



Datalogic's Matrix 210™ offers extreme reading performance and integrated Ethernet & PROFINET in an ultra-compact housing.

With a WVGA image sensor able to capture up to 60 frames per second, and a flexible and powerful illuminator, the Matrix 210™ offers best-in-class direct part marked bar code reading capabilities.

The unrivalled decoding libraries running on the high speed hardware platform deliver superior reading performance and impressive decoding rates, supporting high system throughput which delivers overall production efficiency.

Both read data and captured images are transferred using the on-board Ethernet ports. The captured images can be either saved internally or easily and quickly uploaded to external PCs for storage or offline analysis. Compact dimensions with straight or right angle optical options provides superb contact reading capability and a simple mechanical integration into tight spaces.

Installation and maintenance are extremely easy with the X-PRESS™ Interface. X-PRESS features a five LED bar graph with a multifunction key for immediate access to functions such as Aiming, Setup, Automatic Learning, and Test Mode.

The Green Spot - projected onto the scanned object - provides easy and real-time feedback of the reading status without any additional software or accessories.



IDENTIFICATION

HIGHLIGHTS

- Integrated Ethernet, PROFINET, EtherNet/IP, USB interfaces
- Dynamic Focus Liquid Lens Models
- High performance DPM bar code reading
- On-board image saving (up to 5,000 images)
- Outstanding decoding capability on DPM and labeled 1D & 2D standard codes
- Straight and right angle models for smart mounting
- ID-NET™ reader clustering/networking
- Ultra-fast image acquisition for high speed production lines
- Industrial Protection: ESD-safe, YAG, IP65

APPLICATIONS

Electronic

- PCB Board Tracking
- Electronic Products Tracking

Pharmaceutical & Chemical

- Pharmaceutical manufacturing and packaging
- Supply chain traceability

OEM

- Chemical & Biomedical Analysis Machines
- Access control systems
- Print & Apply systems
- Document Handling



TECHNICAL DATA

	FIXED FOCUS MODELS	LIQUID LENS MODEL
Dimensions	Straight optic 50 x 25 x 45 mm (1.97 x 0.98 x 1.77 in) Right angle optic 54 x 32 x 45 mm (2.13 x 1.26 x 1.77 in)	61 x 25 x 45 mm (2.40 x 0.98 x 1.77 in)
Weight	204 g. (7.2 oz.) with cable	237 g. (8.4 oz.) with cable
Case material	Aluminum, plastic protective window cover	
Operating temperature	0° to 50° C (32 to 122 °F)	0° to +45 °C (32 to 113°F)
Storage temperature	-20 to 70 °C (-4 to 158 °F)	
Protection class	IP65	
Esd safe	YES, with ESD Safe front cover accessory	
Yag laser protection	YES, with YAG cut filter accessory	
Power supply	Standard: 10 VDC to 30 VDC	
Power consumption	0.4 to 0.15 A, 4.5 W max	
Sensor	Image Resolution 780 x 480 WVGA - CMOS global shutter	
Frame rate	60 frames/s	
Optical focus control	Fixed	Variable, Electronic controlled liquid lens
Aiming system	Blue Ring LED system	Dual laser pointer (CDRH/IEC Class II)
Readable symbologies	1D Codes: all standard 1 dimensional symbologies 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more	
Embedded communication interfaces	Ethernet 10/100: Ethernet IP, PROFINET, TCP/IP, UDP, FTP, MODBUS TCP Serial RS232/RS422/RS485 up to 115.2 Kbit/s + Aux RS232 USB (only on fixed focus models)	
Reader networking	Datalogic ID-NET™	
Connectivity modes	Pass Through, Master/Slave, Multiplexer, Ethernet point to point	
Digital inputs	2 opto-isolated. Polarity insensitive and SW Programmable.	
Digital outputs	2 SW programmable, opto-coupled	
Programming method	Windows™ based SW (VisiSet™) via Serial, USB or Ethernet	
User interface	X-PRESS™, Embedded Human Machine Interface Beeper, Push Button, 7 LEDs (Status, Comm., Trigger, Good Read, Ready, Power on, Network)	
Code quality metrics	AIM DPM, ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 16022, ISO/IEC 18004, A59132A	

