

# STATIONARY INDUSTRIAL SCANNERS

## Product Group Guide



# IMAGE-BASED ID 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



## Highlights

### MATRIX 120™

- 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 90° mounting and reflecting surfaces
- Wide angle models for proximity reading
- New flexible cables suitable for robotic arms applications
- 90 degree deflection mirror for more compact installation, designed to be compatible with previous Matrix 210N 90 degree version for easy replacement

## Technical data

### MATRIX 120™

- WVGA for standard applications and 1.2MP models for high resolution codes
- 1D code models for best price/performance ratio
- 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: 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™

- 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

### MATRIX 220™

- 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)

# IMAGE-BASED ID SCANNERS

## APPLICATIONS

### MATRIX 300N™ 1.3 & 2MP

#### Manufacturing

- Automotive: DPM code quality verification and trending after marking, work-in-progress traceability and control
- Electronics: Parts traceability and control, high resolution codes reading
- Packaging: Label print & check, end of line palletizing

#### Document Processing

- High speed process control

#### Medical

- Medical device traceability

#### Clinical Lab Automation

- Biomedical analysis machines
- Specimen collection machines

#### Logistics Automation

- Carton and tote traceability
- Automated warehousing



## Highlights

### MATRIX 300N™ 1.3 & 2MP

- High performance DPM reading
- Multi LED-Chains Illuminator with diffuser for DPM applications
- Manual and electronic focus control
- Polarized illuminator for reflecting surfaces
- Fast and high-resolution image sensors
- Power over Ethernet option

## Technical data

### MATRIX 300N™ 1.3 & 2MP

- CMOS global shutter sensor
- 1280 x 1024 (1.3 MP sensor) and 1600 x 1200 (2 MP sensor) image resolution
- Read rate: 60 frames/s (1.3 MP sensor); 45 frame/s (2 MP sensor)
- ESD and YAG cut filter protection options
- Protection class: IP65 and IP67 extreme industrial grade for harsh environments
- Operating temperature: 0°C to 50°C / 32°F to 122°F (1.3 MP models), 0°C to 45°C / 32°F to 113°F (2 MP models)

### MATRIX 320™ Series

- Intralogistics, Logistic, E-Commerce – Retail Logistics
- Automotive, Food & Beverage, Pharmaceutical, Electronics, General Manufacturing



### MATRIX 320™ Series

- 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
- Liquid lens remote focus control for extreme flexibility in production
- C-Mount lenses for maximum optical configurability and high intrinsic DOF
- Web monitoring and fast image saving for complete performance diagnostics
- Run time diagnostics and unreadable code classification to increase the overall productivity
- Configurable 360 degree multicolor visual feedback
- New embedded orientation sensor and smart aiming systems for easy installation
- New grid pattern aiming system and new embedded distance sensor to improve throughput in presentation applications
- Full industrial connectivity and top Industrial Grade for easy and safe integration

#### ACCESSORIES

- Modular design with large offering of lenses, lightings, covers and filters for special applications provided as accessories for easy stock management

### MATRIX 320™ Series

- Multicore image processing platform excellent for high speed applications
- Hardware Acceleration to speed up algorithm and improve decoding capabilities
- High Dynamic Range for the best image quality and contrast, greater DoF and higher reading performance
- Three illuminators power options: High Power 14 LEDs, Very High Power 36 LEDs, Ultr High Power 72 LEDs
- Gigabit Ethernet Integrated Connectivity
- New Generation FTP for live and high speed image saving
- New embedded ToF sensor for tagete distance reading
- New embedded orientation sensor for easy set and check of product position (roll and pitch)
- OPC UA protocol for Industry 4.0
- EBC protocol for SIS products interoperability
- Protection class: IP65 and IP67 top industrial grade for harsh environments
- Operating temperature: -10 to 50°C (14 to 122°F)

#### ACCESSORIES

- Standard and polarizer cover, half polarizer cover, several bandpass color filters, ESD cover, YAG cut filter, three types of brackets for any configuration and installation need



# IMAGE-BASED ID SCANNERS

## APPLICATIONS

### 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 (Fork Lift)
- 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



## Highlights

### MATRIX 320™

- Innovative 2MP sensor performs outstanding Depth of Field (DOF) and amazing Horizontal Field of View (FOVh) as a traditional 3MP sensor
- Liquid lens remote focus control for extreme flexibility in production
- C-Mount lens for maximum optical configurability and high intrinsic DOF
- Smart configurable lighting solutions

