DATAMAN 8700 SERIES
HANDHELD BARCODE READERS

Cutting-edge performance for the toughest codes

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Manufacturing environments in automotive, medical device, electronics, aerospace, and other industries require rugged, high performing, and easy to use barcode reading technology to ensure top component traceability and productivity. The DataMan® 8700 series handheld barcode readers decode the toughest direct part mark (DPM) and label-based codes while withstanding harsh oils, dirt, and water. A built-in display screen enables quick setup and operator feedback, and the readers support a broad range of industrial protocols and communications to connect and operate efficiently in any facility.

> **Oil and water resistant**

> **High capacity battery**

> **Patented decoding algorithms**

> **Advanced integrated lighting**

> **Fast response times**

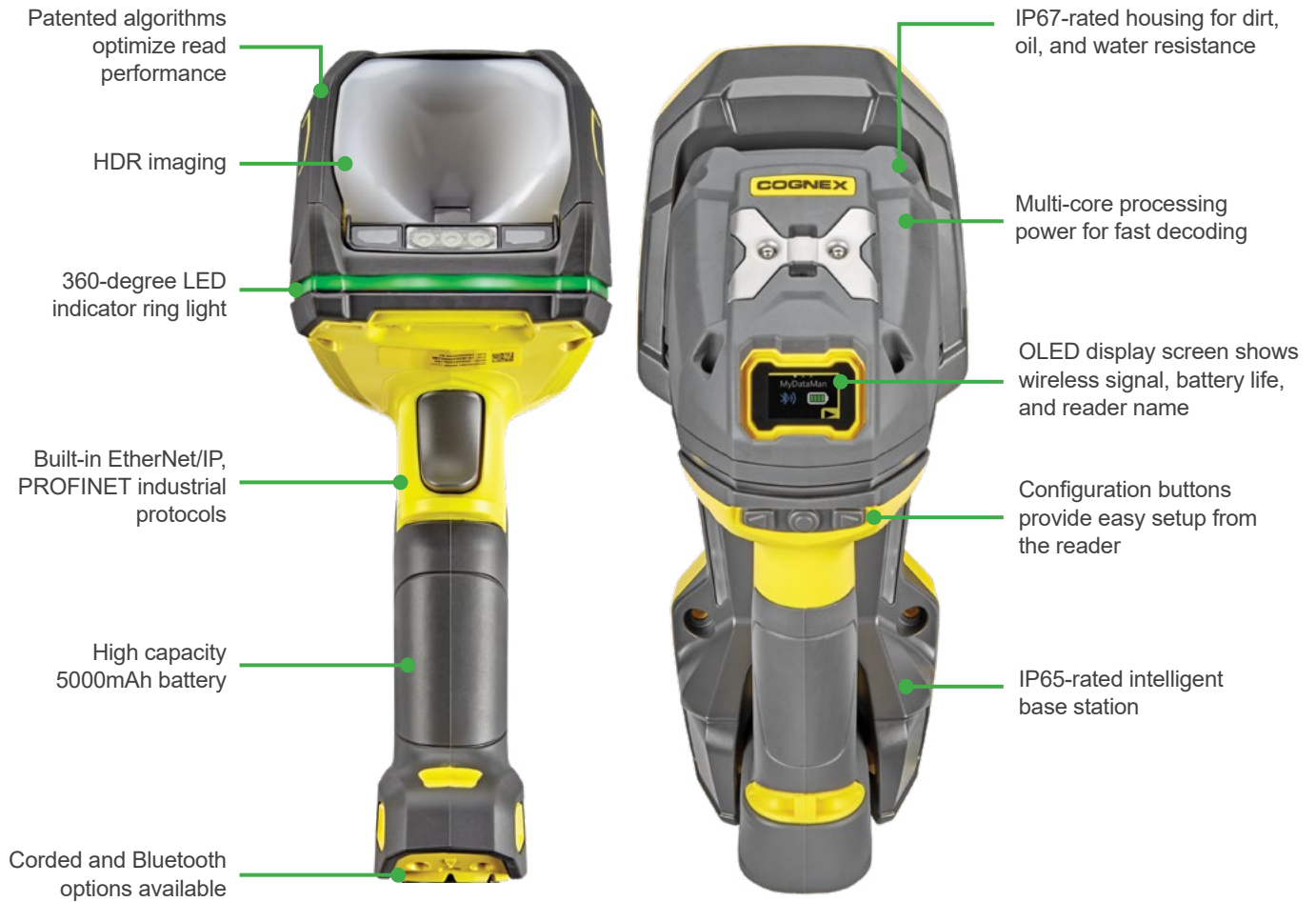**DataMan 8700DX**

DataMan 8700DQ

DataMan 8700LX

Oil- and water-resistant housing

In the past, oils and fluids surrounding the application site have quickly damaged barcode scanners, but the DataMan 8700 is built to last in the harshest environments. It has IP67-rated housing and meets the ISO 16750-5 oil specification for oil resistance. It is submergible in one meter of water without causing damage and withstands multiple drops from 2.5 meters onto concrete.
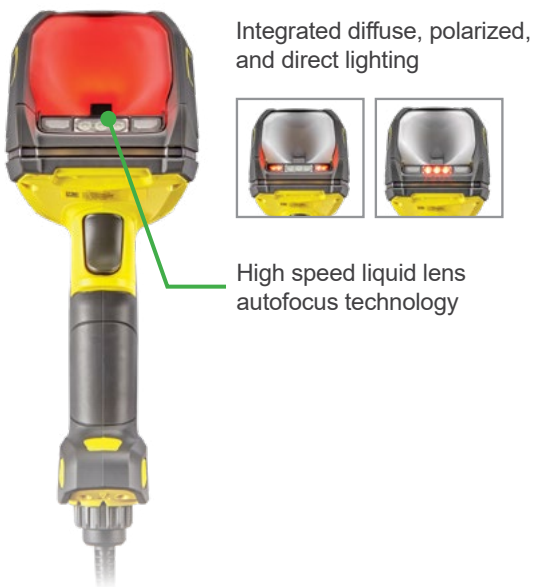
Rugged design with innovative technology

Platform features

Patented algorithms optimize read performance

HDR imaging

360-degree LED indicator ring light

Built-in EtherNet/IP, PROFINET industrial protocols

High capacity 5000mAh battery

Corded and Bluetooth options available

IP67-rated housing for dirt, oil, and water resistance

Multi-core processing power for fast decoding

OLED display screen shows wireless signal, battery life, and reader name

Configuration buttons provide easy setup from the reader

IP65-rated intelligent base station

Unique to DX

Integrated diffuse, polarized, and direct lighting

High speed liquid lens autofocus technology

Unique to DQ

White diffuse lighting

Unique to LX

Red direct lighting

Premium read performance in milliseconds allows operators to reach higher throughput with less effort

