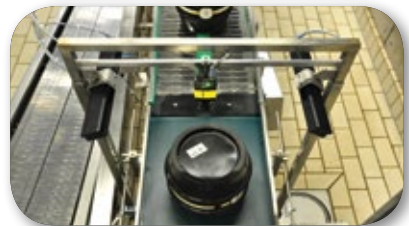




**The global leader in Industrial ID**

- **Handheld barcode readers**
- **Fixed-mount barcode readers**



# Global Leader in Industrial ID & Machine Vision

Cognex is the world's most trusted vision company, with 850,000+ systems installed in facilities around the world, and over thirty years of experience focused solely on machine vision and image-based industrial ID technology. Cognex products are used by many of the world's top manufacturers, suppliers and machine builders to ensure that the products that are being made meet the stringent quality requirement for each industry.

Cognex vision technology helps companies improve their manufacturing quality and performance by eliminating defects, verifying assembly and tracking and capturing information at every stage of the production process. Smarter automation using Cognex vision and ID systems means fewer production errors, which equates to lower manufacturing costs and higher customer satisfaction. Cognex offers the widest range of solutions to meet every application.

<b>Leader</b> in machine vision & industrial ID	<b>30+</b> years in the business
<b>900+</b> employees	<b>\$324M+</b> 2012 reported revenue
<b>850,000+</b> systems shipped	<b>4,000</b> direct customers
<b>Global</b> offices in 20 countries	<b>450</b> channel partners

## The most complete product range



## Local expertise, worldwide reach

Standardizing vision and ID solutions across all production lines reduces the total cost of ownership. As the undisputed global leader in vision-based inspection and identification systems, Cognex is able to deliver and support large scale deployments at multiple global locations. Customers and consumers worldwide are demanding higher quality products than ever before.

Leading manufacturers and suppliers rely on local Cognex engineers and a global network of 450 partners to provide assistance wherever and whenever it is needed.



# Cognex Barcode Readers: Any Code, Every Time

You need reliable barcode readers and, simply put, we read more codes and deliver highest read rates—*that's why people choose Cognex*. When you can put a stop to no-reads by deploying the DataMan® family of image-based barcode readers, you can achieve your Automatic Identification (Auto ID) goals:

- **Increase efficiencies**—aid inventory management, quantify process bottlenecks and improvements, handle supplier printing variations, reduce WIP (work in process)
- **Achieve higher throughput**—less manual resorting, faster read times, reduced downtime
- **Reduce costs**—reduce scrap from rework of rejects
- **Maintain customer satisfaction**—avoid incorrect deliveries and recalls
- **Control traceability**—product quality information, improved asset tracking, allergen management, part authentication deters counterfeiting

Regardless of the barcode symbology, size, quality, printing method or surface the codes are marked on, **we can read it with the highest read rates!**

- **print variations** (color, poor print, scratched, washed out)
- **marking types** (ink jet, dot peen, laser etch, direct part mark)
- **surface types** (glass, metal, cardboard, ceramic, plastic)



Cognex has the product versatility and most advanced technology to help you meet your goals whether your application uses 1-D linear barcodes or higher density 2-D matrix codes:

**we can  
readit™**



## 1-D High Speed

Fast moving 1-D barcodes printed on parts or packaging.



## 1-D Low Speed

Slow moving or stationary 1-D barcodes printed on parts or packaging.



## 2-D Direct Part Mark

Dot peen, etched or laser marked 2-D Data Matrix codes marked directly on parts.



## 2-D Printed

2-D printed codes on labels and packaging. Moving or stationary, these can include a mix of 1-D and 2-D codes.

# Cognex Delivers the Highest Read Rates

## ➤ The #1 benchmark for ranking ID reader performance

Read rate is the number of barcodes read divided by the number attempted. It's usually expressed as a percentage and the closer to 100%, the better.

- Read rate is a measure of process reliability and robustness
- No-reads can cost money, time and effort to remedy
- The higher the read rate, the higher the throughput



### For 1-D Linear Barcodes

1DMax+™, the best-in-class 1-D barcode algorithm reads the most difficult-to-read barcodes. When paired with Hotbars™ technology, 1DMax+ reads codes even faster.

## ➤ Powerful decoding software algorithms

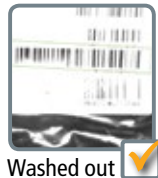
DataMan barcode readers are optimized with patented algorithms for the highest read rates (99.9%) in the most challenging DPM (Direct Part Mark) and label-based identification applications.

