E-GROCERY AUTOMATION

Solution Guide



DATALOGIC
EMPOWER YOUR VISION

DATALOGIC SOLUTIONS FOR E-GROCERY AUTOMATION

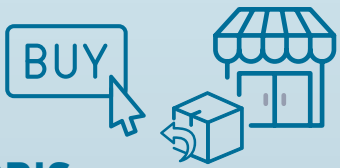




BOPIS:

Buy Online Pickup In Store

You can visit a website, buy what you wish, and then visit the store for quick curbside or pickup in-store. If an item is on sale, you can choose a rate plan and process the sale online before visiting the store.



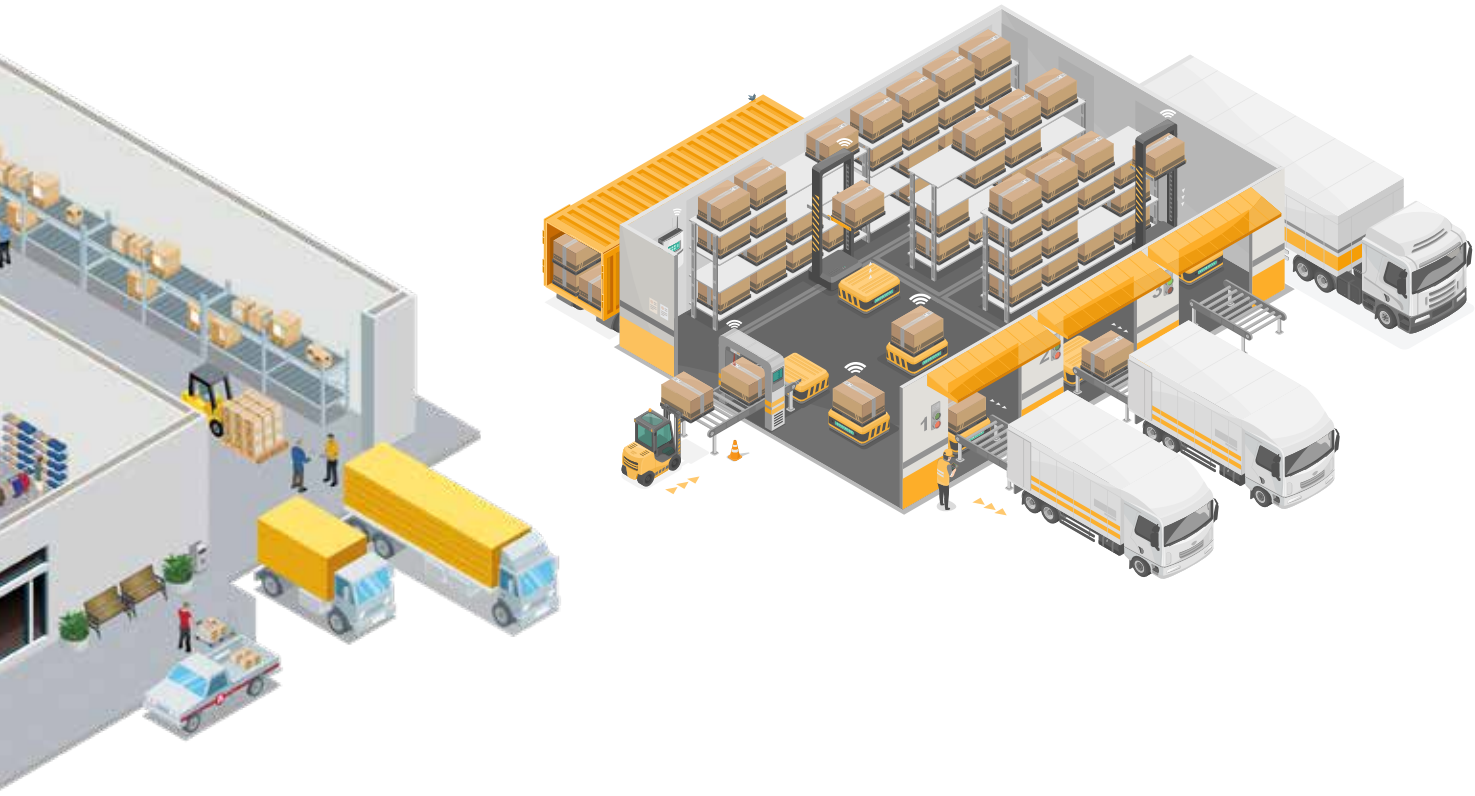
BORIS

Buy Online, Return In-Store

You can visit a website, buy what you wish, and then have it delivered to your home. **If unsatisfied, you can return that online item to a physical store**. This return could even happen at a location you have never visited before.

