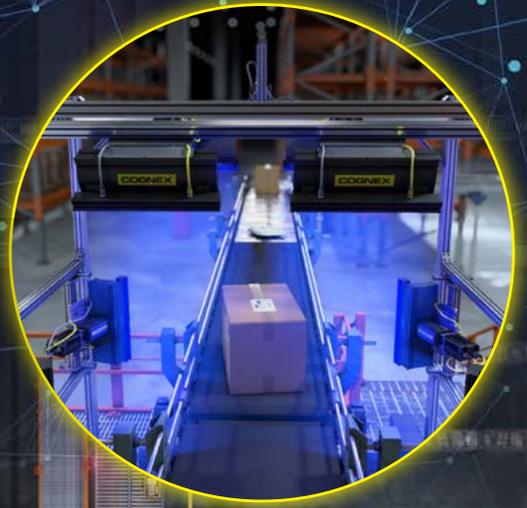


COGNEX

**ECOMMERCE FULFILLMENT
LOGISTICS SOLUTIONS GUIDE**
POWER UP YOUR OPERATIONS



THE GLOBAL LEADER

IN MACHINE VISION AND INDUSTRIAL BARCODE READING

Cognex®, the leading supplier of machine vision and industrial barcode reading solutions.

With over 2 million systems installed in facilities around the world and over thirty seven years of experience, Cognex is focused on industrial machine vision and image-based barcode reading technology. Deployed by the world's top manufacturers, suppliers and machine builders, Cognex products ensure that manufactured items meet the stringent quality requirements of each industry.

Cognex solutions help customers improve manufacturing quality and performance by eliminating defects, verifying assembly and tracking information at every stage of the production process. Smarter automation using Cognex vision and barcode reading systems means fewer production errors, which equates to lower manufacturing costs and higher customer satisfaction. With the widest range of solutions and largest network of global vision experts, Cognex is the best choice to help you **Build Your Vision.™**

