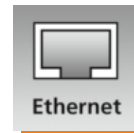


High-resolution 3D camera for innovative vision integration



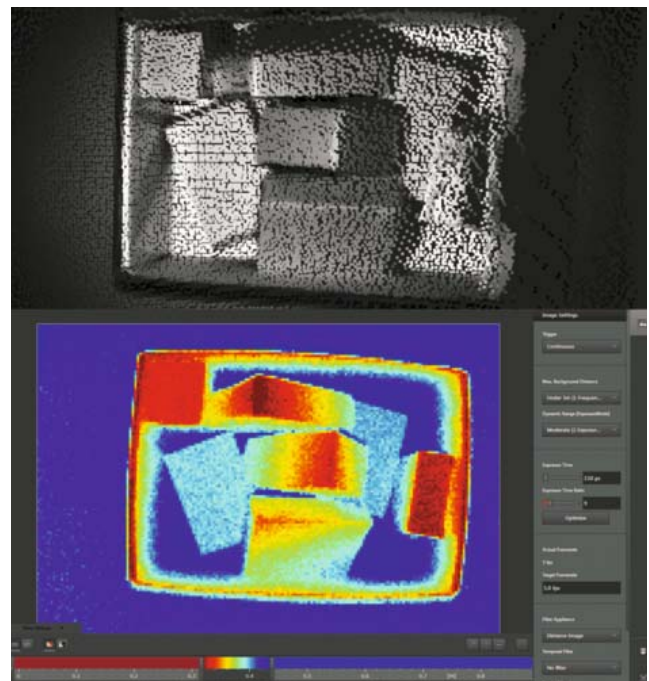
Three-dimensional real-time detection of any scene

- New digital image chip with 23,000 pixels
- Provides distance image and grey-scale image
- Evaluation with common image processing libraries
- Industrially compatible housing
- Connection to MATLAB, HALCON, PCL (Point Cloud Library) and ROS (Robot Operating System)



Three-dimensional detection and evaluation


The 3D camera, on the basis of PMD technology, detects scenes and objects at a glance in three dimensions. In contrast to laser scanners it does not require moving components and is thus robust and wear-free. The function principle, the time of flight technology (ToF), can be compared to a laser scanner. However, instead of one there are 23,000 receiving elements arranged on the chip as a matrix. That means that not only one point but a complete scene is measured in only one capture. Besides the distance image the camera also provides a grey-scale image of the scene. Intuitive parameter setting software allows easy setting of the camera-specific parameters. Furthermore a software development kit with example program code in different languages is available.






Perspective and colour-coded images of the 3D distance image.

Type of sensor	Material housing	Material front pane / LED window	Protection rating, protection class	Angle of aperture [°]	Max. field of view size [mm]	Order no.
PMD 3D camera · Type O3D · M12 connector						
Infineon® 3D Image Sensor	Aluminium	Gorilla glass / polyamide	IP65 / IP67, III	40 x 30	2.61 x 3.47	O3D301
Infineon® 3D Image Sensor	Aluminium	Gorilla glass / polyamide	IP65 / IP67, III	60 x 45	3.75 x 5.00	O3D303
Infineon® 3D Image Sensor	Stainless steel	Polycarbonate / polyamide	IP66 / IP67, III	40 x 30	2.61 x 3.47	O3D311
Infineon® 3D Image Sensor	Stainless steel	Polycarbonate / polyamide	IP66 / IP67, III	60 x 45	3.75 x 5.00	O3D313

Accessories

Type	Description	Order no.
	Mounting set for O3D	E3D301

Connection technology

Type	Description	Order no.
	Ethernet, cross-over patch cable, 2 m, PVC cable, M12 / RJ45	E11898
	Ethernet jumper, 2 m, PVC cable, M12 / M12	E21138
	Socket, M12, 2 m black, PUR cable, 5 poles	EVC070
	socket, M12, 5 m black, PUR cable, 5 poles	EVC071

Further technical data

Operating voltage	[V DC]	24
Current consumption	[mA]	< 1000 (max. 2500)
Current rating (per switching output)	[mA]	100
Short-circuit protection		•
Overload protection		•
Ambient temperature	[°C]	-10...50
Range	[m]	Typically 5
Unambiguous range	[m]	0...30
Sampling rate / switching frequency	[Hz]	Max. 20, adjustable
Resolution		176 x 132 pixels
Function display	LED	2 x yellow, 2 x green
Illumination		850 nm, infrared
Ambient light	[lux]	Max. 10,000 (indoor)
Trigger		Internal or external: 24 V PNP / NPN selectable, according to IEC 61131-2 type 2
Switching inputs		Max: 2 (configurable), 24 V PNP / NPN selectable, according to IEC 61131-2 type 2
Switching outputs		Max: 2 (configurable), 24 V PNP / NPN selectable or 1 analogue output (configurable) scalable, 4...20 mA according to IEC 61131-2, max. load 300 Ω, 0...10 V according to IEC 61131-2, min. load 10 kΩ
Parameter setting interface	Ethernet	10 Base-T / 100 Base-TX
Possible parameter settings		Via PC / notebook