

MATRIX 120™



The Matrix 120 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 with the red light model is the first stationary industrial scanner in the market able to read Digimarc Barcode for added value decoding applications.

The Matrix 120 features 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 a glass-free reading window, suitable for the Food and Beverage environment.

Sulfur gas protection allows the use of Matrix 120 in tires applications through rough manufacturing, final finishing and inspection stations.

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. The Matrix 120 models with shorter output cables (only 100 mm of length) allow an easier integration in OEM machines, making this product ideal for customers belonging to 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
- Digimarc Barcode reading technology for added value decoding applications
- Embedded Ethernet connectivity
- Serial and USB options on the same model
- ESD versions for electronic applications
- Polarized Version for 90° mounting and reflecting surfaces
- Models equipped with shorter output cables (100mm of length) for easier integration in OEM machines
- 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

APPLICATION

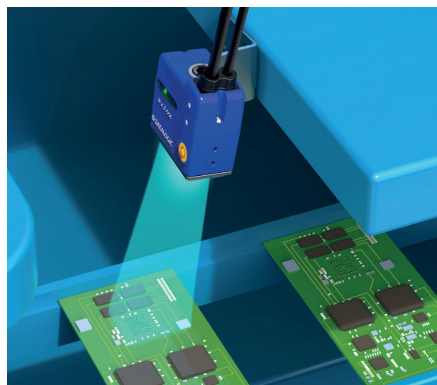
- Electronics: Track and trace PCB board manufacturing
- Factory Automation: Print & Apply – label verification
- Factory Automation: Food & Beverage – traceability
- OEM: Kiosks: ticketing machine
- Healthcare: Clinical Lab – vials identification
- Chemical and biomedical analysis machine

