

DATAMAN 580

ANY CODE, EVERY TIME

Fixed-mount barcode reader for high-speed logistics applications



COGNEX

DATAMAN 580

High-speed code reading for your most challenging logistics applications

Achieve greater throughput and read rates by incorporating the DataMan® 580 into your Cognex Modular Vision Tunnel. Through advanced hardware and intuitive software, the DataMan 580 provides precise multi-symbology reading while supporting high-speed lines and short package gaps.

The DataMan 580 empowers your sortation operations to:

- **Read more symbologies, faster** using advanced decoding algorithms optimized for multi-code and multi-symbology labels
- **Boost throughput** by running your line at high speeds with short gaps
- **Improve traceability and assess vendor compliance** in real time by verifying label dimensions and placement
- **Streamline integration** with simple setup and maintenance tools designed for multi-reader systems



Key features



Twice the coverage of conventional readers with a 9 megapixel (MP) imager optimized for logistics applications

➔ PAGE 3



1D/2D QuickSort™ technology supports multi-symbology decoding on the fastest lines

➔ PAGE 3



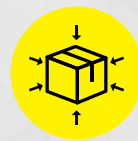
High Dynamic Range+ (HDR+) delivers crisp, clear images even in low-contrast environments

➔ PAGE 4



Multi-reader sync with image offload synchronizes multiple readers for extended field-of-view and multi-side scanning while maintaining your image archive

➔ PAGE 4



Built for Cognex Modular Vision Tunnels, enabling straightforward and flexible deployment

➔ PAGE 5



Edge Intelligence compatibility to track real-time system performance

➔ PAGE 7



Twice the coverage, without the tradeoffs

Simplify and cost-reduce your scanning solutions with optimal coverage across wide conveyors, while acquiring images fast enough to accommodate the highest speed lines. The DataMan 580's high-resolution 9MP sensor enables greater field-of-view and depth-of-field coverage to support the most demanding sortation applications.

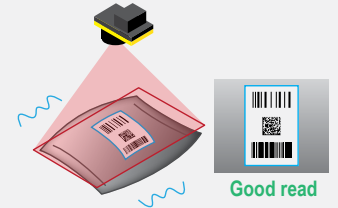
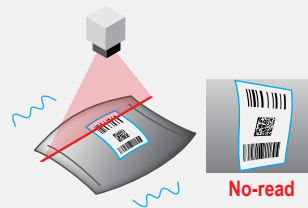


The best image, every time

Conventional linear scanning systems struggle to read packages that have uncontrolled movement or irregular shapes, which can distort images and lower read rates. The DataMan 580's high-resolution area scan sensor ensures optimal images and high read rates, regardless of the material handling environment.

Linear scanning system

DataMan 580 area scan system



Package movement, irregular object

Package movement, irregular object

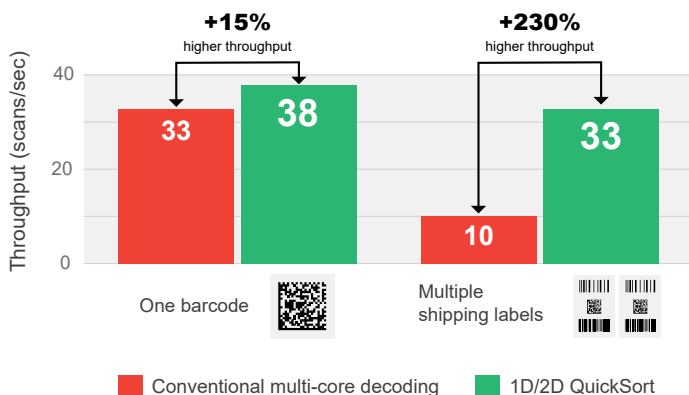


Decode multi-symbology labels with unmatched speed

Conventional barcode reading solutions require slower conveyor lines to effectively read multiple labels and symbologies on each package, reducing throughput.