«In-Store shopping experience» VS «Online shopping experience»?

Datalogic can satisfy both.



OMNICHANNEL RETAIL EXPERIENCE: BOPIS, BOPAC AND BORIS

Buy online, pick up in-store (BOPIS) or pick up at curbside (BOPAC) and buy online, return in-store (BORIS) solutions have expanded as retailers try to drive traffic to their stores offering a more flexible way to shop.
Both BOPIS/BOPAC and BORIS are revolutionizing retail during its most challenging period, consolidating a hybrid shopping experience where customers can buy items online before picking them up in a physical store.
The COVID-19 pandemic has caused a phenomenon never seen before in the supply chain. BOPIS and BORIS solutions are increasingly seen as critical strategies required to help repopulate these rapidly emptied pipelines and supply chains to fulfill customer demand and encourage customer traffic.
Both solutions allow retailers the opportunity to have greater control of the overall customer experience. However, retailers will struggle to allow BOPIS and BORIS solutions to live up to their full potential without a detailed understanding of their on-hand inventory and product pipelines. They must take advantage of automatic ID solutions to provide a significant increase in inventory accuracy. The implementation of this retail technology in physical stores is intrinsic to a fully functional retailer, providing both an improved customer experience and promoting associated employee effectiveness.

E-GROCERY LOGISTIC AUTOMATION

DC-FULFILLMENT CENTERS



Order fulfillment is the core application within a Distribution Center. Efficiency, error-free and fast reaction time are Key.

CLICK AND RECEIVE AT HOME



CLICK AND COLLECT



DARK STORES



In order to simplify and optimize the distribution and delivery processes, store warehouse become a proximity logistic center.

HOME DELIVERY



Home (Last Mile) delivery is the biggest value added of e-Grocery process.

ORDER FULFILLMENT



In-store fulfilment, or ship-from-store, is an Omnichannel retail strategy that involves utilising retail stores as small&local distribution centres. Having multiple options for fulfilment available means retailers can take some pressure off DC's and offer customers more stock and faster delivery by utilising nearby stores.

BOPIS



Buy On Line Pick Up in Store is another growing trend of e-Grocery, to shorten the customer experience inside the store and gain time. You can buy from website and pick up your item in a physical store.

