

**COGNEX**

Advanced machine vision made easy

# Superior read performance for the broadest range of applications

DataMan 370 Series



# DataMan 370 Series Barcode Readers

Superior read performance for the broadest range of applications

DataMan® 370 series fixed-mount barcode readers solve challenging direct part mark (DPM) and label-based multi-code, multi-symbology applications using Cognex's latest decoding algorithms, a multi-core processor, and new integrated lighting. With twice the performance and power of conventional readers in the same class, DataMan 370 delivers superior read performance for the broadest range of applications, including:

- High-speed lines
- Difficult-to-read parts
- Small codes
- Multi-code, multi-symbology applications
- Multi-sided scan tunnels



## Key features



### Double read performance and power

Achieve superior read rate performance across a variety of applications using industry-leading 1D/2D algorithms, including HotBars and PowerGrid.



### Unmatched lighting and autofocus technology

Eliminate the need for external lighting with the High-Powered Integrated Torch Light (HPIT)

- Multi-color LED lights provide operator feedback to indicate no-read, wrong part detected, or possible printing issues.



### Best-in-class image formation

High Dynamic Range (HDR) imaging technology helps you acquire single images that are 16 times more detailed than conventional sensors.



### Setup made simple

DataMan Setup Tool allows for easy installation and operation of your barcode reader

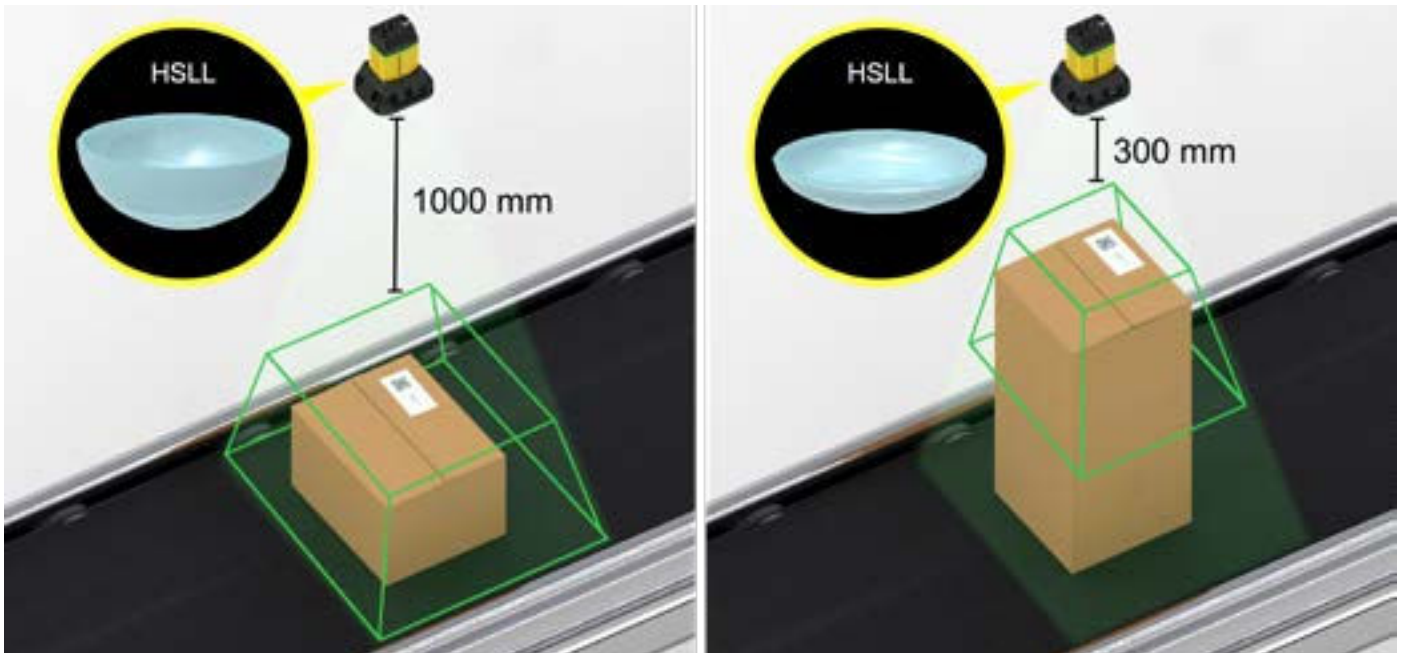
- Intelligent autofocus and auto-tune
- Multiple read setups
- Pre- and post-image optimization tools