**\$806
MILLION**
2018 REVENUE

OVER 37
YEARS IN THE BUSINESS

500+
CHANNEL PARTNERS

GLOBAL OFFICES IN
20+ COUNTRIES

2,000,000+
SYSTEMS SHIPPED



ECOMMERCE FULFILLMENT SOLUTIONS

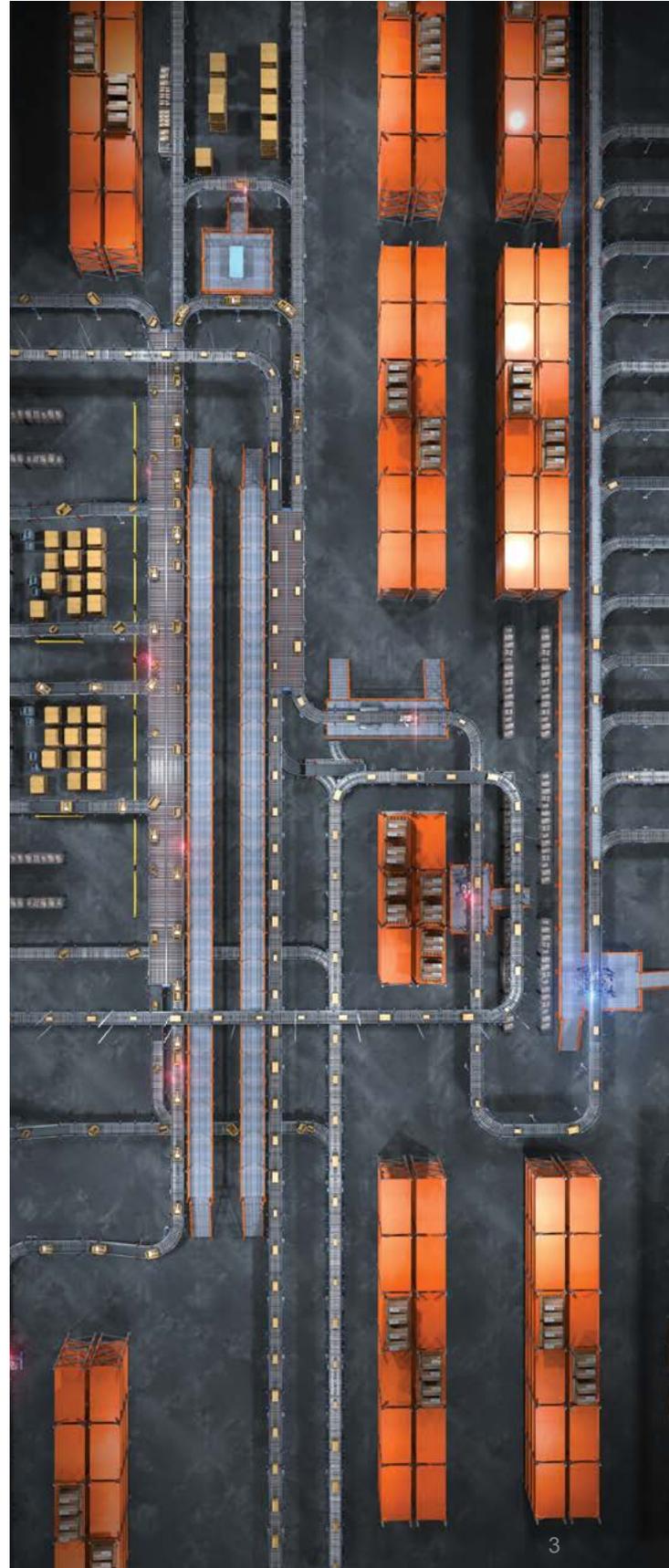
POWER UP YOUR OPERATIONS

Today's ecommerce fulfillment centers deal with more suppliers and a higher volume of goods spread across smaller-sized orders. Successful operations have to scale quickly while minimizing manual rework and equipment downtime. Best-in-class barcode readers are increasingly critical to:

- Prevent or correct label and shipping errors
- Drive up efficiency and throughput
- Lower maintenance costs

Cognex image-based barcode readers quickly and reliably decode 1D and 2D codes, combining the benefits of image-based readers with the ease-of-use and affordability of laser scanners. With the highest read rates on the market, Cognex technology can ensure the right product gets to the right customer at the right time.

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INBOUND SORTING

MANAGE INBOUND FREIGHT SEAMLESSLY

PROBLEM:

The rapid pace of ecommerce fulfillment, in which bulk shipments must be quickly sorted into smaller orders of just a few items, places new demands on businesses. Suppliers, shipments, and individual items must be managed seamlessly for successful inbound receiving and sorting of goods.

SOLUTION:

Unlike laser-based barcode scanners, image-based barcode readers have both the speed and accuracy to decode information and ensure that packages are properly sorted and stored. High read rates at inbound sorting locations reduce labor costs and maximize productivity.

Cognex barcode readers can:

- Achieve 99.9% read rates
- Read smudged or damaged codes
- Read codes at extreme angles
- Provide real-time performance feedback

CUSTOMER SUCCESS STORY

ZALANDO

Online fashion retailer

INBOUND SORTING CHALLENGES:

Zalando's laser scanners could not keep up with the need to read thousands of daily item codes at varying positions, slowing down operations.

RECOMMENDED SOLUTIONS:

DataMan® 150/260 Series

DataMan 370 Series

DataMan 470 Series

DataMan 503 Series

BENEFITS:

Fewer Cognex image-based barcode readers improved the read rate by 3%, with speeds of up to 140 images per second.



READ UP TO
140 IMAGES
PER SECOND

WAREHOUSING

ACHIEVE NEXT LEVEL WAREHOUSING PRODUCTIVITY

PROBLEM:

Warehousing is the process of receiving and storing goods for hours, days or weeks at a time. Some facilities use automated storage and retrieval systems (ASRS), while others store items manually on shelves. Pallets or packages may have poorly printed labels, scratched barcodes, labels on one side, multiple sides, or under plastic which can contribute to barcode scanning challenges and costly tracking and routing inefficiencies.

SOLUTION:

Cognex image-based barcode readers use the most advanced algorithms in the industry to quickly and accurately read damaged 1D and 2D codes with variations in:

- Contrast
- Resolution
- Quiet zone violations
- Perspective distortion
- Height or size

With a large depth-of-field and wide field-of-view, Cognex barcode readers streamline item processing to save time and resources during the warehousing process.

RECOMMENDED SOLUTIONS:

DataMan 150/260 Series
DataMan 370 Series
DataMan 8070 Series
MX Mobile Terminals



PICK AND PACK SORTING

IMPROVE PICK TIMES AND ACCURACY



CUSTOMER SUCCESS STORY

OCADO

Online supermarket

PICK AND PACK SORTING CHALLENGES:

Ocado needed a solution that would read poorly printed, distorted and reflective manufacturer labels to improve pick times on over 1.5 million picks per day.

