

# COGNEX



## The Total Package

Speed, Simplicity,  
and Flexibility

**DATAMAN 380 SERIES**



## DATAMAN 380 SERIES FIXED-MOUNT BARCODE READER

Simplify barcode reading operations with a single reader

The DataMan 380 is an image-based barcode reader that provides insightful, actionable data by capturing and tracking important product and package information in high-speed operations.

An extensive field of view (FoV) captures codes across large areas of logistics and manufacturing lines, improving throughput and efficiency by acquiring more barcodes in a single image.

With advanced imaging and decoding technologies supported by artificial intelligence (AI), these robust barcode readers optimize read rates and line speeds in any environment.



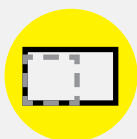
### Key features



**Powerful AI-accelerated decoding** increases throughput during complex, multi-symbology logistics applications by simultaneously processing 1D and 2D codes.



**Modular design** gives users the flexibility to solve many manufacturing and logistics challenges.



**Wide field of view (FoV)** simplifies deployments by providing greater scanning coverage in a single reader, reducing the number of required devices.



**Edge Intelligence insights** offer real-time performance monitoring and analysis to isolate issues and recommend process improvements.



**Advanced image formation** improves read rates and efficiencies by capturing clean, high-resolution images even when codes are damaged and in poor lighting conditions.

# Improve traceability and accelerate throughput across your facility

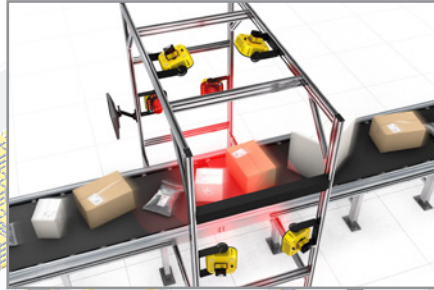
DataMan 380 readers utilize robust decoding algorithms and advanced image formation technology to capture and read more codes in any environment.

From logistics applications like inbound scanning and ship sorting to automotive applications like tire identification, a single DataMan 380 reader improves throughput and traceability with enhanced image acquisition and exceptional read rates.

