Matrix 200™ is the new Datalogic 2D reader offering excellent reading performance, ultra compact size and extreme ease of use. Thanks to innovative optical features, advanced software functions and complete connectivity options, Matrix 200™ is the cost effective solution for applications where the space is very limited.

**ULTRA COMPACT SIZE**
Compact dimensions, straight and 90° reading window models availability allow flexible mounting and positioning in narrow spaces.

**EXCELLENT READING PERFORMANCE**
WVGA image sensor, up to 60 frames/s acquisition rate and dynamic reading capability, together with powerful decoding libraries provide excellent performance on a wide range of code symbologies as well as damaged and low quality codes. Matrix 200™ allows reading 10 mils codes in moving applications at speeds up to 2 m/sec.

**INNOVATIVE OPTICAL FEATURES**
The innovative optical and lighting systems ensure wide field of view at short reading distances, combined with excellent illumination pattern. Matrix 200™ has a maximum reading distance of 200 mm, and it can read at near distance ultra high density 2D codes up to 0.076 mm (3 mils).

**EASE OF USE**
The intuitive X-PRESS™ Human Machine Interface makes installation and maintenance easier than ever thanks to a five LED bar graph and the multi-function key providing immediate access to relevant functions such as Aiming, Setup (for automatic imager calibration), Learn (for automatic code setting), Test Mode (for bar graph activation), A Green Spot provides immediate Good Read feedback.

**ENHANCED CONNECTIVITY**
An embedded high speed ID-NET™ communication interface allows efficient data collection and simplifies network wiring. USB interface models allow direct connection to a PC.

**INDUSTRIAL FEATURES**
Matrix 200™, with its rugged construction, IP65 protection class, 50°C max operating temperature and 10 to 30 VDC power supply is the ideal product for industrial applications.

**Features**
- Ultra compact dimensions
- Direct and 90° window models for smart mounting
- Outstanding decoding capability on 1D, 2D, Stacked and Postal symbologies
- High performance on dynamic reading applications
- X-PRESS™ for easy and intuitive setup
- Optical aiming system
- 10 to 30 VDC Power Supply
- USB connectivity
- ID-NET™ embedded high speed connectivity
- Region Of Interest Windowing for higher frame rate
- Run Time Self Tuning for higher flexibility

**Applications**
- Electronics
- PCB Board Tracking
- Electronic Products Tracking
- Pharmaceutical & Chemical
- Pharmaceutical Industries
- Supply chain traceability
- OEM
- Chemical & Biomedical Analysis Machines
- Access control systems
- Self Service Systems (ATM, Kiosks)
- Print & Apply systems
- Document Handling
Matrix 200

Specifications

Technical Data

Reading Characteristics

Models

<table>
<thead>
<tr>
<th>P/N</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>937501x00</td>
<td>MATRIX 200 211-10x WVGA-Near Distance-25 Pin</td>
</tr>
<tr>
<td>937501x01</td>
<td>MATRIX 200 212-10x WVGA-Medium Distance-25 Pin</td>
</tr>
<tr>
<td>937501x02</td>
<td>MATRIX 200 213-10x WVGA-Far Distance-25 Pin</td>
</tr>
<tr>
<td>937501x03</td>
<td>MATRIX 200 214-10x WVGA-Ultra High Density-25 Pin</td>
</tr>
<tr>
<td>937501x04</td>
<td>MATRIX 200 211-12x WVGA-Near Distance-USB</td>
</tr>
<tr>
<td>937501x05</td>
<td>MATRIX 200 212-12x WVGA-Medium Distance-USB</td>
</tr>
<tr>
<td>937501x06</td>
<td>MATRIX 200 213-12x WVGA-Far Distance-USB</td>
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<tr>
<td>937501x07</td>
<td>MATRIX 200 214-12x WVGA-Ultra High Density-USB</td>
</tr>
<tr>
<td>937501x12</td>
<td>MATRIX 200 211-00x WVGA-Near Distance-90°-25 Pin</td>
</tr>
<tr>
<td>937501x13</td>
<td>MATRIX 200 212-00x WVGA-Medium Distance-90°-25 Pin</td>
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<tr>
<td>937501x14</td>
<td>MATRIX 200 213-00x WVGA-Far Distance-90°-25 Pin</td>
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<td>937501x15</td>
<td>MATRIX 200 214-00x WVGA-Ultra High Density-90°-25 Pin</td>
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<tr>
<td>937501x16</td>
<td>MATRIX 200 211-02x WVGA-Near Distance-90°-USB</td>
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<tr>
<td>937501x17</td>
<td>MATRIX 200 212-02x WVGA-Medium Distance-90°-USB</td>
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<tr>
<td>937501x18</td>
<td>MATRIX 200 213-02x WVGA-Far Distance-90°-USB</td>
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<tr>
<td>937501x19</td>
<td>MATRIX 200 214-02x WVGA-Ultra High Density-90°-USB</td>
</tr>
</tbody>
</table>

NOTE: X = 0 ⇒ MATRIX 200™ Standard Versions; X = 1 ⇒ MATRIX 200™ ESD Safe Versions; X = 2 ⇒ MATRIX 200™ ESD Safe + YAG Cut Filter Versions.

