Matrix 400™
Compact 2D Imager

Highlights
Matrix 400™ is an industrial compact 2D reader that combines image capturing, decoding and communicating in a single compact and versatile product.

• EXCELLENT PERFORMANCE
The two sensor versions (SXGA and UXGA), combined with powerful internal lightings and C-Mount lenses, guarantee accuracy in identifying and verifying codes with different resolutions at various distances. Powerful proprietary decoding libraries provide the Matrix 400™ with excellent performance even on damaged and low quality codes. Higher frame rates can be achieved using the powerful Region Of Interest Windowing, satisfying applications with high throughput.

• EASE OF SETUP
X-PRESS™ makes installation and maintenance easier than ever thanks to a five LED bar-graph and a multi-function key that sets relevant functions such as Focus (Blue Diamonds™ System), Test Mode (for bar graph activation), Setup (for automatic imager calibration), Learn (for automatic code setting).

• EASE OF USE
Run Time Self- Tuning (RTST) increases the Matrix’s flexibility by automatically setting the reader in run time, and a Green Spot provides immediate Good Read feedback.

• FLEXIBILITY
Modular design, focus adjustable C-Mount lenses and a large set of accessories provide high flexibility in covering demanding applications.

• CONNECTIVITY
Embedded high speed ID-NET™ communication interface allows efficient data collection and simplify network wiring.

• VERSATILITY
Matrix 400™ features both DPM (Direct Part Marked) reading capability and Code Quality Verification in the same product accordingly to ISO and IAQG standards.

• INDUSTRIAL STRENGTH
With its rugged construction, IP67 protections and 50°C max operating temperature, Matrix 400™ is the best product for industrial application.

Features
• 1.3 (SXGA) & 2.0 (UXGA) MPixels models
• Adjustable focus through C-Mount lenses
• Outstanding decoding capability on 1D, 2D, Stacked, Postal symbologies
• Excellent Performance on DPM Application
• Region Of Interest Windowing for higher frame rate
• Blue Diamonds™ aiming and focusing system
• X-PRESS™ for easy and intuitive setup
• Run Time Self Tuning for higher flexibility
• ID-NET™ embedded high speed connectivity
• Code Quality Verification Capability
• Ethernet Connectivity

Applications
• Automotive
  • DPM Reading and Verification
• Electronics
  • Large PCB Board Tracking
  • Electronics Product Tracking
• Distribution & Retail Industry
  • Presentation Scanner
  • Small Objects Sorting
  • Warehouse application
• Medical & Pharmaceutical
  • Medical Devices Traceability
  • Pharmaceutical Industries
  • Chemical & Biomedical Analysis
• Food & Beverage
  • Work in Progress Traceability
  • Code Quality Control

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Matrix 400™

Specifications

Physical Characteristics

- **DIMENSIONS**: 123 x 60.5 x 87 mm (4.84 x 2.38 x 3.42 in) with protective lens cover
- **WEIGHT**: 482 g (17 oz.) with lens and internal illuminator
- **CASE MATERIAL**: Aluminum
- **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**: IP67

Performance

- **OPTICAL FEATURES**: SXGA (1280 x 1024)
- **FRAME RATE**: 27 frame/s
- **READABLE SYMBOLOGIES**: 1D and stacked: Code 128, Code 39, EAN/JANUPC, PDF417, Micro PDF417, Pharmacode, GS1 DATABAR (RSS) family, and many more
- **COMMUNICATION INTERFACE**: RS232 + RS232/RS422/RS485 up to 115.2 Kbit/s
- **COMMUNICATION INTERFACE**: Ethernet, IEEE 802.3 and IEEE 802.3U 100 BaseTx
- **ID-NET™**: port up to 1 Mbps
- **CONNECTIVITY MODES**: Pass Through, Master/Slave, Multiplexer, ETH point to point
- **DIGITAL INPUTS**: Two SW programmable, optocoupled and polarity insensitive
- **DIGITAL OUTPUTS**: Two SW programmable optocoupled
- **PROGRAMMING METHOD**: X-PRESS™ Human Machine Interface
- **USER INTERFACE**: Windows™ based SW (VisiSet™) via serial or Ethernet link
- **CODE QUALITY VERIFICATION**: AS9132A (Data Matrix Quality Requirements for Parts Marking), ISO/IEC 15415 (Print quality test specifications for 2D codes), ISO/IEC 15416 (Print quality test specifications for linear codes), ISO/IEC 16022 (DataMatrix), ISO/IEC 18004 (QR-Code), AIM DPM (Global Direct Part Mark Quality Guideline)

Electrical Characteristics

- **POWER SUPPLY**: 10 to 30 VDC
- **POWER CONSUMPTION**: 8 W max; 5W typical

Models & Accessories

- **MODELS**
  - 937401100: MATRIX 400 400-000 SXGA-Base-CMount-Serial
  - 937401103: MATRIX 400 400-010 SXGA-Base-CMount-Ethernet
  - 937401105: MATRIX 400 600-000 UXGA-Base-CMount-Serial
  - 937401107: MATRIX 400 600-010 UXGA-Base-CMount-Ethernet

- **INTERNAL LIGHTING SYSTEMS**
  - 93A401019: LT-001 INTERNAL LT RED NARROW ANGLE
  - 93A401020: LT-002 INTERNAL LT RED WIDE ANGLE
  - 93A401021: LT-003 INTERNAL LT NARROW ANGLE

- **C-MOUNT LENSES**
  - 93ACC11793: LNS-1006 6MM C-MOUNT LENS
  - 93ACC11794: LNS-1109 9MM C-MOUNT LENS
  - 93ACC11795: LNS-1112 12.5MM C-MOUNT LENS
  - 93ACC11796: LNS-1116 16MM C-MOUNT LENS
  - 93ACC11797: LNS-1125 25MM C-MOUNT LENS
  - 93ACC11798: LNS-1135 50MM C-MOUNT LENS
  - 93ACC11799: LNS-1150 50MM C-MOUNT LENS

For more information and software downloads see: www.automation.datalogic.com/matrix400