TECHNICAL DATA

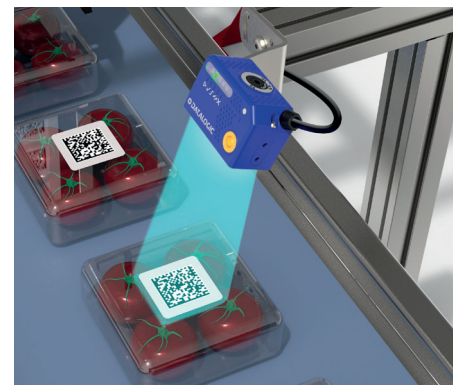
| OPTICAL FEATURES | | ELECTRICAL FEATURES | |
|--|---|---------------------------------|---|
| Sensor | CMOS sensor with Global Shutter/WVGA - 752x480 px CMOS sensor with Global Shutter/1.2 MP - 1280x960 px | Power Supply Voltage | 5-30 VDC; |
| Frame Rate | up to 57 full-frame/s (WVGA model) , up to 36 full-frame/s (1.2 MP model) | Max Power Consumption | 1.6 to 2.4 W |
| Illumination | White Internal Illuminator | PHYSICAL CHARACTERISTICS | |
| Focusing System | Manual adjustment in three precalibrated positions (45, 70, 125mm - WVGA ; 45, 80, 125mm - 1.2 MP) | Dimensions | 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) Cable Versions: STD 1000mm (39 in), SC 100mm (3.9 in) |
| Polarizer filter | Available on dedicated models | Weight | Standard cables 117g (4.1 oz) with cable (SER+USB model) - 200g (7.1 oz) with cable (SER+ETH model) Short Cables 96 g (3.4 oz) with cable (SER+USB model) - 145 g (5.1 oz) with cable (SER+ETH model) |
| Pitch | +/- 35° | Case Material | Aluminum |
| Tilt | 0° - 360°(within vertical FOV) | ENVIRONMENTAL FEATURES | |
| DECODING CAPABILITY | | Humidity | 90% non condensing |
| Readable Symbolologies | Omnidirectional reading on any of the following codes: 1D Codes: all standard 1 dimensional symbolologies 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Dot Code Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more Digimarc Barcode: DWCODE™ | Protection Class EN60529 | IP65 |
| Reading capability | Omnidirectional on any code type Multilabel / multicode reading | Operating Temperature | 0-45 °C / 32 – 113 °F |
| Code Quality Metrics | 1D CQ Standard: ISO/IEC 15416 2D CQ Standard: ISO/IEC 16022/18004, ISO/IEC 29158 (AIM-DPM), ISO/IEC 15415 | Storage Temperature | -20 to 70 °C (-4 to 158 °F) |
| Code Quality Metrics | 1D CQ Standard: ISO/IEC 15416 2D CQ Standard: ISO/IEC 16022/18004, ISO/IEC 29158 (AIM-DPM), ISO/IEC 15415 | Sulfur gas resistance | Available for all the models according to ISO EN 60068-2-43 |
| COMMUNICATIONS INTERFACE | | ESD Safe | Available on dedicated models |
| Embedded communication interfaces | Ethernet 10/100 Mbit/s: TCP/IP, UDP, FTP and Fieldbus PROFINET IO, Ethernet IP, Modbus TCP Serial RS232/RS422FD up to 115.2 Kbit/s | SAFETY & REGULATORY | |
| INPUTS AND OUTPUTS | | Agency approvals | The product meets necessary safety and regulatory approvals for its intended use. |
| Digital Inputs | Ethernet 10/100 Mbit/s: TCP/IP, UDP, FTP and Fieldbus PROFINET IO, Ethernet IP, Modbus TCP | Environmental compliance | Complies to EU RoHS |
| Digital Outputs | Serial RS232/RS422FD up to 115.2 Kbit/s | Regulatory | EN61000-6-2 Electromagnetic Immunity; EN61000-6-4 Electromagnetic Emissions Class A; FCC part 15 for Class A digital device; CSA listed product for Canada and U.S.; CE; KC; EAC Class 1M Laser Product as per IEC 60825-1 Complies with CDRH Requirements |
| USER INTERFACE AND PROGRAMMING | | Laser Safety | Complies with CDRH Requirements |
| Operating Mode | Continuous, One Shot, Phase mode | LED Safety | LED Safety Exempt Risk Group as per EN 62471 |
| Aiming System | Laser indicator | WARRANTY | |
| User Interface | <ul style="list-style-type: none"> Green spot X-PRESS™ Human Machine Interface Beeper X-PRESS™ Push Button 6 LEDs (Power; Ready, Good, Trigger, Com, Status, Ethernet Network) | Warranty | 2-Year Factory Warranty |
| Device Programming | DL.CODE™ Windows-based software (programming via Ethernet or Serial Interface) with Javascript output formatter Serial Host Mode programming X-PRESS™ Human Machine Interface | | |