The DataMan 580 leverages **1D/2D QuickSort™**, a proprietary algorithm that empowers Cognex Modular Vision Tunnels to decode up to three times faster than conventional methods.

Read more barcodes and increase throughput



Simultaneously read multiple codes, labels, and packages

Quickly decode in high-throughput applications with short package gaps



See more codes with every shot

HDR+ is an innovative algorithm that expands the capabilities of HDR technology by increasing 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.



Short gaps between packages make uniform lighting difficult



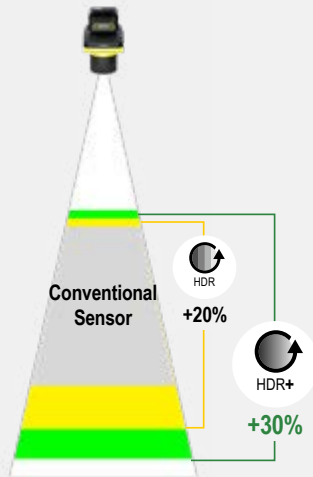
No HDR: reads two of the six codes



With HDR+: reads all six codes

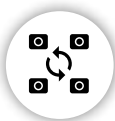
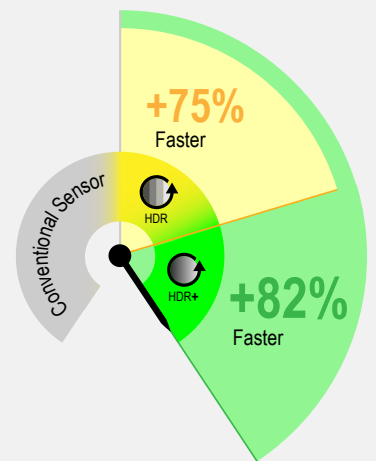
Greater depth-of-field

HDR+ reduces over- and under-exposure, providing greater depth-of-field, above and beyond HDR technology and conventional imaging sensors.



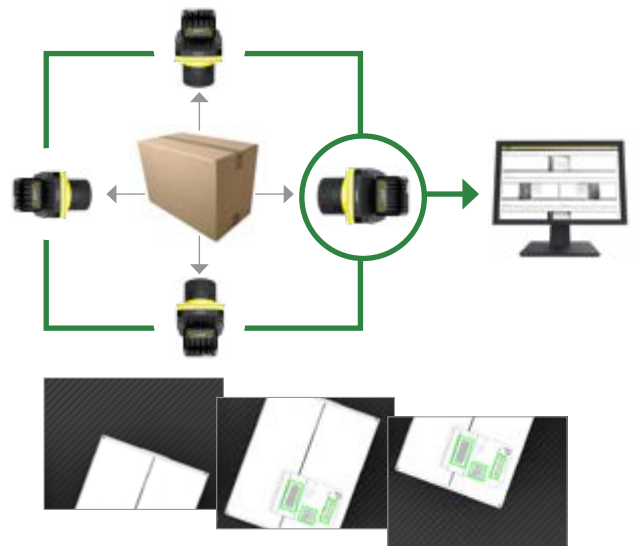
Faster line speeds

HDR+ significantly reduces exposure times, enabling lines to run up to 80% faster.



Multi-reader sync with full resolution image offload

Multi-reader sync (MRS) synchronizes multiple readers for extended field-of-view coverage or multi-side scanning. The primary reader collects data from secondary readers and communicates the results to the control system. Onboard high-speed connectivity allows a DataMan 580 MRS network to easily offload all relevant images while maintaining image quality.

