

Autonomy begins with perception

3D camera for reliable perimeter recognition

- Multimodal sensor system with 3D ToF/RGB camera and IMU
- Embedded data processing for real-time applications
- Large field of view optimised for robotics and high frame rate for dynamic environments
- Powerful SDK/API for easy integration



ToF

ifm – close to you!

Description	Order no.
2D/3D vision camera with integrated image evaluation	**O3P100**

Designed for the next generation of intelligent robots

With the O3P, ifm brings decades of expertise in time-of-flight technology to a new generation of 3D vision systems. Millions of ToF chips deployed worldwide provide the technological foundation for precise, high-performance depth sensing. The O3P has been specifically developed for autonomous robots that need to navigate reliably and interact with their surroundings in dynamic, human-centred environments. By combining 3D depth data, RGB image information and motion data from the integrated IMU, multimodal perception is achieved that provides the foundation for modern robotics and physical AI applications.

See more, understand more, make better decisions

By combining precise ToF distance measurement with AI-assisted depth enhancement, the O3P delivers detailed, robust 3D data even in challenging environments. Obstacles, people and complex structures are detected at an early stage, enabling autonomous systems to navigate more safely and operate with greater precision. At the same time, the high-resolution depth information enhances the perception of small and distant objects. From service robots to humanoid systems, the O3P opens up new possibilities for intelligent automation.

Easy migration and integration

Powerful SDKs, standardised interfaces and support of common operating systems enable rapid evaluation and integration. This reduces development and migration time on the path to productive use.

Technical data		
Connection/interface		USB-C USB 3.0 / 3.1 / 3.2
Supported software		Python and C++ ROS 1 + 2 Ubuntu 20–26 Windows 10, 11
3D image resolution	[pixel]	240 x 180
3D angle of aperture	[°]	106 x 86
Frame rate	[fps]	30
Dimensions	[mm]	90 x 25 x 25

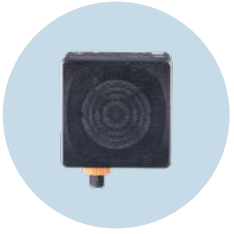
BEST FRIENDS



OGD distance sensor
Time-of-flight measurement for measured values accurate to the millimetre



O2I 1D/2D code reader
Automatic analysis and checking of codes and text



Radar distance sensor
Reliable detection of distance and speed

For further technical details, please visit: ifm.com/fs/O3P100

We reserve the right to make technical alterations without prior notice. · 11.2026
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