# Automatic Identification of Moving Vehicles in Automotive Manufacturing

The VOS Ident Universal Code Reader Dynamically Records All 1-D/2-D Codes

At a Glance

- Reliable detection of 1-D or 2-D codes, even with quick movement and challenging lighting conditions
- Ambient-light-protected code reading over long distances up to two meters
- Ring lighting with integrated flash controller for maximum image brightness
- Variable configuration for simultaneously detecting multiple codes of all common code symbologies
- Integrated data analysis, data preprocessing, and data output via fieldbus interfaces

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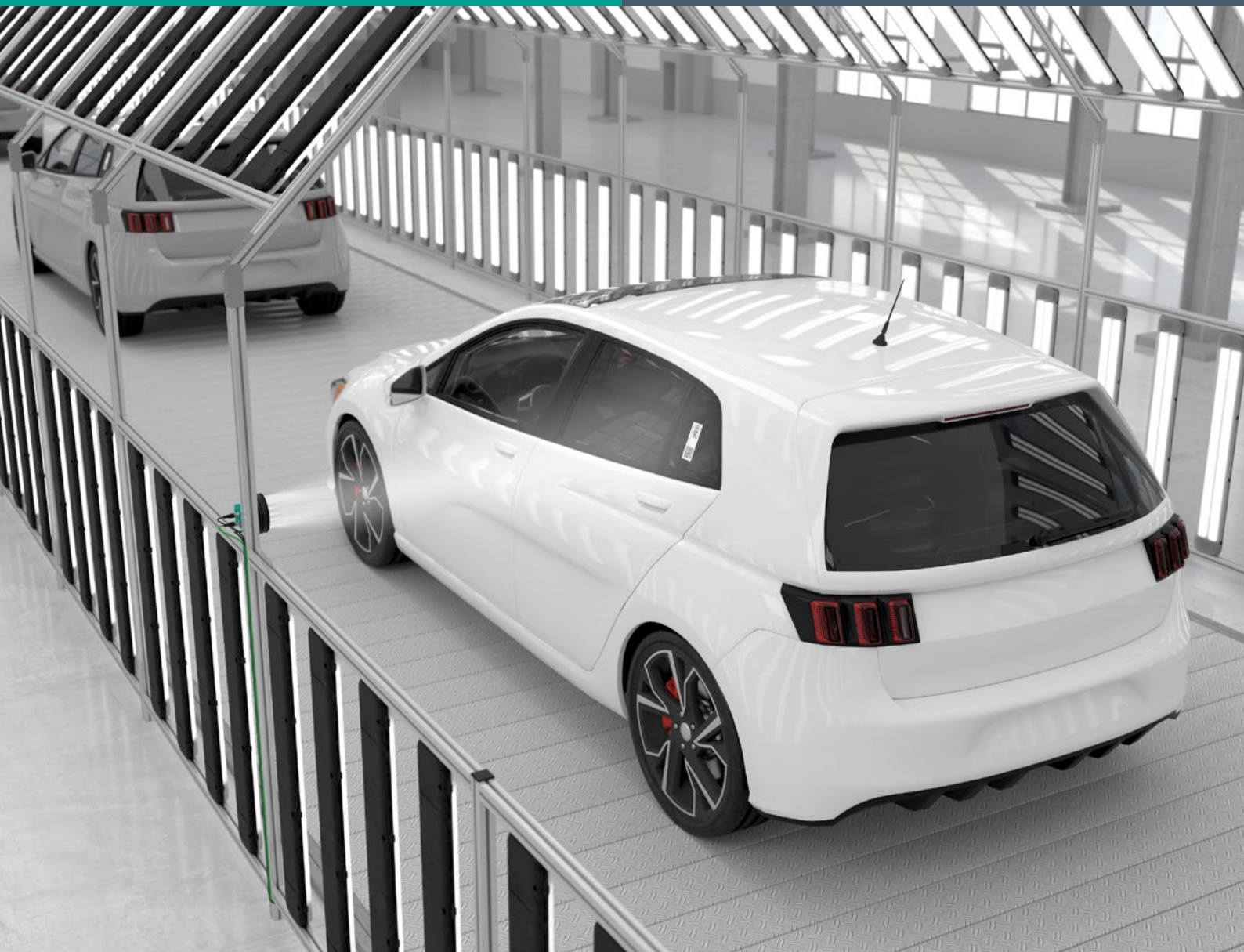
The Application

In automotive manufacturing, a conveyor system transports body components to the final assembly area, where the vehicles are constructed according to the requirements of the respective end customer. The prerequisite for individual assembly is unique identification using a QR or Data Matrix code. The vehicle is in motion as it passes the code reading station. There is up to two meters between the code and the reading station, since manual work is also carried out in this area. Heavy and varying exposure to ambient light is expected in the production hall.