BOPAC



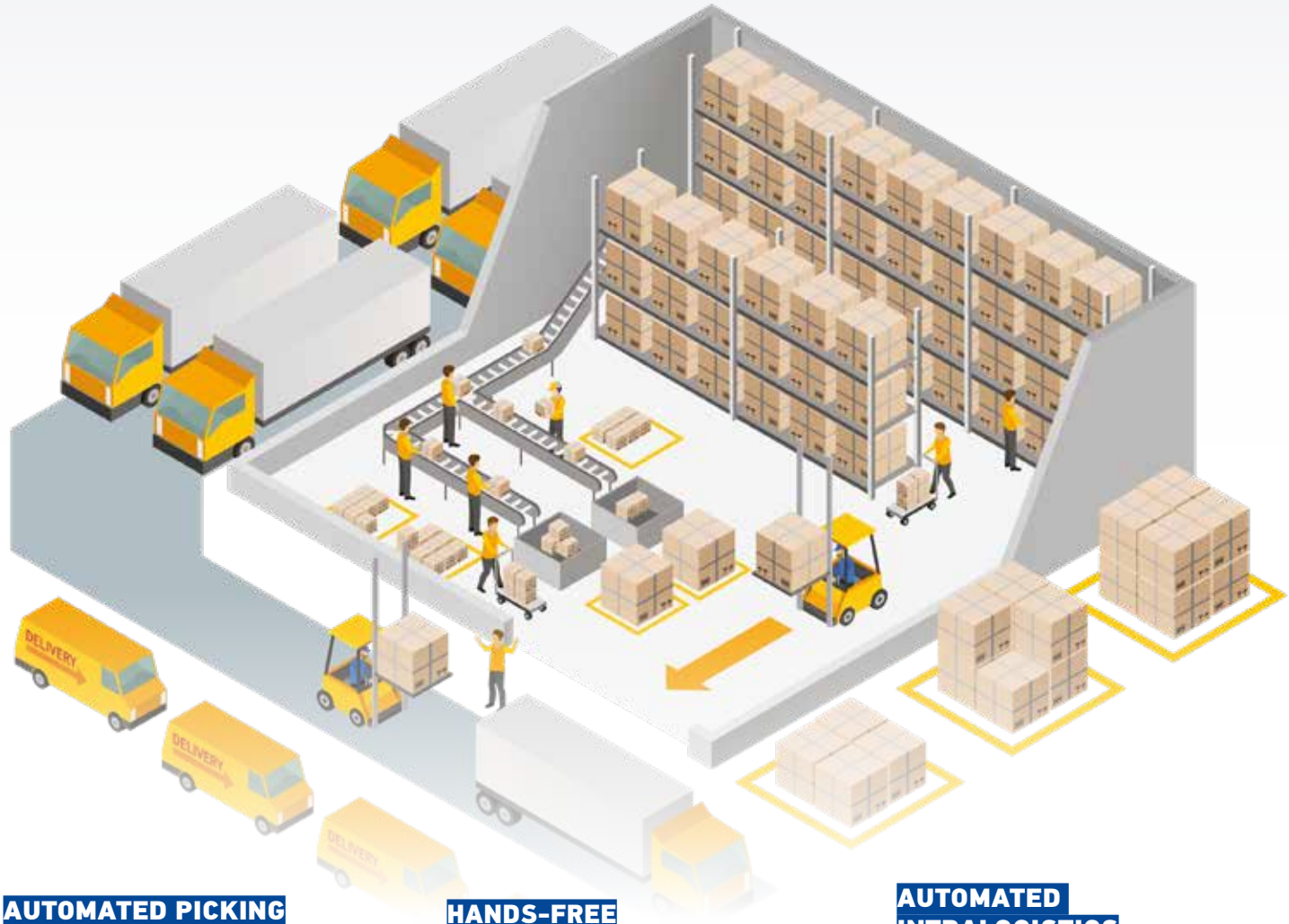
Buy Online Pick Up At Curbside allows you to buy from website and pick up your order in a physical store. You can order online from a shop, drive to the shop and they bring it out to your car.

BORIS



Buy Online Return In Store allows you to buy from a website and if unsatisfied, you can return that online item in a physical store.

ORDER FULFILLMENT:
Distribution Centers and Dark Stores



AUTOMATED PICKING



When using the Goods to Persons (GTP) strategy, the operators work in dedicated areas and the goods reach the areas by means of automated material handling solutions (Mini-loads, AGVs or AMRs). The items are identified and placed in the final or temporary package.

HANDS-FREE



Hands-free is often used in order fulfilment, as it is flexible and easy to be implemented. A portion of the sorter is dedicated to e-commerce and the operator prepares the order in a fast and productive way, as physical handling of the item is not needed when scanning the barcode.

AUTOMATED INTRALOGISTICS



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.

PICK TO LIGHT



Pick to Light (PTL) is another typical picking process: the operator manually picks the items by following a light indication. The picking is confirmed by either pushing a button or scanning the location barcode with a Datalogic wearable device.

