COGNEX

**Total confidence
industrial ID readers
and verifiers**

DATAMAN
ID Readers

The Key is Innovation

Quick, powerful, and reliable ID code reading requires innovation that only Cognex® can deliver. Powerful decoding software, advanced image formation, and exceptional ease-of-use ensure optimum performance for all reading requirements.

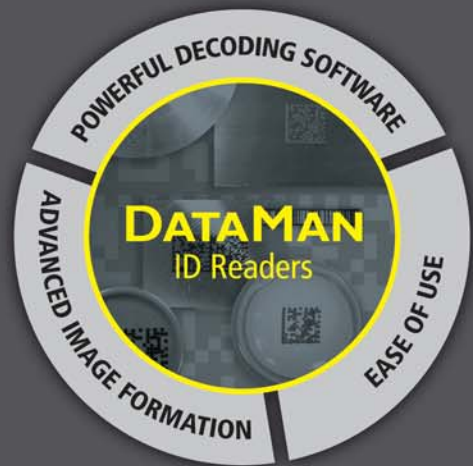### Powerful Decoding Software

Powerful decoding software enables DataMan® readers to deliver the industry's most reliable reading. IDMax®, a breakthrough in 2D decoding software based on patented Cognex PatMax® technology, handles a wide range of degradations to the appearance of a code, no matter what the cause. And, IDQuick™ allows fast, high-performance reading of high-quality 1D/2D barcodes as well as low-contrast codes on uniform backgrounds.

Advanced Image Formation

All DataMan readers optimally illuminate marks on a wide range of surfaces. That, coupled with adjustable lens positions on many models, high-pixel image sensors, and optimized frame rates, give DataMan ID readers the image formation needed to read any mark, on any surface, at any speed.

Exceptional Ease of Use

Shared by all models, the intuitive DataMan user interface has been optimized for quick setup and ease of use. Powerful verification software provides comprehensive mark quality monitoring, and a Software Development Kit allows easy integration into PC applications.

Wide Range of Models

DataMan offers the widest range of industrial ID readers and code quality verifiers — in both fixed-mount and handheld models. These readers handle everything from printed 1D/2D barcodes to the most challenging DPM codes … and everything in-between.

Handheld ID Readers

DataMan handheld readers provide a wide range of models — both corded and cordless — needed for applications in all industries. Whether a low-cost model for reading high-quality codes, or models with the performance needed for reading the most challenging codes, DataMan has what it takes to get the job done.

Fixed-Mount ID Readers

The unprecedented small size of DataMan fixed-mount readers make them ideal for applications where space is limited, such as item identification and process control. Models are available to read codes, at variable working distances, and on any production line … including the fastest document handling systems.

Verifiers

DataMan handheld and fixed-mount verifiers ensure that the code meets a manufacturer's or industry's requirements for quality.

Rugged Handheld ID Readers

Cognex offers the widest range of handheld ID readers in the industry. These readers, for 1D/2D barcodes and DPM, are unmatched in applications where performance, ruggedness, and the ability to read everything reliably is essential.

DataMan 700 Series Readers

Compact size and ergonomic design make the 700 Series exceptionally easy to use, while the rugged design ensures long-term operation in industrial reading environments.

- Laser target system allows easy code alignment
- Adjustable optics optimize resolution and working distance based on code size
- Diffuse brightfield illumination enhances contrast between code and background

Oversize trigger button provides easy access for either hand

Rugged polycarbonate housing, ergonomically designed for any hand size

- Rugged over-molded cable design
- Cable lock does not require tools
- Built-in beeper
- Built-in vibration system for "good read" indication

"Good read" indicator provides easy viewing

Rugged polycarbonate window

The DataMan 750 reader is ESD safe and features award-winning IDMax™ Software, making it ideal for reading 1D/2D barcodes in the electronics and medical device industries.

The **DataMan 710** reader is a general-purpose 1D/2D barcode reader that uses Cognex IDQuick™ software to provide best-in-class performance on labels and well-marked codes.

DataMan 7500 Series Readers

This series of readers provides a complete range of products and features for any DPM application.

