

Handheld Readers for Industrial ID

The DataMan™ 6400 and 6500 are specialized handheld ID readers that provide outstanding performance on direct part mark Data Matrix™ codes produced by marking processes such as dot peen, laser, electro-chemical etch, and inkjet – on a variety of surfaces such as metal, glass, ceramic, and plastic.

DataMan readers incorporate IDMax™, a breakthrough in Data Matrix reading software based upon Cognex patented PatMax® technology. IDMax tolerates a wide range of degradations to the appearance of the code no matter what the cause, allowing DataMan readers to deliver the industry's most robust and reliable reading.

Cognex DataMan readers represent an evolution of technology based on more than 23 years of experience in solving industrial machine vision and identification applications. Incorporating IDMax reading software, advanced image acquisition technology, and high speed DSP processing solves this very challenging application within a compact, easy-to-use handheld form factor.

Direct Part Mark Identification (DPMI)

DataMan readers are used to collect data about products during the manufacturing process and to trace the history of the part during its life. DataMan delivers unsurpassed reading performance in DPMI applications – a fast emerging segment of industrial ID that involves directly marking parts with permanent two-dimensional (2D) Data Matrix codes.

DataMan handheld readers communicate read results via RS-232 or keyboard wedge, and eliminate manual part number data entry errors. DataMan handheld readers are used in areas where part handling is not automated, at test and rework stations, and in operations where parts vary greatly in size.



DataMan 6400 and 6500 ID readers have a lightweight, ergonomic design that's comfortable and easy to use.

Models for all DPMI Applications

Two DataMan models are available to meet the requirements for the various marking processes commonly used in industry to apply permanent marks on parts for traceability. Parts are marked by laser, inkjet, dot peen, or electro-chemical etch, depending upon factors such as the material composition of the part, part usage, and environmental conditions.

The DataMan 6400 incorporates diffuse bright-field LED illumination for reading laser or inkjet marks where the contrast may vary due to changes in background and/or process variability. The DataMan 6500 uses both diffuse bright-field and a unique dark-field LED illumination method for reading the extremely low-contrast codes formed by electro-chemical etch and dot peen processes.

Advantages

- ▶ Includes IDMax – The industry's most robust and reliable Data Matrix reading available
- ▶ Quick setup and configuration
- ▶ Rugged, ergonomic, and lightweight design
- ▶ Integrated aiming
- ▶ Omni-directional reading
- ▶ High-performance processor and software provide quick trigger to read responsiveness

IDMax, the New Standard in Data Matrix Reading

When Direct Part Mark Identification is a required part of the manufacturing process, an unreadable code may stop production, and can result in the part not being processed. The DataMan ID readers incorporate IDMax, a breakthrough Data Matrix reading software based on Cognex's patented PatMax technology. IDMax tolerates degradation in code appearance to deliver the consistently high read rates that are key to the success of part traceability programs.

Verification of the mark at the marking station eliminates reading problems associated with missing or inconsistent features of the Data Matrix mark. However, the readability of a direct part mark through manufacturing or supply chain management can be greatly impacted by a wide variety of factors such as material composition, part processing, environment and handling conditions.

Smooth, high-gloss and reflective surfaces can alter mark appearance depending on the part's position with respect to the reader and illumination source. Textured and cast finishes on metal surfaces create difficult backgrounds when reading Data Matrix marks comprising impressions of similar size to those in the part's surface finish. Marks on curved surfaces further challenge mark readability due to the inconsistent images that are generated. IDMax provides the most robust and reliable decoding under all conditions.

Ergonomic Design

DataMan handheld readers have a lightweight, ergonomic design that's comfortable and easy to use, yet features a rugged polycarbonate housing, rubber bumpers, and shock-mounted electronics that will survive industrial use. A graphical user interface provides fast, simple setup. The DataMan 6400 and 6500 handheld readers also come ready to read the most popular one-dimensional bar codes.

In addition to high read rates, the DataMan readers provide laser-like scanning performance with a consistent "trigger to good read beep" of less than 1 second to deliver accurate and fast decoding and return of results – even on hard-to-read direct part marks – without slowing down the process or frustrating the operator.

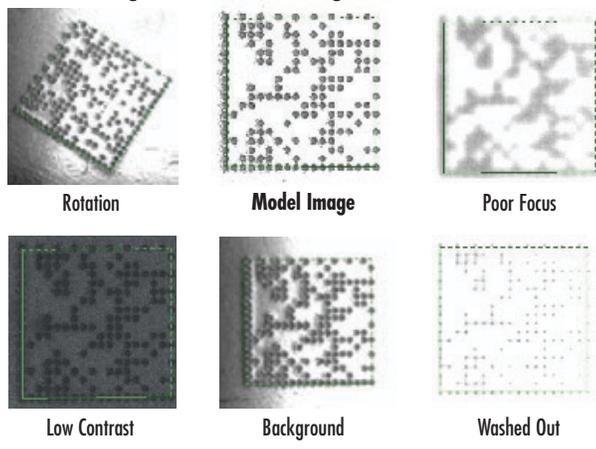
New Report is a "Must" for Direct Part Marking

Implementing Direct Part Mark Identification (DPMI) - 10 Important Considerations is an in-depth look at the most important factors to consider when implementing DPMI for total traceability. Parts and assembly suppliers will appreciate the valuable tips on choosing the best code type and marking method for tracking manufactured items through production, plus much more!