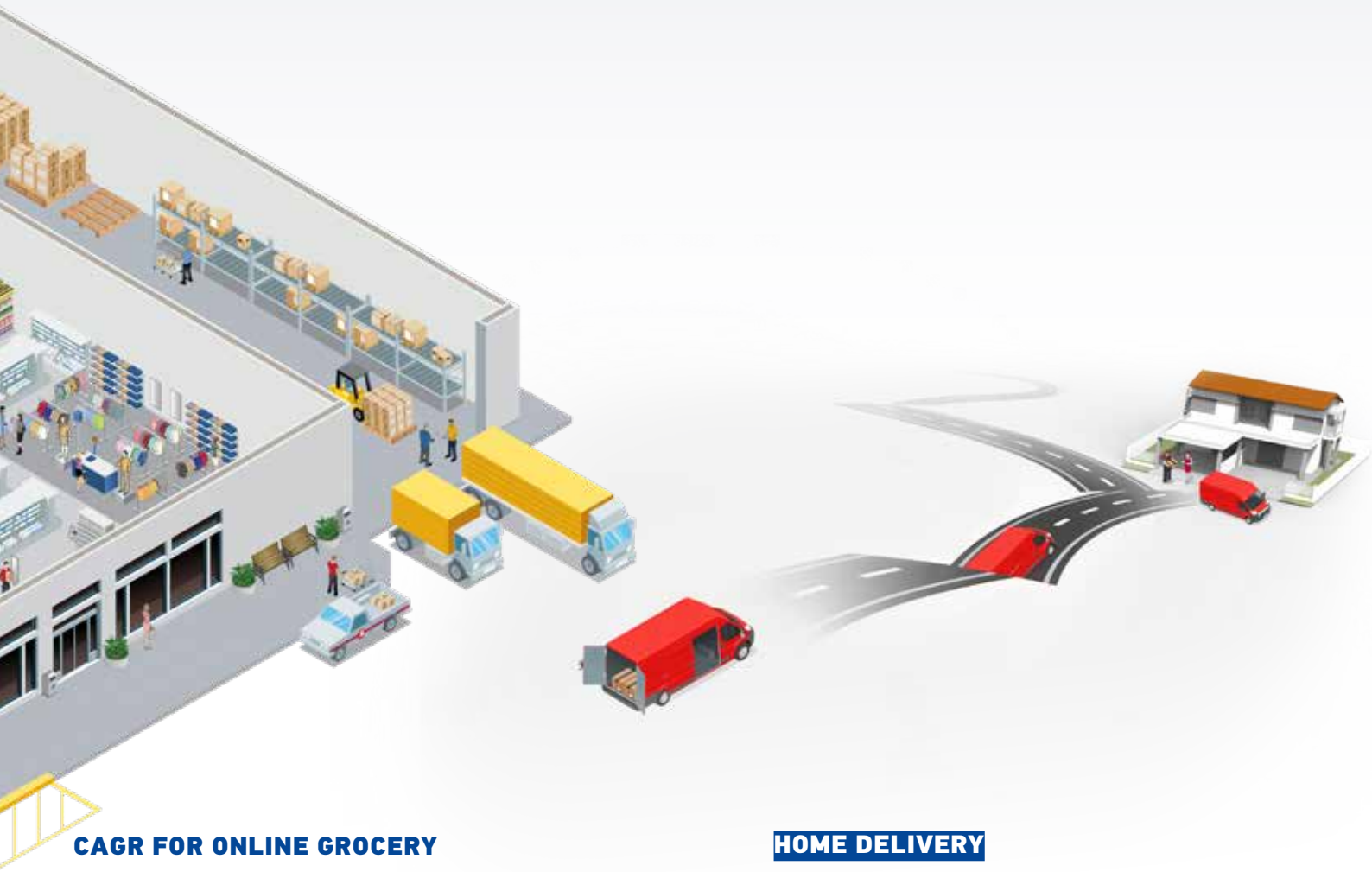
MANUAL PICKING



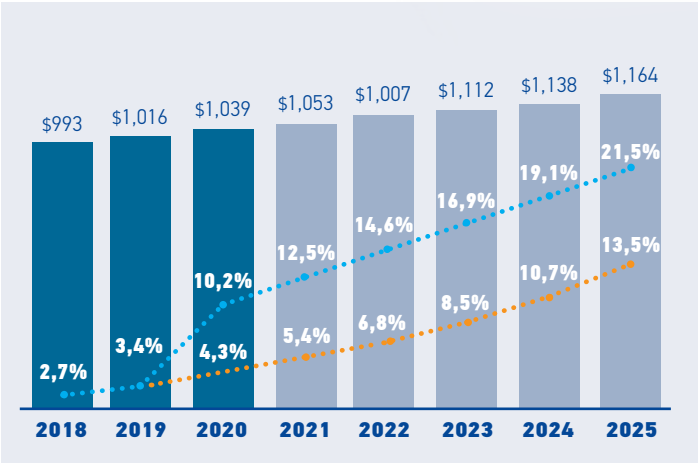


Picking is the first step of the order fulfillment process, where the operator's mission is to complete the picking list as quickly as possible and without errors; the Falcon X60-65 is the ideal device for this task, as it combines superior keyboard readability with optimized key spacing, ensuring high efficiency even for workers wearing gloves. The intuitive touchscreen of the Memor 30-35 combined with the precision of a physical keypad (PDT) ensures flawless picking and total stock control.