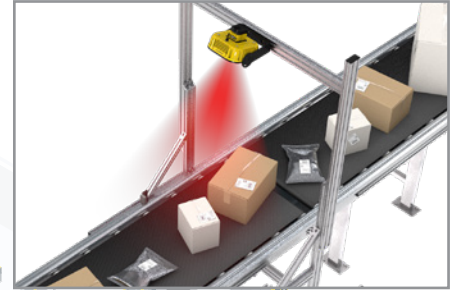
**Dock door scanning**



**Ship sorting**



**Outbound scanning**



**Pallet code reading**

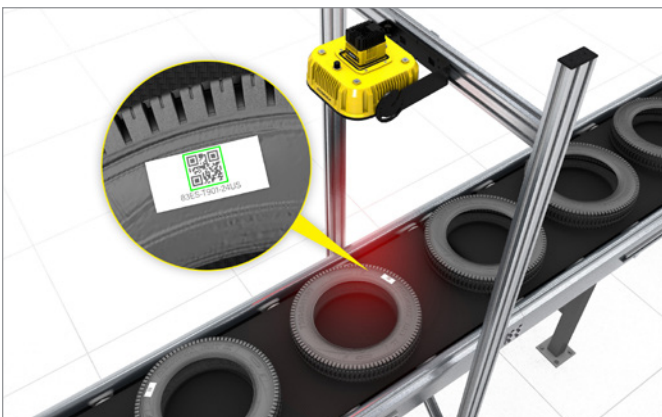


**Robotic sorting**



**Hands-free reading**

**Tire identification**



**Product aggregation**

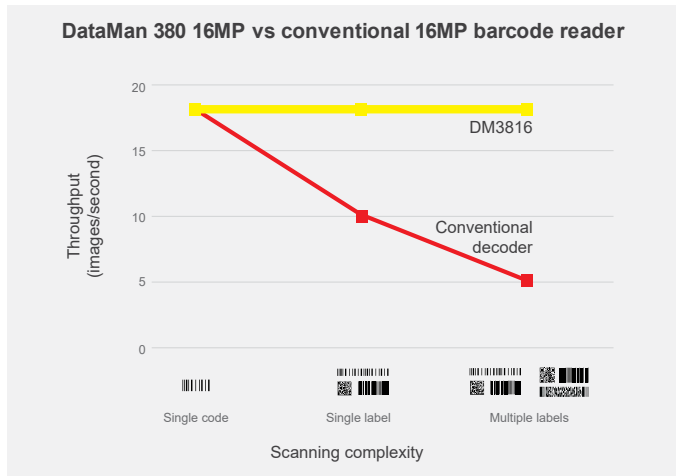


## Have it both ways: high speeds, high read rates

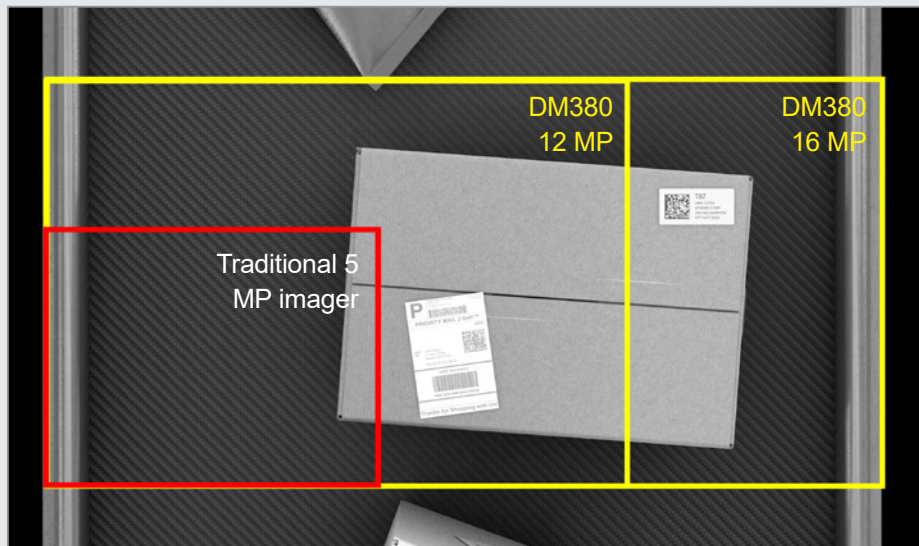
Run your logistics lines at the highest speeds while maintaining exceptional read rates and close package proximity with **1D/2D QuickSort™**. This embedded technology optimizes read rates during high-speed operations by leveraging AI to quickly locate barcodes. The algorithm also enables faster throughput by simultaneously decoding 1D/2D codes.



## Maintain high throughput during complex, multi-symbology applications



## AI locates barcodes, increasing decoding efficiency



## One device offers greater traceability and throughput

Improve throughput with an extensive FoV that covers larger surface areas across manufacturing and logistics lines. The combination of a high-resolution imager and advanced decoding technologies simplifies barcode reading operations in various applications.

## Dependable reading in any environment

Preserve high read rates by decoding obscured, hard-to-read codes. Advanced image formation technologies decipher codes in low-contrast environments and quickly adapt to variable package dimensions, even when codes are damaged.



### See more codes with every shot

**High Dynamic Range Plus (HDR+)** automatically increases contrast to create a more uniform image, enabling greater depth-of-field, faster line speeds, and improved material handling.

**Short gaps between packages make uniform lighting difficult**



**No HDR: reads two of the six codes**



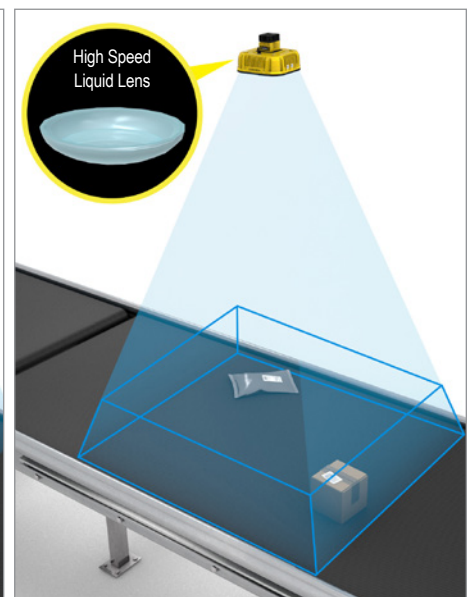
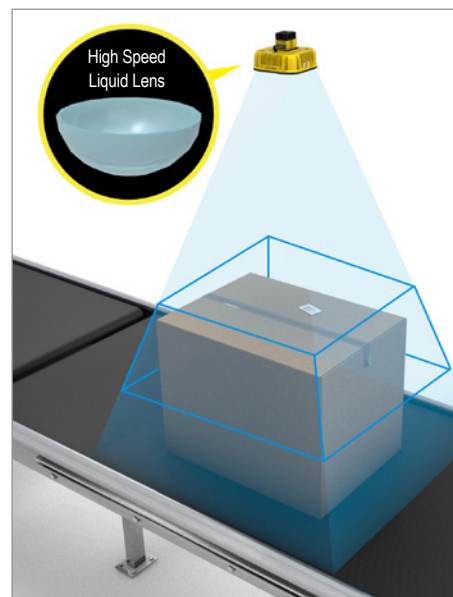
**With HDR+: reads all six codes**



## Instantly adapt to irregular shapes

**High-Speed Liquid Lens (HSLL)** technology facilitates high-speed, high-variability applications by dynamically autofocusing the reader without mechanical parts.

Enhance the reader's coverage and minimizes exposure times for greater throughput.



# Extensive coverage and seamless deployments through advanced technology

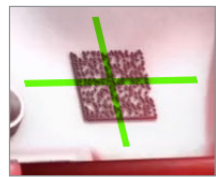
The DataMan 380 is embedded with leading image formation and decoding technology, ready to increase throughput and read rates out of the box. Modular lighting options maximize flexibility and simplify deployments.

