

SPEC SHEET



DISCOVERY MAXSCAN

Contact Scanning Technology for High Resolution Print Inspection



PRODUCT OVERVIEW

Discovery Maxscan is a revolutionary technology which uses a unique sensor, lens and illumination arrangement that enables the unit to operate at a close working distance while maintaining clear, sharp image definition over its entire length.

Fully integrated into a single housing, the white light LED arrays provide homogenous, shade free illumination along the length of the sensor, meaning inspection performance can be maintained even at the very edges of the image.

True, Uniform 600dpi Image Resolution

Maxscan captures images line-by-line, and this data is then composited into a complete image by a frame grabber card. The light reflected by an object through a lens is recorded and directed to a photodiode. This converts the incoming light into an electrical signal whose strength is proportional to the light intensity. In an analogue to digital converter, the signal is finally converted into an 8- or 10-bit value. An essential part of Maxscan is the 'Grin lens' - a gradient-index lens, allowing distortion-free 1:1 representation of the object on the sensor surface, thereby crucially contributing to the high image recording quality. The sensor is also a trilinear sensor, i.e. it has a separate sensitive area for red, green and blue light. It is therefore a colour sensor that records true-colour images. For simple applications, the sensor is also available in a monochrome version that only detects grey values.

Integrated LED illumination

A highly intensive and homogeneous LED illumination is integrated directly in the frame of the sensor housing. The illumination is therefore always optimally aligned on the sensor. Cumbersome calibration and alignment of external light sources is unnecessary.

Another advantage is that an additional power supply can be omitted. For inspection tasks in transmitted light or in special lighting specifications, our sensors are also optionally available without integrated LED illumination.

Integrated optics

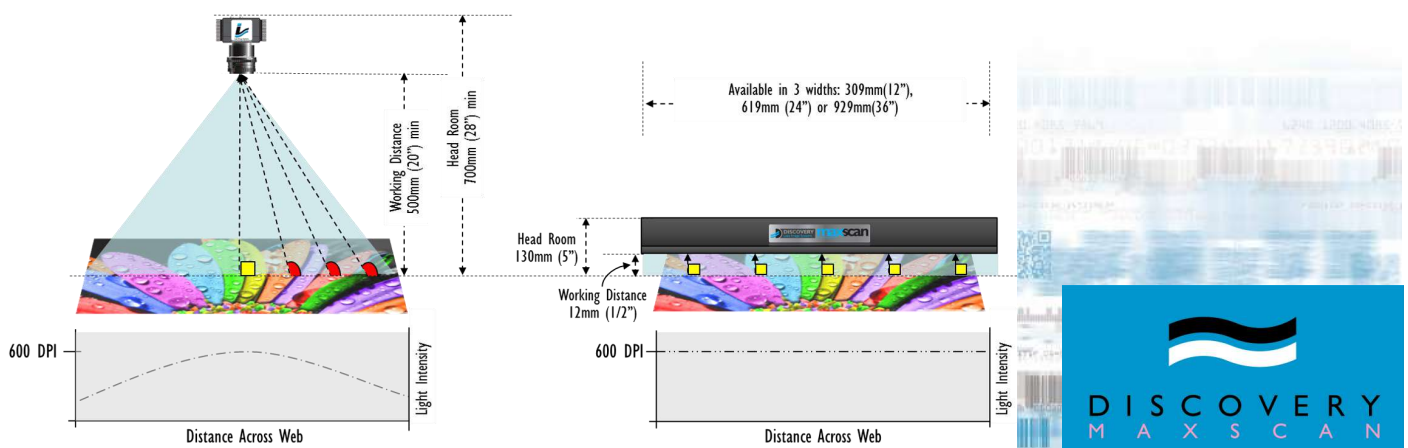
In conventional line scan cameras, the image is distorted towards the edge by the lens used. Maxscan, however, guarantees a distortion-free 1:1 copy of the object. This is achieved by means of a specially designed array of rod lenses, GRIN lenses, with a defined working distance that produce the necessary tele-centric captured radiation. This is an optimal prerequisite for the quality inspection of problematic surfaces. Furthermore, it also eliminates the need for time-consuming alignment or focus during the commissioning.

Compact design

Due to its very compact design, the sensor only requires a fraction of the space that a system still based on line scan cameras would need. This allows system integrators and machine manufacturers more installation options when integrating the sensors in machines or systems - and important cost savings.