## Technical data

### MATRIX 320™

- Sensor: Image resolution 2.0 Mpixel (1920 x 1080) 16:9 form factor - 1/3" CMOS global shutter, 60 frames/s

#### Liquid Lens models

- Electronic focus control on Liquid Lens 6mm (48°), 9mm (34°), Liquid Lens 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

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

### MATRIX 320™ 5MP

*Intralogistics, Logistic, E-Commerce - Retail, Logistic Automation*

- Inbound / Pallet Picking (Fork Lift)
- Print & Apply verification (Re-labelling)
- Depalletizing - Part Traceability
- Order Fulfillment (Automatic/Manual)
- Palletizing (Automatic/Manual)/ Cage Preparation
- Pallet Traceability / Pallet Wrapping
- Retrieval for outbound (Forklift)
- Reverse Logistic

*Automotive, General Manufacturing*

- Automotive Work in Progress (WIP) and Traceability
- Components and Part Traceability
- WIP Traceability (Automatic)
- Secondary Packaging Traceability
- End of Line Traceability



### MATRIX 320 5MP™

- Large FOV and amazing DOF for extended reading capabilities
- C-Mount lens 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
- Packtrack capability to minimize the gap between objects on conveyor and increase the system productivity

### MATRIX 320 5MP™

- Sensor Image resolution 5.0 Mpixel (2560 x 1936) - 1/1.8" CMOS global shutter, 25 frames/s
- Optical models: C-Mount Lens 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
- Smart illuminator adapter for live quick and easy C-Mount lens setup
- Packtrack allows challenging traceability of items with very low item gap, from 50mm (2in), for the maximum throughput
- New fast replacement bracket robust and easy to assembly

### 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



### STS320™

- Outstanding reading performance
- Compact and out of the box solution fully pre-assembled, pre-configured and validated in the factory for the quickest installation on the field and for fast replacement
- 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
- Completely new state of the art DL.CODE software

### STS320™

- Extra-large Field of View (FOV) and increased Depth of Field (DoF)
- Configurable 360 degree multicolor visual feedback, green spot and Red spot LEDs
- Image resolution 2.0 Mpixel (1920 x 1080) 16:9 form factor - 1/3" CMOS global shutter
- 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 POWER OF THE MATRIX SERIES



## 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



### 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



### Rotating connectors

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



### 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



### 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



# IMAGE-BASED ID 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

AV500/AV900

- 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

AV500/AV900

- 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

# IMAGE-BASED ID SCANNERS

## 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



8K  
LINEAR  
CAMERA

## AV7000™

- 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

## AV7000™

- 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

## 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
- Film processing machines
- Shipping & Receiving
- Cross docking



## TC1200

- Cost-effective
- 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

## TC1200

- 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.

