COGNEX

DataMan™ 100, the world's smallest high-performance ID reader, reads everything from simple bar codes to challenging DPM marks with ease!

Shown actual size

DataMan100
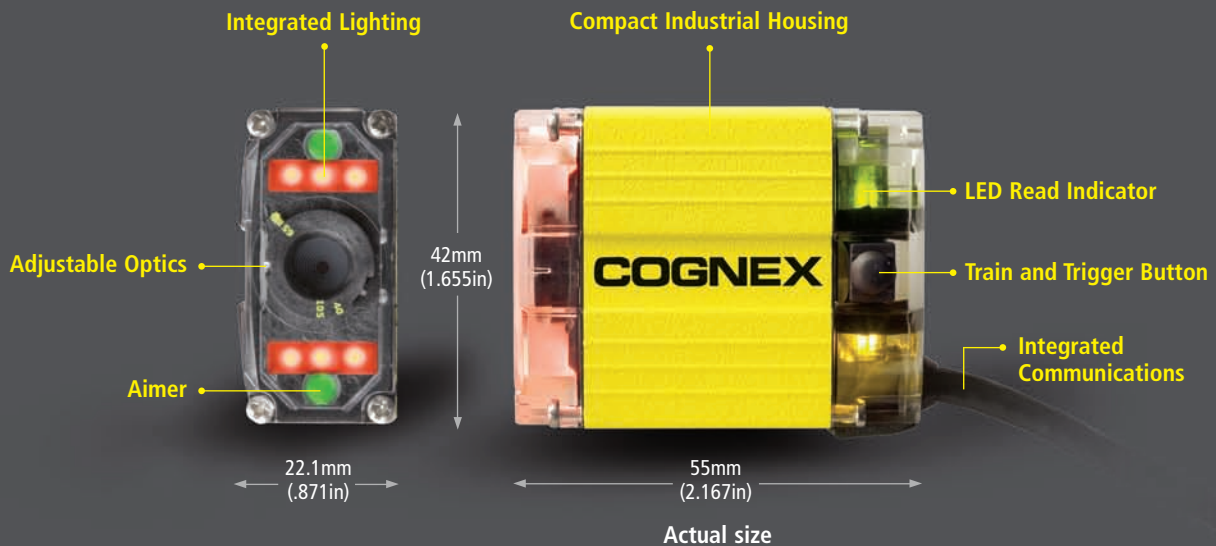### ID Readers and Verifiers

Revolutionary ID Readers and Verifiers

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.

DataMan ID readers are available in two models:
DataMan 100Q … fast, high-performance code reading
DataMan 100X … all features of the 100Q, plus IDMax for reading difficult codes

Integrated Lighting

Compact Industrial Housing

Adjustable Optics

Aimer

LED Read Indicator

Train and Trigger Button

Integrated Communications

42mm
(1.655in)

22.1mm
(.871in)

55mm
(2.167in)

Actual size

The Cognex DataMan 100V verifier allows users to quickly measure code quality to all industry standards. The integrated design provides users with an easy-to-use verification solution for reliable and repeatable results.

The DataMan 100V is also available with the stand and integrated bright field and dark field lighting as shown at right.

Reliable Code Reading and Verification

DataMan 100 ID readers achieve an incredibly high performance level — six sigma read rates at up to 45 parts per second. These readers provide 1D and 2D code reading with models that read even the most challenging direct part marks. And, to ensure that codes meet industry quality standards, the DataMan 100 family includes a code verifier model.

Quick and Powerful Code Reading

DataMan ID readers are optimized to ensure continuously high read rates of 1D and 2D symbologies in direct part mark and label-based identification applications, on the fastest production lines. This allows DataMan readers to deliver the industry's most reliable code reading. Models are available for all fixed-mount code reading applications.
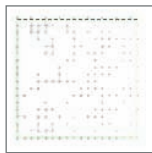
The Power of IDMax™ software results in breakthrough DataMatrix code reading based on patented Cognex PatMax® technology. IDMax handles a wide range of degradations to code appearance that result from dramatic degradations in DPM code quality due to differences in material types and surfaces. IDMax is available with the Dataman 100X model.
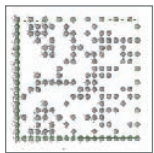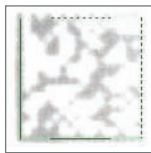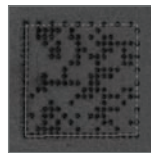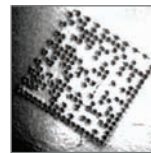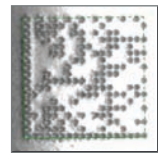
Model Image	Poor Focus	Washed Out	Low Contrast	Finder Degradation	Background Problems

