COGNEX

DAPRA MARKING SYSTEMS

DATAMAN 370 SERIES
BARCODE READERS

Superior read performance for the broadest range of applications

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www.DapraMarking.com ◆ (800) 442-6275

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Superior read performance for the broadest range of applications

DataMan® 370 series fixed-mount barcode readers solve challenging direct part mark (DPM) and label-based multi-code, multi-symbology applications using Cognex's latest decoding algorithms, a multi-core processor, and new integrated lighting. With twice the performance and power of conventional readers in the same class, DataMan 370 delivers superior read performance for the broadest range of applications, including:

- High-speed lines
- Difficult-to-read parts
- Small codes
- Multi-code, multi-symbology applications
- Multi-sided scan tunnels

2X read performance and power

DataMan 370 series barcode readers are optimized with patented decoding algorithms, including the new 1D/2D Auto-Discrimination algorithm, to ensure superior read rate performance for 1D and 2D codes. DataMan 370's multi-core processor enables it to run these algorithms and processes in parallel, resulting in two times the performance and power of comparable high-performance readers.

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.

1D/2D Auto-Discrimination is an algorithm that reduces decode times for complex multi-code, multi-symbology, label-based code applications.
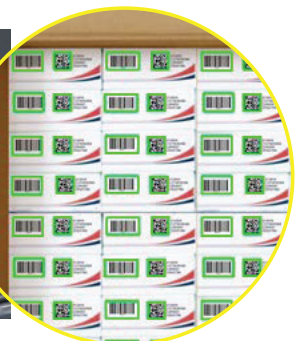
Best-in-class image formation

DataMan 370's High Dynamic Range (HDR) imaging uses the latest CMOS image sensor technology to acquire single images that are 16X more detailed than conventional sensors. HDR takes advantage of the extra available image data to globally enhance image quality and contrast, resulting in greater depth-of-field, faster line speeds, and improved code handling.
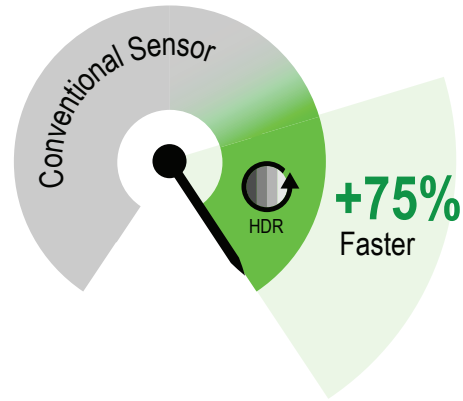
Greater Depth of Field

HDR reduces over- and under-exposure, providing 20% greater depth of field.
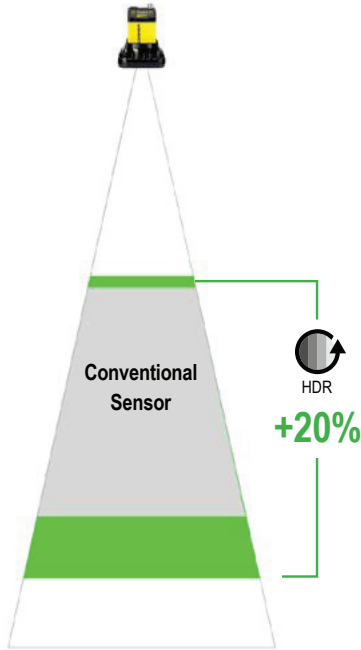
Faster Line Speeds

HDR reduces exposure times, increasing line speed possibilities by 75%

Conventional Sensor

+20%

Conventional Sensor

+75% Faster

Improved Code Handling

HDR allows DataMan 370 to adjust contrast ranges to read difficult codes with variant backgrounds that cannot be read with conventional technology.