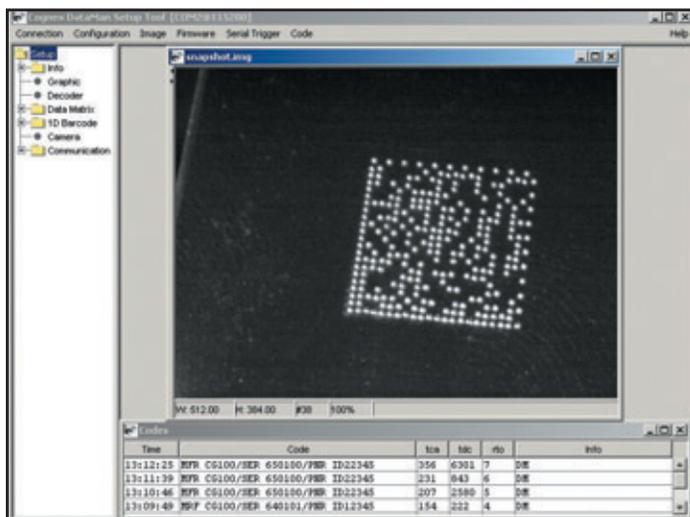
For your free copy, go to www.cognex.com.



Outstanding Performance with 2D Codes Having Degradation and Background Problems



IDMax provides consistently high read rates regardless of changes in contrast, focus, and orientation.



In addition to displaying data and images, the DataMan graphical user interface makes application set up and configuration fast and easy.

DataMan 6400 and 6500

A Wide Array of Applications

DataMan handheld readers achieve the economic returns of their part traceability objectives required in aerospace applications, from Department of Defense suppliers, and in the automotive, electronics, and medical device industries. These readers are designed for users having to read challenging 2D codes where parts are handled manually or where parts vary greatly in size (such as in job shop manufacturing operations, manual assembly and test stations), and in the supply chain areas found across a variety of industries.



The DataMan 6500 ID reader is ideally suited for reading very low contrast Data Matrix codes on automotive powertrain, aerospace, and DoD components and assemblies.

Automotive Part Tracking

By enabling part tracking through the plant, Direct Part Mark Identification helps automotive manufacturers reduce on-hand inventory, eliminate assembly errors, and track quality problems. Additionally, DPMI can help with product containment and optimize service, repair, shipping and receiving operations, as well as address modern safety, liability, and warranty issues.



Electronics manufacturers moving from barcode labels to Data Matrix due to space constraints use DataMan handheld readers for identifying boards and components.

Electronic Component Tracking

Unit-level traceability for component manufacturers and electronic printed circuit board manufacturers allows precise monitoring of inventory and lifetime tracking through return and warranty periods. All information collected can be stored in a database and referenced against each

individually-identified component. The database can be utilized to provide data for improving work in process traceability, managing stock, or for production output calculations, forecasting and other business operations.



The DataMan 6400 is ideally suited for reading Data Matrix codes on medical devices and pharmaceutical products.

Aerospace

Makers of jet engine components and other parts used in the manufacture of aircraft are adopting Direct Part Mark Identification to meet objectives of the Air Transport Association SPEC 2000 that was created to improve overall supply chain management in the aerospace industry. DataMan handheld readers are designed to meet the demanding DPMI requirements of the aerospace environment, facilitating accurate part identification of serialized parts and data entry for “cradle-to-grave” parts tracking. Benefits of part tracking are realized not only through the manufacturing and assembly processes, but also in the field for logistics and repair depot operations.

Department of Defense Suppliers

The Department of Defense requires suppliers of parts that meet specific criteria to adopt the UID (Unique Identification) Standard. UID calls for Data Matrix marking that will be used to create an accurate history of the part for use later in supply chain management and repair depots. Materials authentication is another driving DPM Identification application, which provides the means to detect counterfeit products, ensures that only authorized parts are used, and enables easy authentication in the field.

Medical Device Identification

Error proofing, inventory control, process monitoring, and overall quality assurance programs are driving the need for life cycle traceability of medical devices, surgical instruments, medical device components, and implantables. The selection of marking process, material composition and surface finish can present challenges for reliable reading of Data Matrix marks on these parts. By delivering high read rates with marks having appearance variations, DataMan handheld readers are ideally suited for these applications.

Specifications

Software		
	XML-based universal setup tool	
Reading Capability		
2D	Data Matrix (ECC200)	
Bar code	EAN13, UPC-A, EAN8, UPC-E, Interleaved 2 of 5, Code 11, Code 9, Code 39, Code 128	
Image		
Sensor	High-resolution pixel array	
Lighting/Optics		
Illumination	DataMan 6400	DataMan 6500
	Integrated diffuse LED	Integrated diffuse bright-field and dark-field LED
Reading direction	Omni-directional, different pitch and skew angles up to 20 degrees	
Aiming	Single red LED aimed at center of field of view	
I/O		
Trigger	Via trigger switch in the handle or via PC Software	
Additional outputs	Multifunctional LED and beeper to indicate good read, device status, or errors	
Communications		
Interfaces	RS-232 for data communication, set-up, and image preview	
Power		
Electrical requirements	12VDC, 4 Watts	
Mechanical		
Dimensions	180mm (7.09 in) x 68mm (2.68 in) x 90mm (3.54 in)	
Material	Polycarbonate / ABS blend housing	
Weight	170g (6.00 oz)	
Environmental		
Operating temperature	0°C to +40°C (32°F to +104°F)	
Operating humidity	0% – 95%, non-condensing	
Storage temperature	-40°C to +70°C (-40°F to +158°F)	
Storage humidity	0% – 95% non-condensing	
Drop test	Multiple drops at 1.5 meters	
Certifications		
	CE, (FCC, UL, and CSA pending)	