**The Speed of IDQuick™** software allows fast, high-performance reading of high-quality 1D and 2D codes, as well as low-contrast codes on uniform backgrounds. The DataMan 100Q and 100X models incorporate the IDQuick decoding software.

Accurate and Compliant Verification

DataMan 100 verifiers measure label and direct part mark quality to all industry standards, including the *AIM Direct Part Mark (DPM) Quality Guideline*. Reliable and repeatable results, coupled with automatic report generation, make DataMan verifiers the ideal solution for MIL-STD compliance applications.

These verifiers are also used to monitor changes in mark quality resulting from the production process — reducing scrap material and down time due to bad marks, and increasing the uptime of expensive marking equipment through predictive maintenance.
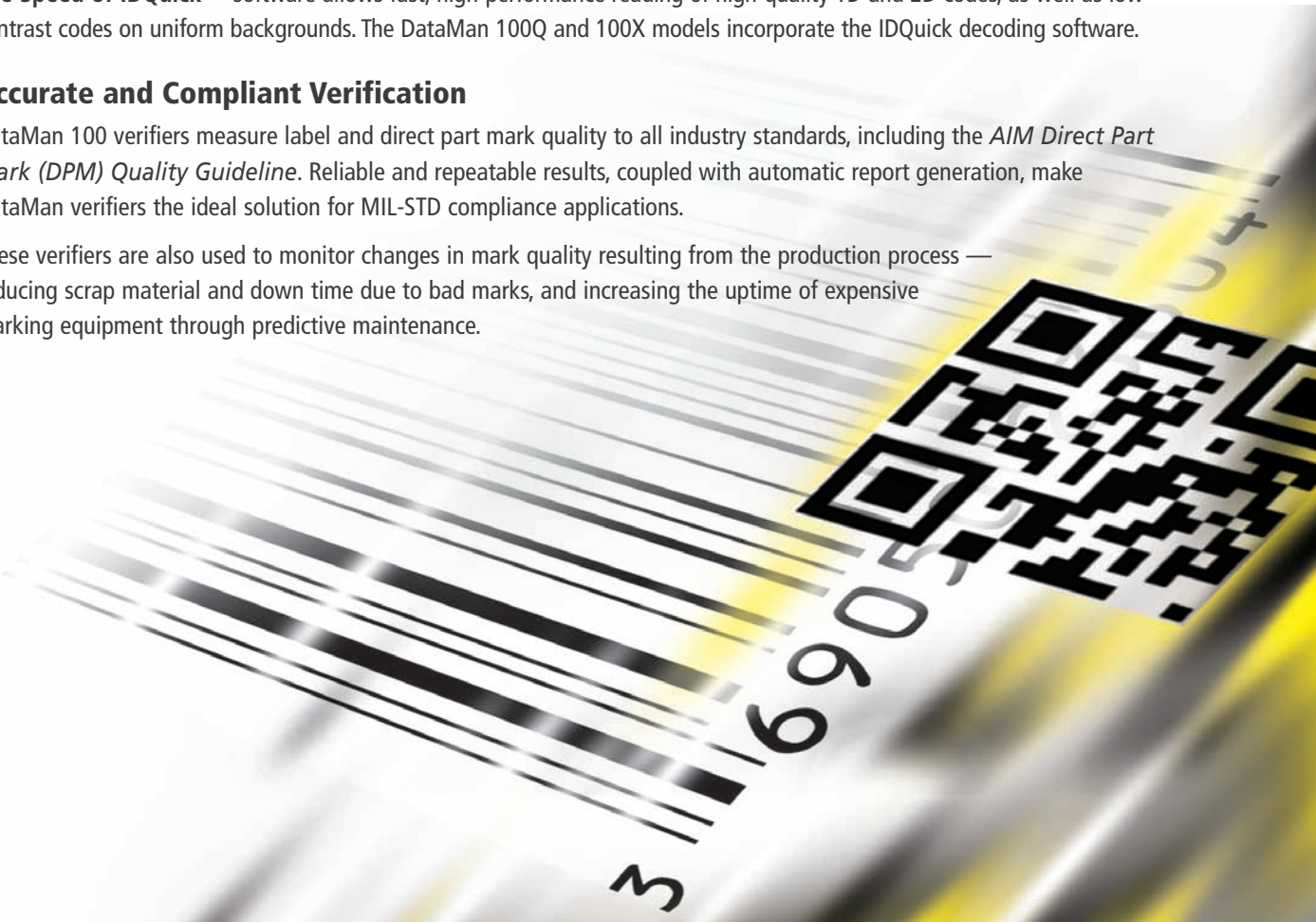
Versatility, Ease of Use, and Quick Setup