Laser scanners cannot provide the **high read rates** you require for today's manufacturing environments. Other advantages over laser scanner technology include:

- Omnidirectional code reading
- Multiple code reading
- Extreme perspective code reading
- Damaged, poorly printed or barcodes with quiet zone violations

### For 2-D Matrix Codes

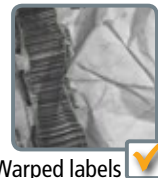
2DMax+™, a breakthrough in 2-D decoding software, handles a wide range of degradations to the appearance of 2-D DPM codes, no matter what the cause or surface.



Washed out ✓



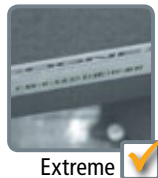
Badly printed ✓



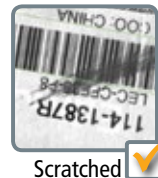
Warped labels ✓



Specularity ✓



Extreme perspective ✓



Scratched ✓

## ➤ Supported symbologies

**1-D:** UPC/EAN/JAN, Codabar, Interleaved 2 of 5, Code 39, Code 128, Code 93, Pharmacode, GS1 DataBar

**Postal Codes:** POSTNET, PLANET Code, Australia 4-State, Japan 4-State, UPU 4-State, Intelligent Mail Barcode

**2-D:** Data Matrix, MaxiCode, Aztec, QR Code and MicroQR Code. Optional: VeriCode®

**Composite:** GS1 (CC-A, CC-B), PDF417, MicroPDF

# Unique Cognex Technologies

## ➤ If you can't see the code, you can't read it

Combined with powerful software, advanced image formation allows you to achieve the **highest read rates** by:

- Highlighting poorly marked codes
- Working over a wide range of code sizes with variable focus technology
- Utilizing integrated lighting and advanced innovations to decode faster

## ➤ Flexible optics

Each DataMan fixed-mount reader provides a variety of lensing options for maximum depth-of-field flexibility. The DataMan 8000 series of handheld readers offers integrated variable focus liquid lens technology as standard—a worldwide first!

### Three-position Lens



Standard for DataMan fixed-mount readers

### S-Mount (M12) Lens



Options for increased zoom range for high speed motion

### C and CS-Mount Lens



Field of View (FOV) flexibility for one reader to adjust to any distance

### Liquid Lens Variable Focus



A non-mechanical lens for greater focal range when part positions and sizes vary

## ➤ Flexible illumination

Modular lighting, custom accessories and other integrated illumination technology provide optimal lighting for all mark types and surfaces.

### Fixed-mount Modular Lighting



### Handheld UltraLight® Technology



Dark field illumination for dot peen and laser DPM



Diffuse off-axis illumination for curved surfaces and highly reflective surfaces



Quadrant control for machined surfaces



Diffuse bright field illumination for labels and marks with strong contrast

## ➤ Advanced patented technologies

### Hotbars Technology

In a pioneering new way of reading 1-D linear barcodes, Cognex has developed Hotbars image analysis technology.

Hotbars combines superior signal fidelity with lightning speed, giving the next generation of Cognex DataMan readers unprecedented performance.



### Xpand

With patent pending Xpand™ technology, the field of view for a single DataMan 300 or DataMan 503 can be increased by more than 50% enabling applications to be solved using fewer readers, which simplifies project installation and setup time and reduces overall cost.



# Easy Deployment and Operation

## ➤ See what the reader sees

DataMan barcode readers allow you to see what the barcode reader sees. You can review images of the barcodes being read live or setup the reader to transfer no read images via FTP for later review. This visualization feature enables you to diagnose no reads and rejects for process improvement.

## ➤ Common Setup Tool with intelligent tuning

Powerful software simplifies initial reader setup. DataMan software is a common platform across all models. The Setup Tool simplifies deployment by putting the most common controls in a single page, allowing the user to see how different options affect the reader in real time.

