



The Matrix 120™ imager is the smallest ultra-compact industrial 2D imager range in the market to fit any integration space and the smallest compact 2D imager with embedded Ethernet connectivity.

The Matrix 120™ is available in different models, including a WVGA sensor for standard applications or a 1.2 MP sensor for high resolution bar codes. Moreover, a wide angle version makes the Matrix 120™ the perfect solution for proximity reading.

The Matrix 120™ is characterized with the top industrial grade parts in its class (IP65 and 0-45 °C / 32 – 133 °F), with ESD safe models for applications in the electronic industry and features a glass-free reading window, suitable for the Food and Beverage environment.

As part of the full Matrix series, the Matrix 120™ leads the market for customer ease of use because of DL.CODE™ configuration software, X-Press™ button and intuitive HMI.

The Matrix 120™ is the entry level model of the best-in-class Matrix family of high performance industrial 2D imagers.

The Matrix 120™ is the perfect solution when small dimension, simple integration and performance are the key drivers. This makes the Matrix 120™ the ideal product for OEM customers: Chemical/Biomedical industry and Print & Apply applications. Additionally, this imager is perfect for entry level applications in the Factory Automation arena: Electronics, Packaging and Food/Beverage.



IDENTIFICATION

## HIGHLIGHTS

- Ultra compact dimensions for easy integration
- WVGA – 1.2 MP and wide angle models
- Smart user selectable focus for high application flexibility
- Embedded Ethernet connectivity
- Serial and USB options on the same model
- ESD versions for electronic applications
- Polarized Version for 90° mounting and reflecting surfaces
- Top industrial grade: IP65; operating temperatures: 0-45 °C / 32 – 133 °F
- DL.Code software configurator for outstanding ease of setup
- Xpress, Datalogic's 'Green Spot' technology and intuitive HMI for top ease of use

## APPLICATIONS

- Electronics – Track and trace PCB board manufacturing
- Factory Automation: Print & Apply – label verification
- Factory Automation: Food & Beverage – traceability
- OEM: Kiosks – ticketing machine
- Healthcare: Clinical Lab – vials identification
- Chemical and biomedical analysis machine

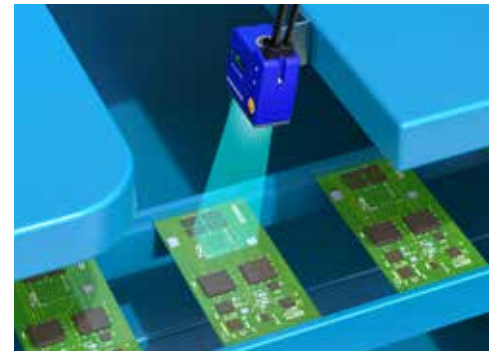
## TECHNICAL DATA

READING RANGE (MIN - MAX)	Matrix 120 - WVGA: 25-190mm [1.0-7.5 in] Matrix 120 - MP: 25-220mm [1.0-8.7 in]
FOCUSING SYSTEM	Manual adjustment in three precalibrated positions (45, 70, 125mm - WVGA ; 45, 80, 125mm - MP)
SENSOR	CMOS sensor with Global Shutter /WVGA - 752x480 px CMOS sensor with Global Shutter /MP - 1280x960 px
FRAME RATE	up to 57 full-frame/s (WVGA model) , up to 36 full-frame/s (MP model)
ON BOARD MEMORY	128 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
CODE ORIENTATION	Omnidirectional on any code type
MULTILABEL /MULTICODE READING	✓
VOLTAGE SUPPLY / POWER CONSUMPTION	5-30 VDC; 1.6 to 2.4 W
IP RATING	IP65
TEMPERATURE RANGE	0-45 °C / 32 – 133 °F
CASE MATERIAL	Zama (Zinc Alloy) - Plastic reading window cover
DIMENSIONS (TYPICAL VALUE)	45.4 x 31.1 x 23.5 mm [1.8 x 1.2 x 1 in] (SER+USB model) 45.4 x 48.5 x 23.5 mm [1.8 x 1.9 x 1 in] (SER+ETH model)
WEIGHT	117 g (4.1 oz) with cable (SER+USB model) - 200 g (7.1 oz) with cable (SER+ETH model)
ESD SAFE	✓
POLARIZING FILTER	✓
EMBEDDED COMMUNICATION INTERFACES	RS-232/RS-422/USB 2.0 high speed (USB-CDC, USB-HID) Main RS-232 or RS-422 FD (2400 to 115200 bit/s)
ETHERNET	Embedded (SER+ETH model only) 10/100 Mbit/s*
DIGITAL INPUTS	Two SW Programmable (PNP/NPN)
DIGITAL OUTPUTS	Two SW Programmable (PNP/NPN)
DEVICE PROGRAMMING	X-PRESS™ Human Machine Interface Windows-based SW (DL.CODE™) via Ethernet or Serial Interface Host Mode Programming sequences sent over Serial or Ethernet TCP interfaces

