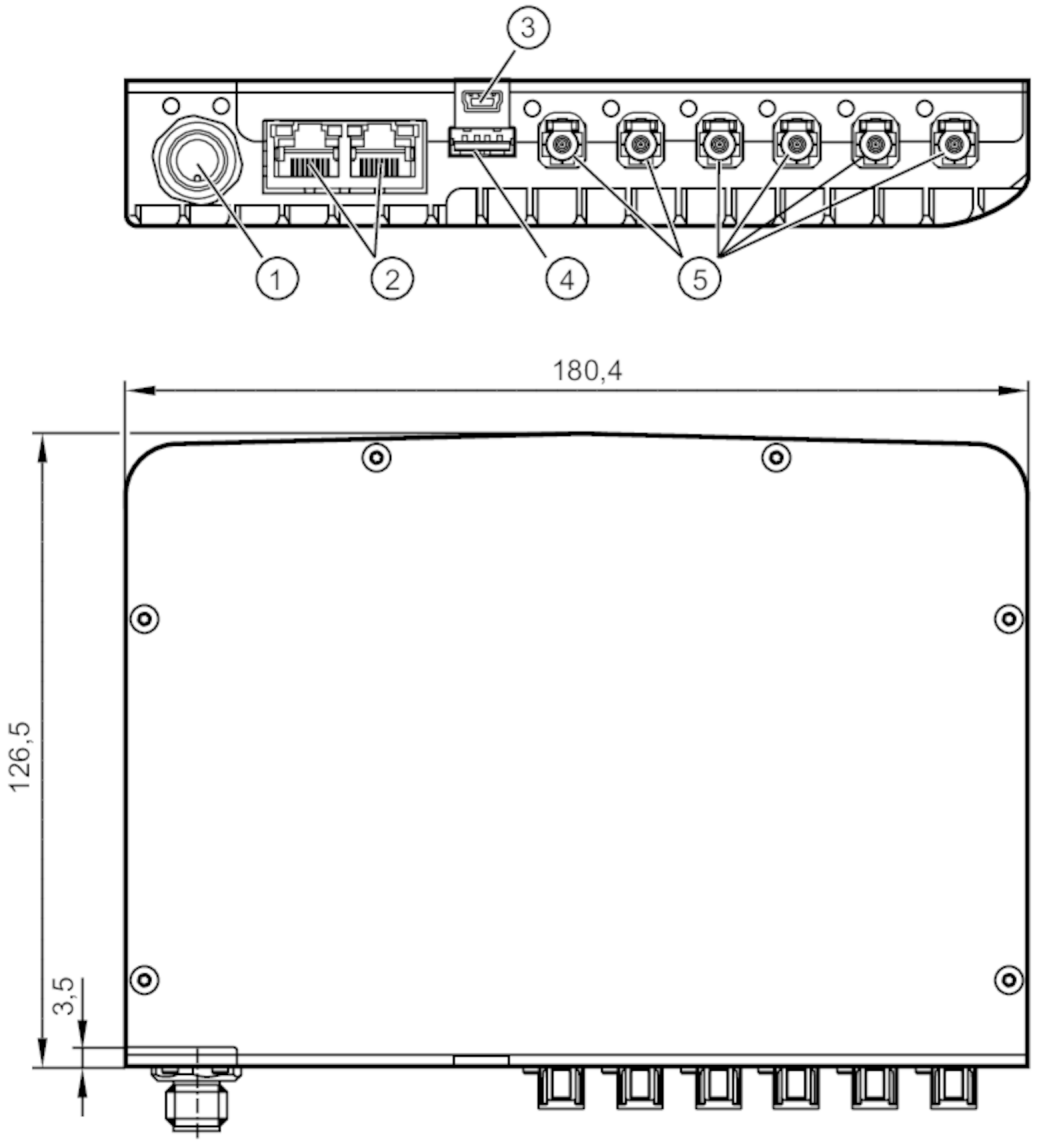
OVP811

Video processing unit (VPU)

OVPAA/RO/E0/E1/TX2NX/4GB/ODS



1 power supply / CAN interface
2 Ethernet 2 x RJ45
3 mini USB interface 2.0
4 USB interface 3.0
5 Connection cameras x 6 HFM

Application		
Application		ODS (obstacle detection) for collision avoidance
Electrical data		
Operating voltage	[V]	19.2...28.8 DC
Max. current consumption	[mA]	1100+n* (630/20) * FPS; n = number of cameras; FPS = camera frame rate
Power consumption	[W]	10,8 +(n* (9,36/20) *FPS; typical n = 3 ; the voltage and power supply are provided by the VPU and are therefore listed in the VPU data sheet.
Interfaces		
Number of CAN interfaces		1

OVP811

Video processing unit (VPU)