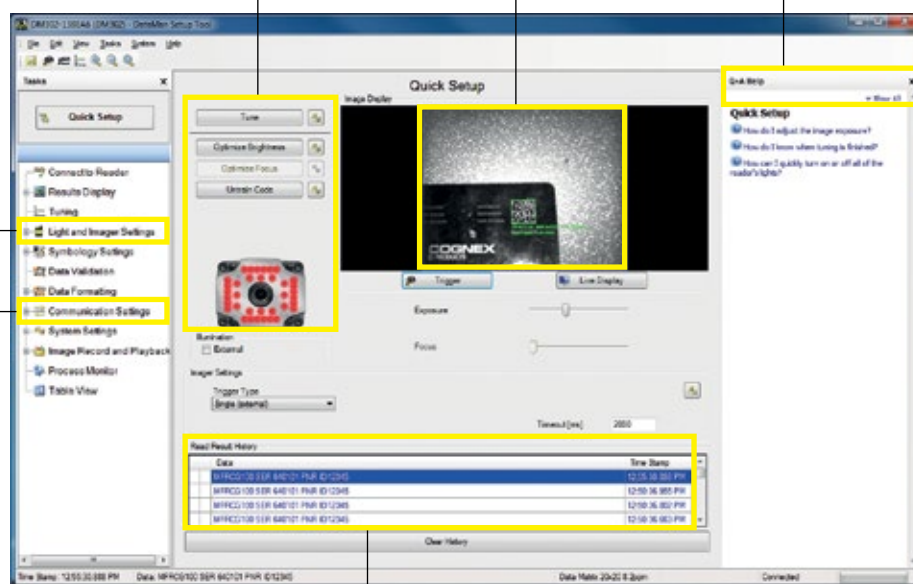
Intelligent tuning automatically adjusts the lighting banks to optimize the image for reading DPM codes on various parts presented

Image with overlay graphics

Easy to access Q&A help section

Easy to adjust lighting and camera settings include trigger modes and focus

Communications Settings includes Cognex Connect integration tools



Results and data history log

## ➤ Cognex Connect communications suite

As a network device, DataMan ID readers can be accessed from any terminal connected to the network. DataMan readers are supported by the Cognex Connect™ suite of Industrial Ethernet protocols, such as EtherNet/IP (with Add-On-Profile), PROFINET, Modbus/TCP and MC Protocol for easy communication into the factory network.



## ➤ Cognex Explorer control center

This unique utility provides a unified network view of all Cognex vision, ID and visualization systems, powerful yet simple maintenance tools, the ability to backup/restore or clone systems, upgrade firmware and much more. Designed for control and maintenance engineers, Cognex Explorer™ is very intuitive and requires no training to use.





# DataMan Handheld ID Readers

Cognex DataMan® industrial handheld barcode readers provide unmatched performance for Direct Part Marks (DPM) and label-based applications, where integration, ruggedness and the ability to read challenging marks quickly are essential to your success.

DataMan industrial handheld readers are available with field interchangeable communication modules, both corded and wireless. One reader can be configured to meet specific communication needs.

## ➤ DataMan 8050 Series



DataMan 8050 readers are equipped with Cognex's world-class barcode reading algorithms and designed to withstand harsh factory floor conditions. The best-in-class algorithms decode even the most challenging barcodes quickly and easily, including DPM codes. And, the flexible modular design ensures the DataMan 8050 readers are ready to meet ever changing communication needs.

- **High speed barcode reader:** Reads 1-D and 2-D codes with incredible speed every time even if the code is damaged, smudged, scuffed or poorly marked. And, at an economical price point.
- **Modular design easily adapts to meet your needs:** Field interchangeable communication modules allow one reader to be configured to meet specific communication needs to support RS-232, USB and Bluetooth communication requirements.
- **Rugged industrial design:** Constructed to handle tough environments, durable industrial features include: lanyard hook for easy retractor mounting, bright centralized aimer for clear targeting, loud beeper and indicator lights provide operator feedback.

### Two Model Options

- DataMan 8050X is designed to decode challenging 2-D DPM codes with near/ far integrated LED illumination.
- DataMan 8050 is designed to decode the most challenging 1-D and 2-D label-based codes.

## ➤ DataMan 750 Series

The DataMan 750 is compact with an ergonomic design, adjustable optics and easily reads well-marked 1-D and 2-D codes on a variety of surfaces. The DataMan 750 is ESD safe, has a built-in laser aimer for quick alignment and supports RS-232, USB and PS/2 communications.



## ➤ DataMan 8000 Series

The DataMan 8000 series of barcode readers offer the industry's most advanced technology for reading 1-D and 2-D codes including the most challenging DPM codes, regardless of size, quality or printing method. They were the first industrial barcode reader to offer Ethernet communication and they feature liquid lens technology and a modular design.