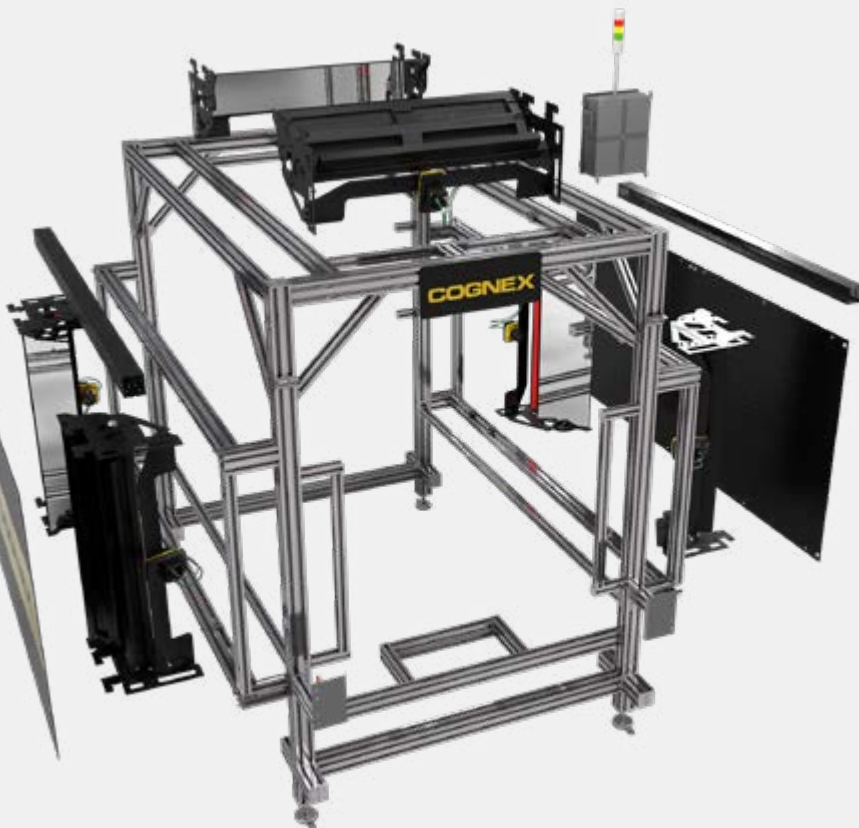
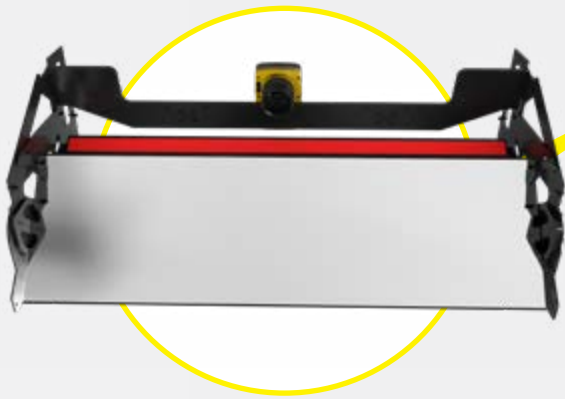


Synchronized code reading and image offload.



Deploy high-speed sortation, quickly and easily

DataMan 580 is designed for the Cognex Modular Vision Tunnel and allows for fast deployment of five- and six-sided code reading solutions.