Pharma

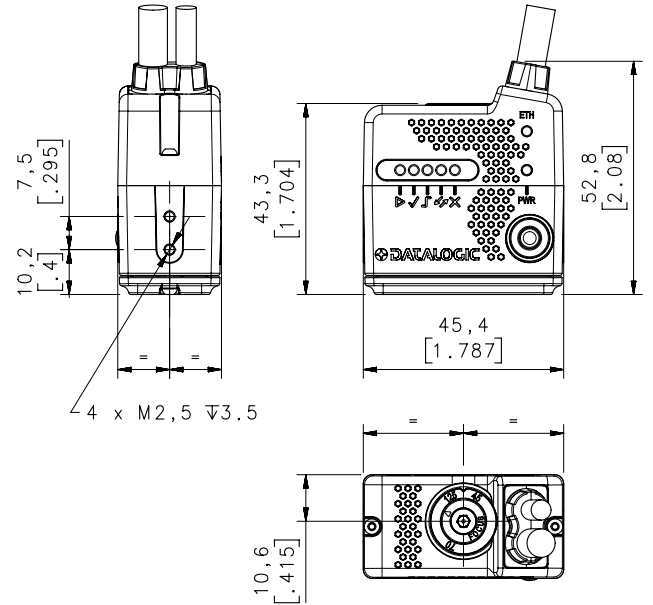
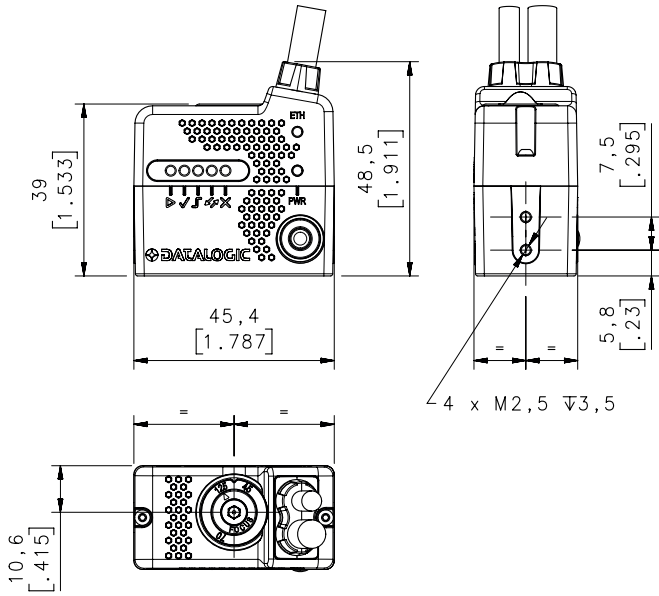
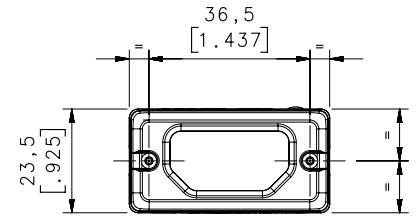
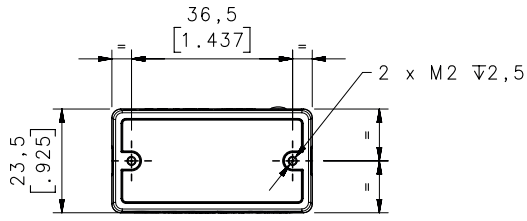