Maxscan is mounted to the side of the machine wall by just four screws at a working distance of 12 mm from the protective glass surface. Then the power cable and the data cable are simply plugged in, and assembly is completed. Time-consuming calibration, alignment or other settings are no longer necessary. Maxscan is pre-calibrated at the factory with a white/black correction. Compared with the assembly of a normal line camera system, a time-saving of up to two days assembly time can be achieved.

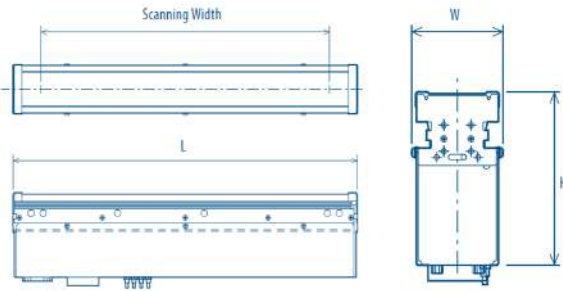
Line Scan Camera vs. MaxScan



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SPECIFICATIONS



APPLICABLE MARKETS

Financial & Direct Mail Documents

- Financial Statements & Bills
- Invoices & General Correspondence
- DM & Card Attaching
- Personalised booklets

Shipping & Licensing Labels

- Courier and postage labels
- Anti-counterfeit Software License labels

Tax Stamps & Pharmaceutical Labels

- Alcohol and Cigarette Tax Stamps
- Drug & dosage verification

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Standard Speed

DISCOVERY MAXSCAN AX (COLOUR) (Line Frequency: 22kHz)						
TYPE	SCANNING WIDTH	TOTAL LENGTH (L)	HEIGHT (H)	WIDTH (W)	PIXEL	RESOLUTION (DPI)
DMS309AX	309 mm	376.1 mm	70.4 mm	62.2 mm	7,296	600/300/150 (switchable)
DMS617AX	617 mm	687.1 mm			14,592	
DMS926AX	926 mm	996.1 mm			21,888	

AX Series with CameraLink™ Interface

DISCOVERY MAXSCAN MX (MONOCHROME) (line Frequency: 43 kHz)						
TYPE	SCANNING WIDTH	TOTAL LENGTH (L)	HEIGHT (H)	WIDTH (W)	PIXEL	RESOLUTION (DPI)
DMS309MX	309 mm	376.1 mm	70.4 mm	62.2 mm	7,296	600/300/150 (switchable)
DMS617MX	617 mm	687.1 mm			14,592	
DMS926MX	926 mm	996.1 mm			21,888	

MX Series with CameraLink™ Interface

High Speed

DISCOVERY MAXSCAN CX (COLOUR) (line Frequency: 55 kHz@600 dpi, 91.8 kHz@300 dpi, 110kHz@200 dpi, 110kHz@150 dpi)						
TYPE	SCANNING WIDTH	TOTAL LENGTH (L)	HEIGHT (H)	WIDTH (W)	PIXEL	RESOLUTION (DPI)
DMS367CX	367 mm	434 mm	109.3 mm	62.2 mm	8,640	600/300/150 (switchable)
DMS587CX	587 mm	654 mm			13,824	
DMS809CX	807 mm	874 mm			19,008	

CX Series with CoaxPress Interface

ADVANTAGES

- **Machine independent** - Can be retro-fitted to most existing printing and converting equipment
- **Reliable** - No image distortion or angular variations. Read variable data from highly reflective/holographic/foil surfaces
- **Flexible** - Low profile allow easy installation inside presses, closed to printing heads with cost retrofits or paper path alterations
- **Multiple Configurations**. Multiple widths and Speeds for all requirements
- **Supported** - Comprehensive maintenance contracts featuring remote diagnostics

BENEFITS

- **Lower Costs** - Automatically detects prints/data. Prevents costly reprints
- **Improved Productivity** - Automates manual integrity & quality inspection processes
- **Increased Customer Satisfaction** - Ensure barcode meets the standard agreed with your customer, support by detailed reports
- **Less Scrap / Less Waste** - Immediately prevent costly scrapping of large runs of defect print
- **Mitigate risks** - Ensure all print work meets with specific industry and government regulations

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