# DIMENSIONER

## DM3610 1-Head Solution

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



## DM3610 1-Head Solution

- 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

## DM3610 1-Head Solution

- 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



## DM3610 2-Head Solution

- 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

## DM3610 2-Head Solution

- 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



# MFDS: MASS FLOW DETECTION SYSTEM

## APPLICATIONS

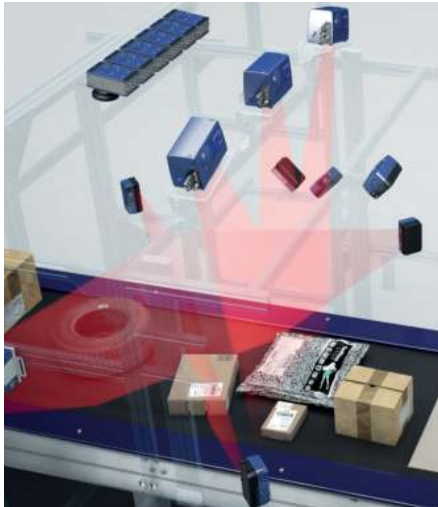
### MFDS

#### Transportation and Logistics

- Postal and couriers, 3PL

#### Retail and E-Commerce

- Distribution centers



## Highlights

### MFDS

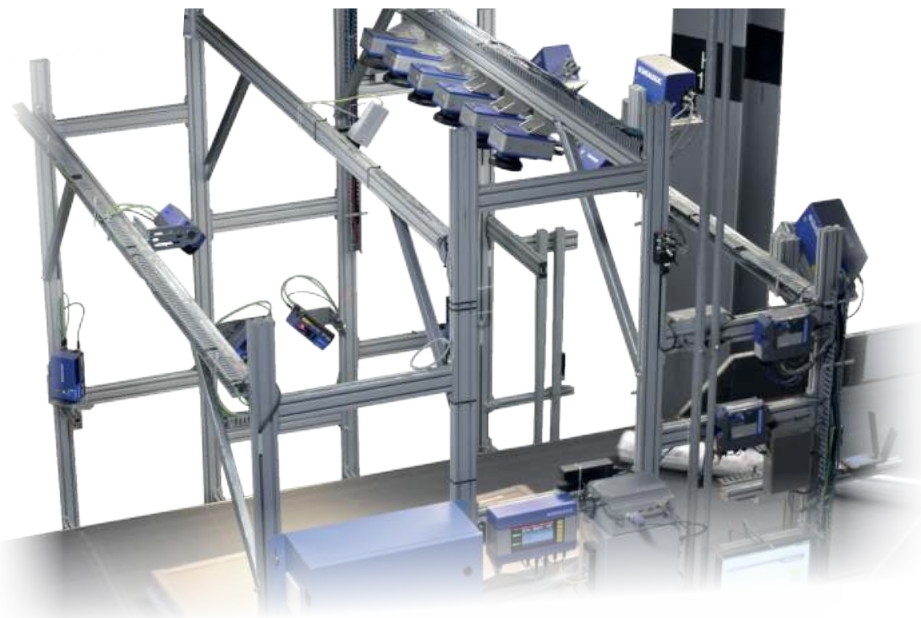
- Automated data collection (replaces manual barcode reading) for large items in a non-singulated flow
- Legal for trade volume measurement for a non-singulated flow
- Leverages standard, well known proven components, empowered by new 3D algorithms and system integration software (AV9000, DS8110, DM3610)
- State-of-the-art 3D analysis of touching objects allows a maximum level of object recognition (separation and detection of each item running even if they are touching or side by side)
- The main system component comes in one pallet for ease of installation

## Technical data

### MFDS

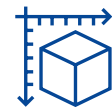
- Material Flow: Singulated and non-singulated
- Maximum box size: L 2500 x W 1200 x H 900 mm / 98 x 48 x 36 in
- Operating temperature: 0 to 50 °C / 32 to 122 °F
- Communication Interfaces Ethernet (TCP/IP), RS-232 / RS-422 / RS-485 (Ethernet IP, Profinet, Profibus available as options)
- Barcode Reading Capability:
  - TOP Imager: 1D and 2D (narrow element greater or equal to 0.3 mm [11.8 mil] for 1D; narrow element greater or equal to 0.5 mm [20 mil] for 2D)
  - TOP Laser: 1D (narrow element greater or equal to 0.3 mm [11.8 mil] for 1D)
  - SIDES Laser: 1D (narrow element greater or equal to 0.3 mm [11.8 mil] for 1D)
- Factory warranty: 2-year limited, parts and labor

## MFDS HIGHLIGHTS: D<sup>4</sup>



### 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).



# LASER BAR CODE SCANNERS

## APPLICATIONS

### DS2100N/DS2400N

#### Automated warehousing

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

#### Automated Shopfloor

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

#### OEM

- High speed document handling machines
- Print & apply systems
- Automatic chemical and biomedical analysis machines
- Reverse vending machines (can and bottle recycling)



## Highlights

### DS2100N/DS2400N

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

## Technical data

### 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
- Max. resolution: 0.12mm (5mils)
- 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



### DS5100

- Selectable focus system
- Display and multi-language messages
- ID-NET™ embedded interface for high speed communication network
- Single/Double Ethernet port
- Integrated oscillating mirror models
- Profinet (MRP supported)
- Compatible with SC500/DS8110/DX8210

### DS5100

- 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/DX8210

- Airport Baggage Handling
- Parcel Sorting
- Retail Distribution Center
- Loading/Unloading System
- Shop Floor and Manufacturing
- Automatic Warehousing Management



### DS8110 linear barcode scanner/ DX8210 omnidirectional barcode scanner

- ALL-IN-ONE architecture (DX8210)
- Top class reading performance
- Excellent performance on Low quality code
- DST (Digital Signal Technology) offering stable and constant performance at any operative conditions
- Multi laser ASTRA G3 technology
- Ethernet Bus Connections
- Fully redundant configuration, no single point of failure
- Compact mechanical dimensions
- Unmatchable ease of use and ease of installation
- e-GENIUS web browser programming tools
- Modular architecture and building block configurations
- Ease maintenance and automatic replacement

### DS8110

- 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
- Factory warranty: 2 years

### DX8210

- 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
- Factory warranty: 2 years

# SOFTWARE

## 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, and presents the information flow as visual onscreen information. It also stores this information in a database and, periodically or on demand, produces performance, diagnostic, and tracking reports.