UltraLight illumination provides optimal lighting for all mark types and surfaces

7500 and 7550 (cordless) models models … for the most challenging DPM applications

7500LR and 7550LR (cordless) models … ideal for applications requiring a wider field of view or longer reading range

Rugged ergonomic design is built for demanding factory floor environments

Corded and cordless models provide solutions for stationary and cordless reading applications

Handheld Product Applications

The wide range of innovative DataMan handheld ID readers offers the performance, cost-effectiveness, and mobility needed for part traceability and process control in all industries. Some of the many applications are shown below.

DataMan 700 Series

Model 710 is general-purpose, compact, easy to use, and rugged … for reading well-marked 1D/2D barcodes.

The DataMan 710 is the low-cost, reliable way to read high-quality codes.

Model 750 includes IDMax software and is ESD safe … for reading 1D/2D barcodes, as well as challenging DPM codes.

The DataMan 750 provides the best price/performance for reading challenging codes in many industries.

DataMan 7500 Series

Corded models 7500 and 7500LR

Cordless models 7550 and 7550LR

(Shown in the intelligent base station)

Models 7500 and 7550 are ideal for applications that require reading the most difficult DPM codes.

These models identify and track parts having the most difficult-to-read codes.

Models 7500LR and 7550LR have a wider field of view and greater reading range for reading very difficult DPM codes and wide 1D barcodes.

The 7500LR and 7550LR are ideal for reading codes at a distance.

Fixed-Mount Products

DataMan 100 ID readers achieve an incredibly high performance level — six sigma read rates at up to 45 codes per second. These readers provide 1D/2D barcode reading with models that read even the most challenging direct part marks.

DataMan 100 Series Readers

Cognex DataMan image-based ID readers represent a breakthrough in combining unmatched code reading performance, ease of use, and an extremely small size. Lighting, camera, processor, and communications are all integrated into an exceptionally small industrial housing, making DataMan 100 ID readers ideal for the most challenging applications.

Integrated Lighting

Compact Industrial Housing

Adjustable Optics

Aimer

LED Read Indicator

Train and Trigger Button

Integrated Communications

Actual Size

Optionally-available features increase the functionality of all DataMan models

Lens Flexibility

ESD-Safe Operation

C-Mount lens versatility extends the range of lenses that can be used with DataMan 100 readers.

The SHD lens provides increased magnification for reading codes with cell sizes down to 2 mil — while retaining the IP65 rating.

Red ESD-safe lens cover allows operation with static-sensitive devices, and/or minimizes the effect of lighting changes in the ambient environment.
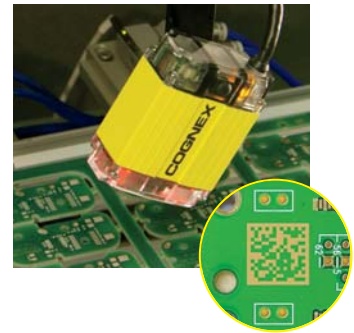
Meets IEC 61340-5-1 and IEC 61340 5-2 requirements.

Fixed-Mount Product Applications

DataMan 100 readers are ideal for item identification and process control in many industries. And, the size of the DataMan 100 — typically 90 percent smaller than other integrated readers in its performance class — allows it to be used in applications where space is limited. This is of particular value in systems such as label printers, clinical analyzers, marking equipment, and document handlers.

DataMan 100S

For slow-moving parts or index motion … where parts have well-marked 1D/2D barcodes.

Components Manufacturing … DataMan identifies boards and components where space constraints require 2D codes.

DataMan 100Q

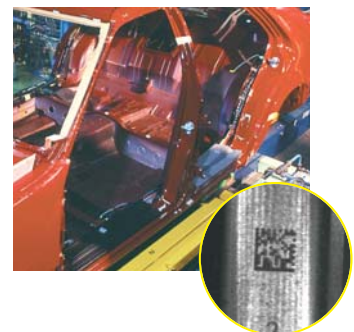Fast, high-performance code reading … of 1D/2D barcodes on fast-moving parts.

Document Handling and Sorting … the DataMan 100Q is perfect for sorting documents, envelopes and more.

DataMan 100X

Highest-performance code reading … for applications that require reading the most challenging DPM codes, as well as 1D barcode reading.

Part-level Code Reading … in this application, a 2D code laser-etched onto a fuel injector is read.

Easy Setup and Deployment

Quick setup and ease-of-use are facilitated by the setup tool common to all DataMan products. This takes process monitoring and the integration of DataMan ID readers into PC applications to new levels of simplicity.