DELIVERY:
Home and BOPIS



CAGR FOR ONLINE GROCERY

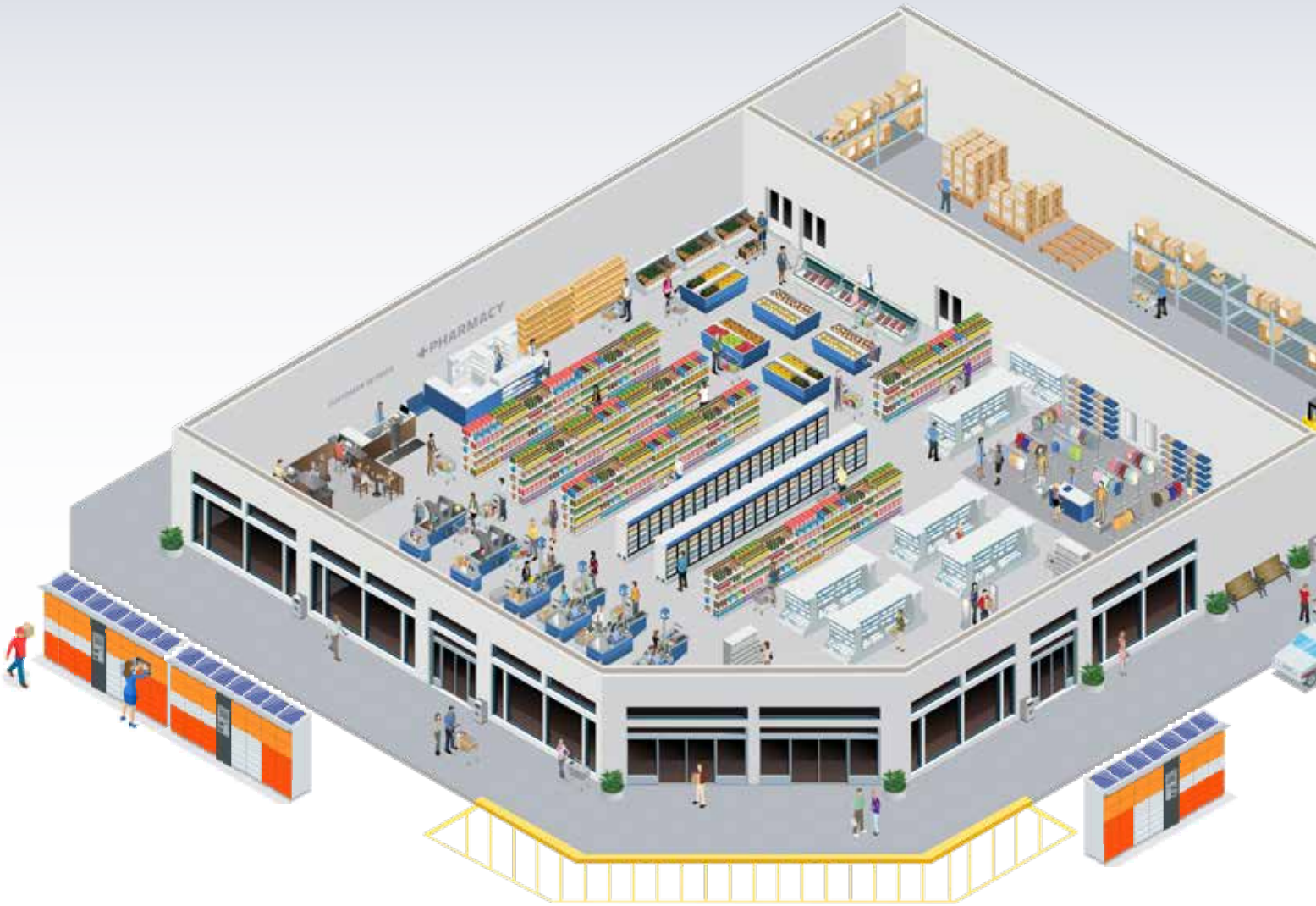




HOME DELIVERY



At the end of last mile delivery, the Proof of Delivery (POD) is the very last step of the journey. Memor 12-17 is the ideal solutions to identify the goods and collect customer signatures. A similar, opposite sequence is the starting phase of returns in reverse logistics.