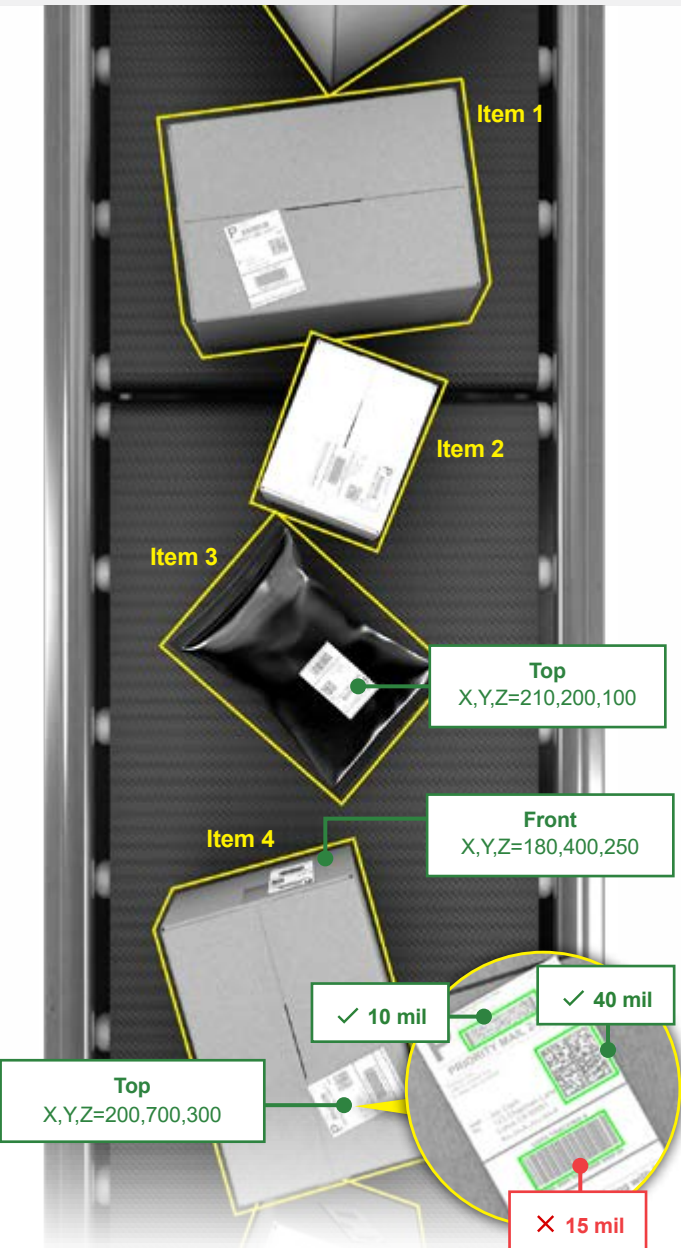
Adapt to changing needs with flexible configurations

Each Cognex Modular Vision Tunnel contains barcode reading modules and hardware components that can be easily modified and scaled to support changing business and application needs. This adaptable system allows you to:

- Swap out reader modules to accommodate different barcodes and package sizes, or increased line speed
- Add new symbologies such as 2D DataMatrix codes
- Upgrade to the latest vision and barcode reading technology

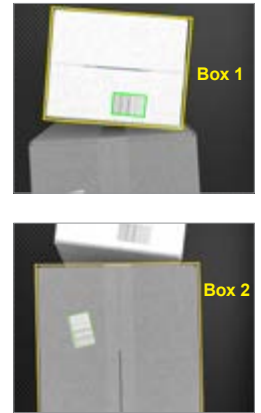
Enhance your operations with ID+3D

Pair your DataMan 580-based Modular Vision Tunnel with a dimensioner to achieve improved operational efficiency and vendor compliance.



Reduce gaps between packages to increase throughput

Many conventional barcode reading solutions require significant gaps between packages, restricting throughput to ensure only one object is visible per trigger cycle. DataMan 580 systems remove this constraint by accurately tracking packages through the field of view, even during occlusion.



Better understand label placement

Identify label position with every read result, and generate label placement and package orientation insights that optimize downstream processes.

Verify label compliance in real time

Recognizing vendor label nonconformity at the outset can prevent time-consuming rework. Determine if a code's dimensions are within your specifications by instantly measuring the printed size of each symbol.



Easily setup and deploy DataMan 580 with Edge Intelligence

Cognex Edge Intelligence (EI) technology transforms big data into smart data to improve overall equipment effectiveness and throughput. EI allows users to configure multiple devices simultaneously, facilitating immediate system performance monitoring and analysis. The technology informs users when issues occur, allowing operators to identify and resolve root causes faster using powerful analytics and image view tools.