**High-Powered Integrated Torch (HPIT)** maximizes scanning coverage and minimizes exposure times for greater throughput. Red and white lighting options illuminate codes in various lighting conditions.

**C-mount lens and HSSL options** maximize application coverage

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

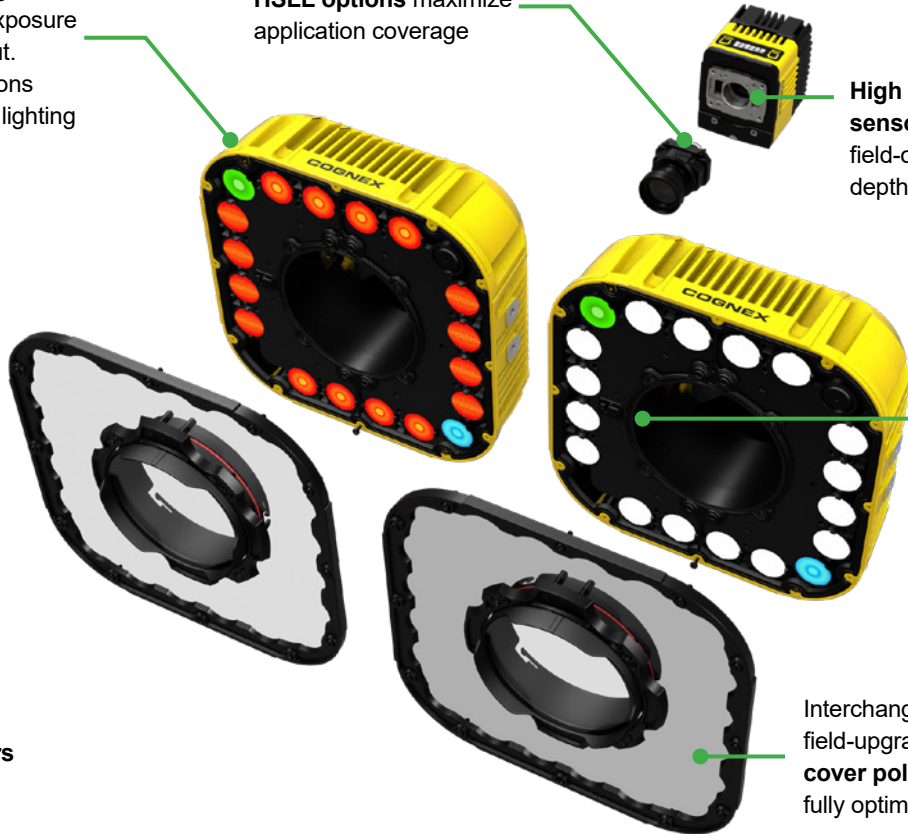
**Distance sensor** to dynamically focus the lens or trigger the reader



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



**Multi-color LED indicators** provide operator feedback



Interchangeable, field-upgradeable **front cover polarization filters** fully optimize image quality

## Scalable, full-coverage reading

Synchronize multiple barcode readers to extend your field of view or simultaneously capture every side of an object for multi-side barcode reading.

**Multi-reader sync (MRS)** technology seamlessly increases reading coverage by enabling a primary reader to collect data from secondary readers and communicate the results to a control system.

## Synchronized code reading and image offload



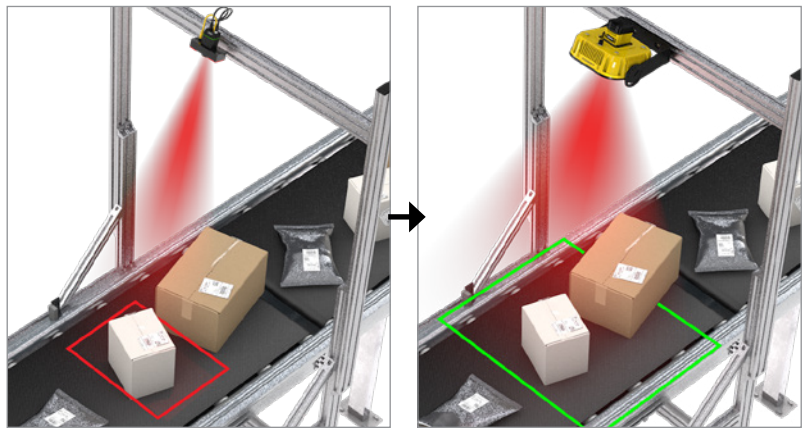
# Improve read rates and maintain close package proximity

Cognex Modular Vision Tunnels facilitate high-throughput, no-touch barcode reading for improved traceability. These solutions leverage advanced image processing technology to read codes from extreme angles and high perspectives while maintaining high read rates.