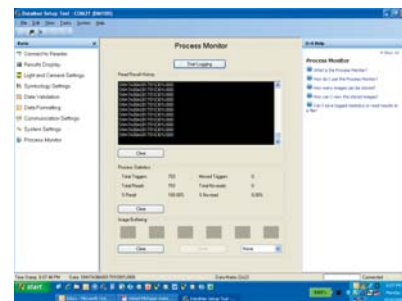## Common Interface Across all DataMan ID Reader Products

Point-and-click configuration, a display of the image that DataMan sees, a display of results (decoded images and data) — and many more features — all add up to the most intuitive and complete user interface available.

Quick setup, ease of use, and "out of the box" operation is made possible by the DataMan setup tool.

Process Monitoring, for Quick Setup and Integration

The DataMan process monitoring tool allows operators to run tests at production speeds. By providing production statistics such as no-reads and missed triggers … as well as buffered images … operators get DataMan readers operating at production speeds easily, quickly, and efficiently.

The process monitoring pane makes it easy to integrate a fixed-mount reader onto a manufacturing line.

DataMan Configuration Commands and Software Development Kit

DataMan Configuration Commands (DMCC), and the Software Development Kit (SDK), provide an easy way for customers to integrate DataMan functionality into a PLC or PC application.

- Detect and connect to DataMan ID readers
- Configure DataMan applications
- Receive information from a DataMan reader (including image)
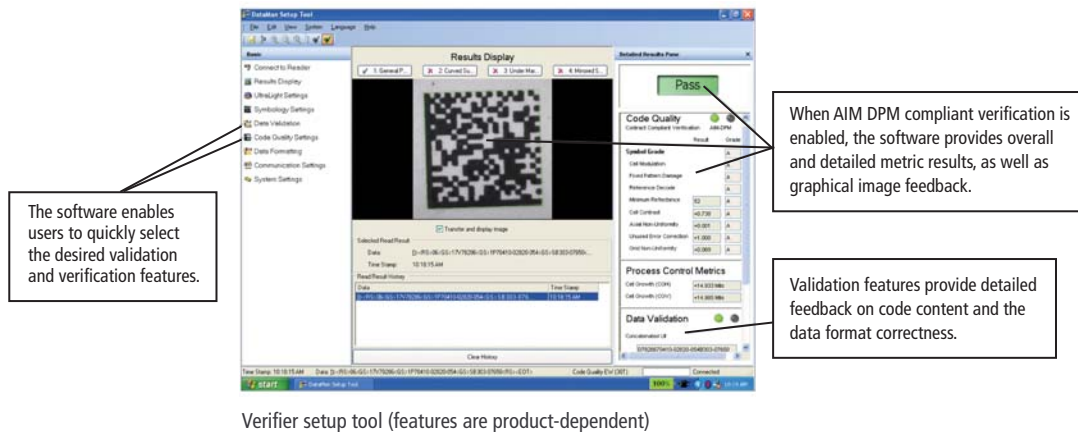- Provide access to all DMCC

DataMan functionality integrated into a PC application.

Ensuring 2D Code Quality

In addition to breakthrough code reading, there are DataMan products for every step of the traceability process, including verification, and validation. Easy-to-use and reliable DataMan verification products enable users to monitor mark quality, critical to traceability.

The software enables users to quickly select the desired validation and verification features.

When AIM DPM compliant verification is enabled, the software provides overall and detailed metric results, as well as graphical image feedback.

Validation features provide detailed feedback on code content and the data format correctness.

Verifier setup tool (features are product-dependent)

All DataMan verifiers feature:

- **AIM DPM compliance** … software, integrated lighting and fixed optics allow code reading to the latest AIM Direct Part Mark Quality Guideline
- **Fully integrated design** … lighting, camera, processor, and communications — all in an industrial housing

- **Certified calibration** … DataMan verifiers includes a certified and traceable calibration target for establishing AIM DPM reflectance values
- **Ease of Use** … plus the reliable and consistent performance of DataMan readers
- **Quick and cost-effective part changeovers** … no need to adjust fixturing or lighting when the production line changes

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High-Reliability Portable Verification

DataMan brings a "first" to industry ... portability. This enables manufacturers to perform verification on the factory floor, rather than at a fixed verification setup at a remote location. The combination of AIM compliance and portability provides users with advantages that set DataMan verifiers apart from all others.