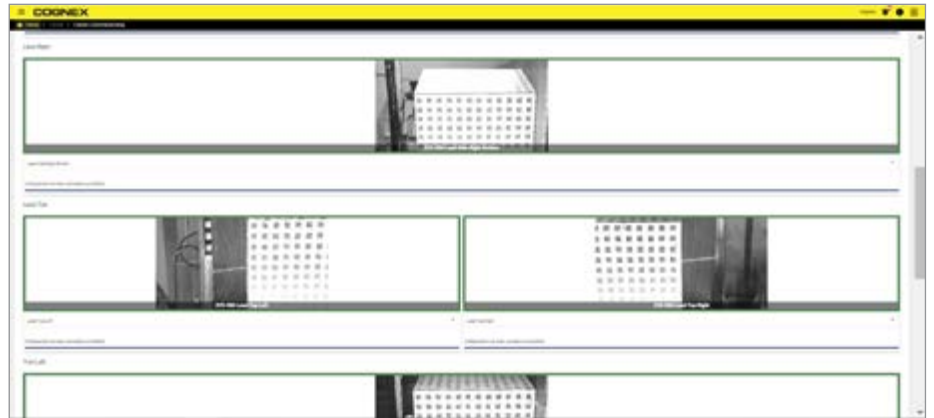
Analytics tools



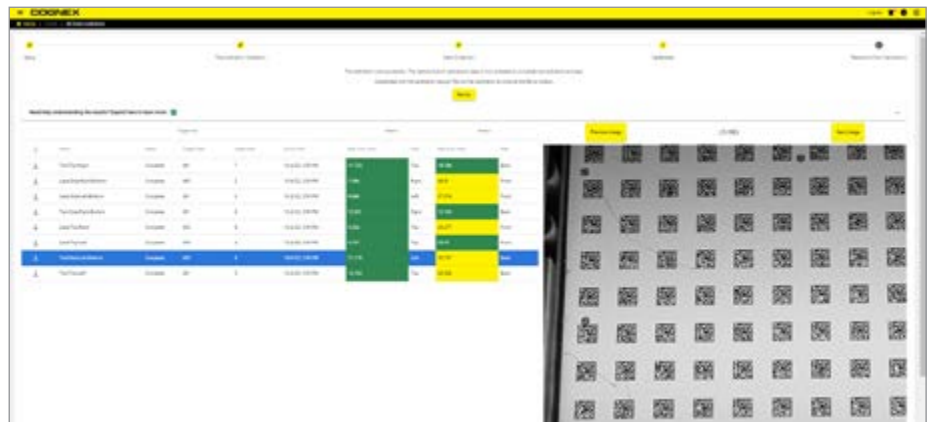
Performance dashboards and read-rate trends

Setup tools

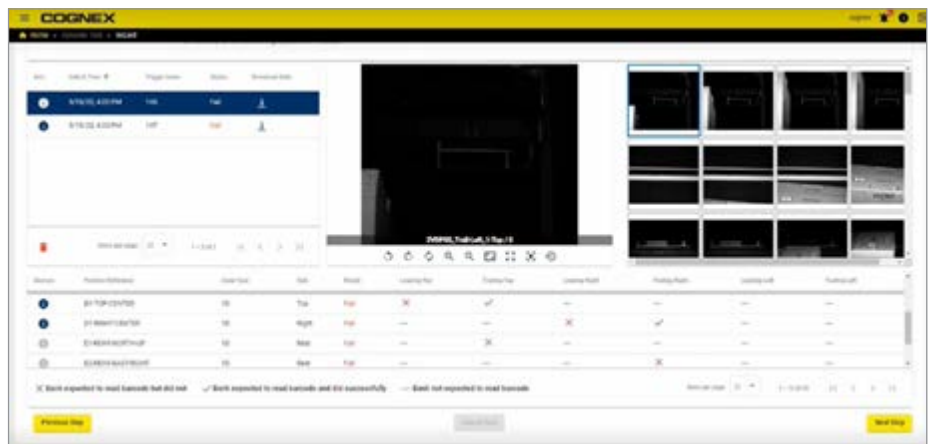
The **Tunnel Commissioning Assistant** helps you configure an entire scan tunnel in a few simple steps.



