MATRIX-1000™

1D & 2D, Stacked, Postal Code Area CCD Reader

DATALOGIC
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Multicode

Codes w/optical distortion

Damaged codes

Calibration Tool

Unattended Scanning Systems

General Description

Matrix-1000™ is an area CCD reader for industrial Automatic Identification applications using bar code, 2D, stacked and postal code technologies. The fully integrated reader combines a LED lighting system, image capturing, decoding and communication interfaces in a single compact product.

Matrix-1000™ has been designed to offer a simple, robust and high performance CCD reader that is easy to use. It is the ideal solution for OEM integrations (kiosks, ATM, gaming & lottery machines) and industrial applications. It is also suitable for multi-reader array solutions connected via multiplexer (Datalogic accessory).

Matrix-1000™ captures images at 30 fps (frame per second). It is the perfect solution for low to medium code translation speed applications where the price/performance ratio is a high level priority.

Matrix-1000™ diagnostic software tools enable real time monitoring of code printing quality according to AIM standards for all symbologies decoded.

The state-of-the-art embedded decoding libraries are extremely effective on damaged and low quality code applications. The reader's flexibility allows a smooth transition from standard bar code reading to 2D bar code symbologies.

Matrix-1000™ is ready for use in various applications, offering many optical solutions to guarantee high accuracy in identifying codes with different resolutions at various distances, with the best reading performance in its class. Customized solutions for specific applications are also available upon request.

Features

> Up to 30 frames/s (1800 frames/min)
> Up to 100 code readings in a single frame
> 1D & 2D, stacked, postal code reading
> Internal image buffering
> Image transfer capability
> Code quality control (AIM standards)
> Integrated LED lighting system

Applications

> WIP control / product traceability
> PCB production line tracking
> Semiconductor production line tracking
> Chemical and biomedical analysis machines
> Small objects production line tracking
> OEM integration (kiosks, atm, gaming & lottery machines, etc.)

Specifications

ELECTRICAL CHARACTERISTICS

POWER SUPPLY	10 to 30 Vdc
POWER CONSUMPTION	4 W max.; 2,5 W typ.

MECHANICAL CHARACTERISTICS

DIMENSIONS	121 x 73 x 57 mm (4.76 x 2.87 x 2.24 in)
WEIGHT	330 g (11.60 oz)
CASE MATERIAL	Magnesium alloy

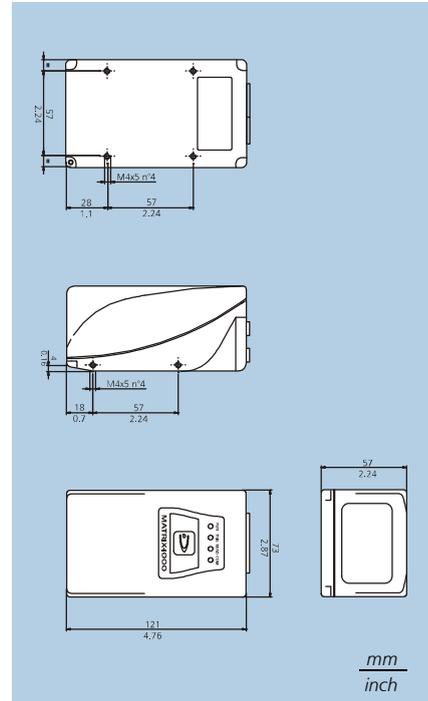### PERFORMANCE

OPTICAL FEATURES	VGA format CCD sensor / LED array lighting systems
READING RATE	Up to 30 reads/s
READING ANGLES	Max. Pitch: ± 35°; Tilt: 360°
READABLE SYMBOLOGIES	Data Matrix ECC200, QR Code, PDF417, I 2/5, Code 128, Code 39, EAN/UPC, RSS, postal codes and many more
COMMUNICATION INTERFACE	RS232 (aux) + RS485 half-duplex (main); up to 115.2 Kbit/s
CONNECTIVITY	Point to point and Multiplexer
DIGITAL INPUTS	One SW programmable, optocoupled and polarity insensitive
DIGITAL OUTPUTS	One SW programmable optocoupled
PROGRAMMING METHOD	Windows™ based configuration software (VisiSet™)
DIAGNOSTIC SW TOOLS	Code Quality (AIM standards), Exposure Indication, Code Position and Orientation, Decoding time
LEDS	PWR, TRIG, READ, COM

ENVIRONMENT

OPERATING TEMPERATURE	0 to 40 °C (32 to 104 °F)
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90% non condensing
VIBRATION RESISTANCE	IEC 68-2-6 test FC 1.5 mm; 10 to 55 Hz; 2 hours on each axis
SHOCK RESISTANCE	IEC 68-2-27 test EA 30 G; 11ms; 3 shocks on each axis
PROTECTION CLASS	IP64

Dimensions

mm
inch

Reading Characteristics

MODEL / DESCRIPTION	TYP. 2D CODE RESOLUTION mm (mils)	TYP. 1D/STACKED CODE RESOLUTION mm (mils)	FOCUS DISTANCE mm (in)	FIELD OF VIEW AT FOCUS DISTANCE mm x mm (in x in)	READING DISTANCE mm (in)
MATRIX-1021 High Density	0.19 (7.5)	0.10 (4)	115 (4.5)	25 x 19 (1.0 x 0.75)	105-125 (4.13 - 4.92)
MATRIX-1031 Standard Density	0.25 (10)	0.15 (6)	155 (6.1)	34 x 26 (1.3 x 1.02)	135-180 (5.31 - 7.09)
MATRIX-1041 Low Density	0.38 (15)	0.20 (8)	110 (4.3)	54 x 40 (2.13 x 1.57)	90-140 (3.54 - 5.51)
MATRIX-1051 Medium Range	0.60 (24)	0.30 (12)	210 (8.3)	95 x 70 (3.74 x 2.76)	150-250 (5.90 - 9.84)

For other possibilities, please see the Matrix-2000™. Customized models upon request.

Accessories

C-Box 100 connection box

C-Box 300/310 Profibus connection box

C-Box 400/410 Devicenet connection box

DATALOGIC Quality Partner
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