A Wide Array of Accessories

These accessories expand the power and capabilities of DataMan ID readers, and facilitate DataMan integration into systems. Included are the lenses, filters, and external lighting described below, as well as mounting, I/O management, and communications options.

Lens Flexibility

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

SHD lens kit provides increased magnification, allowing the DataMan 100 to read codes with cell sizes down to 2 mil, while retaining the IP-65 industrial rating.

ESD-Safe Operation

Red ESD-safe lens cover allows DataMan 100 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.

External Lighting Options

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.

Quick Setup and Ease of Use

Quick setup is facilitated by the DataMan 100 aimer, train-and-trigger button, beeper, and LED read indicator — providing "out of the box" operation, without requiring a PC for setup or job changeovers. An intuitive setup tool is available for advanced reader setup, and integrated lighting, camera, aimer, and communications enable impressive ease of use.
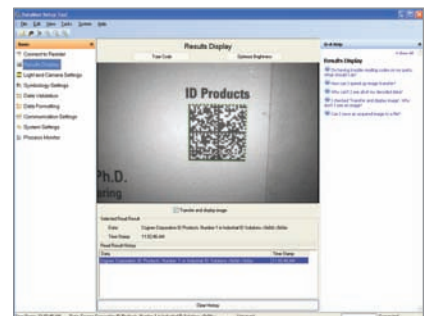
The DataMan 100 setup tool allows quick and easy customization of parameters.

Reliable Code Reading for Many Industries

DataMan 100 readers are ideal for 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 perform-ance 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.

Automotive Parts
In this application, a 2D code laser-etched onto a fuel injector is read.

Packaging
DataMan 100 readers are ideally suited to a wide range of packaging applications.

Pharmaceuticals
DataMan 100 ID readers provide accurate reading of multiple code formats in a single view.

Document Handling and Sorting
The DataMan 100 is perfect for sorting documents, envelopes, and more.

Electronic Components
Electronics manufacturers moving from bar code labels to Data Matrix codes (due to space constraints and the need to include more data on parts) use DataMan readers to identify boards and components.

Specifications

ID TOOLS

1D Codes	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)
2D Codes	
Model 100X	Data Matrix ECC 0, 50, 80, 100, 140, and 200
Model 100Q	Data Matrix ECC200
Models 100Q/100X	QR Code and microQR Code, Composite Symbology (CC-A, CC-B), PDF417, MicroPDF

VERIFIER METRICS

Quality standards	AIM DPM Guidelines, ISO15415, AS9132

IMAGE

Sensor	1/3-inch CMOS w/Global shutter (752 x 480 resolution)
Acquisition	Max rate 60 fps
Lens type	3 position adjustable lens (6.2 mm; F:5 aperture) with 40mm, 65mm and 105mm working distances

I/O

Trigger	High-speed trigger input, manual trigger button
Trigger voltage	-25VDC to +25VDC
Trigger current	7.7mA @ 24VDC 3.7mA @ 12VDC 1.33mA @ 5VDC
Trigger delay	1ms (max)
Discrete inputs	2 opto-isolated (one used as trigger)
Discrete outputs	2 opto-isolated
Status LEDs	2 status LEDs (Read LED and communication LED)
Beeper	Programmable functions

LIGHTING

Lighting methods	Integrated bright field lighting with exposure control

COMMUNICATIONS

Serial	RS-232
USB	Supports USB 1.1 and 2.0 compatible (Maximum speed 12Mbits/sec.)

