MITSUBISHI ELECTRIC LINE SCAN BAR

Highest image quality with minimum effort
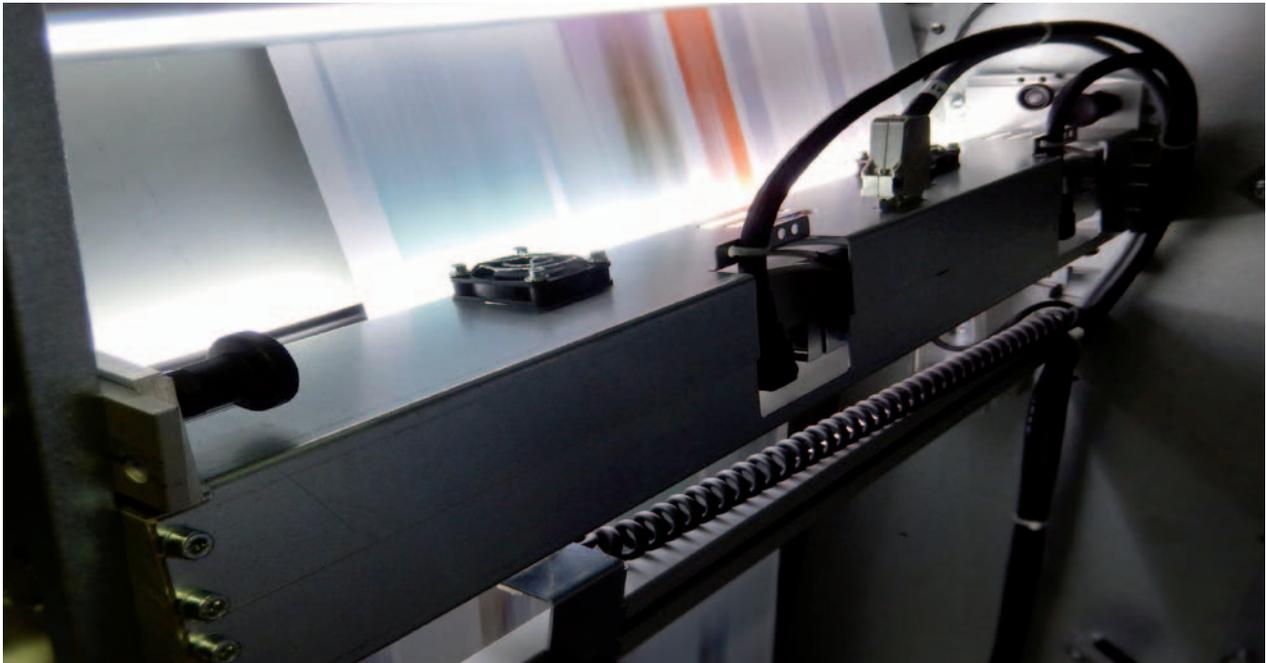
- **Highly compact design**
- **High resolution**
- **Full speed scanning**
- **Easy integration**
- **Lowest service efforts**

Perfect resolution, made simple

Very compact design ideal for integration in machines

The easiest way to acquire perfect images

In the growing market of Surface Vision and Machine Vision solutions, image quality, highest resolution and ease of integration are becoming more and more important success factors.

For several decades, Mitsubishi Electric has been the worldwide leading supplier of CMOS chip-based Contact Image Sensors (CIS) for professional image capture. These sensors, marketed under the name Mitsubishi Electric Line Scan Bar, feature not only highest image quality, resolution and line rate, but also a very compact design ideal for integration in machines or mechanical devices. The Line Scan Bar is therefore a real alternative to well-known line scan cameras, but it also offers a whole series of additional benefits.

Know-how

The image is captured line-by-line, and this data is then composited into a complete image by a frame grabber card. An essential part of the Line Scan Bar 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.