## Unmatched lighting and autofocus technology

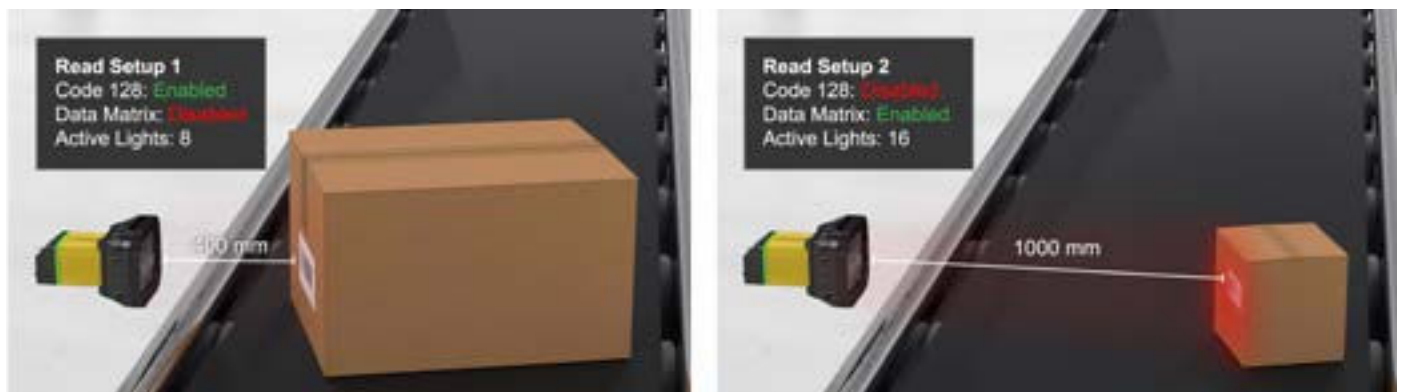
New high-powered integrated torch (HPIT) light provides unmatched illumination power, ideal for presentation scanning, difficult to read codes, and applications that are challenged by changes in working distances. It uses 16 programmable LED lights, high speed autofocus technology, and distance sensors to provide high quality 1D and 2D code image formation every time.



High speed liquid lenses can dynamically autofocus by detecting how far away the target object is and rapidly auto-adjusting focus before the next image is taken to ensure a crisp image.



When the distance to the target object changes, it is often useful to adjust more than just focus to achieve optimal decoding performance. For example, when an object is closer, a filter can be applied to reduce glare, lower light output, and shorten exposure. Previously, this was only possible by cycling through all read setups. Now HPIT can dynamically enable multiple read setups based on distance sensor measurements, saving a lot of time on variable applications.





## Modularity provides unparalleled flexibility

DataMan 370's innovative design with modular lighting, lens, and communication options provides maximum flexibility and ease-of-use.



RS-232, Ethernet with industrial protocols, SD card, and other network connectivity options



Patented technology and advanced algorithms optimize performance

Same form factor as DataMan 360



High resolution sensors enable greater field-of-view and depth-of-field coverage

Distance sensor to dynamically focus the lens or trigger the reader



Multi-core processing power for high speed decoding



C-mount and high speed liquid lens with dynamic focusing options maximize application coverage



New high-powered integrated torch (HPIT) provides unmatched illumination power, eliminating the need for external lighting



Interchangeable front cover polarization filters fully optimize image quality



Guided laser aimer allows field-of-view to be clearly mapped to the desired target.



Multi-Reader Sync™ capability enables extended coverage



Multi-color LED indicators provide operator feedback

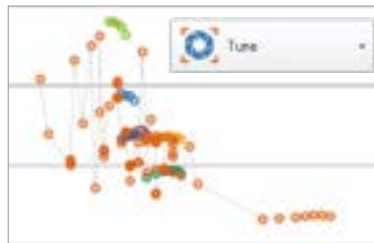


## Easy setup and operation

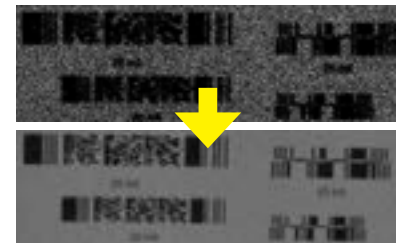
The DataMan Setup Tool software simplifies installation and operation of DataMan 370. Intelligent auto-tuning and application assistants guide the user to quickly optimize complex parameters with ease.



