TIRES
PRODUCT PORTFOLIO

MATRIX 120™

Matrix 120 is the most compact industrial 2D imager on the market to fit any integration space and the smallest compact 2D imager with embedded Ethernet connectivity.
Matrix 120 leads the market for customer Ease of Use and is characterized by a top Industrial grade in its class.
With only a few models, the Matrix 120 imager covers all of the targeted applications in OEM and the entry level manufacturing industry.

FEATURES & BENEFITS
- Ultra compact dimensions for easy integration
- WVGA – 1.2 MP models and wide angle models
- Embedded Ethernet connectivity
- Serial and USB interfaces available on the same model
- Polarized versions
- Outstanding performance
- Smart user selectable focus for high application flexibility
- Top Industrial grade rating: IP65;
- Operating temperature: 0 to 45 °C / 32 to 113 °F
- DL.Code for ease of setup
- Xpress, Green Spot technology and intuitive HMI for top ease of use

TIRES APPLICATIONS
- Traceability in manufacturing and final testing
- Parts and components tracking

MATRIX 210N™

Datalogic's Matrix 210N™ offers extreme reading performance and integrated Ethernet, Ethernet/IP and PROFINET in an ultra-compact housing.
With a WVGA imaging sensor able to capture up to 60 frames per second, and a flexible and powerful illuminator, the Matrix 210N™ offers the best-in-class direct part marked bar code reading capabilities. The unrivaled decoding libraries running on the high speed hardware platform deliver superior reading performance and impressive decoding rates, supporting high system throughput which delivers overall production efficiency.
Compact dimensions with straight or right angle optical options and an electronic variable focus option provides superb contact reading capability and a simple mechanical integration into tight spaces.
Installation and maintenance are extremely easy with the X-PRESS™ Interface. Datalogic's Green Spot technology (projected onto the scanned object) provides easy and real-time feedback of the reading status without any additional software or accessories.

FEATURES & BENEFITS
- Integrated Ethernet, PROFINET, EtherNet/IP, interfaces
- Electronic Focus Control
- Straight and right angle models for smart mounting
- Outstanding decoding capability on codes marked with DPM and 1D/2D standard codes
- On-board image saving
- ID-NET™ reader clustering/networking
- Ultra-fast image acquisition for high speed production lines
- Industrial Protection: ESD-safe, YAG, IP65

TIRES APPLICATIONS
- Traceability in manufacturing and final testing
- Parts and components tracking

2D IMAGERS

	MATRIX 120™	MATRIX 210N™
READING RANGE	25 to 220 mm / 0.98 to 8.66 in	30 to 190 mm / 1.2 to 7.5 in
MAXIMUM RESOLUTION	Up to 0.076 mm / .003 in (3 mils) - MP model	
FRAME RATE / SCAN RATE	Up to 57 full-frame/sec (WVGA model); Up to 36 full-frame/sec (MP model)	60 frames/sec @ full window size
FOCUSING SYSTEM	Manual adjustment in three precalibrated positions WVGA: 45, 70, 125 mm / 1.7, 2.7, 4.9 in ; MP: 45, 80, 125 mm / 1.7, 3.1, 4.9 in	Fixed or Variable, Electronic focus control model
SENSOR	CMOS sensor with Global Shutter WVGA – 752 x 480, MP – 1280 x 960	CMOS sensor with Global Shutter WVGA – 752 x 480
READABLE CODES	1D Codes: all standard 1 dimensional symbologies 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more	1D Codes: all standard 1 dimensional symbologies 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more
CODE ORIENTATION	Omnidirectional on any code type	Omnidirectional on any code type
MULTILABEL/MULTICODE READING	YES	YES
VOLTAGE SUPPLY / POWER CONSUMPTION	5 to 30 VDC; 1.6 - 2.4 W	10 to 30 VDC; 4.5 W
IP RATING	IP65	IP65
TEMPERATURE RANGE	0 to 45 °C / 32 to 113 °F	0 to 50 °C / 32 to 122 °F
CASE MATERIAL	Zama (Zinc Alloy) Plastic protective window cover	Aluminum, plastic protective window cover
DIMENSIONS (TYPICAL VALUE)	45.4 x 23.5 x 29 mm / 1.7 x 0.9 x 1.1 in (Serial and USB model) 45.4 x 23.5 x 42.9 mm / 1.7 x 0.9 x 1.6 in (Serial and Ethernet model)	Straight optic: 50 x 25 x 45 mm / 1.9 x 0.9 x 1.7 in Right angle optic: 54 x 32 x 45 mm /2.1 x 1.2 x 1.7 in
WEIGHT	116 gr / 4.0 oz (Serial and USB model) 199 gr / 7.0 oz (Serial and Ethernet model)	204 gr / 7.2 oz with cable
EMBEDDED COMMUNICATION INTERFACES	RS-232/RS-422 USB 2.0 (USB-CDC, USB-HID) Ethernet 10/100	RS-232/RS-422/RS-485 USB 2.0 in RS-232 MODE Ethernet 10/100
FIELDBUS	Profinet I/O Embedded Additional fielbus available with CBX & QLM accessories	Profinet I/O Embedded Additional fielbus available with CBX & QLM accessories
ETHERNET	Embedded (Serial and Ethernet model)	Embedded
XPRESS INTERFACE	YES	YES
DIGITAL INPUTS	Two SW Programmable (PNP/NPN)	Two opto-isolated. Polarity insensitive and SW Programmable.
DIGITAL OUTPUTS	Two SW Programmable (PNP/NPN)	Two SW programmable optocoupled
DEVICE PROGRAMMING	Windows™ based SW DL.CODE™	Windows™ based SW (DL.CODE™) via Ethernet