RECOMMENDED SOLUTIONS:

DataMan 70 Series
DataMan 150/260 Series
DataMan 370 Series
DataMan 470 Series
DataMan 503 Series
DataMan 8070 Series
MX Mobile Terminals

BENEFITS:

Cognex image-based barcode readers improved pick times and order accuracy resulting in higher throughput.

PROBLEM:

Order fulfillment operations manage inventory by tracking and sorting goods using 1D and 2D codes located on various sides of items or packages. Manual pick and pack sorting applications, such as pick-to-light, put-to-light, and pick-and-pass, use fixed-mount presentation scanners to scan barcodes and verify that the item in hand matches the order.

Laser scanning challenges occur when codes are damaged from transport or handling, or when operators must manually present barcodes to a scanner several times before obtaining a successful read. This results in costly rework, delays and order inaccuracies.

SOLUTION:

Despite these material handling and presentation scanning challenges, Cognex image-based barcode readers improve pick and pack sorting times and maximize throughput by reliably reading:

- Omnidirectional codes
- Codes at angles exceeding 85 degrees
- Damaged, smudged or distorted codes

PRINT AND APPLY

IDENTIFY AND RESOLVE LABEL PRINTING AND PLACEMENT PROBLEMS

PROBLEM:

Whether your organization has a one million square foot facility or small regional warehouses, fulfillment requires accurately printing and applying a tracking label to ensure each item is sorted and routed correctly. Smudged, wrinkled, flagged, or improperly placed labels lower read rates and lead to costly manual rework, delayed shipments and even fines.

SOLUTION:

Cognex image-based barcode readers do more than read codes. They catch issues early on, allowing facility managers to identify and fix label printing and placement problems.

Cognex barcode readers can:

- Achieve 99.9% read rates
- Read smudged or damaged codes
- Provide real-time performance feedback

CUSTOMER SUCCESS STORY

FOREVER 21

Fashion retailer

AUTOMATED SORTING CHALLENGES:

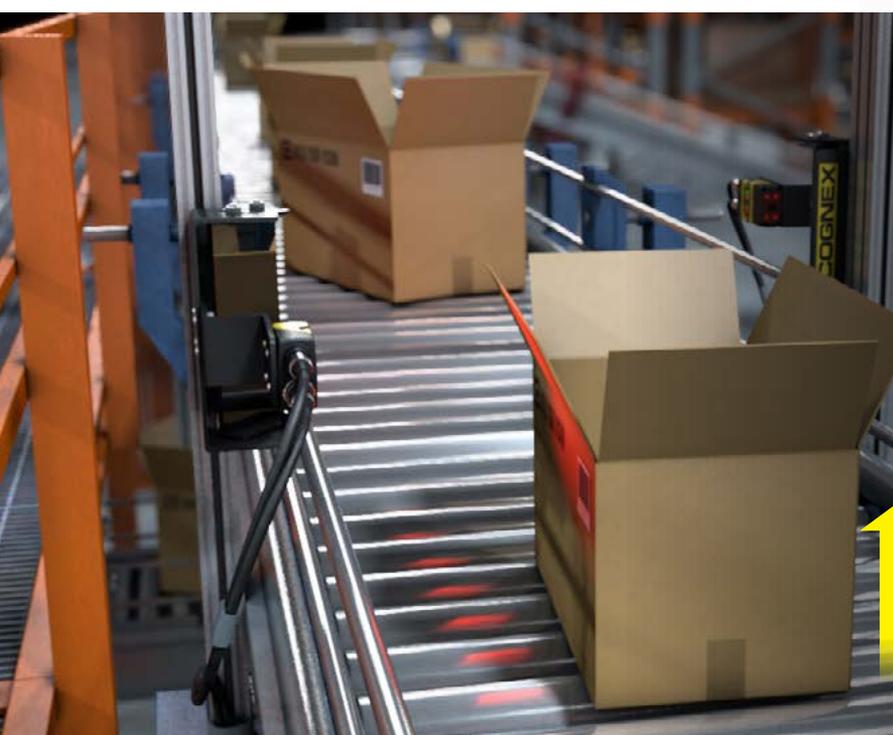
Forever 21's laser scanners could not read 5% to 6% of codes, requiring manual intervention for 1,728 items per hour.