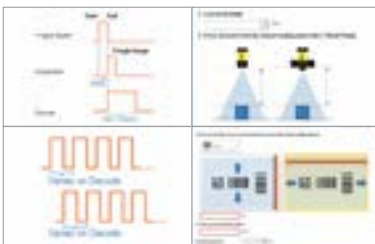
Step-by-step visual guidance



Auto-tune and autofocus



Pre- and post-image optimization tools



Application assistants



Independent lighting controls



Multiple read setups



## Performance feedback helps optimize operations

The DataMan Setup Tool software also provides image offload and read result history, process control metrics, and real time monitoring. Process control metrics help identify print quality and readability issues. Real time monitoring provides performance feedback for process optimization, including no-read tracking, code quality metrics, heat mapping, and configuration audit trails.

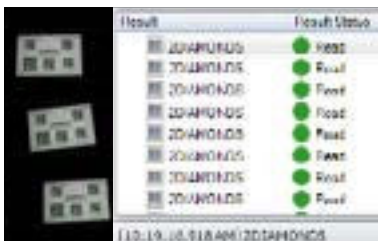
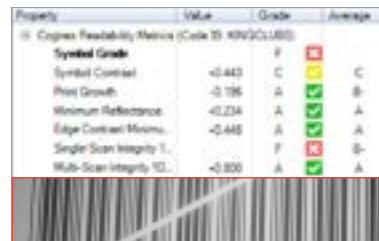
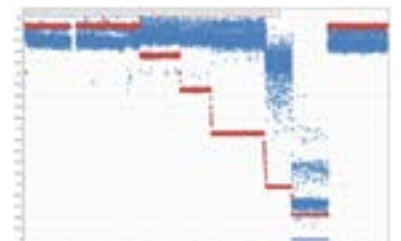


Image & read result history



Process control metric feedback



Real time monitoring

## Solves the broadest range of applications

With its superior read performance and best-in-class image formation, DataMan 370 easily solves the broadest range of manufacturing and logistics applications with wide field-of-view and large depth-of-field coverage needs.



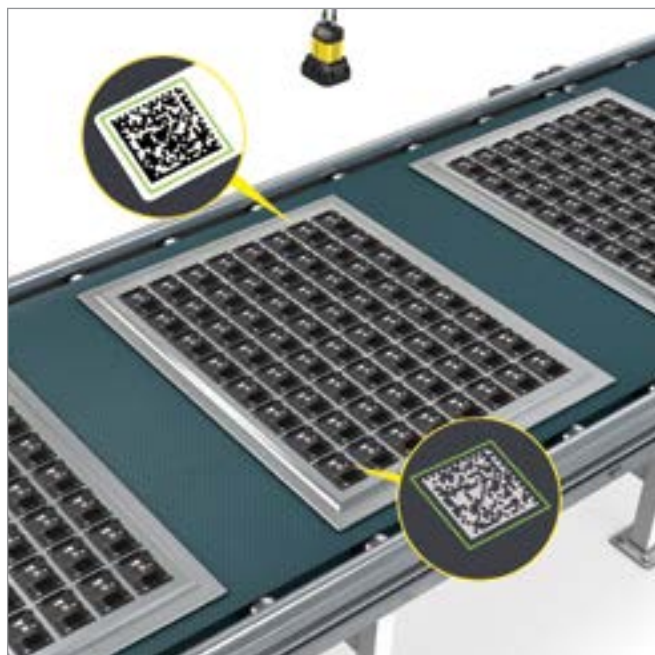
**High-speed code reading**



**Tire identification**



**Difficult-to-read automotive parts**



**Electronic component traceability**

DataMan 370 series barcode readers deliver unmatched overhead or desktop presentation scanning performance due to 1D/2D auto-discrimination, a guided laser aimer, and dynamic focusing technology.



**Multi-code, multi-symbology presentation scanning**

Single-, multi-, and full coverage scan tunnel options are available to help increase throughput in logistics applications. Multi-Reader Sync technology synchronizes several readers for increased field of view and multi-side scanning at high speeds.