Mechanical standoff ensures uniform illumination and a fixed working distance. Corded and cordless models provide solutions for stationary and mobile reading applications (especially useful for larger parts).

Fixed-Mount Verification

The Cognex DataMan 100V verifier allows users to quickly measure code quality to all industry standards. Ideal for standalone applications, the 100V can also be integrated into marking equipment.

Fully-configured option available with the stand and integrated bright field and darkfield lighting as shown at right.

Complete Range of Accessories

A wide range of accessories extends the versatility of DataMan ID readers and verifiers.

DataMan 7500 Series

Overhead Retractor

This retractor provides convenient access to DataMan readers and verifiers from an overhead storage position, and also prevents accidental dropping of the reader. It hooks easily to any overhead structure. A belt retractor is also available.

Wall-Mount Holder

The Wall-Mount Holder allows easy storage of DataMan readers. Hardware for mounting to metal, drywall, and wooden surfaces is included.

Presentation Stand

The presentation stand provides table-top DataMan storage ... and its flexible neck makes it ideal for presentation mode scanning.

Included is a weighted base, flexible neck, and the same mounting bracket used in the wall-mount holder accessory.

DataMan 700 Series

Wall-Mount/Desktop Holder

This versatile holder is ideal for storing DataMan 700 Series readers in many convenient locations.

DataMan 100 Series

Panel-Mount Viewer

The SensorView 350 is a compact, rugged, panel-mount display for DataMan 100 ID readers.

More than just a display, SensorView provides production statistics and a user-definable view of the parts and codes that DataMan is reading; this enables operators to easily monitor their production process without ever needing to connect to a PC.

I/O Modules

DataMan I/O modules provide a convenient connection method for discrete I/O and communications. Both modules are DIN rail mountable.

Basic I/O Module ... provides I/O breakout, including:
- 2 inputs and 2 high-speed outputs
- USB and RS-232 connections
- Connection for power supply (5VDC-24VDC)

Expanded I/O Module ... provides I/O breakout, including:
- 2 inputs
- 8 outputs (2 high-speed and 6 general-purpose). Each output is capable of driving 100mA.
- USB and RS-232 connections
- Connection for power supply (5VDC - 24VDC)

External Light

The DPM Reading Light is ideal for hard-to-read codes direct-marked on parts, where uniform lighting is required. This light provides easy setup, and is specifically designed for DataMan 100 readers.

And, for all DataMan products …

A wide range of adapter cables, extension cables, mounting brackets, I/O modules, and power supplies are available for DataMan ID readers.

Your Cognex sales engineer or distributor can provide additional information on these accessories.

