

## MATRIX 410™

**Matrix 410™** is an industrial compact 2D reader that combines image capturing, decoding and communicating in a single compact and versatile product.

**MATRIX 410™** is powered by a new engine, a high speed industrial micro processor, optimized for image processing and Ethernet connectivity. The result is a superior barcode reading speed and robustness, especially for 2D codes and DPM; the **powerful proprietary decoding libraries** provide the Matrix 410™ with unrivalled performance even on damaged and low quality codes.

**MATRIX 410™** strongly excels for throughput in data transfer over the Ethernet; it is capable to transmit **over 4 SXGA (1.3 MP) images per second**, while capturing and decoding at the normal rate; the high capacitance channel enables real time massive image transfer, even with a full working resolution.

The Embedded high speed **ID-NET™** communication interface enables an efficient and fast clustering of multiple reader; this offers the best modularity of the building block approach and always the optimal balance between price and performance.

**MATRIX 410™** makes better the remote slave reader configuration, a new function enabling the reader parameter setup over an ID-NET link; the system configuration and maintenance are so easier and efficient than ever.

**2MP  
Sensor**

Large FOV



Adjustable Focus

**Xpress  
interface**

Ease of use



VISION

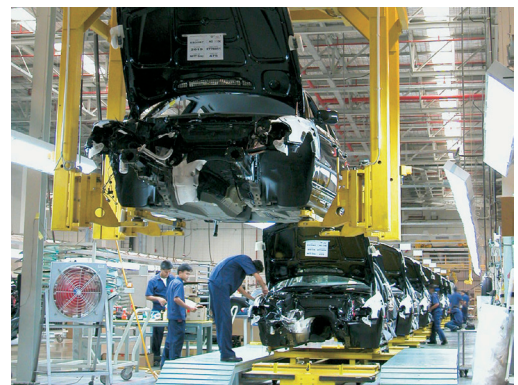
## HIGHLIGHTS

- Ethernet Connectivity
- 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

## APPLICATIONS

- **Automotive**
  - DPM Reading and Verification
  - Tires Tracking & Tracing
- **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

### Automotive



## TECHNICAL DATA

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	MATRIX 410 -4xx-xxx	MATRIX 410 -6xx-xxx
	SXGA (1280 x 1024)	UXGA (1600 x 1200)
	CMOS sensor	CCD sensor
FRAME RATE	27 frames/s	15 frames/s
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, Micro QR, Maxicode, Aztec, Microglyph Postal: Royal Mail, Japan Post, Planet, Postnet and many more	
COMMUNICATION INTERFACE	RS232 + RS232/RS422/RS485 up to 115.2 Kbit/s Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant ID-NET™ port up to 1 Mbps	
CONNECTIVITY MODES	Pass Through, Master/Slave, Multiplexer, Ethernet 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 Windows™ based SW (VisiSet™) via serial or Ethernet link	
USER INTERFACE	X-PRESS™ Human Machine Interface Beeper, Programmable Push Button, LEDs (Status, Com, Trigger, Good, Ready, Power on, Network presence, Good read Spot)	
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		
	P/N	Description
MODELS	937401031	MATRIX 410 400-000 SXGA-BS-CM-SER-STD
	937401032	MATRIX 410 400-010 SXGA-BS-CM-ETH-STD
	937401033	MATRIX 410 600-000 UXGA-BS-CM-SER-STD
	937401034	MATRIX 410 600-010 UXGA-BS-CM-ETH-STD
INTERNAL LIGHTING SYSTEMS	93A401019	LT-001 INTERNAL LT RED NARROW ANGLE
	93A401020	LT-002 INTERNAL LT RED WIDE ANGLE
	93A401021	LT-003 INTERNAL LT WHITE NARROW ANGLE
	93A401022	LT-004 INTERNAL LT WHITE WIDE ANGLE
	93A401024	LT-006 INTERNAL LT RED SUPER NARROW ANGLE
	93A401026	LT-010 HI POWER LT BLUE SUPERNARROW
	93A401025	LT-020 ULTRA POWER LT BLUE SUPERNAR.
C-MOUNT LENSES	93ACC1793	LNS-1006 6MM C-MOUNT LENS
	93ACC1794	LNS-1109 9MM C-MOUNT LENS
	93ACC1795	LNS-1112 12,5MM C-MOUNT LENS
	93ACC1796	LNS-1116 16MM C-MOUNT LENS
	93ACC1797	LNS-1125 25MM C-MOUNT LENS
	93ACC1798	LNS-1135 35MM C-MOUNT LENS
	93ACC1799	LNS-1150 50MM C-MOUNT LENS



Electronics



Distribution & Retail



Medical & Pharmaceutical



Tires Tracking & Tracing



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