**Single-sided scan tunnel**



**Multi-sided scan tunnel**



**Full coverage scan tunnel**

## Product configurations and descriptions\*

| DataMan 370 Series                                                                |                    |            |            |               |               |
|-----------------------------------------------------------------------------------|--------------------|------------|------------|---------------|---------------|
|                                                                                   | Part Number        | Resolution | Light      | Lens          | Cover         |
|  | DMR-374X-0000      | 3.2MP      | N/A        | N/A           | N/A           |
|  | DMR-374X-0181-P    |            | Red HPIL   | 8mm HSSL      | Polarized     |
|                                                                                   | DMR-374X-0111-P    |            |            | 10 mm HSSL    |               |
|  | DMR-374X-TMAX      |            | Red HPIT   | 24 mm HSSL    | 3/4 Polarized |
|  | DMR-375X-0000      | 5MP        | N/A        | N/A           | N/A           |
|  | DMR-375X-0244-M    |            | White HPIT | 16 mm HSSL    | Clear         |
|                                                                                   | DMR-375X-0254-CLBT |            |            | 24 mm HSSL    |               |
|                                                                                   | DM375-KNWMT-HF     |            |            | 35 mm C-mount |               |

\*This table includes only the most common product models. To get information on other available models, including angled configurations, please contact Cognex Sales at [cognex.com/contact-sales](http://cognex.com/contact-sales).

## Components and accessories

| Power and I/O Cables                                                                |               |        |                                     |
|-------------------------------------------------------------------------------------|---------------|--------|-------------------------------------|
|                                                                                     | Product ID    | Length | Description                         |
|  | CCB-PWRIO-05  | 5M     | M12-12 to flying lead, straight     |
|                                                                                     | CCB-PWRIO-10  | 10M    |                                     |
|                                                                                     | CCB-PWRIO-15  | 15M    |                                     |
|                                                                                     | CCB-PWRIO-05R | 5M     | M12-12 to flying lead, right-angled |
|                                                                                     | CCB-PWRIO-10R | 10M    |                                     |
|                                                                                     | CCB-PWRIO-15R | 15M    |                                     |

| Mounting Brackets                                                                   |                 |                            |
|-------------------------------------------------------------------------------------|-----------------|----------------------------|
|                                                                                     | Product ID      | Description                |
|  | DM100-UBRK-000  | Universal mounting bracket |
|  | DM100-PIVOTM-01 | Pivot mounting bracket     |

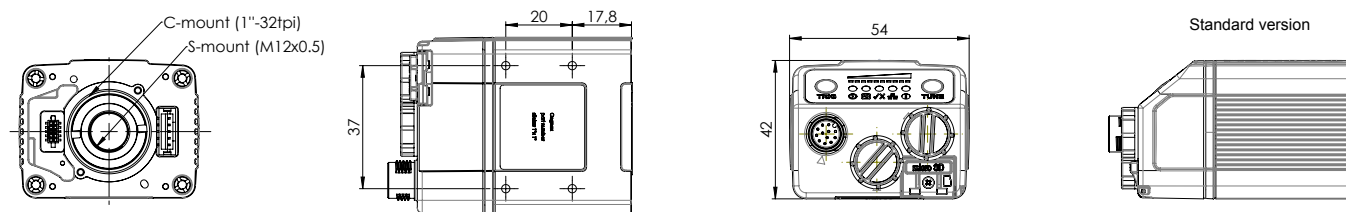
| Front Covers      |                                   |
|-------------------|-----------------------------------|
| Product ID        | Description                       |
| DMLA-HPIT-CLCOV   | HPIT clear, non-polarized cover   |
| DMLA-HPIT-DLCOV   | HPIT diffuse, non-polarized cover |
| DMLA-HPIT-PLCOV   | HPIT 3/4 polarized cover          |
| DMLA-HPIT-PLCOV-F | HPIT full polarized cover         |