MODELS

	P/N	DESCRIPTION	P/N	DESCRIPTION
Serial	937501026	MATRIX 210 211-100 WVGA-NEAR-25P-ST	937501038	MATRIX 210 211-000 WVGA-NEAR-90-25P-ST
	937501027	MATRIX 210 212-100 WVGA-MED-25P-ST	937501039	MATRIX 210 212-000 WVGA-MED-90-25P-ST
	937501028	MATRIX 210 213-100 WVGA-FAR-25P-ST	937501040	MATRIX 210 213-000 WVGA-FAR-90-25P-ST
	937501029	MATRIX 210 214-100 WVGA-UHD-25P-ST	937501041	MATRIX 210 214-000 WVGA-UHD-90-25P-ST
Serial ethernet	937501030	MATRIX 210 211-110 WVGA-NEAR-ETH-ST	937501042	MATRIX 210 211-010 WVGA-NEAR-90-ETH-ST
	937501031	MATRIX 210 212-110 WVGA-MED-ETH-ST	937501043	MATRIX 210 212-010 WVGA-MED-90-ETH-ST
	937501032	MATRIX 210 213-110 WVGA-FAR-ETH-ST	937501044	MATRIX 210 213-010 WVGA-FAR-90-ETH-ST
	937501033	MATRIX 210 214-110 WVGA-UHD-ETH-ST	937501045	MATRIX 210 214-010 WVGA-UHD-90-ETH-ST
USB	937501034	MATRIX 210 211-120 WVGA-NEAR-USB-ST	937501046	MATRIX 210 211-020 WVGA-NEAR-90-USB-ST
	937501035	MATRIX 210 212-120 WVGA-MED-USB-ST	937501047	MATRIX 210 212-020 WVGA-MED-90-USB-ST
	937501036	MATRIX 210 213-120 WVGA-FAR-USB-ST	937501048	MATRIX 210 213-020 WVGA-FAR-90-USB-ST
	937501037	MATRIX 210 214-120 WVGA-UHD-USB-ST	937501049	MATRIX 210 214-020 WVGA-UHD-90-USB-ST
Liquid Lens/Serial ethernet	937500023	MATRIX 210 235-111 WVGA-DPM-LL-ETH-ES		

Note: Matrix 210™ is also available in ESD and ESD YAG cut filter versions. For the complete model range please visit our website.

READING CHARACTERISTICS

MODELS	FOCUS DISTANCE	FIELD OF VIEW @ FOCUS DISTANCE	PPI@ FOCUS DISTANCE	TYP. 1D AND STACKED CODE RESOLUTION	2D CODE RESOLUTION		READING DISTANCE MM (IN)	
					mm (mils)	mm (in)	Min.	Max.
MATRIX 210 214-xxx UHD	30 (1.38)	16.5 x 10.5 (0.65 x 0.41)	1150	0.063 (2.5)	Max.	0.076 (3)	28 (1.10)	32 (1.26)
					Typ.	0.13 (5)	23 (0.91)	38 (1.50)
MATRIX 210 211-xxx UHD	45 (1.77)	35 x 22 (1.38 x 0.87)	545	0.10 (4)	Max.	0.13 (5)	42 (1.65)	53 (2.08)
					Typ.	0.19 (7.5)	36 (1.42)	61 (2.40)
MATRIX 210 212-xxx MEDIUM	65 (2.56)	50 x 32 (1.97 x 1.26)	380	0.15 (6)	Max.	0.19 (7.5)	54 (2.13)	90 (3.54)
					Typ.	0.25 (10)	47 (1.85)	101 (3.97)
MATRIX 210 213-xxx FAR	105 (4.13)	80 x 50 (3.15 x 1.97)	238	0.20 (8)	Max.	0.25 (10)	85 (3.35)	135 (5.31)
					Typ.	0.38 (15)	70 (2.76)	192 (7.55)