WebSentinel Plus provides visibility to enterprise controlled automated systems from a high level view of the each connected facilities down to a detailed view of any specific barcode reader device.



### 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
- Front page that shows real-time reading performance, package activity and device diagnostics in foreground
- Complete control from enterprise to device
- Quickly 'drill-down' from enterprise to facility to scan point to device level views
- Database searches and reporting
- Image file browsing for imager devices (linear and area camera)
- 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)

### Technical data

#### Software requirements

- Operating System: Windows 7 - 10 (32 Or 64-Bit, 64-Bit Preferred), Linux on Datalogic Hw or on Request
- Web Browsers: Internet Explorer 10 (Or Later), Chrome 36 (Or Later), Firefox 30 (Or Later)
- Java: Version 7 (Or Later)

#### Server Hardware Recommendations

- Dedicated Computer With The Following:
  - Intel Core I3, 2.1 Ghz Or Equivalent Processor
  - 8 Gb Ram
  - 500 Gb Hard Disk With At Least 350 Gb Free Space For Package Data
  - Two 10/100/1000Mb Ethernet Port
  - Usb 2.0 Port For Software Installation

## WebSentinel™ PLUS INVESTIGATOR

INVESTIGATOR is an upgrade to the WebSentinel Plus image analysis, obtaining data (including images) for Datalogic Industrial Barcode Readers based on imaging technology such as the AV and Matrix series.

With INVESTIGATOR, it is now possible to extract value from the data (decoding process results and images), enabling the Collect-Analyze-Prevent cycle which helps keeping Auto-ID performances at the top. In particular, 'No Read' image analysis will provide 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

- No Read Root Cause Automated aggregation in classes
- Printing Quality Trend evaluation
- Analysis Result at Parcel Level
- Reporting trends by day/hour
- Quick drill down to Image level
- Full integration within Websentinel Plus platform:
  - Individual user accounts with configurable roles and privileges
  - Web-based client
  - Cross platform server application (Windows and Linux OS)
  - Configurable alarm and event notification via email
  - Quickly 'drill-down' from enterprise to facility to scan point to device level views

### Technical data

#### Software requirements

- Operating System: 64 bit Windows 10 pro or Windows Server 2016 or later, Linux on Datalogic HW or on request.
- Web Browsers: Internet Explorer 10 (or later), Chrome 36 (or later), Firefox 30 (or later)
- Java: version 8

#### Server Hardware Recommendations

- Dedicated Computer With The Following:
  - Intel Core-i7 CPU or equivalent processor
  - 16 GB RAM
  - 1 GB hard disk free space for package data
  - 1 TB available disk space for images and data base (minimum)
  - Two 10/100/1000 MB Ethernet port
  - USB 2.0 port for software installation

# SYSTEM CONTROLLERS

## APPLICATIONS

### SC5100

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



## Highlights

### SC5100

- 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

### SC5100

- 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: IP55\*
- Mechanical dimensions: 349 x 175 x 89 mm / 13.75 x 6.89 x 3.5 in

*\*Sealed connectors or connector covers required.*

# CONNECTIVITY

Wide range of **connectivity** for the identification product range with standard IP65 (NEMA4) protection class and operating temperature up 0°C to 50°C.

## CBX SERIES



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

## QL SERIES



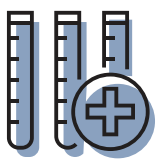
- Easy, fast, modular and cost-effective solution with "plug-in connection"
- Ethernet TCP/IP and EtherNet IP (QL500)

## 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





**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*

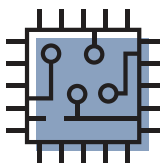
Matrix 320 top performing, extremely flexible and compact reader to empower shop floor and manufacturing traceability with excellent reading performance both on label and high resolution DPM.





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

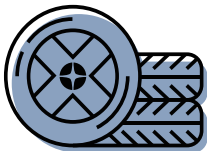
Reading barcodes on round fastmoving objects with random orientation is a challenging task that can be solved using an array of Matrix 220 readers.



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

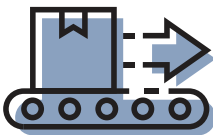
Parts, subassembly and components are continuously tracked by fixed readers like M220 or M320 throughout the production process

**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 undisputed reliability

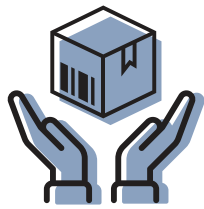


**AUTOMATED  
INTRALOGISTICS**  
*End of line, tote reading,  
secondary packaging, automatic  
order fulfillment and verification*

Matrix 320 5MP and 2MP the next step beyond intralogistics traceability, to track items to guarantee integrity, user safety, and efficient management of recalls.