- **Industry-leading read rates:** Two powerful patented algorithms decode virtually every type of code, every time, with unsurpassed read rates.
- **Advanced image formation:** Integrated liquid lens technology maximizes application and depth of field flexibility. Patented UltraLight technology provide superior image formation on any mark type and surface. UltraLight illumination provides dark field, bright field and diffuse lighting all in one electronically controlled light.
- **Easy to use modular design:** Field interchangeable communication modules provide corded RS-232, USB, corded Ethernet or wireless with intelligent base station (Ethernet, USB, RS-232).



### Two Model Options

- DataMan 8100 is designed with integrated bright field illumination ideal for applications that require superior performance for well-printed 1-D and 2-D codes and well-marked DPM codes.
- DataMan 8500 is designed with Cognex patented UltraLight technology for DPM codes that require advanced illumination capability for reading the most difficult codes.

The DataMan 8000 series wireless reader provides a long working range—up to 30m—with a large memory capacity for reading codes when offline or out of range. The base station is compatible with industry standard Ethernet, USB and RS-232 cables.

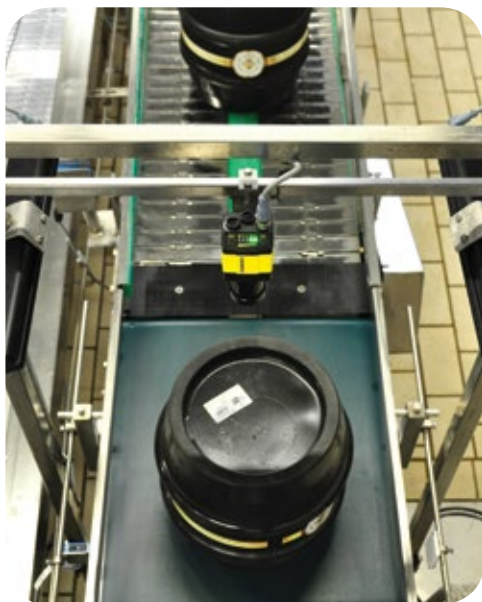


	Challenging 2-D DPM codes	2-D DPM codes	Challenging 1-D/2-D codes	Well-printed 1-D/2-D codes	Wireless	ESD
DataMan 8500	•	•	•	•	•	
DataMan 8100		•	•	•	•	
DataMan 8050 X		•	•	•	•	
DataMan 8050			•	•	•	
DataMan 750			•	•		•
DataMan 750 S				•		•

# DataMan Fixed-mount Barcode Readers

## ➤ DataMan 300 Series

The DataMan 300 series is the most versatile Cognex fixed-mount barcode reader offering multiple integrated lighting and lens options, an intelligent auto-tune feature, and multiple models to select from.



## ➤ DataMan 503 Series

The DataMan 503 is the highest performing Cognex fixed-mount barcode reader for applications requiring high speed and large depth-of-field or field-of-view.



## ➤ DataMan 500 Series

The DataMan 500 series is a high performance fixed-mount reader that offers Cognex proprietary vision chip technology, called VSoC.



	2-D Barcode Reading				2-D & 1-D Barcode Reading		1-D Barcode Reading					
	Direct Part Mark (DPM)	High Speed	Slow Speed	Multiple Codes	Mixed Codes	Challenging Codes	Ultra Fast	High Speed	Slow Speed	Multiple Codes	Omni-directional	Oriented
DataMan 300/302/303 X	•	•	•	•	•	•		•	•	•	•	•
DataMan 300/302/303 L								•	•	•		•
DataMan 503 X	•	•	•	•	•	•		•	•	•	•	•
DataMan 503 QL							•	•	•	•	•	•
DataMan 500 X	•	•	•	•	•	•		•	•	•	•	•
DataMan 500 QL								•	•	•	•	•



## > DataMan 50 Series



The DataMan 50 series is the smallest Cognex fixed-mount reader measuring just 23.5mm x 27mm x 43.5mm. DataMan 50 features:

- IP65-rated housing
- Three-position adjustable lens
- Integrated lighting and LED aimer
- USB and RS-232 communications

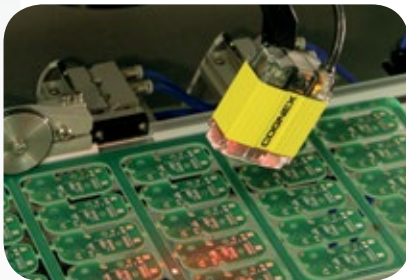


## > DataMan 60 Series

The DataMan 60 series is a compact fixed-mount reader that features:

