



Engineering peace of mind

Machine Vision - ISO Verification - Serialization





Matrix 410N™ is an industrial 2D imager purpose-built for the most complex traceability applications in material handling and logistics, equipped with an ultra-fast image sensor that performs at 2.0 megapixels with a frame rate of 45 frames per second.

The Matrix 410N™ offers multiple communication options for increase flexibility and cost-effectiveness. The industrial imager offers Ethernet connectivity embedded, including standard communication such as TCP/IP, HTTP, FTP, as well as common industrial fieldbus communication protocols, like PROFINET IO, EtherNet/IP, Modbus TCP/IP.

In addition to flexibility, Matrix 410N™ is equipped with features for increased ease of use and configurability, with the option for a single or multi-device layout for scanning over large areas or multiple signs.

Powered by DL.CODE, Matrix 410N™ software offers an easy-to-use graphical user interface, while supporting in-line monitoring functionality, including live image display, reading statistics and diagnostics. The Matrix 410N™ also has image saving capability for reading case review, such as no reads, storing up to 3,000 images either onboard or at an external FTP client.

The embedded laser aimer and the patented Green Spot - projected onto the scanning area - offers the user a quick scanning area determination and to easily acknowledge a reading without any external accessory or software.



IDENTIFICATION

HIGHLIGHTS

- Patented ultra-fast strobed lighting with stable effect for operator
- Patent Pending Packtrack 2D for short object gapping in sortation applications
- Embedded Ethernet connectivity, with common protocol support: PROFINET IO, ETHERNET/IP, TCP/IP, FTP, HTTP
- On board image storage saving up to 3,000 image (scaled)
- External connection box with parameter back up memory and display
- Increased flexibility with single reading point or multiple device cluster with easy configuration
- Laser pointing system, good read Green Spot, focusing aiming system
- Remote, web-based WebSentinel software with image archiving database

APPLICATIONS

- **Distribution & Retail**
 - Manual Presentation
 - Small Objects Sorting
 - Totes content scanning
- **Warehouse**
 - End of line, Carton/objects, single or multi-side scanning
- **Automotive**
 - Part traceability in assembly
- **Medical & Pharmaceutical**
 - Automated storage/retrieval
 - Automated Order fulfilment/validation



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 410N -5xx-xxx SXGA (1280 x 1024) | MATRIX 410N -7xx-xxx UXGA (1600 x 1200) |
| | CMOS sensor 60 frames/s | CMOS sensor 45 frames/s |
| Frame rate | Max. Pitch: ± 35°; Tilt: 0-360° | |
| Reading angles | 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 Postal: Royal Mail, Japan Post, Planet, Postnet and many more | |
| Readable symbologies | R5232 + R5232/R5422/R5485 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 | |
| Communication interface | Pass Through, Master/Slave, Ethernet point to point | |
| Connectivity modes | 2 opto-isolated. Polarity insensitive and SW Programmable. | |
| Digital inputs | 3 SW programmable PNP/NPN (short circuit protection). OUT3 programmable as input Output current 100 mA max, Saturation voltage < 3 V @ 100 mA | |
| Digital outputs | X-PRESS™ Human Machine Interface Windows™ based SW (DL.CODE™) Ethernet link | |
| Programming method | X-PRESS™ Human Machine Interface Beeper, Programmable Push Button, LEDs (Status, Com, Trigger, Good, Ready, Power on, Network presence, Good read Spot) | |
| User interface | AIM DPM, ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 16022, ISO/IEC 18004, A59132A | |
| Code quality verification | ELECTRICAL CHARACTERISTICS | |
| Power supply | 10 to 30 VDC | |
| Power consumption | 8 W max, 5W typical | |

MODELS AND ACCESSORIES

| | P/N | DESCRIPTION |
|-------------------------|---------------------------|--|
| Matrix 410N Reader Body | 937401082 | MATRIX 410N 500-010 1.3MP-60FPS-ETH |
| | 937401083 | MATRIX 410N 700-010 2.0MP-45FPS-ETH |
| Focusing 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 |
| | Internal Lighting modules | 93A401019 |
| 93A401020 | | LT-002 INTERNAL LT RED WIDE ANGLE |
| 93A401021 | | LT-003 INTERNAL LT WHITE NARROW ANGLE |
| 93A401023 | | LT-005 INTERNAL LT BLUE FOR DPM |
| 93A401022 | | LT-004 INTERNAL LT WHITE WIDE ANGLE |
| 93A401024 | | LT-006 INTERNAL LT RED SUPERNARROW ANGLE |
| 93A401030 | | LT-007 INTERNAL LT RED SUPERNARROW LASER P |
| 93A401026 | | LT-010 HI POWER LT BLUE SUPERNARROW |
| 93A400031 | | LT-011 HI POWER LT RED SUPERNARROW |

Rev. 00, 02/2015