Grin lens

Focal length
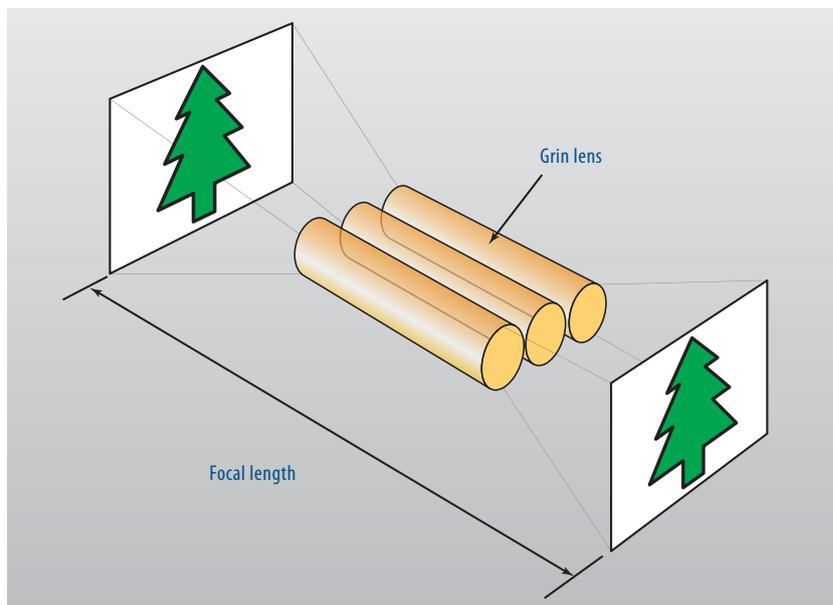
Distortion-free 1:1 representation of the objec for high image recording quality

True-colour images

The sensor is a trilinear sensor, i.e. it has a separate sensitive area for red, green and blue light. For simple applications, the sensor is also available in a monochrome version that only detects gray 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 to the sensor. Cumbersome calibration and alignment of external light sources is unnecessary. Our sensors are also optionally available without integrated LED illumination.

Sensor ICs

The Mitsubishi Electric Line Scan Bar uses CMOS high-end chips for high-speed image acquisition, a defined pixel size of 0.042 mm and real trilinear CMOS chips with RGB filters.

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.

Easy mounting and installation

The Line Scan Bar 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.

Low service efforts

Thanks to its easy installation, any replacement of the Line Scan Bar that is required can be done by the in-house technicians. There are no costs for deployment of service staff. Here also, there is an enormous savings potential for the end-user and the system integrator or machine manufacturer.
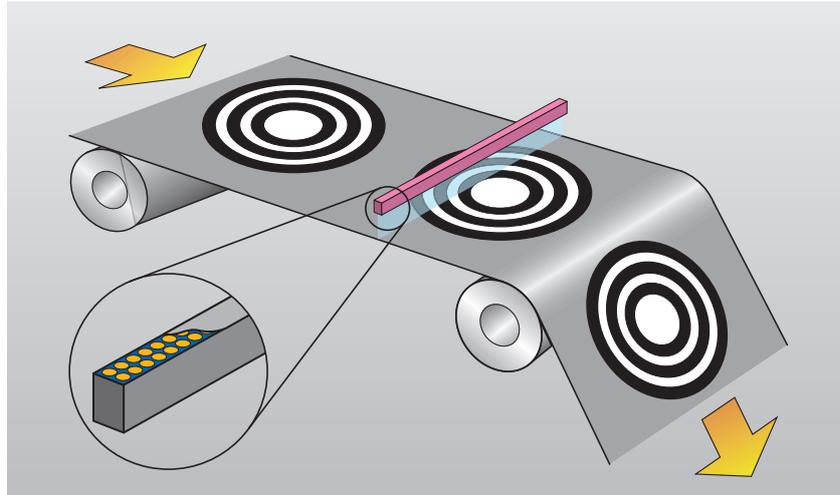
CIS scanning technology