Electronics



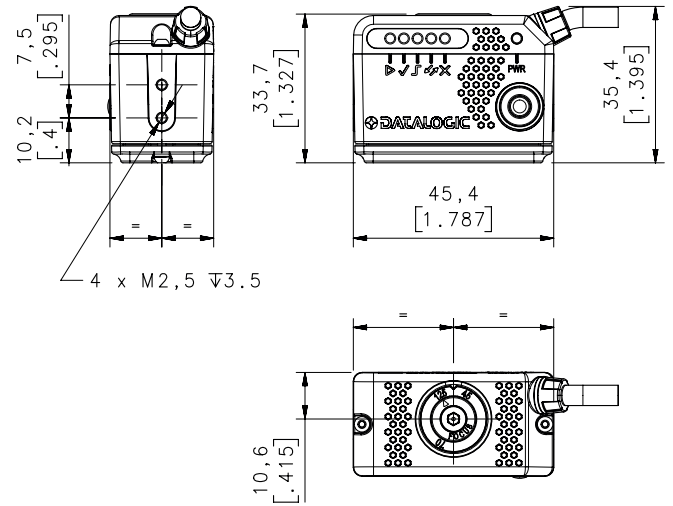
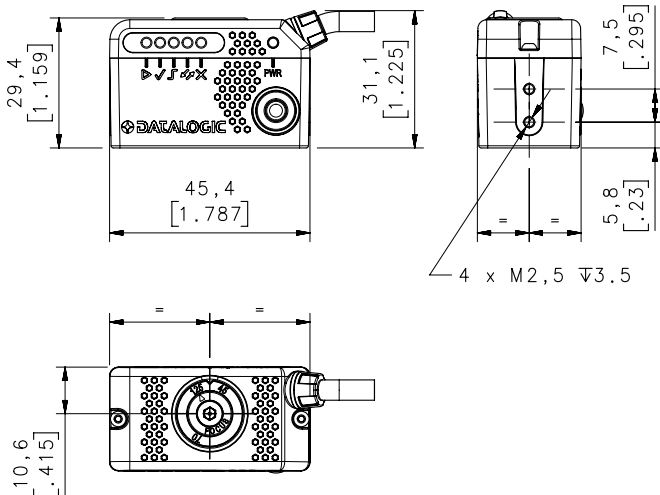
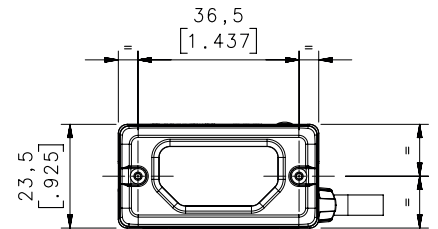
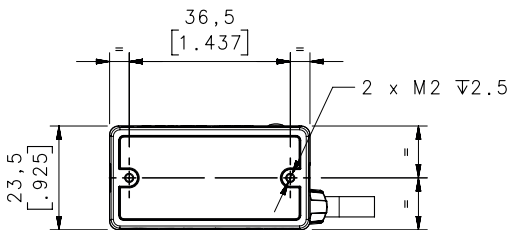
Food & Beverage

DIMENSIONS



Matrix 120 Ethernet Models

Matrix 120 Ethernet Models with ESD Cover



Matrix 120 USB Models

Matrix 120 USB Models with ESD Cover

MODELS

| CODE | DESCRIPTION | SENSOR | CONNECTIVITY | TYPE |
|-----------|--|--------|--------------|-----------|
| 937800000 | MATRIX 120 210-000 WVGA SER+USB STD | WVGA | SER+USB | STD |
| 937800001 | MATRIX 120 210-010 WVGA SER+ETH STD | WVGA | SER+ETH | STD |
| 937800002 | MATRIX 120 210-001 WVGA SER+USB ESD | WVGA | SER+USB | ESD |
| 937800003 | MATRIX 120 210-011 WVGA SER+ETH ESD | WVGA | SER+ETH | ESD |
| 937800004 | MATRIX 120 310-001 1.2MP SER+USB ESD | 1.2MP | SER+USB | ESD |
| 937800005 | MATRIX 120 310-011 1.2MP SER+ETH ESD | 1.2MP | SER+ETH | ESD |
| 937800006 | MATRIX 120 210-100 WVGA SER+USB 1D | WVGA | SER+USB | STD 1D |
| 937800007 | MATRIX 120 210-110 WVGA SER+ETH 1D | WVGA | SER+ETH | STD 1D |
| 937800008 | MATRIX 120 311-000 1.2MP SER+USB WA | 1.2MP | SER+USB | WA |
| 937800009 | MATRIX 120 311-010 1.2MP SER+ETH WA | 1.2MP | SER+ETH | WA |
| 937800010 | MATRIX 120 311-100 1.2MP SER+USB WA 1D | 1.2MP | SER+USB | WA 1D |
| 937800011 | MATRIX 120 311-110 1.2MP SER+ETH WA 1D | 1.2MP | SER+ETH | WA 1D |
| 937800014 | MATRIX 120 311-005 1.2 SER+USB WA PLZR | 1.2MP | SER+USB | WA+PLZ |
| 937800015 | MATRIX 120 311-015 1.2 SER+ETH WA PLZR | 1.2MP | SER+ETH | WA+PLZ |
| 937800045 | MATRIX 120 310-01A 1.2MP SER+ETH | 1.2MP | SER+ETH | Digimarc |
| 937800052 | MATRIX 120 210-050 WVGA SER+USB STD SC | WVGA | SER+USB | STD SC |
| 937800053 | MATRIX 120 210-060 WVGA SER+ETH STD SC | WVGA | SER+ETH | STD SC |
| 937800054 | MATRIX 120 311-050 1.2MP SER+USB WA SC | 1.2MP | SER+USB | WA SC |
| 937800055 | MATRIX 120 311-060 1.2MP SER+ETH WA SC | 1.2MP | SER+ETH | WA SC |
| 937800056 | MATRIX 120 311-055 1.2 SER+USB WA PLZ SC | 1.2MP | SER+USB | WA+PLZ+SC |
| 937800057 | MATRIX 120 311-065 1.2 SER+ETH WA PLZ SC | 1.2MP | SER+ETH | WA+PLZ+SC |