DataMan 8700 series is equipped with the latest patented decoding algorithms and a multi-core processor to read codes in under 150 milliseconds.

1DMax® with Hotbars® is an algorithm and technology optimized for omnidirectional 1D barcode reading, decoding up to 10X the speed of a conventional barcode reader.
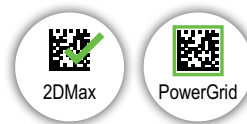
2DMax® with PowerGrid® is a breakthrough algorithm and technology designed to read 2D codes with significant damage to or complete elimination of a code's finder or clocking pattern, or quiet zone.
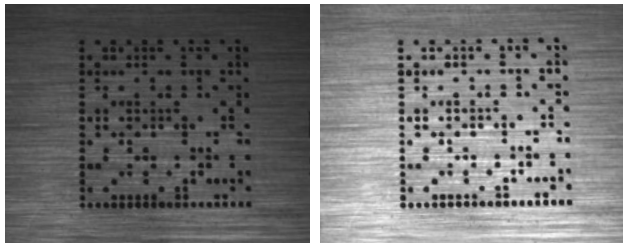
No HDR   *With HDR*

High Dynamic Range (HDR) imaging uses the latest CMOS image sensor technology to acquire single images that are significantly more detailed than conventional sensors. HDR enhance image quality and contrast, captures features that were not visible before, and increases depth of field.


High speed multi-core processor provides ultra-high speed decode response times, enabling operators to scan codes faster.

Setup that enhances efficiency

First-of-its-kind OLED display screen to make setup easy and to give operators quick and intuitive feedback without connecting to a PC.

- Setup the reader using the configurator buttons below the screen
- Name the reader so it's easy to know which station it belongs to
- View the wireless signal strength to ensure the reader is within range
- Monitor battery life so the reader doesn't power down mid-shift
- Review code data to ensure a successful read
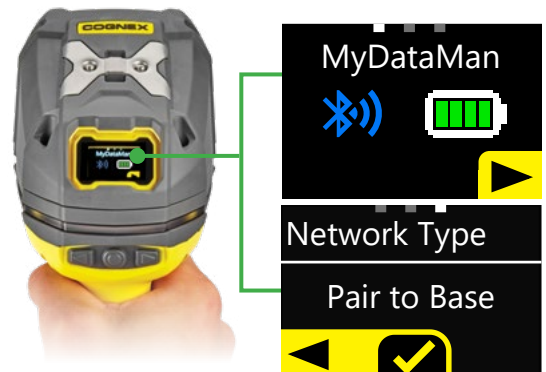
Integrated industrial protocols enable DataMan 8700 to easily connect to PLCs and factory networks. The DataMan 8700 supports more communication options than ever before including Bluetooth 4.2 and a corded option.
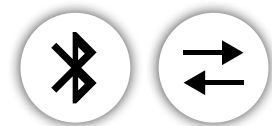
Key DataMan 8700DX features
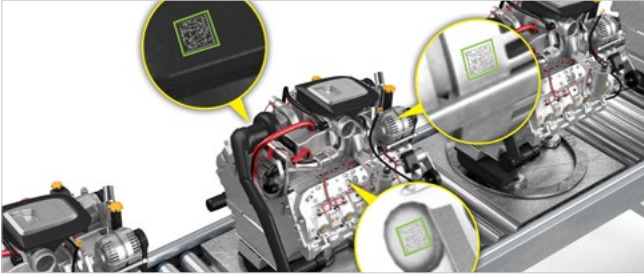
Integrated **diffuse, polarized, and direct lighting** enables superior image formation to read dot peen, laser-etched, and label-based codes on challenging (shiny, cylindrical, dark) surfaces without any hot spots.
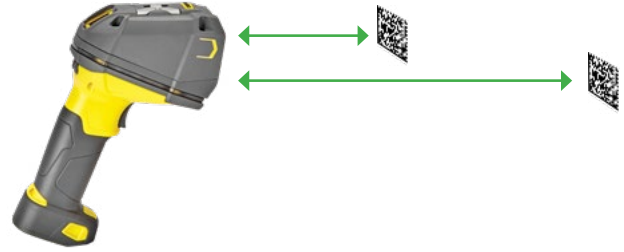
High Speed Liquid Lens (autofocus) technology automatically adapts to changes in working distances without any reconfiguration or wait time to focus. It enables greater depth of field range without compromising optical quality to read codes faster and easier at distances near and far.