# Simplify solutions

Integrate DataMan 380 readers into your logistics tunnels to increase performance during high-speed operations. A single DataMan 380 can replace multiple devices in logistics tunnel applications thanks to the reader's large FoV and AI-accelerated decoding.



# Intuitive, actionable data

Cognex Edge Intelligence Tunnel Manager provides tools to setup, monitor, and optimize Modular Vision Tunnels, including:

## Tunnel Analytics

Aggregate, and analyze data from multiple devices for insights into tunnel performance, vendor compliance, and more to improve operational efficiency and revenue recovery initiatives.

## Setup and Commissioning

Validate tunnel performance before deployment for repeatable, reliable installations and actionable information.

## Data Forwarding

Connect data over secure MQTT to Microsoft Azure™, Amazon Web Services™, and SCADA systems such as Ignition to enhance your operation.

Device	Timestamp	Status	Trigger Value	Read String	Length (mm)	Width (mm)	Height (mm)
1	1:30:53 PM	✓	414	000020741206	292	203	77
2	1:30:53 PM	✓	413	00000000000000000000	200	185	158
3	1:30:53 PM	✓	412	MSF 78000000000000000000	411	309	209
4	1:30:47 PM	✓	411	117448103140000760300714	404	366	134
5	1:30:44 PM	✓	410	10701600000000000000000000	303	386	189
6	1:30:42 PM	✓	409	YTR0P AD11 JNC113L3000000	385	407	172

## DATAMAN 380 SERIES SPECIFICATIONS

Lens Type	C-Mount, Cognex High Speed Liquid Lens Autofocus
Trigger	1 opto-isolated, acquisition trigger input.
Discrete Inputs	1 opto-isolated, acquisition trigger input. Up to 3 general-purpose inputs when connected to the Breakout cable. $V_{IL} \leq \pm 6 \text{ V}$ $V_{IH} \geq \pm 12 \text{ V}$ $I_{TYP} : 4.2 \text{ mA @ } 24 \text{ V}$
Discrete Outputs	Up to 4 outputs when connected to the Breakout cable. $I_{MAX} : 50 \text{ mA}$ $V_{OL} \leq \pm 3 \text{ V @ } 50 \text{ mA}$
Status LEDs	Pass/Fail LED and Indicator Ring, Network LED, and Error LED.
Codes	1D barcodes: Codabar, Code 39, Code 128, Code 93, Code 25, Interleaved 2 of 5, UPC/EAN/JAN 2D barcodes: Data Matrix (ECC 0, 50, 80, 100, 140, and 200), QR Code, PDF 417, MaxiCode
Network Communication	2 Ethernet ports, 10/100/1000 BaseT with auto MDIX. IEEE 802.3 TCP/IP Protocol. Supports DHCP, static, and link-local IP address configuration. One port supports TSN networks. RS-232: Rx/D, Tx/D according to TIA/EIA-232-F
Power Consumption	24 V DC +/- 10% LPS or NEC class 2 Power consumption without USB device attached: Average $\leq 15 \text{ W}$ without illumination Average $\leq 40 \text{ W}$ with illumination Peak $\leq 2 \text{ A}$
Power Output	24 V DC at 1.0 A maximum to external light.
Material	Die-cast and extruded aluminum housing.
Finish	Painted.
Mounting	Four M3 threaded mounting holes. Pattern: 38.5 × 58.5 mm (1.52 × 2.60 in)
Weight	DataMan 380 with no accessories attached: 775 g (27.3 oz).
Case Temperature	0° C to 40° C (32° F to 122° F)
Storage Temperature	-20° C to 80° C (-4° F to 176° F)
Humidity	< 95% non-condensing

## DATAMAN 380 SERIES IMAGE SENSOR SPECIFICATIONS

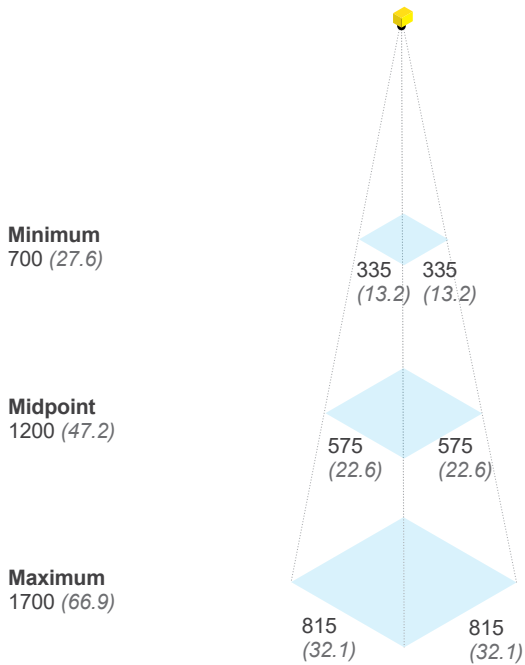
	DM3808	DM3812	DM3816
Sensor Type	1/1.1-inch CMOS	1/1.1-inch CMOS	1.1-inch CMOS
Image Sensor Properties	Diagonal size: 11.1 mm Pixel size: 2.74 $\mu\text{m}$ (H) x 2.74 $\mu\text{m}$ (V)	Diagonal size: 14 mm Pixel size: 2.74 $\mu\text{m}$ (H) x 2.74 $\mu\text{m}$ (V)	Diagonal size: 16.8 mm Pixel size: 2.74 $\mu\text{m}$ (H) x 2.74 $\mu\text{m}$ (V)
Maximum Image Resolution (pixels)	2840 × 2840 (8.06 MP)	4096 × 3000 (12.28 MP)	5320 × 3032 (16.13 MP)
Electronic Shutter Speed	Minimum exposure: 15 $\mu\text{s}$ Maximum exposure: 200 ms		