Legenda:

- 1D Only linear code
- ESD ESD safe version
- WA Wide Angle Optics
- PLZ Polarizer Version
- SC Short pig tail cable 100mm
- Digimarc Digimarc Version

ACCESSORIES

| CODE | DESCRIPTION |
|-----------|---|
| 93A050099 | CAB-1011 M120 M12 Main To CBX (1M) |
| 93A050100 | CAB-1021 M120 M12 Main To USB (1M) |
| 93A050108 | CAB-1051 M120 M12 Main To USB + I/O (1M) |
| 93A050103 | CAB-1001 M120 M12-M12 Main Extension (1M) |
| 93A050104 | CAB-1002 M120 M12-M12 Main Extension (2M) |
| 93A050105 | CAB-1005 M120 M12-M12 Main Extension (5M) |
| 93A051346 | CAB-ETH-M01 M12-IP67 Ethernet Cable (1M) |
| 93A051347 | CAB-ETH-M03 M12-IP67 Ethernet Cable (3M) |
| 93A051348 | CAB-ETH-M05 M12-IP67 Ethernet Cable (5M) |
| 93A050057 | CBL-1534.02 Adapter Cable Ethernet M12 to female RJ45 |

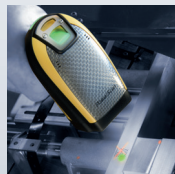
CABLES

| CODE | DESCRIPTION |
|-----------|--|
| 93A050099 | CAB-1011 - M120 M12 Main To CBX (1M) |
| 93A050100 | CAB-1021 - M120 M12 MAIN TO USB 1M |
| 93A050108 | CAB-1051 - M120 M12 MAIN USB AND I/O 1M |
| 93A050103 | CAB-1001 - M120 M12 MAIN EXTENS 1M |
| 93A050104 | CAB-1002 - M120 M12 MAIN EXTENS 2M |
| 93A050105 | CAB-1005 - M120 M12 MAIN EXTENS 5M |
| 93A051346 | CAB-ETH-M01 M12-IP67 ETHERNET CAB. (1M) |
| 93A051347 | CAB-ETH-M03 M12-IP67 ETHERNET CAB. (3M) |
| 93A051348 | CAB-ETH-M05 M12-IP67 ETHERNET CAB. (5M) |
| 93A050057 | CBL-1534-0.2 ADAPT. CABLE ETH M12-TO-RJ4 |

DATALOGIC PRODUCT OFFERING



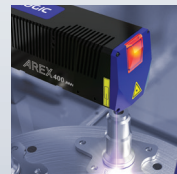
Sensors



Hand Held scanners



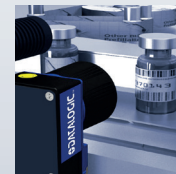
Mobile Computers



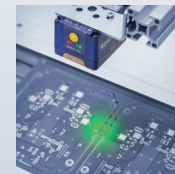
Laser Marking Systems



Safety Laser Scanner



Vision Systems



Stationary Industrial Scanners



Safety Light Curtains

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