- Integrated lighting and LED aimer
- Three-position adjustable lens
- Ethernet, USB and RS-232 communications

## > DataMan 100 Series



The DataMan 100 series is a standard fixed-mount reader featuring:

- Three-position adjustable lens and C-Mount lens options
- Integrated lighting and LED aimer
- Train and trigger button for ease of setup
- USB and RS-232 communications

## > DataMan 200 Series

The DataMan 200 series is a flexible fixed-mount reader featuring:

- IP65-rated housing
- Integrated lighting and laser aimer
- Optional variable focus liquid lens technology so there is no need to manually adjust the focus
- Ethernet and RS-232 connectivity



	2-D Barcode Reading				2-D & 1-D Barcode Reading		1-D Barcode Reading					
	Direct Part Mark (DPM)	High Speed	Slow Speed	Multiple Codes	Mixed Codes	Challenging Codes	Ultra Fast	High Speed	Slow Speed	Multiple Codes	Omni-directional	Oriented
DataMan 50/60 L								•	•	•		•
DataMan 50/60 S	•		•	•	•	•			•	•	•	•
DataMan 50/60 QL								•	•	•	•	•
DataMan 100/200 X	•				•	•		•	•	•	•	•
DataMan 100/200 Q						•		•	•	•	•	•
DataMan 100/200 QL								•	•	•	•	•

# ID for Every Industry



Automotive Traceability



Code Reading on Packages



Food & Beverage



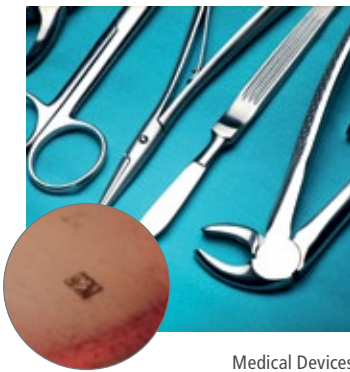
Document Handling



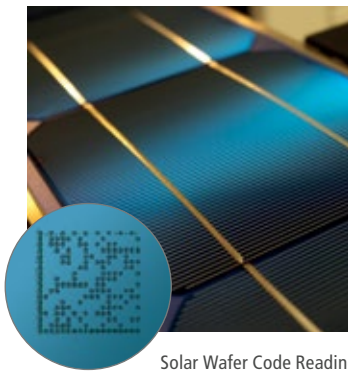
Pharmaceutical Traceability



Code Reading on PCBs



Medical Devices



Solar Wafer Code Reading



Tote ID & Sorting



Package Sortation



Carton Coding



Print and Apply



## Netflix

One of the most expensive processes at Netflix was the handling of DVD returns. Huge resources were tied up in manually opening mailers, taking out the sleeved discs, checking the titles on the DVDs against the sleeves, checking the discs for physical defects, cleaning them and scanning them into the system.

To improve production quality and reduce labor costs, Netflix implemented a system using DataMan barcode readers to read barcodes on the envelope, sleeve, and DVD disc. Since go-live, the project has exceeded expectations in all areas.



## Axel-Springer

Barcodes are used to pack the newspapers into bundles to make sure they not only arrived quickly but also at the right address. For three decades the barcodes were read using a laser scanner with a tilting mirror, but recently this mature technology was replaced by the next generation of barcode readers: DataMan.

The high performance DataMan 500 made it possible to achieve 100 percent reliability in reading the barcodes after a test phase of just four weeks. And that was for newspaper bundles ranging in height from 0.5 to 10 inches and variations in the position of the code over a range of 15 inches plus.



## Borg Warner uses DataMan readers for turbocharger traceability

Borg Warner Turbo Systems implemented a project to mark each component to create seamless traceability through the production process and beyond.

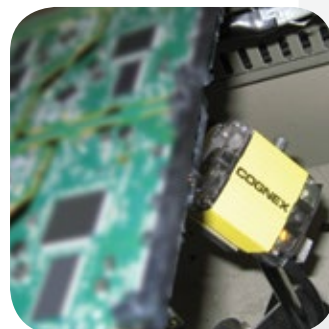
Even at high temperatures and at high volumes, DataMan readers were up to the task. Parts were scanned at each station with such ease and speed that the traceability project was able to achieve its goals as well as lower costs by increasing efficiencies and reducing rework and scrap.



