



## Datalogic Matrix 120 – Compact industrial scanner

- ✓ High frequency capture of smallest barcodes with 1.2 megapixel sensor
- ✓ Compact dimensions for flexible installation
- ✓ Easy integration into existing processes and machines
- ✓ Numerous special models to choose from
- ✓ Innovative software to simplify configuration and control

## Features

**Readable codes:** 1D, 2D, Post, Digimarc

**Sensor:** WVGA / 1.2 MP | 57 / 36 FPS

**Reading distance:** 4.5 - 12 cm

**Feedback:** LEDs, Green Spot, Beeper

**Connectivity:** Ethernet, serial, USB, optical inputs / outputs

**Power supply:** 5-30 V DC

**Protection:** IP65

**Operating temperature:** 0 - 45°C

**Dimensions:** 45 x 48 x 23 mm

**Weight:** 200 g (with 1m cable)

## Optional accessories

various connection cables

| OPTICAL FEATURES                         |                                                                                                                                                                                                                                                                                                                     | ELECTRICAL FEATURES             |                                                                                                                                                                                                                              |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sensor</b>                            | CMOS sensor with Global Shutter/WVGA - 752x480 px<br>CMOS sensor with Global Shutter/1.2 MP - 1280x960 px                                                                                                                                                                                                           | <b>Power Supply Voltage</b>     | 5-30 VDC;                                                                                                                                                                                                                    |
| <b>Frame Rate</b>                        | up to 57 full-frame/s (WVGA model) , up to 36 full-frame/s (1.2 MP model)                                                                                                                                                                                                                                           | <b>Max Power Consumption</b>    | 1.6 to 2.4 W                                                                                                                                                                                                                 |
| <b>Illumination</b>                      | White Internal Illuminator                                                                                                                                                                                                                                                                                          | PHYSICAL CHARACTERISTICS        |                                                                                                                                                                                                                              |
| <b>Focusing System</b>                   | Manual adjustment in three precalibrated positions (45, 70, 125mm - WVGA ; 45, 80, 125mm - 1.2 MP)                                                                                                                                                                                                                  | <b>Dimensions</b>               | 45.4 x 31.1 x 23.5 mm [1.8 x 1.2 x 1 in] (SER+USB model)<br>45.4 x 48.5 x 23.5 mm [1.8 x 1.9 x 1 in] (SER+ETH model)<br>Cable Versions: STD 1000mm (39 in), SC 100mm (3.9 in)                                                |
| <b>Polarizer filter</b>                  | Available on dedicated models                                                                                                                                                                                                                                                                                       | <b>Weight</b>                   | <u>Standard cables</u><br>117g (4.1 oz) with cable (SER+USB model) - 200g (7.1 oz) with cable (SER+ETH model)<br><u>Short Cables</u><br>96 g (3.4 oz) with cable (SER+USB model) - 145 g (5.1 oz) with cable (SER+ETH model) |
| <b>Pitch</b>                             | +/- 35°                                                                                                                                                                                                                                                                                                             | <b>Case Material</b>            | Aluminum                                                                                                                                                                                                                     |
| <b>Tilt</b>                              | 0° - 360°(within vertical FOV)                                                                                                                                                                                                                                                                                      | ENVIRONMENTAL FEATURES          |                                                                                                                                                                                                                              |
| DECODING CAPABILITY                      |                                                                                                                                                                                                                                                                                                                     | <b>Humidity</b>                 | 90% non condensing                                                                                                                                                                                                           |
| <b>Readable Symbolologies</b>            | Omnidirectional reading on any of the following codes:<br><u>1D Codes:</u> all standard 1 dimensional symbolologies<br><u>2D Codes:</u> Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Dot Code<br><u>Postal Codes:</u> Royal Mail, Japan Post, Planet, Postnet and many more<br><u>Digimarc Barcode:</u> DWCODE™ | <b>Protection Class EN60529</b> | IP65                                                                                                                                                                                                                         |
| <b>Reading capability</b>                | Omnidirectional on any code type<br>Multilabel / multicode reading                                                                                                                                                                                                                                                  | <b>Operating Temperature</b>    | 0-45 °C / 32 – 113 °F                                                                                                                                                                                                        |
| <b>Code Quality Metrics</b>              | 1D CQ Standard: ISO/IEC 15416<br>2D CQ Standard: ISO/IEC 16022/18004, ISO/IEC 29158 (AIM-DPM), ISO/IEC 15415                                                                                                                                                                                                        | <b>Storage Temperature</b>      | -20 to 70 °C (-4 to 158 °F)                                                                                                                                                                                                  |
| COMMUNICATIONS INTERFACE                 |                                                                                                                                                                                                                                                                                                                     | <b>Sulfur gas resistance</b>    | Available for all the models according to ISO EN 60068-2-43                                                                                                                                                                  |
| <b>Embedded communication interfaces</b> | Main RS-232 or RS-422 FD (2400 to 115200 bit/s)<br>SER+ETH models: RS-232/RS-422/Ethernet 10/100 Mbit/s with protocols TCP/IP, UDP, FTP and Fieldbus PROFINET IO, Ethernet IP, Modbus TCP<br>SER+USB models: RS-232/RS-422/USB 2.0 high speed (USB-CDC, USB-HID)                                                    | <b>ESD Safe</b>                 | Available on dedicated models                                                                                                                                                                                                |
| INPUTS AND OUTPUTS                       |                                                                                                                                                                                                                                                                                                                     | SAFETY & REGULATORY             |                                                                                                                                                                                                                              |
| <b>Digital Inputs</b>                    | Two SW Programmable (PNP/NPN)                                                                                                                                                                                                                                                                                       | <b>Agency approvals</b>         | The product meets necessary safety and regulatory approvals for its intended use.                                                                                                                                            |
| <b>Digital Outputs</b>                   | Two SW Programmable (PNP/NPN)                                                                                                                                                                                                                                                                                       | <b>Environmental compliance</b> | Complies to EU RoHS                                                                                                                                                                                                          |
| USER INTERFACE AND PROGRAMMING           |                                                                                                                                                                                                                                                                                                                     | <b>Regulatory</b>               | EN61000-6-2 Electromagnetic Immunity;<br>EN61000-6-4 Electromagnetic Emissions Class A;<br>FCC part 15 for Class A digital device;<br>CSA listed product for Canada and U.S.; CE; KC; EAC                                    |
| <b>Operating Mode</b>                    | Continuous, One Shot, Phase mode                                                                                                                                                                                                                                                                                    | <b>Laser Safety</b>             | Class 1M Laser Product as per IEC 60825-1<br>Complies with CDRH Requirements                                                                                                                                                 |
| <b>Aiming System</b>                     | Laser indicator                                                                                                                                                                                                                                                                                                     | <b>LED Safety</b>               | LED Safety Exempt Risk Group as per EN 62471                                                                                                                                                                                 |
| <b>User Interface</b>                    | <ul style="list-style-type: none"> <li>Green spot</li> <li>X-PRESS™ Human Machine Interface</li> <li>Beeper</li> <li>X-PRESS™ Push Button</li> <li>6 LEDs (Power; Ready; Good; Trigger; Com; Status, Ethernet Network)</li> </ul>                                                                                   | WARRANTY                        |                                                                                                                                                                                                                              |
| <b>Device Programming</b>                | DL.CODE™ Windows-based software (programming via Ethernet or Serial Interface) with Javascript output formatter<br>Serial Host Mode programming<br>X-PRESS™ Human Machine Interface                                                                                                                                 | <b>Warranty</b>                 | 2-Year Factory Warranty                                                                                                                                                                                                      |