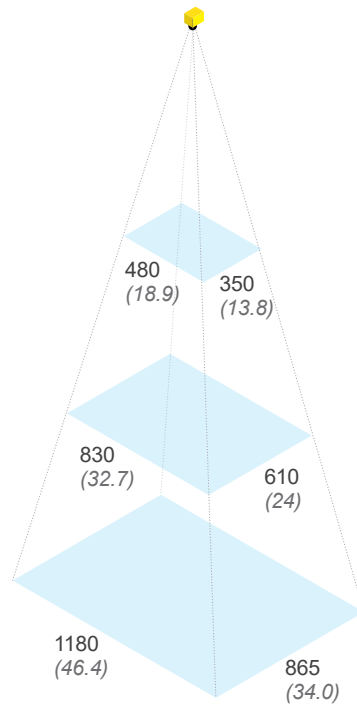
# Field of view diagrams

Working distances  
Units: mm (in)

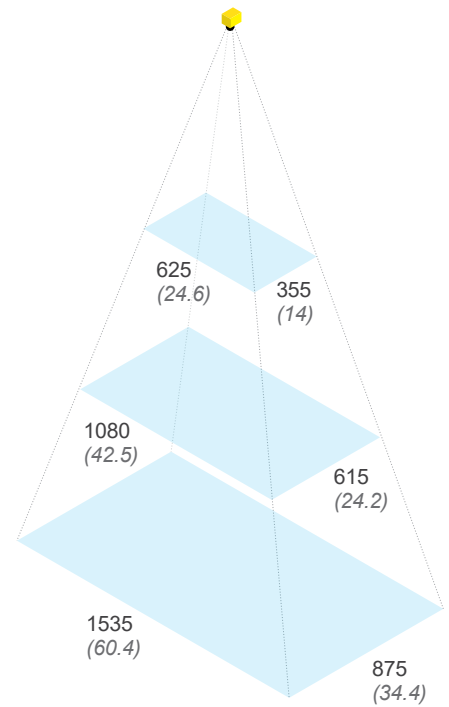
**DM3808**  
with 16 mm lens



**DM3812**  
with 16 mm lens

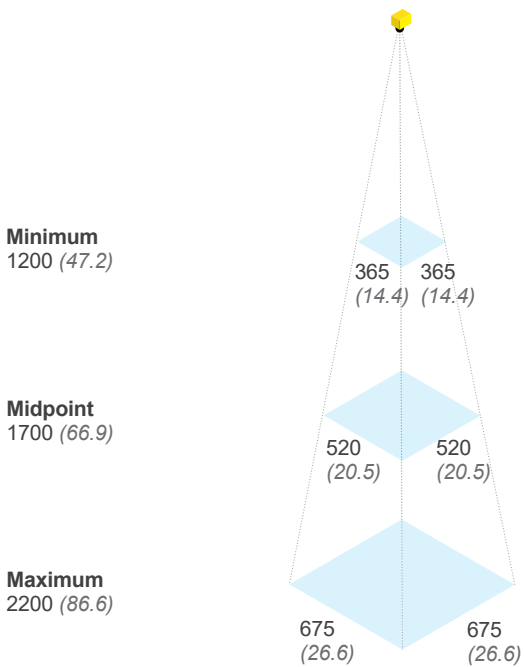


**DM3816**  
with 16 mm lens

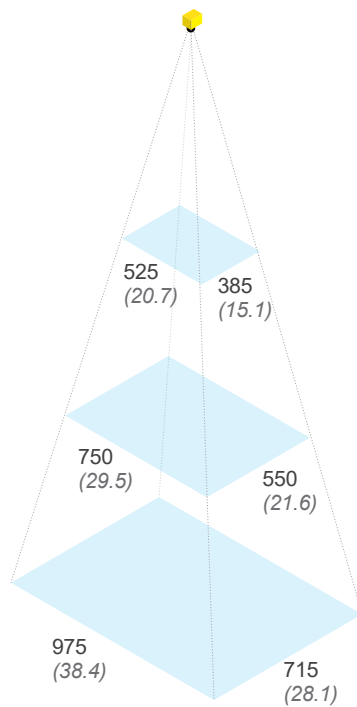


Working distances  
Units: mm (in)