MATRIX 300N™

The Matrix 300N™ is an ultra-compact image-based bar code reader designed for performance on high speed and Direct Part Marking (DPM) applications.
The Matrix 300N™ reader is powered by the new software DL.CODE and combines a high resolution sensor with ultra-fast image acquisition: 1.3 MP, 60 frames per second.

FEATURES & BENEFITS
- Fast and high resolution image sensor: 1.3 megapixels, ' true' 60 frame/s
- Ultra-compact reader, rotating connector system
- High performance DPM reading
- Profinet-IO communication embedded
- Both manual and electronic focus control options
- Integrated dual illuminator: dark field/bright field
- Polarized model available
- Packtrack 2D for short object gapping
- Power over Ethernet Option
- Extreme Industrial grade: IP67 rating; Operating temperature: 0 to 50 °C / 32 to 122 °F

TIRES APPLICATIONS
- Traceability in manufacturing and final test
- Parts and components tracking

MATRIX 410N™

Matrix 410N™ is an industrial 2D imager purpose-built for the most complex traceability applications in material handling and logistics, equipped with an ultra-fast image sensor that performs at 2.0 MP and a frame rate of 45 frames per second.
The industrial imager offers Ethernet connectivity embedded, including TCP/IP, HTTP, FTP, PROFINET IO, EtherNet/IP, Modbus TCP/IP.

FEATURES & BENEFITS
- Patented ultra-fast strobed lighting with stable effect for users
- Packtrack 2D for short object gapping
- Embedded Ethernet connectivity, with common protocol support: PROFINET IO, ETHERNET/IP, TCP/IP, FTP, HTTP
- On board image storage saving up to 3,000 images (scaled)
- External connection box with parameter backup memory and display
- Increased flexibility with single reading point or multiple device cluster with easy configuration
- Laser pointing system, Datalogic's 'Green Spot' technology, focusing aiming system

TIRES APPLICATIONS
- Traceability in manufacturing and final test
- Parts and components tracking

MATRIX 450N™

The MATRIX 450N™ is a high-end, industrial 2D reader designed for transportation and logistics applications. With an extraordinary acquisition rate at a very high resolution and a high intensity illuminator, the Matrix 450N™ reader is the ideal product for automated and material handling. This 2D reader provides a large reading area in a single shot, resulting in high throughput and maximum ease of use – eliminating the need for multiple reading attempts.

FEATURES & BENEFITS
- Gigabit Ethernet integrated connectivity
- Adjustable focus through C-Mount lenses
- White and blue lighting options
- Continuous, no-flashing lighting
- Colored spot indicators
- Region of interest window for higher frame rate
- X-PRESS™ for easy and intuitive setup
- ID-NET™ embedded high speed connectivity

TIRES APPLICATIONS
- Traceability in manufacturing and final test
- Parts and components tracking