3D Field Calibration easily integrates 3D data sources without an installation expert.



The **Dynamic Test App** quickly validates the scan tunnel has been properly installed to specification.



Note: Operators can use DataMan Setup Tool as a familiar alternative to EI.

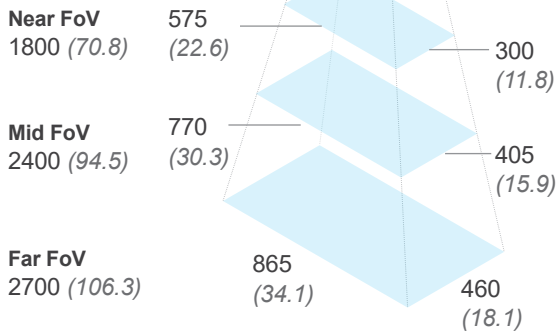
DATAMAN 580 SPECIFICATIONS

Image Sensor	2/3" CMOS
Image Sensor Properties	Diagonal size: 12.96 mm, Pixel area: 7.84 μm^2
Image Resolution	4096 x 2160 pixels
Electronic Shutter Speed	Min. exposure: 29 μs Max. exposure: Up to 10 ms (internal illumination) / Up to 400 ms (external illumination)
Acquisition	Up to 38 Hz
Lens Options	16 mm F6, 25 mm F6.5, 35 mm F6 (manual or high speed liquid lens)
Trigger and Tune Buttons	Yes
Discrete Inputs	2 opto-isolated, 2 configurable
Discrete Outputs	2 opto-isolated, 2 configurable
Other I/O Points	2 user configurable as inputs or outputs
Status Outputs	5 status LEDs, audible beeper
Communications	Serial, Dual Ethernet, and CogLink interface
Protocols	RS-232, TCP/IP, PROFINET, EtherNet/IP™, SLMP, Modbus TCP, NTP, SFTP, FTP, MRS, CC-Link Java Scripting enabled for custom protocols
Power	24V +/- 10% PoE (Power over Ethernet) Class 3
Power Consumption	< 15W without illumination < 40W with external illumination peak < 2A
Material	Zinc alloy/aluminum
Weight	1780g
Operating Temperature	0–40° C (32–104° F)
Storage Temperature	-10–60° C (14–140° F)
Operating and Storage Humidity	<95% non-condensing
Protection	IP67
RoHS Certified	Yes
Approvals	EU CE, US FCC, TUV CB NRTL IEC 61010, Korea KCC

Field of view diagrams

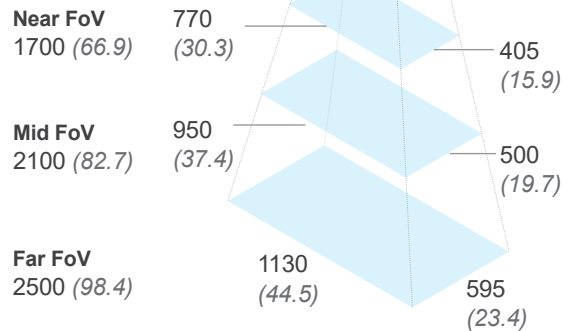
35 mm Lens

Working distances
Units: mm (in)



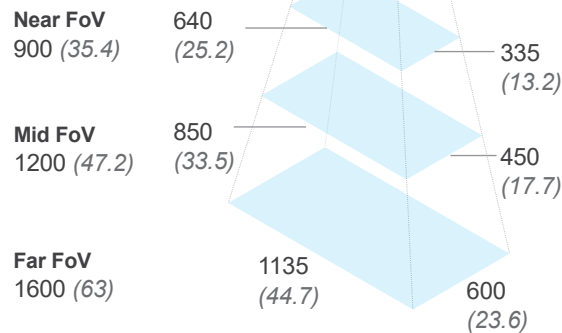
25 mm Lens

Working distances
Units: mm (in)



16 mm Lens

Working distances
Units: mm (in)



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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