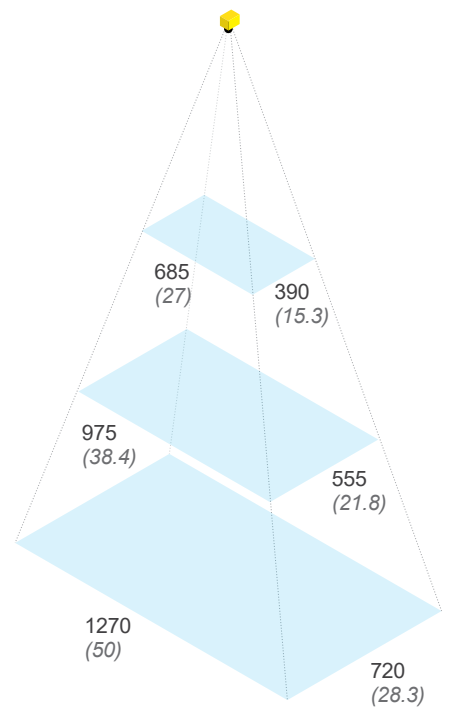
**DM3808**  
with 25 mm lens



**DM3812**  
with 25 mm lens



**DM3816**  
with 25 mm lens








Please contact Cognex sales for part numbers and pricing on the configuration options below.

[cognex.com/sales](http://cognex.com/sales)



## DATAMAN 380 KITS

	Resolution	Software	Lens	Focus	Illumination
	8 MP 12 MP 16 MP	1D/2D omnidirectional code reading	16, 25, 35 mm C-mount lensing + lens cover	Custom pre-focus (optional)	Integrated or external illumination (red or white)













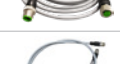

## MOUNTING BRACKETS

	Product ID	Description
	DMBK-PIVOT-DM380	Pivot mounting bracket
	DMBK-PVT-HPIT-380	U-shaped mounting bracket for use with HPIT

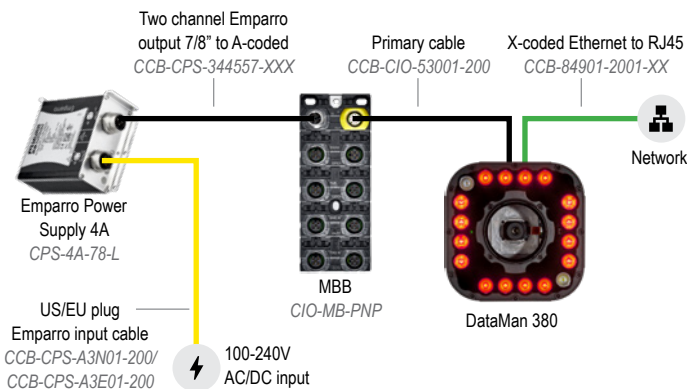
## LENSES

	Lens Product ID	Lens Cover Product ID	Description
	CLN-C16F06-UR	COV-380-CMNT-45	16 mm f6.5.5 C-mount lens
	CLN-C25F06-UR	COV-380-CMNT-45	25 mm f6.5.5 C-mount lens
	LEC-86571	COV-380-CMNT-60	16 mm var. aperture C-mount lens
	LEC-86572	COV-380-CMNT-60	25 mm var. aperture C-mount lens
	LEC-86573	COV-380-CMNT-75	35 mm var. aperture C-mount lens

## COGNEX IO

	Product ID	Description
	CPS-4A-78-L*	Emparro Power Supply 4A 7/8" - L
	CPS-8A-78-L	Emparro Power Supply 8A 7/8" - L
	CIO-MB-PNP*	Master Breakout Board (MBB)
	CIO-PD-4	Power Distribution Board (PDB)
	CIO-HS-4	Hybrid Switch (HS)
	CCB-CPS-A3N01-200/ CCB-CPS-A3E01-200*	US plug Emparro input or EU plug Emparro input (2 m)
	CCB-CIO-40021-XX	External/light cable (1-4 m)
	CCB-CPS-344557-XXX	Two channel Emparro output 7/8" to A-coded (0.5 m, 1-5 m)
	CCB-CIO-53001-200*	Primary cable 12 pin (2 m)
	CCB-CIO-P4141-XX	L-coded power chain (0.5 m, 1-5 m)
	CCB-84901-2001-XX*	X-coded Ethernet to RJ45 (2 m, 5 m, 10 m, 15 m)
	CCB-CIO-51001-XX	X-coded Ethernet chain (0.5 m, 1-5 m, 10 m, 15 m)
	CCB-CIO-40507-XX	Power cable (0.5 m, 1-5 m)
	CCB-CIO-X0116-XX	Two channel A-coded to A-coded (0.5 m, 1-5 m)
	CCB-PWRIO-XX	Power and I/O breakout cable, M12-12 to flying lead (5 m, 10 m, 15 m)

