch
- 5 inch Graphical Color display and Clear Status LEDS
- Supports Full Redundant Controller Layout

DM3610 1 AND 2 HEAD SYSTEM

- Ultra-high performance, in-motion, overhead dimensioning unit
- Automatically measures the length, width, and height of packages
- Performs highly accurate measurements
- Perfect solution for spatial management applications

WEBSENTINEL PLUS

- Very advanced monitor
- Offers key features, benefits, and insights to end-users and System Integrators specializing in Factory Automation and Transportation and Logistics.

MOBILE COMPUTERS

MEMOR™ 30/35 family

- Complete range of mid-tier mobile computers with top data capture performance: 2 scan engines with a range up to 10mt, front/rear camera, green spot good read technology
- Qualcomm 2.4 GHZ Octa core platform, 5G and WIFI 6E, Android 13
- 6'' display, 12h swappable battery, multiple modular charging solutions, full accessory range
- IP68 dust and water protection, wireless charging battery and cradles, full software suite to enhance optimization, deployment and protection of the asset

MEMOR™ 12/17 family

- Effortless scanning at fast pace in any environment with Green Spot technology
- Reliable and stable connectivity in crowded environments: Wi-Fi 6/6E, Bluetooth 5.3, 5G + Qualcomm 4490 platform
- Rugged and high-quality display: 6'' inch capacitive multi-touch, FHD+ display, GG7
- Three different charging options: USB-C, Wired cradles, Wireless cradles
- Quick and Effortless Payments with Multi-Side NFC reading technology

MEMOR™ 11

- Ultra-Ergonomic, compact and robust
- 5 inch brilliant capacitive multi-touch HD display
- Validated by Google as 'Android Enterprise Recommended' for rugged devices
- Wireless charging increases reliability dramatically by eliminating contacts on both the device and docks
- Ruggedized with drop resistance to 1.5 m / 5 ft to concrete and IP65 sealing
- Full suite of cellular connectivity for voice and data, featuring LTE-Advanced/4G+

CODISCAN

- Flexible Bluetooth wearable scanner with multiple comfortable mounting options: hand, neck, belt/pocket
- Small, lightweight super reliable device
- 2 working shifts and up to 12,000 scans with a single charge
- Best-in-class scanning performances reduce TCO: 1D/2D Datalogic decoding library, smart-aiming system, Green Spot, 3 high-visible LEDs, audio and vibration feedback

AS1/DS1

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

DS4

- Controlled heights from 300 to 3000mm
- 5, 10 or 25mm pitch
- Operating distance up 13m
- Crossed or parallel beams
- Opaque and Transparent detection
- Outputs: analogue and digital, RS485, Ethernet TCP/IP
- Fully configurable via IO-Link or through WiFi with GUI

CX0/CX2

- 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

- Retroreflective polarized area sensors
- Simplified installation with just one active unit working with a reflector
- 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

EASEOFCARE
SERVICE PROGRAMS

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.

Datalogic at a glance

Datalogic Group is a global leader in the **automatic data capture and industrial 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 **more than 50 years of history** behind it, during which enormous successes have been achieved: **11 R&D centers and 3 DL Labs in Italy, USA, Vietnam, and China; 13 manufacturing and repair facilities** in USA, Hungary, Slovakia, Italy, China, Vietnam, and Australia; a **portfolio of about 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 the headquarters in Bologna, Italy. It is through the close cooperation of **nearly 3,000 employees** that Datalogic can boast some of the most remarkable automatic data capture and factory automation solutions available today in the market.

DATALOGIC TARGET INDUSTRIES

RETAIL
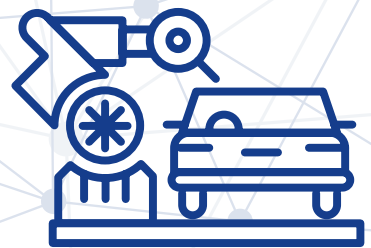
MANUFACTURING

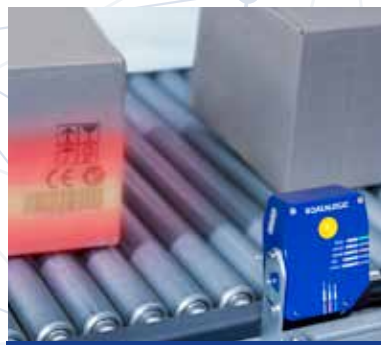TRANSPORTATION & LOGISTICS

HEALTHCARE

DATALOGIC PRODUCT RANGE

Fixed Retail Scanners

Handheld Scanners

Stationary Industrial Scanners

Mobile Computers

Laser Marking Systems

OEM Barcode Readers

RFID Systems

Sensors & Safety
by DATASENSING

Machine Vision
by DATASENSING

CUSTOMER SERVICE

Datalogic's Customer Service offers a wide and complete range of post-sales services. It is organized in three levels of support, in order to guarantee the most appropriate professional assistance based on the specific problem.
Datalogic's Customer Service can deploy in each territory a team of multi-lingual professionals, with a broad technical expertise across the whole product range.
Our standard service portfolio includes: warranty extension, fast turnaround time for repairs, 24/7/365 phone support, next day on-site intervention and site audits. Datalogic can tailor the service offering to your specific needs.
Our experts will support every stage of your projects, from feasibility study to extended post-sales support, performing, when necessary, root cause analysis and remediation.

EASEOFCARE
Service Programs

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

FAST REPAIR TURNAROUND (OVERNIGHT/2 DAYS)

ACCIDENTAL DAMAGE COVERAGE

BOTH WAYS FREIGHT PAID BY DATALOGIC

DATALOGIC SHIELD FOR MOBILE PRODUCTS INCLUDED

3-5 YEARS CONTRACT SERVICE OPTIONS

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

www.datalogic.com

DATALOGIC

EMPOWER YOUR VISION

www.datalogic.com