## Beyonics moved to 2-D codes to save space and increase throughput

As electronics shrink in size, smaller printed circuit boards (PCBs) mean less space for labels, while the increasing demand for product traceability requires more information. Beyonics had to migrate to 2-D Data Matrix codes.

Beyonics' existing readers were in poor condition and could not read 2-D codes. The direct replacement was implemented without altering any existing software programming or hardware wiring configurations while achieving higher read rates and increasing production throughput by about 10%.



# Handheld Reader Specifications

	750 S	750	8050	8050X	8100	8500
1-D and Stacked Codes	Yes					
2-D Codes	Yes					
Decoding Algorithm	IDQuick/1DMax	1DMax/2DMax	IDQuick/ 1DMax+/Hotbars	2DMax/ 1DMax+/Hotbars	2DMax+/1DMax+/Hotbars	
Image Sensor	752 x 480 global shutter		752 x 480 global shutter		1280 x 1024 high resolution sensor	
Lens Type	3-position (40/65/105mm) Adjustable		Fixed focus		Variable focus liquid lens (working distances from 0 to 500mm)	
Trigger	Handle trigger, presentation					
Aimer	Laser (CDRH/IEC Class II)		Centralized LED aimer		Laser, Class II	
Status Outputs	LED, beeper and vibration		LED, beeper		LED, beeper and vibration	
Lighting	Integrated bright field		Integrated LED with near/far optics		Integrated UltraLight (bright, dark and diffuse)	
Communications	RS-232, USB and PS/2		Serial Module: RS-232, USB-CDC and USB-HID		Serial Module: RS-232, USB and PS/2 Ethernet Module: EtherNet/IP, PROFINET, MC Protocol, Modbus TCP, TCP/IP and FTP Intelligent Base Station: Ethernet (TCP/IP, FTP), RS-232 and USB (Point-to-Point Wireless: 802.11 b/g Channels 1-11)	
Cordless Option	No		No		Yes	
Power	5VDC		5V – 6V DC, 2.5W max LPS or NEC Class 2 power supply		DataMan 8100 with Serial Module: 5V - 6V DC, 2.5 W maximum LPS or NEC Class 2 power supply DataMan 8500 with Serial Module: 5V - 6V DC, 5.0 W maximum LPS or NEC Class 2 power supply DataMan 8100/8500 with Ethernet Module: PoE Class 2 power supply Intelligent Base Station: 24V or PoE Class 3 power supply	
Material	Polycarbonate		Polycarbonate housing with overmold			
Weight	110g		279 g		326g	
Dimensions	151mm x 54mm x 49mm		210 x 155 x 85		220mm x 155mm x 85mm	
Operating Temperature	0°C to 50°C (32°F to 122°F)		0°C to 40°C (32°F to 104°F)		0°C to 40°C (32°F to 104°F)	
Storage Temperature	-10°C to 60°C (14°F to 140°F)		-40°C to 60°C (-40°F to 140°F)			
Operating and Storage Humidity	0% to 95%, non-condensing					
Protection	IP50		IP54			
ESD Safe	Yes		No			
DoD UID Data Validation	No	Yes				
RoHS Certified	Yes					
Approvals (CE, UL, FCC)	Yes					
Operating System	Microsoft® Windows® XP and Windows 7 32 bit and 64 bit, Windows 8					





# Fixed-mount Reader Specifications

L Models	QL Models	S Models	X Models
1DMax+ algorithm with Hotbars technology for reading the most challenging, high speed 1-D barcodes presented in fixed position, either horizontally or vertically.	Best-in-class 1-D barcode reading supported by 1DMax+ with Hotbars technology, which is optimized for ultra fast omnidirectional barcode reading.	For slow-moving parts or index motion where parts have well-marked 1-D/2-D codes.	In addition to 1DMax+ with Hotbars technology, X models also provide the highest-performance for applications that require reading 2-D codes.