2D IMAGERS

	MATRIX 300N™	MATRIX 410N™	MATRIX 450N™
READING RANGE	25 to 450 mm / 1.2 to 19.7 in	50 to 2000 mm / 1.9 to 78.7 in	300 to 3000 mm / 11.8 to 118.1 in
FOCUSING SYSTEM	Electronic for liquid lens model (LQL-9MM)	Variable Focus	Variable Focus
SENSOR	CMOS sensor, Global Shutter SXGA – 1280 x 1024 - 1.3 MP	CMOS sensor SXGA (1280 x 1024) 1.3 MP CCD sensor UXGA (1600x1200) 2 MP	CCD sensor 5 MP (2448 x 2050)
FRAME RATE	60 frames/s @ full window size	CMOS: 60 frames/s CCD: 45 frames/s	15 frames/s
ON BOARD MEMORY	256 MB	256 MB	512 MB
READABLE CODES	1D Codes: all standard 1 dimensional symbologies 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more	1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417,Micro PDF417, Pharmacode, GS1 DataBar (RSS) family, and many more. 2D: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Microglyph Postal: Royal Mail, Japan Post, Planet, Postnet and many more	1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417, Micro PDF417, Pharmacode, GS1 DataBar (RSS) family, and many more. 2D: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Microglyph Postal: Royal Mail, Japan Post, Planet, Postnet and many more
CODE ORIENTATION	Omnidirectional on any code type	Omnidirectional on any code type	Omnidirectional on any code type
MULTILABEL/MULTICODE READING	YES	YES	YES
VOLTAGE SUPPLY/POWER CONSUMPTION	Std 5-30 VDC PoE 48 VDC; 5 - 8 W	10 to 30 VDC; 5 - 8 W	24 VDC; 2.5 A
IP RATING	IP67	IP67	IP65
TEMPERATURE RANGE	0 to 50 °C / 32 to 122 °F	0 to 50 °C / 32 to 122 °F	0 to 50 °C / 32 to 122 °F
CASE MATERIAL	Aluminum, Plastic protective window cover	Aluminum	Aluminum
DIMENSIONS (TYPICAL VALUE)	95 x 54 x 43 mm /3.7 x 2.1 x 1.6 in	123 x 60.5 x 87 mm /4.8 x 2.3 x 3.4 in	170 x 200 x 150 mm / 6.6 x 7.8 x 5.9 in
WEIGHT	485 g /17 oz with lens and internal illuminator	482g / 17 oz with lens and internal illuminator	3 kg / 105.8 oz with lens
YAG LASER PROTECTION	YES	YES (with accessories)	NO
EMBEDDED COMMUNICATION INTERFACES	RS-232/RS-422/RS-485 Ethernet 10/100	RS-232 / RS-422 / RS-485 Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant	RS-232 / RS-422 / RS-485 Ethernet IEEE 802.3 1000 BaseT compliant
ID-NET INTERFACE	YES	YES	YES
FIELDBUS	YES Profinet I/O Embedded Additional fieldbus available with CBX and QLM	YES Profinet I/O Embedded Additional fieldbus available with CBX and QLM	YES CBX, QLM external devices
ETHERNET	YES Embedded	YES Embedded	YES Embedded
XPRESS INTERFACE	YES	YES	YES
DIGITAL INPUTS	Polarity insensitive and software programmable.	Two software programmable, optocoupled and polarity insensitive	Two software programmable, optocoupled and polarity insensitive
DIGITAL OUTPUTS	Three software programmable PNP/NPN (short circuit protection) OUT3 programmable as input too	Three software programmable, optocoupled	Two software programmable, optocoupled
DEVICE PROGRAMMING	Windows™ based software (DL.CODE™) via Ethernet	X-PRESS™ Human Machine Interface Windows™ based software (DL.CODE™) Serial Host Mode Programming sequences	X-PRESS™ Human Machine Interface Windows™ based software (DL.CODE™) Serial Host Mode Programming sequences

XRF410N™

The XRF410N™, named for its extended Reading Field, is a solution based on the Matrix 410N™ platform for material handling and sortation in the logistics industry. XRF410N is designed and built for a broad variety of material handling applications with transportation speeds up to 2.2 m/s (433 fpm) for medium sized objects, with typical scanning depths of 400 mm (15.7 in.).

FEATURES & BENEFITS

- Easy to select the correct model: no technical analysis is required. Just the code dimension, conveyor width and speed
- Easy to install: the XRF410N is pre-assembled and configured at the factory
- Increase customer productivity: XRF410N is fully capable of successfully scanning hard-to-read, damaged or poor quality bar codes
- DL.Code for ease of setup
- Patented Packtrack 2D for short object gapping in sortation applications
- Laser pointing system, Green Spot technology, focusing aiming system

TIRES APPLICATIONS

- Traceability in manufacturing and final test
- Parts and components tracking

STS400™

STS400™ is a state-of-the-art solution for tire sorting. With an extremely compact and self-contained structure, this solution excels in delivering top reading performance with simple, user-friendly installation and maintenance. STS400 is pre-assembled and calibrated, making integration into a tire sorting system quicker than ever. In less than one hour, with no special tools or training, the STS400 can go from the shipping carton to reading tires in the production line.