| Ethernet Cables                                                                     |                   |        |                                           |
|-------------------------------------------------------------------------------------|-------------------|--------|-------------------------------------------|
|                                                                                     | Product ID        | Length | Description                               |
|  | CCB-84901-2001-02 | 2M     | X-coded M12-8 to RJ-45, straight          |
|                                                                                     | CCB-84901-2001-05 | 5M     |                                           |
|                                                                                     | CCB-84901-2001-10 | 10M    |                                           |
|                                                                                     | CCB-84901-2001-15 | 15M    |                                           |
|                                                                                     | CCB-84901-2001-30 | 30M    | X-coded M12-8 to RJ-45, right-angled      |
|                                                                                     | CCB-84901-2002-02 | 2M     |                                           |
|                                                                                     | CCB-84901-2002-05 | 5M     |                                           |
|                                                                                     | CCB-84901-2002-10 | 10M    |                                           |
|                                                                                     | CCB-84901-2RBT-02 | 2M     | Robotic X-coded M12-8 to RJ-45, straight  |
|                                                                                     | CCB-84901-2RBT-05 | 5M     |                                           |
|                                                                                     | CCB-84901-2RBT-10 | 10M    |                                           |
|  | CCB-M12X8MS-XCAC  | 0.5M   | X-coded to A-coded Ethernet cable adapter |

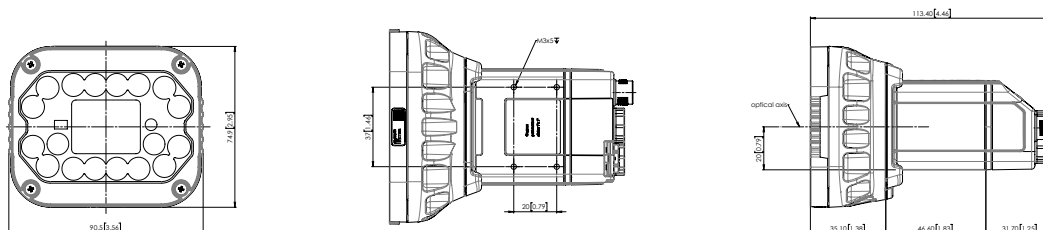
# DataMan 370 Dimensions Units: mm, [in]

[Download CAD files](#)