Wide range of applications

Surface Inspection

- Paper
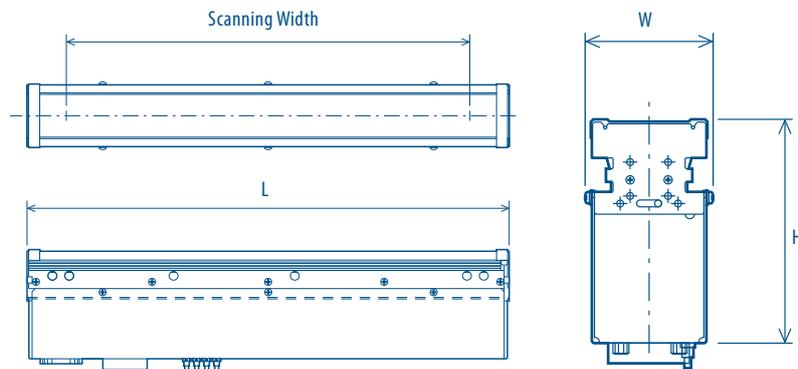- Foil
- Textiles
- Metal

Quality monitoring

- Circuit boards
- Wafers
- Solar panels
- Flat panel

Print inspection

- Paper
- Foil
- Textile

Optical security features

- Holograms
- Foil elements
- Bank notes and IDs

Mitsubishi Electric Line Scan Bar

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Specifications

Standard Speed

MITSUBISHI LINE SCAN BAR AX (COLOR) (Line Frequency: 22 kHz)						
TYPE	SCANNING WIDTH	TOTAL LENGTH (L)	HEIGHT (H)	WIDTH (W)	PIXEL	RESOLUTION DPI
Incl. LED Light Source						
KD6R309AX	309 mm	376.1 mm	70.4 mm	62.2 mm	7,296	600/300/150 (switchable)
KD6R617AX	617 mm	687.1 mm			14,592	
KD6R926AX	926 mm	996.1 mm			21,888	
Without Light Source						
KD6R309AX-NL	309 mm	376.1 mm	66.9 mm	62.2 mm	7,296	600/300/150 (switchable)
KD6R617AX-NL	617 mm	687.1 mm			14,592	
KD6R926AX-NL	926 mm	996.1 mm			21,888	

AX Series with CameraLink™ interface

MITSUBISHI LINE SCAN BAR MX (MONOCHROME) (Line Frequency: 43 kHz)						
TYPE	SCANNING WIDTH	TOTAL LENGTH (L)	HEIGHT (H)	WIDTH (W)	PIXEL	RESOLUTION DPI
Incl. LED Light Source						
KD6R309MX	309 mm	376.1 mm	98.3 mm	62.2 mm	7,296	600/300/150 (switchable)
KD6R617MX	617 mm	687.1 mm			14,592	
KD6R926MX	926 mm	996.1 mm			21,888	
Without Light Source						
KD6R309MX-NL	309 mm	376.1 mm	94.8 mm	62.2 mm	7,296	600/300/150 (switchable)
KD6R617MX-NL	617 mm	687.1 mm			14,592	
KD6R926MX-NL	926 mm	996.1 mm			21,888	

MX Series with CameraLink™ interface

High Speed

MITSUBISHI LINE SCAN BAR CX (COLOR) (Line Frequency: 55 kHz@600 dpi, 91,8 kHz@300 dpi , 110 kHz@ 200 dpi, 110 kHz@150 dpi)						
TYPE	SCANNING WIDTH	TOTAL LENGTH (L)	HEIGHT (H)	WIDTH (W)	PIXEL	RESOLUTION DPI
KD6R367CX	367 mm	434 mm	109.3 mm	62.2 mm	8.640	600/300/200/150 (switchable)
KD6R587CX	587 mm	654 mm			13.824	
KD6R807CX	807 mm	874 mm			19.008	

CX Series with CoaXPress Interface