RECOMMENDED SOLUTIONS:

DataMan 70 Series
DataMan 150/260 Series
DataMan 370 Series
DataMan 470 Series
DataMan 503 Series

BENEFITS:

Cognex image-based barcode readers improved read rates to over 99%, thus improving productivity by 15% and providing a cost savings of approximately \$1 million per year.



“With the image-based scanners, our current read rate is **OVER 99%**. We're able to process a lot more orders with the same amount of people.”

—Jason Kim, Forever 21

15%
PRODUCTIVITY

COST SAVINGS OF APPROX.
\$1 MILLION
PER YEAR

OUTBOUND SORTING

SORT AND DELIVER PACKAGES ON TIME

PROBLEM:

Ecommerce orders—whether packaged and delivered to consumer doorsteps or shipped to a brick and mortar store—require systems that can handle variability. All packages must go through an outbound scanner to be sorted for shipment to different locations. As volume grows, the limitations of traditional laser-based scanners can cause a bottleneck at the outbound sorting stage, resulting in lower throughput and delayed shipments.

SOLUTION:

Cognex's image-based barcode readers have the speed and accuracy to accommodate ecommerce demands, ensuring that packages are properly sorted and delivered on time.

Cognex image-based barcode readers can:

- Achieve read rates of 99.9%, regardless of the 1D and 2D barcode quality
- Improve depth-of-field and field-of-view coverage for omnidirectional code reading
- Monitor read rate performance and collect data to enable operators to diagnose and resolve issues

RECOMMENDED SOLUTIONS:

DataMan 150/260 Series
DataMan 370 Series
DataMan 470 Series
DataMan 503 Series
MX Mobile Terminals



DataMan barcode readers can be configured as a five-sided scanning tunnel to quickly and accurately scan multiple sides of packages.

TECHNOLOGY

FOR OPTIMAL PERFORMANCE AND TRACEABILITY

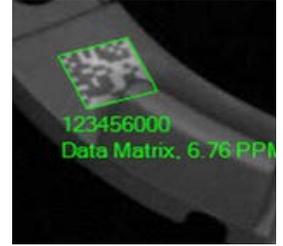
1D MAX WITH HOTBARS

A 1D barcode algorithm and technology optimized for omnidirectional barcode reading, decoding up to 10x the speed of a conventional barcode reader.



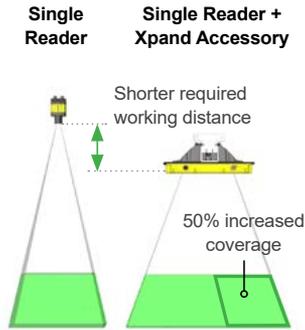
2D MAX WITH POWERGRID

A breakthrough 2D decoding algorithm and technology designed to read 2D codes with significant damage to or complete elimination of a code's finder or clocking pattern, or quiet zone.



XPAND

Increases the field-of-view coverage of a single barcode reader by over 50%. This enables wider belt coverage using fewer readers, simplifying setup and installation, and reducing overall cost.



PERFORMANCE FEEDBACK

Provides performance feedback for networked DataMan fixed-mount barcode readers, including no-read tracking, code quality metrics, heat mapping, and configuration audit trails.



HIGH DYNAMIC RANGE (HDR)

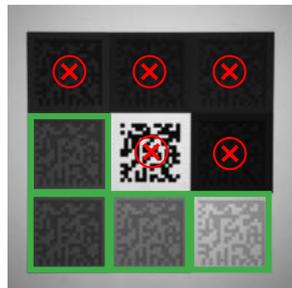
HDR imaging uses the latest CMOS image sensor technology, which is 16x more detailed than conventional sensors, to globally enhance image quality and contrast.

HDR+ further increases localized contrast changes automatically. This creates a more uniform image in a single acquisition allowing greater depth-of-field, faster line speeds, and improved handling of difficult codes.