Target Source

Conventional Sensor

HDR
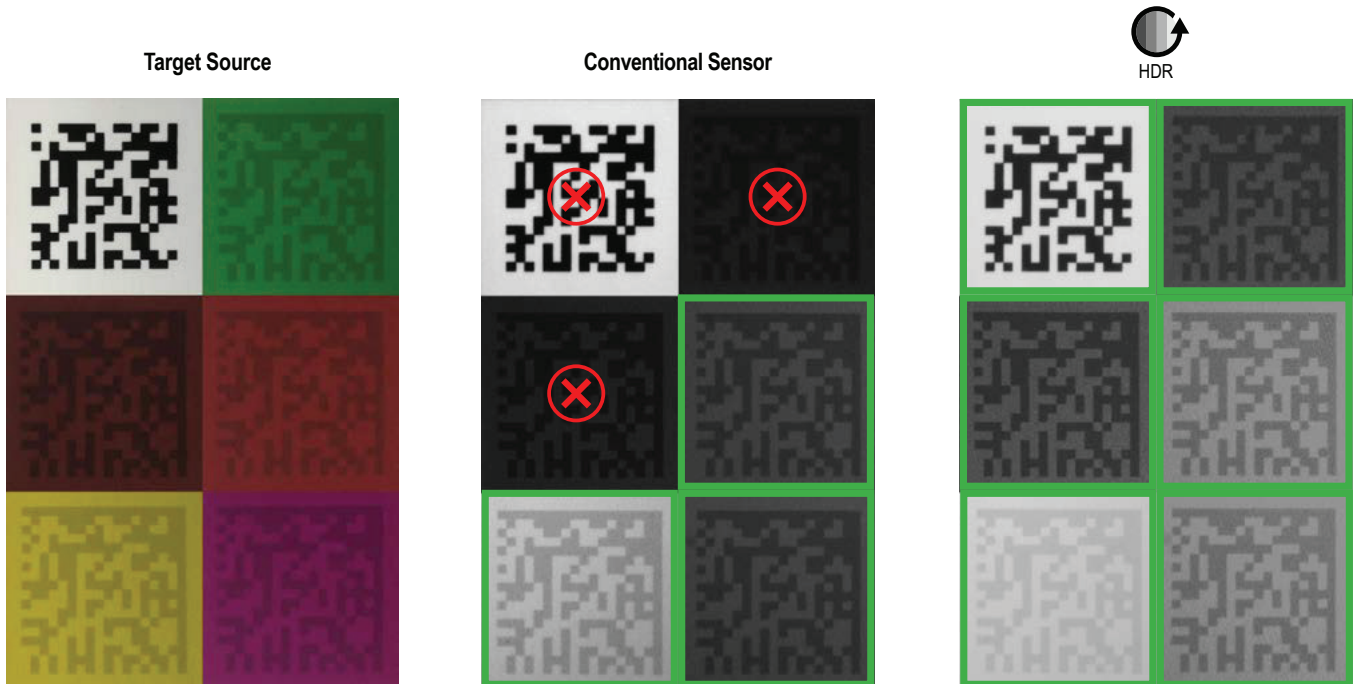
Modularity provides unparalleled flexibility

DataMan 370's innovative design with modular lighting, lens, and communication options provides maximum flexibility and ease-of-use.

1DMax 2DMax Hotbars PowerGrid HDR

RS-232, Ethernet with industrial protocols, SD card, and other network connectivity options

Patented technology and advanced algorithms optimize performance

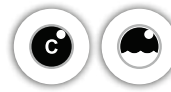Same form factor as DataMan 360

High resolution sensors enable greater field-of-view and depth-of-field coverage

Supports encoder inputs for conveyor position tracking

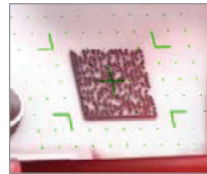Multi-core processing power for high speed decoding

C-mount and high speed liquid lens with dynamic focusing options maximize application coverage

New high-powered integrated torch (HPIT) provides unmatched illumination power, eliminating the need for external lighting
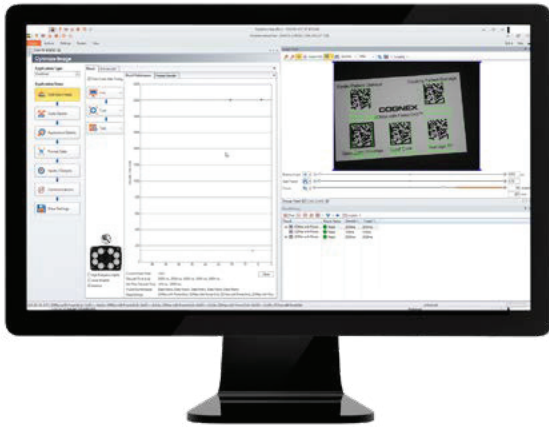
Guided laser aimer allows field-of-view to be clearly mapped to the desired target.

Interchangeable front cover polarization filters fully optimize image quality

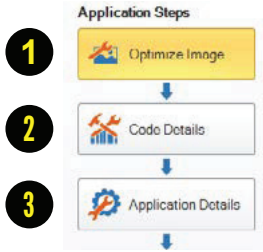Multi-color LED indicators provide operator feedback

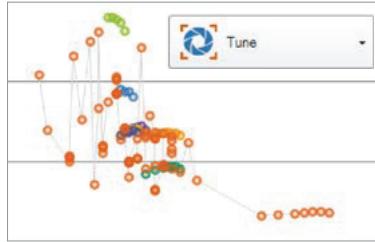Multi-Reader Sync™ capability enables extended coverage

Easy setup and operation

The DataMan Setup Tool software simplifies installation and operation of DataMan 370. Intelligent auto-tuning and application assistants guide the user to quickly optimize complex parameters with ease.
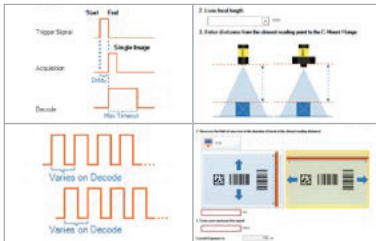
Step-by-step visual guidance