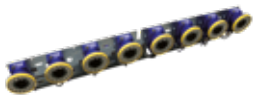
FEATURES & BENEFITS

- Easy to install install and maintain (100% pre-assembly calibration)
- Simple and lean: regulated render layout, eliminating articulated mounting patterns
- Long-term reliability with no moving on-board
- Compatible with changing requirements, such as code heights

TIRES APPLICATIONS

- Final Inspection
- Sorting and Shipping
- Finishing and Inspection
- Curing Process Control
- Labeling Verification

2D IMAGERS



	XRF410N™	STS400™- Passenger Light Truck Tires	STS400™- Commercial Vehicle Tires
READING DISTANCE (MIN / MAX)	860-1670 mm	890 - 1140 mm (35 - 44.9 in)	880 - 1280 mm (34.6 - 50.4 in)
SENSOR	CMOS sensor SXGA (1280 x 1024) 1.3 MP CCD sensor UXGA (1600x1200) 2 MP	CCD sensor UXGA (1600x1200) 2 MP	CCD sensor UXGA (1600x1200) 2 MP
FRAME RATE	CMOS: 60 frames/s CCD: 45 frames/s	15 frames / s	15 frames / s
READABLE CODES	1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417,Micro PDF417, Pharmacode, GS1 DataBar (RSS) family, and many more. 2D: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Microglyph Postal: Royal Mail, Japan Post, Planet, Postnet and many more	1D and Stacked: IL 2/5, Code 128, Code 39, Code 32, MSI, Std 2 of 5, Matrix 2 of 5, Interleaved 2 of 5, Codabar, Code 93, EAN/UPC, PDF417, Micro PDF417, Pharmacode, GS1 DataBar (RSS) family, Composite Symbologies 2D: Data Matrix ECC200, QR Code, Micro QR, Maxicode, Aztec Code Postal: Australia Post, Royal Mail 4 State Customer, Kix Code, Japan Post, Planet, Postnet, Intelligent Mail, Swedish Post	1D and Stacked: IL 2/5, Code 128, Code 39, Code 32, MSI, Std 2 of 5, Matrix 2 of 5, Interleaved 2 of 5, Codabar, Code 93, EAN/UPC, PDF417, Micro PDF417, Pharmacode, GS1 DataBar (RSS) family, Composite Symbologies 2D: Data Matrix ECC200, QR Code, Micro QR, Maxicode, Aztec Code Postal: Australia Post, Royal Mail 4 State Customer, Kix Code, Japan Post, Planet, Postnet, Intelligent Mail, Swedish Post
CODE ORIENTATION	Omnidirectional on any code type	Omnidirectional on any code type	Omnidirectional on any code type
MULTILABEL/MULTICODE READING	YES	YES	YES
VOLTAGE SUPPLY / POWER CONSUMPTION OR CURRENT ABS.	10 to 30 VDC; 5 - 8 W	24 VDC ; 1.35 A	24 VDC ; 1.71 A
IP RATING	IP67	IP65	IP65
TEMPERATURE RANGE	0 to 50 °C (32 to 122 °F)	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)
CASE MATERIAL	Aluminum	Aluminum	Aluminum
DIMENSIONS (TYPICAL VALUE)	320x230x166.5 mm (12.6x9x6.55 in); a capo..320x242.75x167.5 mm (12.6x9.55x6.59 in)	**STS400-006**: 785 x 223 x 149 mm (30.91 x 8.78 x 5.87 in.)	**STS400-106**: 800 x 241 x 176 mm (31.50 x 9.49 x 6.93 in)
WEIGHT	from 3600 g to 4920 g	**STS400-006**: 10 kg (22.05 lb)	**STS400-106**: 10 kg (22.05 lb)
EMBEDDED COMMUNICATION INTERFACES	RS232 / RS422 / RS485 Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant	RS232/RS422/RS485 Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant	RS232/RS422/RS485 Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant
ID-NET™ INTERFACE	YES	YES	YES
FIELDBUS	Profinet I/O Embedded Additional fielbus available with CBX & QLM accessories	YES Available with external device	YES Available with external device
ETHERNET	YES Embedded	YES Embedded	YES Embedded
XPRESS INTERFACE™	YES	YES	YES
DIGITAL INPUTS	Two SW programmable, optocoupled and polarity insensitive	Input 1 (External Trigger) Input 2 Opto-coupled and polarity insensitive	Input 1 (External Trigger) Input 2 Opto-coupled and polarity insensitive
DIGITAL OUTPUTS	Two SW programmable optocoupled + one non-optocoupled	Output 1 and Output 2 Opto-coupled	Output 1 and Output 2 Opto-coupled
DEVICE PROGRAMMING	Windows™ based SW DL.CODE™	Windows™ based SW (Visiset) Serial Host Mode Programming sequences	Windows™ based SW (Visiset) Serial Host Mode Programming sequences