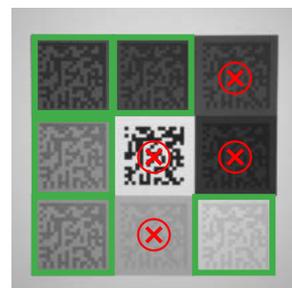
Target Source



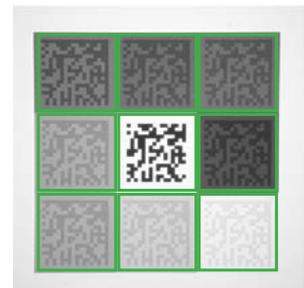
Conventional Sensor



HDR



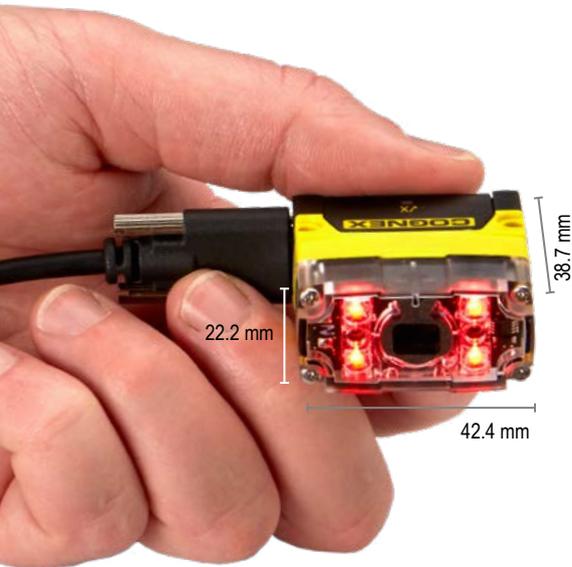
HDR+



COGNEX LOGISTICS PRODUCTS

READ ALL YOUR TOUGHEST CODES

Cognex barcode readers are optimized with patented algorithms to ensure industry-leading 99.9% read rates of 1D and 2D symbologies in the most challenging barcode reading applications.



DATAMAN 70 SERIES

Compact design ideal for pick and pack sorting, presentation reading, tote scanning, and daisy chaining.



DATAMAN 260 SERIES

Straight or right-angle modular design ideal for automated or hand sorting, print and apply, and warehousing applications.



DATAMAN 370 SERIES

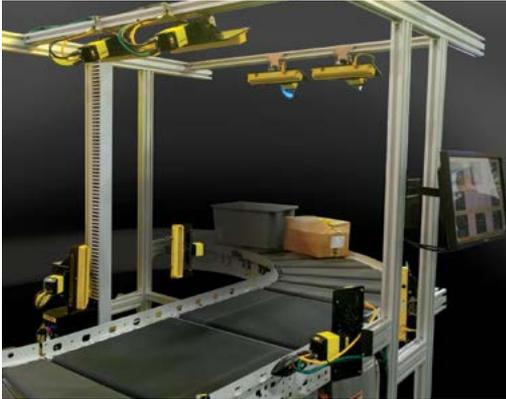
Modular and easy to use reader, ideal for presentation reading.



*Including integrated light. Base dimensions are same as DataMan 360 series: 73 mm (L) x 54 mm (W) x 42 mm (H)

DATAMAN 470 SERIES

Premium reader designed for complex, high-throughput applications.



DATAMAN 503 SERIES

Well-suited for applications that have high speeds, wide belt widths or large variations in package heights.



MX MOBILE TERMINALS

Combines fast, image-based 1D and 2D barcode reading with iOS® and Android® mobile devices for standard, long, and extended range applications.



DATAMAN 8070 SERIES

Handheld reader for scanning codes on pallets or slips from up to 8 meters away.



COGNEX LOGISTICS SOLUTIONS

POWER UP YOUR OPERATIONS

Maximize deliverability and minimize manual handling with advanced barcode reading solutions from Cognex.



RETAIL DISTRIBUTION

The world's leading retailers use Cognex barcode readers to quickly scan and track goods through their distribution centers.



PHARMACEUTICAL DISTRIBUTION

Pharmaceutical groups solve tough automated sorting challenges with Cognex image-based barcode readers.



Ecommerce

Ecommerce businesses rely on image-based barcode readers to scan and sort goods quickly and accurately.



PARCEL & POSTAL

Parcel and postal organizations rely on Cognex barcode readers to reliably decode multiple 1D and 2D codes on various types of packages.



Grocery

Grocery retailers use Cognex's image-based barcode readers to ensure maximum pallet receiving and routing efficiencies.



AIRPORTS

Airport baggage handling systems depend on Cognex's barcode reading solutions to speed up luggage processing times.



Apparel

Fashion and apparel companies use image-based barcode readers to help manage changes in volume and SKUs and minimize manual handling.

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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