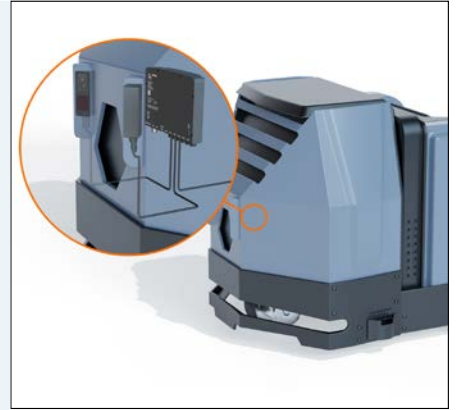




Industrial imaging

# Unites all senses: the new O3R camera platform



3D vision systems



**Central processing of image  
and sensor information**

**Synchronisation of several  
cameras for 360° coverage  
Flexibility through different  
camera versions**

**Standardised SDKs for Docker  
architecture as well as Python,  
C++, CUDA and ROS**

**Latest time-of-flight imager  
with high extraneous light  
stability**



## **Integrated and upgradeable vision system**

The O3R platform is the comprehensive solution for centralised, synchronised processing of image and sensor information in autonomous mobile robots such as AGVs. The simplified integration and reliable interaction of cameras and sensors enables the robust implementation of relevant functions such as collision avoidance, navigation and positioning.

In addition, analysis and dimensioning of stationary objects can be implemented, and is handled more effectively by means of several cameras. Examples include the measurement of pallets, logs, packages or suitcases.





Type	Description	Order no.
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### Video Processing Unit

	Video Processing Unit (VPU), connection for up to 6 cameras, Gigabit Ethernet interface for sensor signals	<b>OVP800</b>
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Type	Dimensions [mm]	Image resolution [pixel]	Angle of aperture [°]	Order no.
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### Camera heads

	90 x 31 x 26	38K + VGA	60 x 45	<b>O3R222</b>
	90 x 31 x 26	38K + VGA	105 x 78	<b>O3R225</b>

#### Powerful and open: the central unit for sensory processing


The core of the system is a powerful computing unit called a Video Processing Unit (VPU), which uses a yocto Linux on an NVIDIA Jetson TX2 embedded hardware. Based on a Docker architecture, open development environments such as Python, C++, CUDA and ROS are supported. Up to six camera heads can be connected to the computing unit. Additional sensors, such as for distance detection, can be connected via a Gigabit Ethernet interface. All relevant "senses" that an AGV needs for safe autonomous navigation are thus available at a central point.

#### Camera head with imager developed in-house

ifm also offers suitable, high-performance camera heads as part of the platform solution: The 2D/3D cameras have an angle of aperture of either 60 or 105 degrees and are equipped with the latest time-of-flight imager from pmdtechnologies ag. This company of the ifm group of companies develops all sensors for the vision products of the automation specialist and adapts them precisely to the respective requirements.

Thanks to the modulated infrared light, the 2D/3D camera detects objects with maximum reliability even with increased exposure to ambient light.

#### Connection technology

Type	Description	Order no.
	Coaxial connection cable between camera and VPU	<b>E3R100</b>

We reserve the right to make technical alterations without prior notice. · 08.2022