	300 L	300 X	302 L	302 X	303 L	303 X	503 QL	503 X
1-D and Stacked Codes	Yes							
Omnidirectional 1-D Codes	No	Yes	No	Yes	No	Yes	Yes	Yes
Postal Codes	No	Yes	No	Yes	No	Yes	No	Yes
2-D Codes	No	Yes	No	Yes	No	Yes	No	Yes
Algorithm	1DMax+, Hotbars	1DMax+, Hotbars, IDQuick, 2DMax+	1DMax+, Hotbars	1DMax+, Hotbars, IDQuick, 2DMax+	1DMax+, Hotbars	1DMax+, Hotbars, IDQuick, 2DMax+	1DMax+, Hotbars	1DMax+, Hotbars, IDQuick, 2DMax+
Image Resolution	800 x 600 global shutter		1280 x 1024 global shutter		1600 x 1200 global shutter		2048 x 1088 global shutter	
Image Sensor	1/1.8" CMOS						2/3" CMOS	
Acquisition	Max 60 fps				Max 40 fps		Max 150 fps	
Decode Rate	Max 45/sec				Max 30/sec		120/sec	
Lens Options	C-Mount, S-Mount, variable focus liquid lens						C-Mount	
Trigger	Manual; External: single, burst and continuous; Internal: self and presentation							
Aimer	Dual laser (CDRH/IEC Class II)						None	
Discrete Inputs	2 opto-isolated						4 opto-isolated	
Discrete Outputs	4 opto-isolated							
Status Outputs	Beeper, 5 multifunctional LEDs, 10x LED bar array							
Lighting	Integrated segment-controlled bright field, external						High-powered illumination accessory, external	
Communications	Ethernet and RS-232							
Power	24VDC (±10%)							
Power Consumption	5W (internal lights), 18W (internal and external lights)						15W (DM503 only), 36W max (with HPIA)	
Material	Aluminum							
Weight	165g						1.5kg	
Dimensions	73mm x 54mm x 42mm, 92mm x 54mm x 42mm (w/cover and lights)						113mm x 88mm x 158mm (without lens or lens cover)	
Operating Temperature	0°C to 45°C (32°F to 113°F)							
Storage Temperature	-10°C to 60°C							
Operating and Storage Humidity	0% to 95%, non-condensing							
Protection	IP65							
RoHS Certified	Yes							
Approvals (CE, UL, FCC)	Yes							
Operating System	Microsoft® Windows® XP and Windows 7 32 and 64 bit							





# Fixed-mount Reader Specifications

QL Models	Q Models	X Models
Best-in-class 1-D barcode reading with 1DMax, which is optimized for omnidirectional barcode reading. QL models are field upgradable to the Q model.	High-performance code reading of 1-D/2-D codes on fast-moving parts. Includes 1DMax and IDQuick technologies.	Highest-performance code reading for applications that require reading the most challenging DPM codes or 1-D/ 2-D codes.

	100 QL	100 Q	100 X	200 QL	200 Q	200 X
1-D and Stacked Codes	Yes					
2-D Codes	No	Yes		No	Yes	
Decoding Algorithm	1DMax	1DMax, IDQuick	1DMax, IDQuick, 2DMax+	1DMax	1DMax, IDQuick	1DMax, IDQuick, 2DMax+
Image Sensor	752 x 480 global shutter					
Acquisition	Max 60 fps					
Decode Rate	Max 45/sec					
Lens Options	3-position (40/65/105mm) adjustable. large aperture, SHD (super high density), C-Mount			3-position (40/65/105mm) adjustable, variable focus liquid lens. large aperture, C-Mount		
Trigger	Manual; External: single, burst and continuous; Internal: self and presentation					
Aimer	LED			Dual Laser (CDRH/IEC Class II)		
Discrete Inputs	2 Opto-isolated					
Discrete Outputs	2 Opto-isolated					
Status Outputs	Beeper and 1 multi-functional LEDs					
Lighting	Integrated bright field					
Communications	RS-232 and USB			Ethernet and RS-232		
Power	5VDC to 24VDC			36VDC to 57VDC (PoE)		
Power Consumption	500mA @ 5VDC max			50mA @ 48VDC max		
Material	Aluminum					
Weight	125g			75g		
Dimensions	55mm x 42mm x 22mm			64mm x 42mm x 21mm		
Operating Temperature	0°C to 40°C (32°F to 104°F)					
Storage Temperature	-10°C to 60°C (14°F to 140°F)					
Operating and Storage Humidity	0% to 95%, non-condensing					
Protection	IP65					
ESD Safe	Yes, with ESD safe cover					
DoD UID Data Validation	Yes					
RoHS Certified	Yes					
Approvals (CE, UL, FCC)	Yes					
Operating System	Microsoft® Windows® XP and Windows 7 32 and 64 bit					



# Fixed-mount Reader Specifications

S Models	L Models	QL Models	X Models
For slow-moving parts or index motion where parts have well-marked 1-D/2-D codes.	1DMax+ algorithm with Hotbars technology for reading the most challenging, high speed 1-D barcodes presented in fixed position, either horizontally or vertically.	Best-in-class 1-D barcode reading supported by 1DMax+ with Hotbars technology, which is optimized for ultra fast omnidirectional barcode reading.	In addition to 1DMax+ with Hotbars technology, X models also provide the highest-performance for applications that require reading 2-D codes.