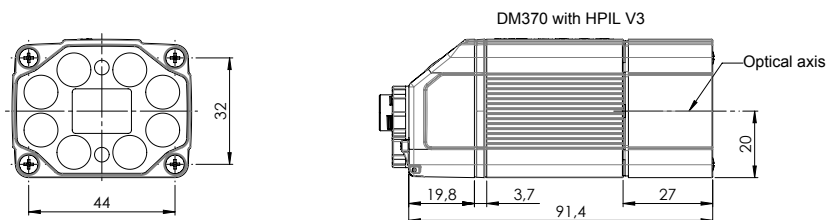
## Dataman 370 Reader



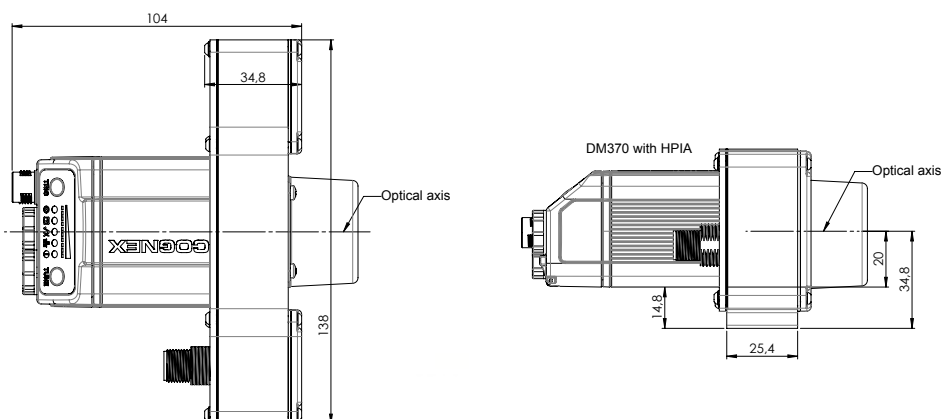
## Dataman 370 with HPIT



## Dataman 370 with HPIL



## Dataman 370 with HPIA



## DataMan 370 Series Specifications

|                                | DataMan 374                                                                                                                                                                   | DataMan 375                                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Algorithms                     | 1DMax, 2DMax, Hotbars, PowerGrid                                                                                                                                              |                                                                                                                                         |
| Image Sensor                   | 1/1.8" CMOS                                                                                                                                                                   | 2/3" CMOS                                                                                                                               |
| Image Sensor Properties        | Diagonal 8.9 mm; 3.45 µm square pixels                                                                                                                                        | Diagonal 11.1 mm; 3.45 µm square pixels                                                                                                 |
| Image Sensor Resolution        | 2048 x 1536                                                                                                                                                                   | 2448 x 2048                                                                                                                             |
| Electronic Shutter Speed       | Min. exposure: 15 µs<br>Max. exposure: 1000 µs with internal illumination/10000 µs with external illumination                                                                 |                                                                                                                                         |
| Max Acquisition                | Up to 80 Hz                                                                                                                                                                   | Up to 55 Hz                                                                                                                             |
| Lens Options                   | Liquid lens 8 mm, 10 mm, 16 mm, 24 mm, 35 mm; C-mount 12 mm, 16 mm, 25 mm, 35 mm, 40 mm                                                                                       |                                                                                                                                         |
| Trigger and Tune Buttons       | Yes; Quick Setup Intelligent Tuning                                                                                                                                           |                                                                                                                                         |
| Aimer                          | Optional                                                                                                                                                                      |                                                                                                                                         |
| Discrete Inputs                | 2 fixed + (*) opto-isolated                                                                                                                                                   |                                                                                                                                         |
| Discrete Outputs               | 2 fixed + (*) opto-isolated                                                                                                                                                   |                                                                                                                                         |
| *Other I/O Points              | 2 user-configurable                                                                                                                                                           |                                                                                                                                         |
| Status Outputs                 | Beeper, 5 multifunctional LEDs, 10 LED bar array, 360-degree indicator                                                                                                        |                                                                                                                                         |
| Lighting                       | Integrated LEDs, red, blue or IR; diffuse, polarized, high powered integrated light (HPIL), high powered integrated torch (HPIT), various controllable external light options | Integrated LEDs, red, blue or IR; diffuse, polarized, high powered integrated torch (HPIT), various controllable external light options |
| Communications                 | Ethernet and serial                                                                                                                                                           |                                                                                                                                         |
| Protocols                      | RS-232, TCP/IP, PROFINET, EtherNet/IP™, SLMP, Modbus TCP, NTP, SFTP, FTP, MRS, Java Scripting enabled for custom protocols                                                    |                                                                                                                                         |
| Power Consumption              | 24 VDC ±10%, 1.5 A maximum (HPIL/HPIT <sup>1</sup> )<br>24 VDC, 250 mA maximum (reader)<br>Supplied by LPS or NEC class 2 only                                                |                                                                                                                                         |
| Weight                         | 165 g                                                                                                                                                                         |                                                                                                                                         |
| Dimensions                     | 73 x 54 x 42 mm; 113 x 91 x 75 mm (with HPIT)                                                                                                                                 |                                                                                                                                         |
| Operating Temperature          | 0 °C–57 °C (32 °F–134.6 °F) <sup>2</sup>                                                                                                                                      |                                                                                                                                         |
| Storage Temperature            | -20 °C–80 °C (-4 °F–176 °F)                                                                                                                                                   |                                                                                                                                         |
| Operating and Storage Humidity | < 95% non-condensing                                                                                                                                                          |                                                                                                                                         |
| Protection                     | IP67 with cables and appropriate lens cover attached                                                                                                                          |                                                                                                                                         |
| RoHS Certified                 | Yes                                                                                                                                                                           |                                                                                                                                         |
| Approvals (CE, UL, FCC)        | Yes                                                                                                                                                                           |                                                                                                                                         |

<sup>1</sup> HPIL denotes one of the DM360-HPIL-RE, DM360-HPIL-RE-P, DMLT-HPIL-RE or DMLT-HPIL-RE-P accessories. HPIT denotes one of the DMLT-HPIT-RE-W, DMLT-HPIT-RE-S, DMLT-HPIT-RE-N, DMLT-HPIT-WHI-W, DMLT-HPIT-WHI-S, DMLT-HPIT-WHI-N accessories.

<sup>2</sup> In situations where the operating temperature exceeds 40 °C, an external heat sink is required.

# COGNEX

Companies around the world rely on Cognex vision and barcode reading solutions to optimize quality, drive down costs, and control traceability.

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Lit. No. DSDM370-02-2025

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