Auto-tune and autofocus

Pre- and post-image optimization tools

Application assistants

Independent lighting controls

Multiple read setups

Performance feedback helps optimize operations

The DataMan Setup Tool software also provides image offload and read result history, process control metrics, and real time monitoring. Process control metrics help identify print quality and readability issues. Real time monitoring provides performance feedback for process optimization, including no-read tracking, code quality metrics, heat mapping, and configuration audit trails.
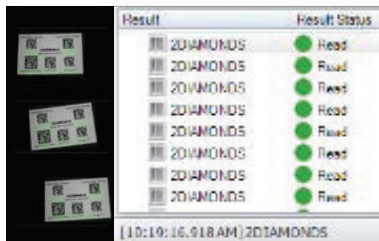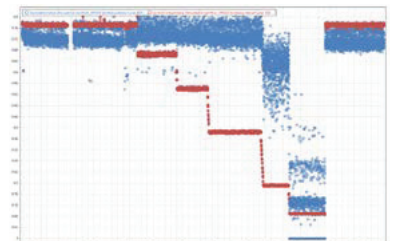
Image & read result history

Process control metric feedback

Real time monitoring

Solves the broadest range of applications

With its superior read performance and best-in-class image formation, DataMan 370 easily solves the broadest range of manufacturing and logistics applications with wide field-of-view and large depth-of-field coverage needs.

DataMan 370 series barcode readers deliver unmatched overhead or desktop presentation scanning performance due to 1D/2D auto-discrimination, a guided laser aimer, and dynamic focusing technology.

Single-, multi-, and full coverage scan tunnel options are available to help increase throughput in logistics applications. Multi-Reader Sync technology synchronizes several readers for increased field of view and multi-side scanning at high speeds.

DATAMAN 370 SERIES SPECIFICATIONS		
	DataMan 374	DataMan 375
Algorithms	1DMax, 2DMax, Hotbars, PowerGrid, 1D/2D Auto-Discrimination	
Image Sensor	1/1.8" CMOS	2/3" CMOS
Image Sensor Properties	Diagonal 8.9 mm; 3.45 µm square pixels	Diagonal 11.1 mm; 3.45 µm square pixels
Image Sensor Resolution	2048 x 1536	2448 x 2048
Electronic Shutter Speed	Min. exposure: 15 µs Max. exposure: 1000 µs with internal illumination/10000 µs with external illumination	
Max Acquisition	Up to 80 Hz	Up to 55 Hz
Lens Options	Liquid lens 10 mm, 16 mm, 24 mm; C-mount 12 mm, 16 mm, 25 mm, 35 mm, 40 mm	
Trigger and Tune Buttons	Yes; Quick Setup Intelligent Tuning	
Aimer	Optional	
Discrete Inputs	2 fixed + (*) opto-isolated	
Discrete Outputs	2 fixed + (*) opto-isolated	
*Other I/O Points	2 user-configurable	
Status Outputs	Beeper, 5 multifunctional LEDs, 10 LED bar array, 360-degree indicator	
Lighting	Integrated LEDs, red, blue or IR; diffuse, polarized, high powered integrated light (HPIL), high powered integrated torch (HPIT), various controllable external light options	Integrated LEDs, red, blue or IR; diffuse, polarized, high powered integrated torch (HPIT), various controllable external light options
Communications	Ethernet and serial	
Protocols	RS-232, TCP/IP, PROFINET, EtherNet/IP™, SLMP, Modbus TCP, NTP, SFTP, FTP, MRS, Java Scripting enabled for custom protocols	
Power Consumption	24 VDC ±10%, 1.5 A maximum (HPIL/HPIT[1]) 24 VDC, 250 mA maximum (reader) Supplied by LPS or NEC class 2 only	
Weight	165 g	
Dimensions	73 mm x 54 mm x 42 mm; 113 mm x 91 mm x 75mm (with HPIT)	
Operating Temperature	0 °C–57 °C (32 °F–134.6 °F)[2]	
Storage Temperature	-20 °C–80 °C (-4 °F–176 °F)	
Operating and Storage Humidity	< 95% non-condensing	
Protection	IP67 with cables and appropriate lens cover attached	
RoHS Certified	Yes	
Approvals (CE, UL, FCC)	Yes	

[1] HPIL denotes one of the DM360-HPIL-RE, DM360-HPIL-RE-P, DMLT-HPIL-RE or DMLT-HPIL-RE-P accessories. HPIT denotes one of the DMLT-HPIT-RE-W, DMLT-HPIT-RE-S, DMLT-HPIT-RE-N, DMLT-HPIT-WHI-W, DMLT-HPIT-WHI-S, DMLT-HPIT-WHI-N accessories.

[2] In situations where the operating temperature exceeds 40 °C, an external heat sink is required.