

An eye on plant traffic

Industrial 2D/3D camera for AGVs and AMRs

- RGB and 3D depth data in a single standalone device
- Precise environmental perception using tried-and-tested time-of-flight technology
- Obstacle and clear driving area detection beyond the scanning plane of safety scanners
- Easy integration into machines, robots and AGVs



IP67 ToF

ifm – close to you!

Description	Order no.
2D/3D vision camera with integrated data processing	**O3C335**
2D/3D vision camera with obstacle and clear space detection (ODS)	**O3C435**

Three-dimensional vision for mobile vehicles

The O3C is a standalone industrial 2D/3D camera for AGVs, AMRs and other robotic systems. Combining colour and depth information in a single device, it transmits the data to the vehicle computer via Gigabit Ethernet.

By capturing the surroundings in three dimensions, the camera can provide more spatial information than safety scanners. This enables for example the detection of low-lying obstacles on the floor, fork tines, protruding loads and other overhanging objects. Mobile vehicles can use this additional information for obstacle detection, navigation and path planning.

Versions with and without ODS

The O3C335 is particularly well suited to users who wish to integrate the camera data into their own software and develop customised functions for navigation, object detection or environmental perception.

The O3C435 additionally features the integrated Obstacle Detection System (ODS). The latter calculates obstacle and clear-area information directly within the camera, transmitting it then to the controller. This reduces the load on the controller while minimising additional development work. The solution is based on many years of development and application experience in mobile robotics and has been specifically designed for use in AGVs and AMRs.

Technical data		
Communication interface		Ethernet
Operating range	[m]	6
3D image resolution	[pixel]	240 x 164
2D image resolution	[pixel]	1296 x 972 (2x2 binning of 2592 x 1944)
3D angle of aperture	[°]	105 x 78
Frame rate	[fps]	20
Dimensions	[mm]	93.5 x 34.5 x 34.5
Protection rating		IP67

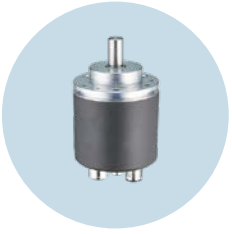
Designed for industrial integration

The compact design combines camera, illumination and data processing in a robust IP67-rated housing. Industrial M12 connectors for voltage supply, inputs/outputs and Gigabit Ethernet facilitate integration into both new and existing vehicle designs.

BEST FRIENDS



ecomatController
Controller for mobile applications, also for safety applications



Safety encoder
Precise detection of positions and rotational movement



Dynamic inclination sensor
Fusion of acceleration sensor and gyroscope (IMU)

For further technical details, please visit: ifm.com/fs/O3C335

We reserve the right to make technical alterations without prior notice. · 11.2026
ifm electronic gmbh · Friedrichstr. 1 · 45128 Essen