POWER

Operating Voltage	5VDC to 24VDC
Power consumption	500mA @5VDC max (peak) Avg: 300mA @5VDC

MECHANICAL

Material	Aluminum housing
Mounting	2 M3 x 3.5 mounting holes
Dimensions	55mm x 42mm x 22mm (2.17in x 1.65in x .87in)
Weight	125g (.28lb)

ENVIRONMENTAL

Operating temperature	0ºC to 40ºC (32ºF to 104ºF)
Operating humidity	95% (non-condensing)
Storage temperature	-10ºC to 60ºC (-14ºF to140ºF)
Storage humidity	95% (non-condensing)
Protection	IP-65
Vibration	EN61373, including IEC 60068-2-6,60068-2-64 6.4, and 60068-2-27

CERTIFICATIONS

Approvals	CE, UL, FCC, CSA, CTICK, VCCI, IC

DATAMAN 100 ID READERS

Description	Part Number
DataMan 100Q	DMR-100Q-00
DataMan 100X	DMR-100X-00
DataMan 100V	DMR-100V-00

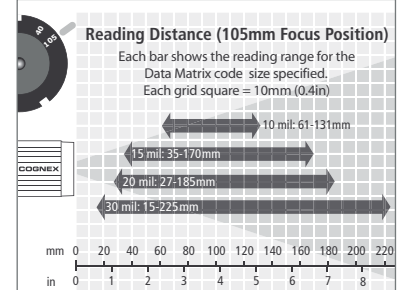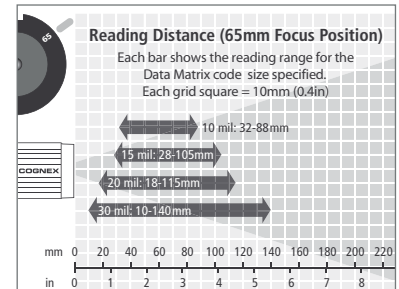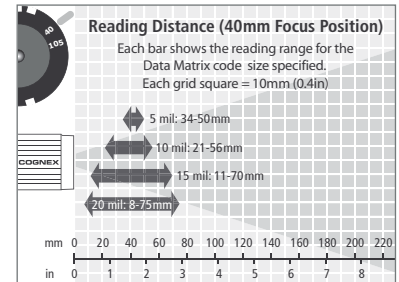## DATAMAN 100 ACCESSORIES

Description	Part Number
Basic Accessory Kit	
(Includes the following items)	DM100-BAK-000
USB adapter cable with power tap	DM100-USB-000
Universal mounting bracket	DM100-UBRK-000
Setup tool and drivers (CD)	206-6400-220
Quick Reference Guide	590-7013

Additional Accessories

ESD-safe red lens cover	DM100-RLC-000
SHD lens kit	DM100-SHD-000
C-Mount lens adapter	DM100-CMNT-000
DPM reading light	DM100-DPML-000

Additional Accessories (Continued)

DM100 expanded I/O module	DM100-1400-000
Basic I/O Module	DM100-IOBOX-000
Extension cable, 5 meter (15ft)	DM100-EXTCBL-000
RS-232 adapter cable with power tap	DM100-RS232-000
Power supply (USB and RS-232)	DM100-PWR-000

Reading Distance (40mm Focus Position)
Each bar shows the reading range for the Data Matrix code size specified. Each grid square = 10mm (0.4in)

5 mil: 34-50mm
10 mil: 21-56mm
15 mil: 11-70mm
20 mil: 8-75mm

Reading Distance (65mm Focus Position)
Each bar shows the reading range for the Data Matrix code size specified. Each grid square = 10mm (0.4in)

10 mil: 32-88mm
15 mil: 28-105mm
20 mil: 18-115mm
30 mil: 10-140mm

Reading Distance (105mm Focus Position)
Each bar shows the reading range for the Data Matrix code size specified. Each grid square = 10mm (0.4in)

10 mil: 61-131mm
15 mil: 35-170mm
20 mil: 27-185mm
30 mil: 15-225mm

Visit www.cognex.com/dataman for additional product information

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