Matrix 120™

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
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]

FOCUSBING 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

MULTICODE/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-I0, Modbus TCP.

MODELS

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<th>Code</th>
<th>Description</th>
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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.

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