	50 L	50 QL	50 S	60 L	60 QL	60 S	500 QL	500 X
1-D and Stacked Codes	Yes, oriented	Yes, omni-directional	Yes	Yes, oriented	Yes, omni-directional	Yes		
Omnidirectional 1-D Codes	No	Yes		No	Yes			Yes
Postal Codes	No							Yes
2-D Codes	No		Yes	No		Yes	No	Yes
Algorithm	1DMax+, Hotbars		1DMax+, Hotbars, IDQuick	1DMax+, Hotbars		1DMax+, Hotbars, IDQuick	1DMax+, Hotbars	1DMax+, Hotbars, IDQuick, 2DMax+
Image Resolution	752 x 480 global shutter						1024 x 768 global shutter	
Image Sensor	1/3" CMOS						VSoC (contact Cognex for details)	
Acquisition	Max 60fps						Max 1000 fps	
Decode Rate	Max 45/sec		Max 5/sec	Max 45/sec		Max 5/sec	Max 90/sec	
Lens Options	3-position (45/70/110mm) adjustable						CS-Mount, variable focus liquid lens	
Trigger	Manual; External: single, burst and continuous; Internal: self and presentation		Manual; External: single Internal: self and presentation	Manual; External: single, burst and continuous; Internal: self and presentation		Manual; External: single Internal: self and presentation	Manual; External: single, burst and continuous; Internal: self and presentation	
Aimer	LED						Dual laser (CDRH/IEC Class II)	
Discrete Inputs	2, non-isolated						4 opto-isolated	
Discrete Outputs	3, non-isolated						4 opto-isolated	
Status Outputs	3 multifunctional LEDs, (external control box with beeper and two buttons available)						Beeper, 5 multifunctional LEDs	
Lighting	Integrated bright field, external							
Communications	USB and RS-232			Ethernet, USB and RS-232			Ethernet and RS-232	
Power	5VDC to 24VDC or USB Bus powered			5VDC to 24VDC			36VDC to 57VDC (PoE)	
Power Consumption	2.5W						13W max including HPIA	
Material	Aluminum, Polycarbonate		Aluminum Housing \ Polycarbonate Window				Aluminum	
Weight	76g (w/cable)			100g (3.42 oz)			350g	
Dimensions	23.5mm x 26.5mm x 45.4mm			55mm x 44.5mm x 23.5mm			106mm x 70mm x 52mm	
Operating Temperature	0°C to 40°C (32°F to 104°F)							
Storage Temperature	-10°C to 60°C							
Operating and Storage Humidity	0% to 95%, non-condensing							
Protection	IP65			IP40			IP65	
RoHS Certified	Yes							
Approvals (CE, UL, FCC)	Yes							
Operating System	Microsoft® Windows® XP and Windows 7 32 and 64 bit							



# Whatever you make, make it right with Cognex Vision



People choose Cognex because we do more with vision. How do we do more with vision? We have the capabilities to do more inspections with greater reliability and repeatability than any other supplier.



Cognex vision technology performs tasks that are difficult or impossible for people to do reliably and consistently. Our vision systems speed production, minimize defects and reduce costs.

Whether it is a standalone vision system or powerful vision software integrated into an OEM machine, vision technology can be used for one or any combination of the following applications:



## Inspect

Inspect for assembly errors, surface defects, damaged parts and missing features. Identify the orientation, shape and position of objects and features.



## Guide/Align

Guide automation equipment and robotic devices. Align parts for high accuracy assembly operations and other manufacturing processes.



## Gauge/Measure

Gauge parts to check critical dimensions. Measure components for sorting and classification processes.



## OCR/OCV

Read and verify alphanumeric characters marked directly on parts and printed on labels.



## Presence/Absence

Detect the presence or absence of simple features and objects to give basic pass/fail results.

# COGNEX

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

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