

Datalogic's Matrix 210N™ offers extreme reading performance with 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 210N™ offers best-in-class reading performance for direct part-marked bar codes.

Unrivaled decoding libraries running on a high speed hardware platform deliver superior reading performance and decoding rates. With these combined features the Matrix 210N supports high throughput systems which results in improved 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, right angle, or electronic variable focus options provide superb contact reading capabilities and simple mechanical integration into small 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, interfaces
- Dynamic focus liquid lens models
- High performance DPM bar code reading
- On-board image saving
- Outstanding decoding capability on DPM and printed 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
- Print & Apply systems
- Document Handling



TECHNICAL DATA

| | FIXED FOCUS MODELS | ELECTRONIC FOCUS CONTROL 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 focus control |
| 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 Ethernet 10/100: EtherNet/IP, PROFINET, TCP/IP, UDP, FTP, MODBUS TCP Serial RS232/RS422/RS485 up to 115.2 Kbit/s + Aux RS232 | |
| Embedded communication interfaces | Datalogic ID-NET™ | |
| Reader networking | Master/Slave, Ethernet point to point | |
| Connectivity modes | 2 opto-isolated. Polarity insensitive and SW Programmable. | |
| Digital inputs | 2 SW programmable, opto-coupled | |
| Digital outputs | 2 SW programmable, opto-coupled | |
| Programming method | Windows™ based SW (DL.CODE™) via Ethernet | |
| User interface | X-PRESS™, Embedded Human Machine Interface | |
| Code quality metrics | Beeper, Push Button, 7 LEDs (Status, Comm., Trigger, Good Read, Ready, Power on, Network) AIM DPM, ISO/IEC 15416 | |

MODELS

| | P/N | STRAIGHT OPTICS | P/N | RIGHT ANGLE OPTICS |
|-----------------------------------|-----------|--|-----------|---|
| Standard | 937501241 | MATRIX 210N 211-110 WVGA-NEAR-ETH-ST | 937501250 | MATRIX 210N 211-010 WVGA-NEAR-90-ETH-ST |
| | 937501242 | MATRIX 210N 212-110 WVGA-MED-ETH-ST | 937501251 | MATRIX 210N 212-010 WVGA-MED-90-ETH-ST |
| | 937501243 | MATRIX 210N 213-110 WVGA-FAR-ETH-ST | 937501252 | MATRIX 210N 213-010 WVGA-FAR-90-ETH-ST |
| ESD Safe | 937501259 | MATRIX 210N 211-111 WVGA-NEAR-ETH-ES | 937501268 | MATRIX 210N 211-011 WVGA-NEAR-90-ETH-ES |
| | 937501260 | MATRIX 210N 212-111 WVGA-MED-ETH-ES | 937501269 | MATRIX 210N 212-011 WVGA-MED-90-ETH-ES |
| | 937501261 | MATRIX 210N 213-111 WVGA-FAR-ETH-ES | 937501270 | MATRIX 210N 213-011 WVGA-FAR-90-ETH-ES |
| SESD Safe YAG laser protection | 937501274 | MATRIX 210N 211-112 WVGA-NEAR-ETH-ESYF | 937501277 | MATRIX 210N 211-012 WVGA-NEAR-90-ETH-ESYF |
| | 937501275 | MATRIX 210N 212-112 WVGA-MED-ETH-ESYF | 937501278 | MATRIX 210N 212-012 WVGA-MED-90-ETH-ESYF |
| | 937501276 | MATRIX 210N 213-112 WVGA-FAR-ETH-ESYF | 937501279 | MATRIX 210N 213-012 WVGA-FAR-90-ETH-ESYF |
| Electronic focus control | 937501282 | MATRIX 210N 235-110 WVGA-DPM-LL-ETH-STD | | |
| | 937501283 | MATRIX 210N 235-111 WVGA-DPM-LL-ETH-ES | | |
| | 937501284 | MATRIX 210N 235-112 WVGA-DPM-LL-ETH-ESYF | | |

READING CHARACTERISTICS

| MODELS | FOCUS DISTANCE | FIELD OF VIEW @ FOCUS DISTANCE | PPI (Pix per Element) @ FOCUS DISTANCE | TYP. 1D AND STACKED CODE RESOLUTION | 2D CODE RESOLUTION | READING DISTANCE | |
|----------------------------|----------------|--------------------------------|--|-------------------------------------|--------------------|----------------------|---|
| | mm (in) | mm (in) | | mm (mils) | mm (mils) | mm (in) | Min. mm (in) Max. mm (in) |
| MATRIX 210N 211-xxx NEAR | 45 (1.77) | 35 x 22 (1.38 x 0.87) | 545 | 0.10 (4) | Max. Typ. | 0.13 (5) 0.19 (7.5) | 42 (1.65) 36 (1.42) 53 (2.08) 61 (2.40) |
| MATRIX 210N 212-xxx MEDIUM | 65 (2.56) | 50 x 32 (1.97 x 1.26) | 380 | 0.15 (6) | Max. Typ. | 0.19 (7.5) 0.25 (10) | 54 (2.13) 47 (1.85) 90 (3.54) 101 (3.97) |
| MATRIX 210N 213-xxx FAR | 105 (4.13) | 80 x 50 (3.15 x 1.97) | 238 | 0.20 (8) | Max. Typ. | 0.25 (10) 0.38 (15) | 85 (3.35) 70 (2.76) 135 (5.31) 192 (7.55) |