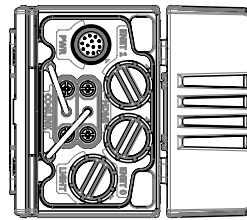
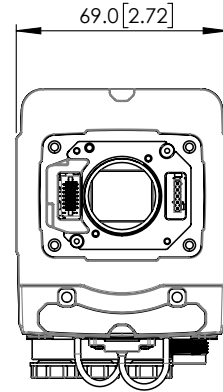
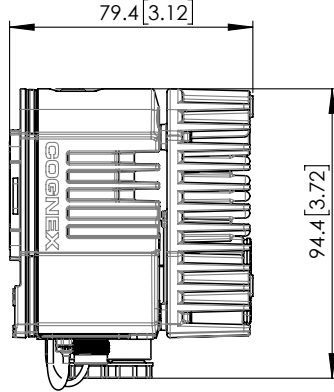
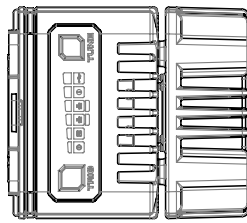
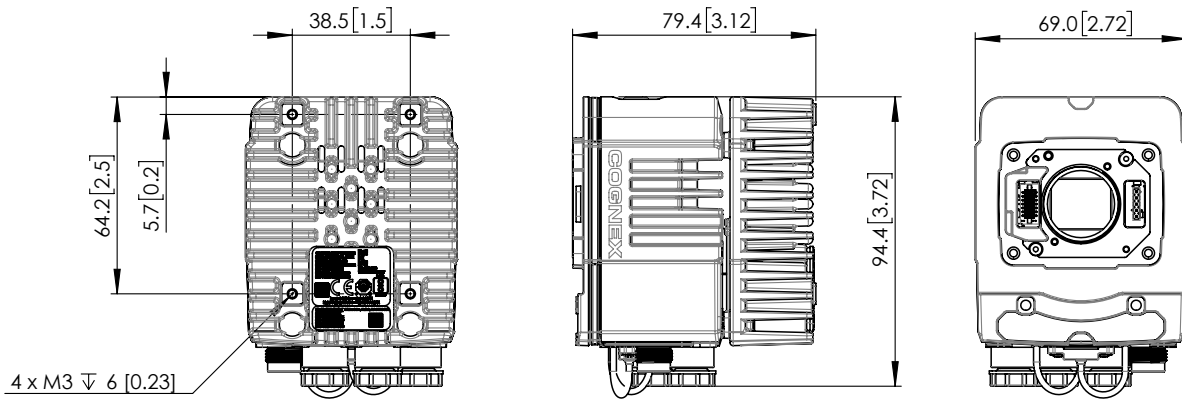
### \*Recommended Cognex IO components required for standalone DataMan 380 installations



# Dimensions

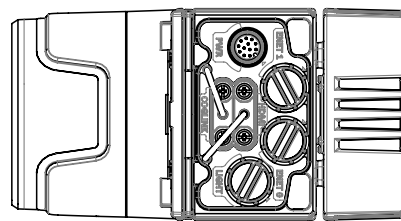
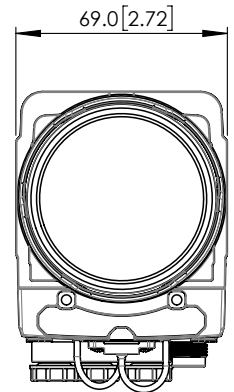
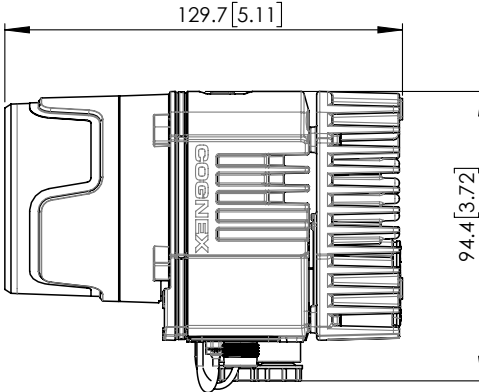
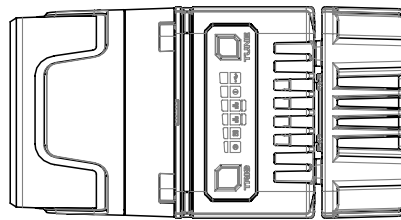
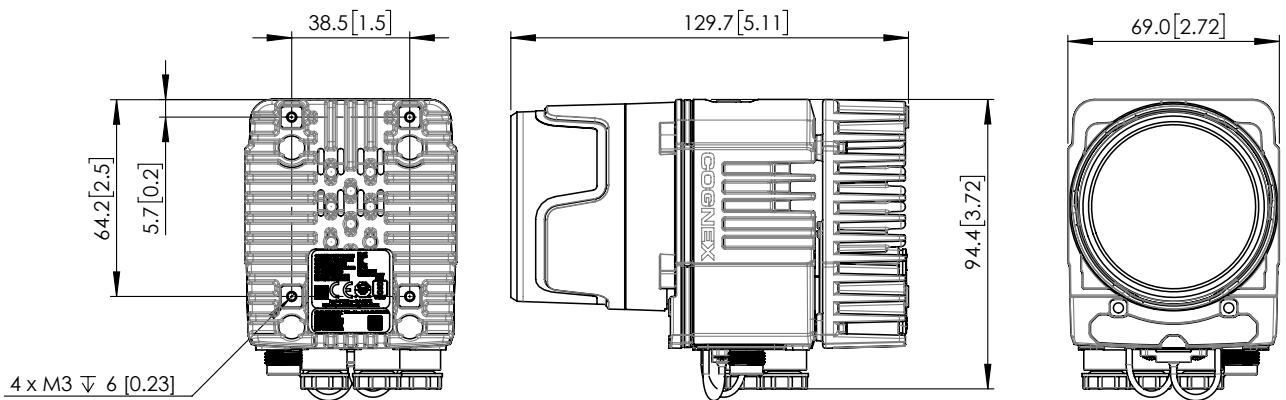
## DataMan 380 base unit