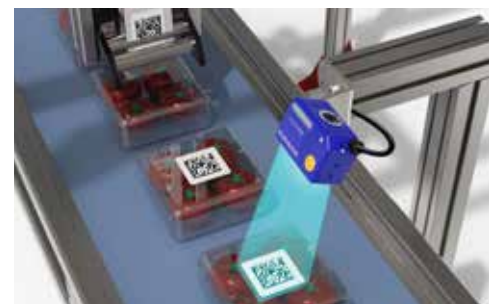
\* The embedded Ethernet interface supports application protocols: TCP/IP, EtherNet/IP, PROFINET-I/O, Modbus TCP.



Pharma



Electronics



Food & Beverage

## MODELS

Code	Description	SW	Sensor	Connectivity	Type	Code Library
937800000	MATRIX 120 210-000 WVGA SER+USB STD	DL.Code	WVGA	SER+USB	STD	1D+2D
937800001	MATRIX 120 210-010 WVGA SER+ETH STD	DL.Code	WVGA	SER+ETH	STD	1D+2D
937800002	MATRIX 120 210-001 WVGA SER+USB ESD	DL.Code	WVGA	SER+USB	ESD	1D+2D
937800003	MATRIX 120 210-011 WVGA SER+ETH ESD	DL.Code	WVGA	SER+ETH	ESD	1D+2D
937800004	MATRIX 120 310-001 1.2MP SER+USB ESD	DL.Code	1.2 MP	SER+USB	ESD	1D+2D
937800005	MATRIX 120 310-011 1.2MP SER+ETH ESD	DL.Code	1.2 MP	SER+ETH	ESD	1D+2D
937800006	MATRIX 120 210-100 WVGA SER+USB 1D	DL.Code	WVGA	SER+USB	STD	1D
937800007	MATRIX 120 210-110 WVGA SER+ETH 1D	DL.Code	WVGA	SER+ETH	STD	1D
937800008	MATRIX 120 311-000 1.2MP SER+USB WA	DL.Code	1.2 MP	SER+USB	WA	1D+2D
937800009	MATRIX 120 311-010 1.2MP SER+ETH WA	DL.Code	1.2 MP	SER+ETH	WA	1D+2D
937800010	MATRIX 120 311-100 1.2MP SER+USB WA 1D	DL.Code	1.2 MP	SER+USB	WA	1D
937800011	MATRIX 120 311-110 1.2MP SER+ETH WA 1D	DL.Code	1.2 MP	SER+ETH	WA	1D
937800014	MATRIX 120 311-005 1.2 SER+USB WA PLZR	DL.Code	1.2 MP	SER+ETH	WA	1D+2D
937800015	MATRIX 120 311-015 1.2 SER+ETH WA PLZR	DL.Code	1.2 MP	SER+ETH	WA	1D+2D

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