AT THE STORE: BOPIS/BORIS ORDER FULFILLMENT







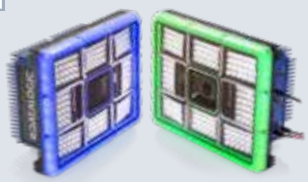
As omni-channel gains traction, it is forcing stores to hone their systems for efficiency and speed. Datalogic rugged mobile PDA devices can send notifications when customers arrive to pick up their orders (BOPIS). When a store worker sees a notification, they immediately respond so customers don't have to wait long. If customers are sitting in their cars at curbside or the parking lot, notifications can include identifiers such as car make and color to help direct the employee to the right customer.

E-commerce has altered the number of returned products that Retailers must handle (BORIS). Datalogic can offer several systems based on stationary industrial scanners or mobile computers to handle returned products at store, production and shipping levels.

PRODUCTS PORTFOLIO

STATIONARY INDUSTRIAL SCANNERS

MATRIX 830 - MATRIX 930



- Wider field of view and higher-resolution imaging, allowing one reader to cover belt widths that normally require multiple devices
- Beyond Barcode capability on board (Premium version) enables Hazmat recognition, parcel inspections, OCR
- Advanced PackTrack technology enables accurate code reading with very small item gaps, maximizing throughput and efficiency

MATRIX 320



- Innovative platform and sensor with outstanding Field of View (FoV) and Depth of Field (DoF)
- Smart configurable lighting solutions with more color options in three power versions
- Configurable 360° multicolor visual feedback
- Liquid lens remote focus control for extreme flexibility in production

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

AV7000



- High speed linear camera
- 8k and **NEW12k resolutions**
- High density barcodes down to 5mil
- Belt widths up to 1600mm.
- Single view high quality images
- Patented Autofocus System offering extended DoF
- Patented PLS technology, reducing system footpring by 50%

MOBILE COMPUTERS

JOYA SMART & JOYA SMART+



- Processor & connectivity: Qualcomm 4490 | Wi-Fi 6/6E, BT 5.3
- Scanning: Halogen™ DE2121-DL with Green Spot and Auto Scan mode
- Wireless charging: no contacts, less downtime
- Tap & Go: fast NFC payments
- Smart Cart Mode: AI vision to validate items and flag re-checks
- GS1 Digital Link reader: Shoppers can scan product GS1 Digital Link ready QR codes to view real-time, screen-displayed information
- Vibrant 5-inch display for a fully immersive shopping journey

DATALOGIC SMART PORTAL



- Instant self-shopping start with fast customer identification and automatic device unlocking
- Fewer queues and faster service thanks to multi-function self-service capabilities
- Real-time price and product verification with fast, accurate Datalogic scanning
- AI-ready insights at the store level to detect risks and optimize operations instantly
- Flexible deployment anywhere with PoE or standard power and VESA mounting

FALCON X60-65



- Largest display in its class with a 4.3" WVGA with Gorilla™ Glass 7
- Uncompromised durability (IP65/68 and 2.4m/8ft drop) and wireless charging option for lower TCO
- Enterprise-grade processing and connectivity with Wi-Fi 6/6E and 5G
- Android™ 15 with AER and GMS (upgradeable to Android 19)
- Advanced capture with TrueAim™ technology and Extra-Long range with Green Spot visual feedback
- Choice of 3 keyboards optimized for flawless typing even with gloves
- Empowered by Datalogic Connect and compliant with main MDMs and TE

SKORPIO X40-X45



- Lightweight design and comfortable handling for extended shifts
- Enterprise-ready computing platform QC4490 with Wi-Fi 6/6E and 5G
- Precision scanning and intuitive Green Spot visual feedback
- Versatile data entry with choice of 3 keyboards and field adaptability
- Wireless charging option and eco-system of accessories' continuity
- Field-detachable handle for added operational flexibility

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 technology
- Center of gravity design and modular cradle design for multiple connectivity

GRYPHON™ 4600 SERIES



- Ecodesign, lower carbon footprint
- Double camera, from near to far, fast reading
- Configurable white/red illumination
- Wireless communications and wireless charging
- Battery and supercap power packs, long lasting

FIXED RETAIL SCANNERS

MAGELLAN 900i



- Advanced digital imaging provides excellent performance and reliability
- Quickly reads 1D and 2D barcodes, whether printed or displayed with Greenspot™ technology
- Subtle, adaptive illumination for user comfort
- Compact, ergonomic design is ideal for hands-free or handheld operations
- Image capture and adjustable stand

BLADE



- 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 to a 310 mm (12.2 in.) reading distance
- BLADE 200:
  Up to a 600 mm (23.6 in) reading distance

DM3610



- 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

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

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.

