Matrix 120™

DATALOGIC

IDENTIFICATION

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.

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

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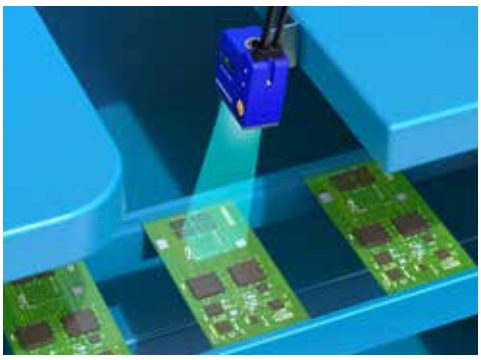
TECHNICAL DATA

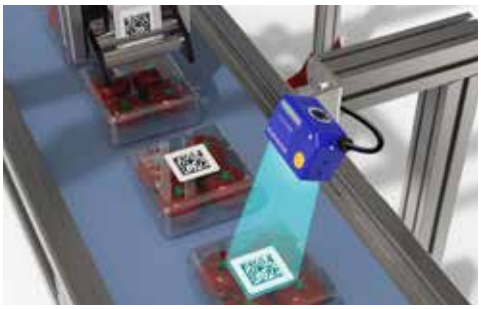
READING RANGE (MIN - MAX)	Matrix 120 - WVGA: 25-190mm [1.0-7.5 in] Matrix 120 - MP: 25-220mm [1.0-8.7 in]
FOCUSING SYSTEM	Manual adjustment in three precalibrated positions (45, 70, 125mm - WVGA ; 45, 80, 125mm - MP)
SENSOR	CMOS sensor with Global Shutter/WVGA - 752x480 px CMOS sensor with Global Shutter/MP - 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	✓
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-IO, Modbus TCP.

Pharma



Electronics



Food & Beverage

MODELS

Code	Description	SW	Sensor	Connectivity	Type	Code Library
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	ETH	STD	1D
937800000	MATRIX 120 210-000 WVGA SER+USB STD	DL.Code	WVGA	SER+USB	STD	1D+2D
937800002	MATRIX 120 210-001 WVGA SER+USB ESD	DL.Code	WVGA	SER+USB	ESD	1D+2D
937800001	MATRIX 120 210-010 WVGA SER+ETH STD	DL.Code	WVGA	ETH	STD	1D+2D
937800003	MATRIX 120 210-011 WVGA SER+ETH ESD	DL.Code	WVGA	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	ETH	ESD	1D+2D

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The company endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products.