[Download CAD files](#)

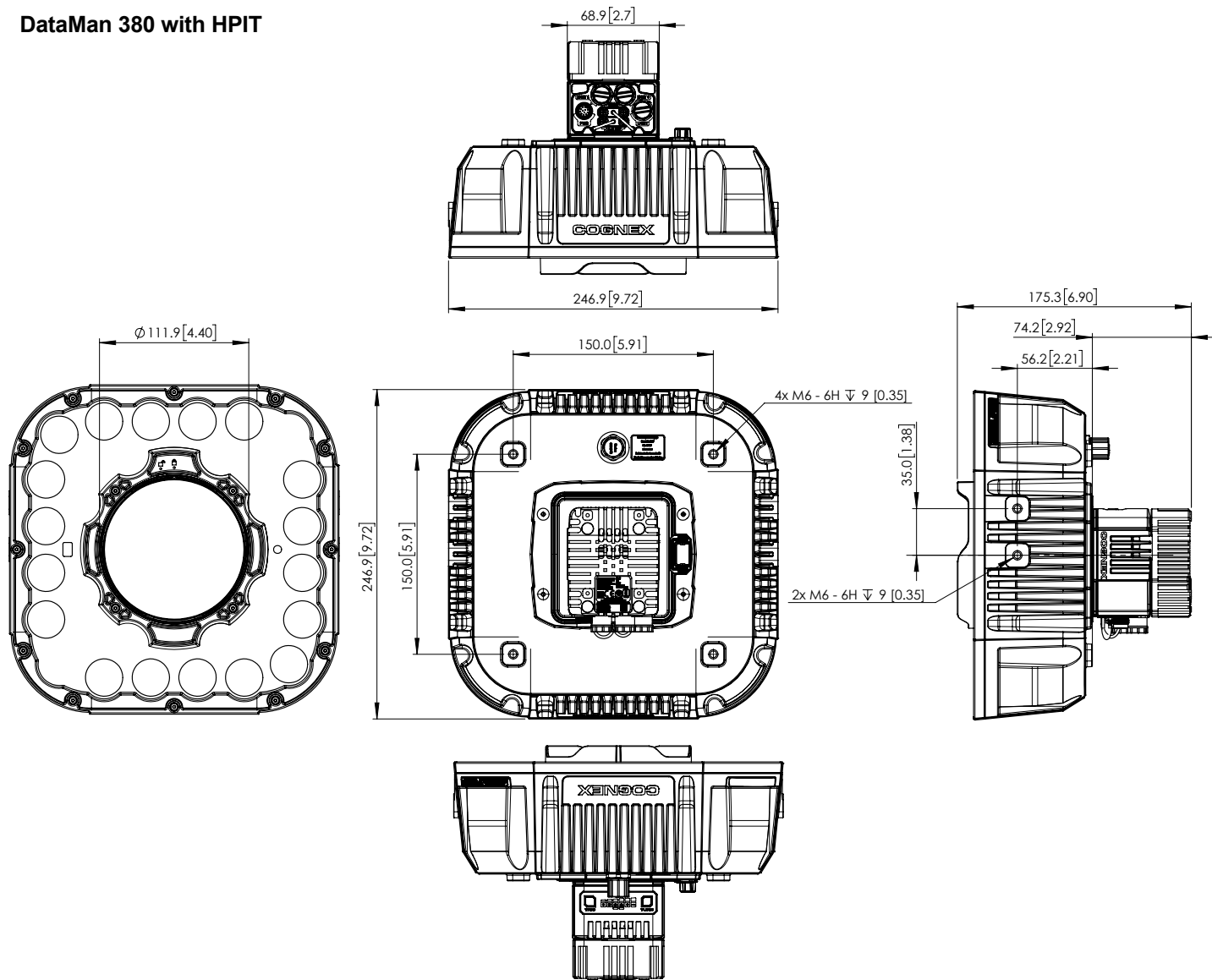


## DataMan 380 with 45 mm lens cover

[Download CAD files](#)



# DataMan 380 with HPIT



## 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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