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
- Ultimate flexibility with three different charging options: USB-C, Wired cradles, Wireless cradles
- Quick and Effortless Payments with Multi-Side NFC reading technology

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

RHINO II™ and SH15/SH21



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

MAGELLAN 1500i



- Advanced digital imaging provides class-leading performance and reliability
- Seamlessly reads 1D and 2D barcodes, whether printed or displayed on mobile phone, laptop or tablets
- Compact, ergonomic design for hands-free or handheld operations

OEM BARCODE READERS

MAGELLAN 900i OEM



- All digital imaging provides excellent performance and low TCO
- Quickly reads 1D and 2D barcodes from printed or mobile sources with Greenspot™ good read confirmation
- Dedicated OEM mount for easy kiosk or self checkout integration

MAGELLAN 3600Vsi



- Advanced digital imaging provides class-leading performance and reliability
- Seamless 1D, 2D, GS1 Digital Link, OCR, and Digimarc® digital watermark reading
- Subtle, adaptive illumination for user comfort
- Software driven - flexible and upgradeable
- Read and write UHF RFID Tags
- Color video and color image capture
- Checkpoint Systems and Tyco Sensormatic EAS compatible
- Cable retention harness
- IoT Remote Management Platform for diagnostics, SW upgrades, and configuration
- Available Magellan Customer Service Scanner (CSS) with omni-mount for reading cell phones, coupons and loyalty cards

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

PRODUCT PORTFOLIO by DATASENSING

easing automation challenges

SAFETY AND GUIDANCE

SH4



- 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

SH4 ACTIVE/PASSIVE



- 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

SLIM



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

LASER SENTINEL MASTER/REMOTE/ 10 METERS



- More than 240 m², with up to 10m / 320ft over 275°
- Master/remote topology with up to 4 units
- 3 simultaneous areas detected / up 70 zone set
- Advanced dust filtering

SENSORS

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

S3N IO-Link



- High performance in standardized miniature housing
- Replaces larger sensors and fits in limited space in smaller machinery
- Miniaturized fast and precise mark reader is also available

S300-PA/PR



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

SENSORS

CR0/CR1/CR2



- 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

S65-M IO-Link



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

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

LASER SENTINEL PROFISAFE



- System integration command by Profinet/Profisafe fieldbus
- More than 240 m^2 with up to 10m /320ft over 275°
- 8 simultaneous areas detected / up 70 zone set
- Advanced dust filtering

LIDAR GUIDANCE SCANNER

LGS-N50



- High performance lidar guidance scanner
- ToF technology on infrared laser
- 2D Measurement data for natural or marker navigation
- 360° measurement for all-round scanning
- 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

LGS-N25



- Compact lidar for mapping, navigation and object profiling
- ToF technology on infrared laser W
- 2D Measurement data for natural or marker navigation
- 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

LGS-A10



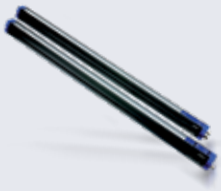
- Compact lidar for collision avoidance, object detection and shape recognition
- ToF technology on infrared laser
- 2D measurement data available
- 360° measurement for all-round scanning
- 10m of detection capability range
- 3 simultaneuos outputs
- 16 zone sets
- Scanning rate 10/15/25 Hz
- Angular resolution : up to 0,25°
- Measurement range: 0.1-25m with 80% reflectivity
- Dimensions (w,d,h): 65 x 65 x 70 mm

AS1/DS1



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

DS2



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

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

TL46 IO-Link



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

LD46



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

SMART-VS



- AI enabled
- MLAS - Machine Learning Assisted Setting

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



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.

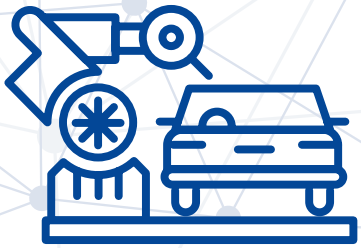
The Group has **more than 50 years of history** behind it, during which enormous successes have been achieved: **10 R&D centers and 3 DL Labs in Italy, USA, Vietnam, China, Czech Republic and Sweden; 10 manufacturing and repair facilities** in USA, Hungary, Slovakia, Italy, China and Vietnam; a **portfolio 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 28 countries worldwide**, with the headquarters in Bologna, Italy. It is through the close cooperation of **approximately 2,700 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

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

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