The Goal

Reliable identification must be ensured, although the movement of the vehicle may affect the sharpness of the image. This requires especially fast shutter speeds. The codes must always be reliably detected, despite the long distance of two meters from the reading station. The reading range must be large enough to capture the code under any circumstances, including in the event of heavy exposure to ambient light. The ring lighting of the reading station must be able to focus the light on a defined reading range and provide sufficient brightness despite the fast shutter speed.
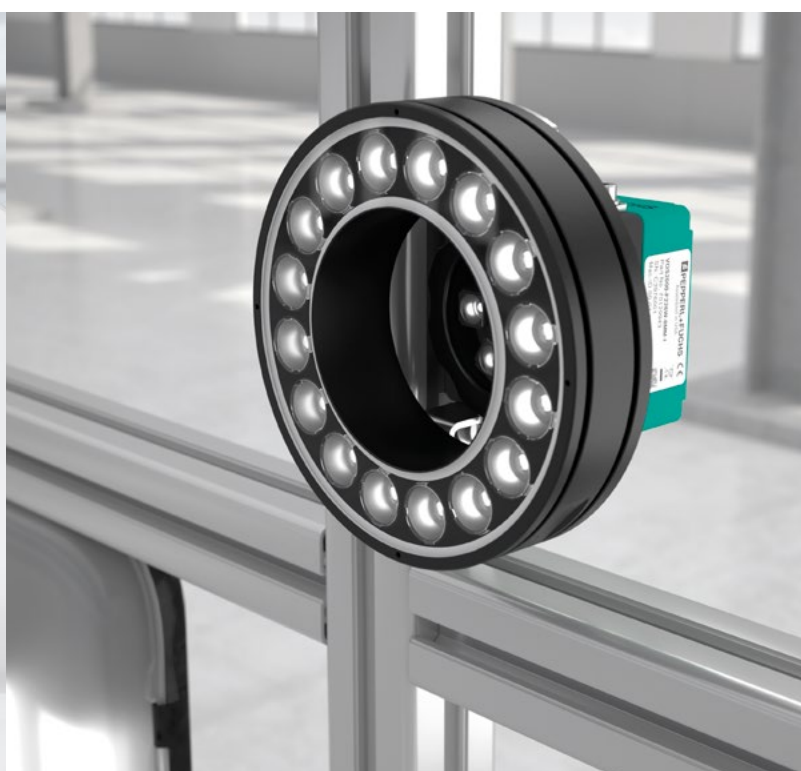
The Solution

The VOS2000-I vision sensor with C-mount can be combined with powerful, external ring system lighting for reading codes over long distances. The integrated stroboscope control enables a flash mode that delivers a performance 10 times that of the constant light mode. The high-power LEDs of the ring lighting are equipped with optics for focusing the beam on the target. They illuminate the object well, even at longer distances. The camera reliably detects the code even under challenging and varying lighting conditions. The VOS system also provides vision tools for reading 1-D and 2-D codes of all common code symbologies. All components are highly rugged and feature IP65 degree of protection.

The Benefits

The reading station can be easily connected to a control system or industrial PC via fieldbus or TCP/IP and can be configured in a variety of ways and used in a wide range of applications. Compared to solutions with internal illumination, the combination of camera and external lighting ensures the greatest possible reliability. The camera offers the ability to set extremely fast shutter speeds, so that moving objects are reliably captured.

Technical Features

- For all common 1-D and 2-D codes
- Simultaneous reading of several codes
- Formatting of the output character string
- Output of code quality
- 32 jobs can be stored in the device
- Offline parameterization
- 1.2 mega pixel resolution
- Interchangeable lens (C-mount)
- IP65 degree of protection

For more information, visit: **pepperl-fuchs.com/px-vos**