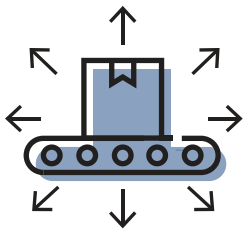






**E-COMMERCE RETAIL LOGISTICS**  
*Manual sorting, good to person, hands-free, manual order fulfillment*

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.

# DATALOGIC SOLUTIONS



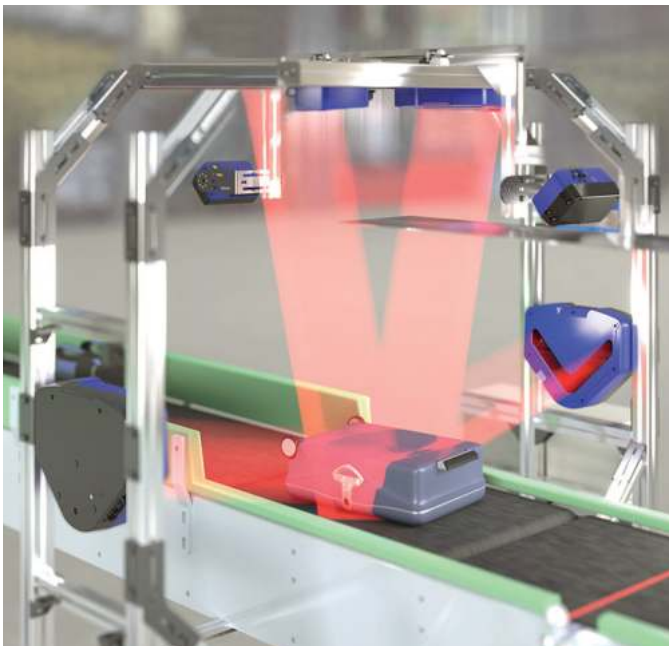
**BAGGAGE IDENTIFICATION: IMAGING TECHNOLOGY**  
*baggage tracking & sortation application*

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

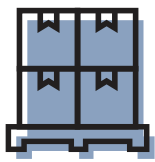


**BAGGAGE IDENTIFICATION: LASER TECHNOLOGY**  
*baggage tracking & sortation application*

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.







### INBOUND AND OUTBOUND LOGISTICS TRACEABILITY

*Pallet and batch reading (pallet on roller conveyor, on AGV, on forklift), pallet wrapping*

Matrix 320 powerful series with high intrinsic depth of field and wide field of view covers the whole side of the pallet or batch while moving, easily reading labels regardless of location also at high distance



### 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.

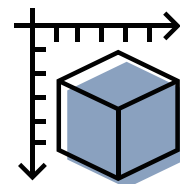
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### HIGH SPEED SORTING

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

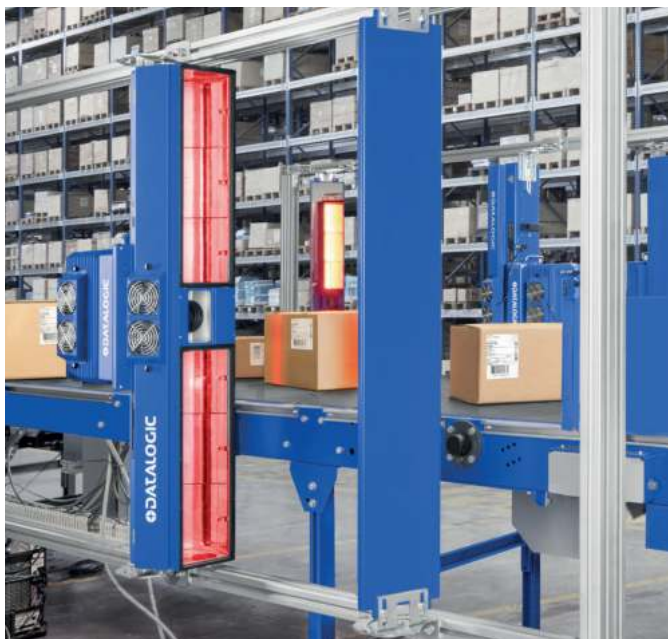
Single or multi-sided scanning tunnels with integrated Datalogic dimensioners, linear cameras or laser scanners, identify and sort packages on high speed sorting systems.



### 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.





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