DataMan Specifications

	FIXED-MOUNT			HANDHELD			
	100S	**100Q**	**100X**	**710**	**750**	**7550/7550LR**	**7500/7500LR**
1D Codes[1]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2D Codes[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Composite Symbology[3]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Decoding Algorithm	IDQuick	IDQuick	IDMax	IDQuick	IDMax	IDMax	IDMax
Image Sensor	752 x 480 global shutter	752 x 480 global shutter	752 x 480 global shutter	752 x 480	752 x 480	1280 x 960	1280 x 960
Acquisition	Max 5 rps	Max 60 fps	Max 60 fps	NA	NA	NA	NA
Lens Type	3-position adjustable	3-position adjustable	3-position adjustable	3-position adjustable	3-position adjustable	Fixed	Fixed
Trigger	High speed external, self or manual trigger	High speed external, self or manual trigger	High speed external, self or manual trigger	Handle trigger and presentation mode triggering	Handle trigger and presentation mode triggering	Handle trigger and presentation mode triggering	Handle trigger and presentation mode triggering
Aimer	LED	LED	LED	Laser (CDRH/IEC Class II)	Laser (CDRH/IEC Class II)	LED	LED
Discrete Inputs	2 opto-isolated	2 opto-isolated	2 opto-isolated	NA	NA	NA	NA
Discrete Outputs	2 opto-isolated	2 opto-isolated	2 opto-isolated	NA	NA	NA	NA
Status Outputs	Beeper and 2 LEDs ("Read" LED and communcation)	Beeper and 2 LEDs ("Read" LED and communcation)	Beeper and 2 LEDs ("Read" LED and communcation)	LED, beeper and vibration	LED, beeper and vibration	Multi-functional LED and beeper	Multi-functional LED and beeper
Lighting	Integrated bright field	Integrated bright field	Integrated bright field	Integrated bright field	Integrated bright field	UltraLight (bright, dark and diffuse lighting)	UltraLight (bright, dark and diffuse lighting)
Communications	RS-232 and USB	RS-232 and USB	RS-232 and USB	RS-232 and USB PS/2	RS-232 and USB PS/2	RS-232 and USB PS/2	RS-232 and USB PS/2
Bluetooth	NA	NA	NA	NA	NA	Class 2 (10 Meter Range)	NA
Voltage	5VDC to 24VDC	5VDC to 24VDC	5VDC to 24VDC	5VDC	5VDC	9VDC	5VDC
Power Consumption	500mA @ 5VDC max; Avg. 300mA	500mA @ 5VDC max; Avg. 300mA	500mA @ 5VDC max; Avg. 300mA	500mA @ 5VDC max; Avg. 300mA	500mA @ 5VDC max; Avg. 300mA	800mA @ 9VDC max; Avg. current varies with charge power	1000mA @ 5VDC max; Avg. 700mA
Material	Aluminum housing	Aluminum housing	Aluminum housing	Polycarbonate	Polycarbonate	Polycarbonate housing with overmold	Polycarbonate housing with overmold
Weight	125g	125g	125g	110g	110g	330g	270g
Dimensions	55mm x 42mm x 22mm	55mm x 42mm x 22mm	55mm x 42mm x 22mm	151mm x 54mm x 49mm	151mm x 54mm x 49mm	175mm x 134mm x 81mm	175mm x 134mm x 81mm
Operating Temperature	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 50°C (32°F to 122°F)	0°C to 50°C (32°F to 122°F)	0°C to 50°C (32°F to 122°F)	-10°C to 50°C (14°F to 122°F)
Storage Temperature	-10°C to 60°C (14°F to 140°F)	-10°C to 60°C (14°F to 140°F)	-10°C to 60°C (14°F to 140°F)	-10°C to 60°C (14°F to 140°F)	-10°C to 60°C (14°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-40°C to 70°C (-40°F to 158°F)
Drop Resistance	NA	NA	NA	50 drops from 2 Meters	50 drops from 2 Meters	25 drops from 2 Meters	50 drops from 2 Meters
Operating and Storage Humidity	0% to 95%, non-condensing	0% to 95%, non-condensing	0% to 95%, non-condensing	0% to 95%, non-condensing	0% to 95%, non-condensing	0% to 95%, non-condensing	0% to 95%, non-condensing
ESD Safe	Yes, with ESD safe cover	Yes, with ESD safe cover	Yes, with ESD safe cover	No	Yes	No	No
DoD UID Data Validation	No	Yes	Yes	No	Yes	Yes	Yes
RoHS Certified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Approvals (CE, UL, FCC)	Yes	Yes	Yes	Yes, UL Pending	Yes, UL Pending	Yes	Yes
Laser	NA	NA	NA	Laser CDRH Class II, IEC Class 2[4]	Laser CDRH Class II, IEC Class 2[4]	NA	NA
Operating System	Windows XP® and Vista®	Windows XP and Vista	Windows XP and Vista	Windows XP and Vista	Windows XP and Vista	Windows XP and Vista	Windows XP and Vista

Notes:

1) UPC/EAN/JAN, Codabar, Interleaved 2 of 5, Code 39, Code 128, and Code 93, PostNet, Planet Code, Australia 4-State, Japan 4-State, UPU 4-State, USPS Intelligent Mail Bar Code, Pharma Code, Reduced Space Symbology (RSS)

2) Data Matrix, QR Code and microQR Code

3) (CC-A, CC-B), PDF417, MicroPDF

4)

> LASER LIGHT
> DO NOT STARE INTO BEAM
> CLASS 2 LASER PRODUCT
> 650nm <1mW, 16msec pulse, 60 Hz Pulse rep frequency
> CLASSIFIED PER IEC 60825-1, Ed 2, 2007-03
> CLASSIFIED PER AU/NZS 2211.1:2004

Additional specifications and scan maps are available at **www.cognex.com/datamanspecs**

COGNEX

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

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