DIMENSIONS

<table>
<thead>
<tr>
<th>MODELS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATRIX 200 21x-1x</td>
<td>50 x 26 x 45 mm (1.97 x 0.98 x 1.77 in)</td>
</tr>
<tr>
<td>MATRIX 200 21x-0x</td>
<td>54 x 32 x 45 mm (2.12 x 1.26 x 1.77 in)</td>
</tr>
</tbody>
</table>

WEIGHT

60g (2.1 oz) without cable

CASE MATERIAL

Aluminum alloy

OPERATING TEMPERATURE

0 to 50 °C (32 to 122 °F)

STORAGE TEMPERATURE

-20 to 70 °C (-4 to 158 °F)

HUMIDITY

90% non-condensing

PROTECTION CLASS

IP65

OPTICAL FEATURES

WVGA (752 x 480) CMOS Sensor with Global Shutter

FRAME RATE

60 frames/s

READING WINDOW

Direct or 90°

READING ANGLES

Max. Pitch: ± 35°; Tilt: 0-360°

READABLE SYMBOLOGIES

1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417, Micro PDF417, Pharmacode, GS1 DATABAR (RSS) family, and many more

2D: Data Matrix, QR Code, Maxicode, Aztec, Microglyph

Postal: Royal Mail, Japan Post, Planet, Postnet and many more

COMMUNICATION INTERFACES

RS232 + RS232/RS422/RS485 up to 115.2 Kbit/s

ID-NET™ port up to 1 Mbps

USB 2.0 up to 901.6 Kbit/s

CONNECTIVITY MODES

Pass Through, Master/Slave, Multiplexer, USB Point To Point

DIGITAL INPUTS

Two SW programmable, optocoupled and polarity insensitive

DIGITAL OUTPUTS

Two SW programmable optocoupled

DEVICE PROGRAMMING

X-PRESS™ Human Machine Interface

Windows™ based SW (VisiSet™) via serial or USB link

USER INTERFACE

X-PRESS™ Human Machine Interface

Beeper, Programmable Push Button, LEDs (Status, Com, Trigger, Good, Ready, Power On, Good read Spot)

CODE QUALITY VERIFICATION

ISO/IEC 16022 (Data Matrix), ISO/IEC 18004 (QR Code)

ISO/IEC 15415 (Print quality test specifications for 2D codes)

ISO/IEC 15416 (Print quality test specifications for linear codes)

AS9132A (Data Matrix Quality Requirements for Parts Marking)

AIM DPM (Global Direct Part Mark Quality Guideline)

Matrix 200 21x-xxx

POWER SUPPLY:

10 to 30 VDC

5 VDC

POWER CONSUMPTION:

3.0 W max; 3.0 W typ.

2.5 W max; 2.0 W typ.

Reading Characteristics

<table>
<thead>
<tr>
<th>Models</th>
<th>Focus Distance (mm)</th>
<th>Field of View @ Focus Distance (±10.5)</th>
<th>PHN @ Focus Distance (±0.063)</th>
<th>2D Code Resolution (mm/mil)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATRIX 200 214-xxx</td>
<td>30 (1.2)</td>
<td>16.5 ± 10.5</td>
<td>1150 (0.063 ± 2.5)</td>
<td>Min: 28 (1.10) Max: 32 (1.26)</td>
</tr>
<tr>
<td>MATRIX 200 211-xxx</td>
<td>45 (1.7)</td>
<td>38 ± 22</td>
<td>545 (0.10 ± 4)</td>
<td>Min: 23 (0.91) Max: 38 (1.50)</td>
</tr>
<tr>
<td>MATRIX 200 212-xxx</td>
<td>65 (2.6)</td>
<td>50 ± 32</td>
<td>380 (0.15 ± 6)</td>
<td>Min: 35 (1.42) Max: 81 (3.20)</td>
</tr>
<tr>
<td>MATRIX 200 213-xxx</td>
<td>105 (4.1)</td>
<td>80 ± 50</td>
<td>238 (0.20 ± 8)</td>
<td>Min: 47 (1.85) Max: 101 (3.97)</td>
</tr>
</tbody>
</table>

NOTE: X = 0 ⇒ MATRIX 200™ Standard Versions; X = 1 ⇒ MATRIX 200™ ESD Safe Versions; X = 2 ⇒ MATRIX 200™ ESD Safe + YAG Cut Filter Versions.

PCB Handling

Medical & Pharmaceutical

OEM