Choosing the right model

	DX	DQ	LX
Challenging DPM codes*	✓		
Well-marked DPM codes*	✓	✓	
Printed labels	✓		✓
High Speed Liquid Lens (HSLL)	✓		
Color of illumination	Red	White	Red
Connectivity			
Ethernet with industrial protocols	✓	✓	✓
USB	✓	✓	✓
RS-232	✓	✓	✓
Bluetooth	✓	✓	✓

*Well-marked DPM codes can come in a number of forms including dot peen, laser-etched, inkjet, etc. What separates a challenging versus a well-marked DPM code is damage or wear and tear on a code, shiny or textured backgrounds, or improper marking.

8700 SERIES SPECIFICATIONS

Algorithms	1DMax, 2DMax, Hotbars, PowerGrid
Resolution	1.6MP
Status Outputs	OLED display, LED ring light, beeper, vibration
Communications	Serial: RS-232 and USB Ethernet: TCP/IP, FTP, industrial protocols: EtherNet/IP, PROFINET, MC protocol, Modbus TCP Intelligent base station: RS-232, USB, Ethernet, industrial protocols Bluetooth communicates to intelligent Bluetooth base station
Symbologies	1D: UPC/EAN/JAN, Codabar, Interleaved 2 of 5, Code 39, Code 128, Code 93, POSTNET, PLANET Code, IMB, Postal 2D: Data Matrix, QR, MicroQR, PDF417, MaxiCode, Aztec
Operating Temperature	0°C–40°C (32°F–104°F)
Storage Temperature	-40°C–60°C (-40°F–140°F)
Maximum Humidity	95% (non-condensing)
Power Supply Requirements	DataMan 8700 with serial/USB: 5.5 V DC, 6.0 W maximum LPS or NEC Class 2 power supply DataMan 8700 with Ethernet: PoE Class 2 power supply DataMan 8700 with Bluetooth: 3.7 V, 5000 mAh Li-ion battery DataMan Intelligent Base Station: 5.5 V DC, 6 W maximum LPS or NEC Class 2 power supply or PoE Class 2 power supply
Wireless Unit Scans per Full Charge	125,000+
Protection	Handheld reader: IP67; Base station: IP65
Drop Test	Multiple drops from 2.5 meters
Tumble Test	5000 tumbles from 1 meter
Environmental	Compliant with latest EU RoHS and China RoHS
Regulatory	EU: CE EMC & RED; USA/Canada: cTÜVus IEC 61010-1, part 15, ICES 03; Korea: KCC; India: BIS and WPC; China: SRRC; Brazil: ANATEL; Mexico: NOM and IFETEL; Japan: MIC
Data Validation	US DoD UID guidelines, GS-1, ISO15434 and ISO15418
Operating System	Windows 7 and Windows 10

MODEL SPECIFICATIONS

	8700DX	8700DQ	8700LX
Lens	8 mm lens with liquid lens	6.2 mm fixed lens	8 mm fixed lens
Lighting	Red diffuse, polarized, direct	White diffuse	Red direct
Aimer	On-axis green LED aimer	On-axis green LED aimer	Dual off-axis green LED aimers
Dimensions	Wireless: 221 mm (H) x 114.1 mm (L) Corded: 233.2 mm (H) x 114.1 mm (L)	Wireless: 211.4 mm (H) x 113.1 mm (L) Corded: 223.4 mm (H) x 113.1 mm (L)	Wireless: 211.4 mm (H) x 113.1 mm (L) Corded: 223.4 mm (H) x 113.1 mm (L)
Weight	Wireless weight: 548 g (battery included) Corded weight: 450 g (+ approx. 130 g for cables)	Wireless weight: 479 g (battery included) Corded weight: 395 g (+ approx. 130 g for cables)	Wireless weight: 479 g (battery included) Corded weight: 395 g (+ approx. 130 g for cables)

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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