OVPAA/RO/E0/E1/TX2NX/4GB/ODS

Number of Ethernet interfaces		2	
Number of USB interfaces		2	
CAN			
Protocol		free protocol	
Ethernet			
Transmission standard		1GBase-T	
Transmission rate		1000 MBit/s	
Connector type		RJ45	
Protocol		TCP/IP	
Factory settings		IP address: 192.168.0.69	
		subnet mask: 255.255.255.0 (Class C)	
		gateway IP address: 192.168.0.201	
		MAC address: see type label	
Sensor interface			
Transmission standard		FPD-Link	
Connector type		HFM (Mini-FAKRA)	
Note on interfaces		number of cameras when using the ODS function (obstacle detection system): see operating instructions	
USB			
Connector type		Mini-USB; type A	
Version		2.0; 3.0	
Operating conditions			
Ambient temperature	[°C]	-10...40	
Storage temperature	[°C]	-40...85	
Protection		IP 50	
Tests / approvals			
EMC		EN IEC 61000-6-4	radiation of interference / residential, commercial and light-industrial environments
		EN IEC 61000-6-2	immunity / industrial environments
Shock resistance		DIN EN 60068-2-27	50 g / (11 ms) not repetitive
		DIN EN 60068-2-27	40 g / (6 ms) repetitive
Vibration resistance		DIN EN 60068-2-6	2 g / (10...150 Hz)
		DIN EN 60068-2-64	2.3 g RMS / (10...500 Hz)
Electrical protection		DIN EN 61010-2-201	electrical supply only via PELV circuits
Mechanical data			
Weight	[g]	1287.2	
Dimensions	[mm]	126.5 x 29 x 180.4	
Materials		housing: aluminium	
Tightening torque	[Nm]	< 5.5	
Hardware			
Processor		SOM: Nvidia Jetson TX2NX 4GB Module CPU: Dual-Core NVIDIA Denver 2 64-Bit CPU and Quad-Core Arm® Cortex®-A57 MPCore processor; GPU: 256-core NVIDIA Pascal™ architecture GPU	
RAM		4GB 128-bit LPDDR4, 1600 MHz - 51.2 GB/s	

OVP811

Video processing unit (VPU)

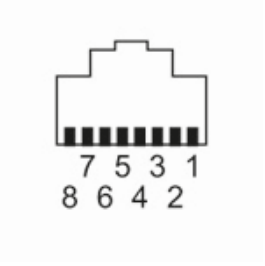
OVPAA/RO/E0/E1/TX2NX/4GB/ODS

Mass storage	32GB eMMC 5.1 Flash (16GB for docker)

Remarks

Pack quantity	1 pcs.

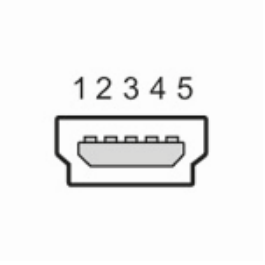
Electrical connection - Ethernet Connection



1	TX +
2	TX -
3	RX +
4	not used
5	not used
6	RX -
7	not used
8	not used

Electrical connection - USB socket

Connector: 1 x mini USB interface



Electrical connection - USB socket Typ A

Connector: 1 x Typ A

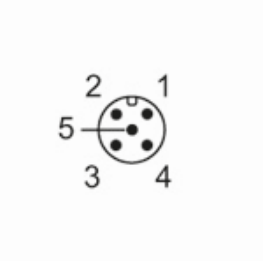
OVP811

Video processing unit (VPU)

OVPAA/RO/E0/E1/TX2NX/4GB/ODS

Electrical connection - power supply / CAN

Connector: 1 x M12; coding: A



1	screen
2	24 V
3	GND
4	CAN +
5	CAN -

Electrical connection - sensor interface

Connector: 6 x HFM (Mini-FAKRA) (AMK12A-1M4Z5-A)

Other data

Connection

	Port 0	Port 1	Port 2	Port 3	Port 4	Port 5
example 1	camera 1 (3D-38k)	camera 2 (3D-38k)	camera 1 (2D)	camera 2 (2D)	camera 3 (3D-38k)	-
example 2	camera 1 (2D)	camera 2 (2D)	camera 1 (3D-38k)	camera 2 (3D-38k)	camera 3 (2D)	camera 4 (2D)
example 3	camera 1 (3D-38k)	camera 2 (3D-38k)	-	camera 4 (3D-VGA)	-	-
example 4	camera 1 (3D-VGA)	camera 2 (3D-VGA)	camera 3 (3D-VGA)	camera 4 (3D-VGA)	-	-

ports 0 and 1, 2 and 3, 4 and 5 must be assigned to the same type of image sensor.

please note the different 3D image sensor types 38k and VGA when connecting the cameras.

Remarks: Further information on the free memory required for specific applications can be found in the firmware-specific version information (ifm.3d.com).

OVP811

Video processing unit (VPU)

OVPAA/RO/E0/E1/TX2NX/4GB/ODS

typical detection range

object / object height	camera heads	mounting position	typical detection range *
fork on ground	O3R225 105°	20...30 cm	1.3 m
	O3R225 105°	55...60 cm	1.5 m
	O3R222 60°	55...60 cm	2.5 m
fork cantilevered	O3R225 105°	20...30 cm	2.1 m
	O3R225 105°	55...60 cm	2.1 m
	O3R222 60°	55...60 cm	3.0 m
7 cm cube (18%)	O3R225 105°	20...30 cm	1.6 m
	O3R225 105°	55...60 cm	1.6 m
	O3R222 60°	55...60 cm	2.5 m

* test -conditions :

indoor

speed : ≤ 2 m/s

sealed, slightly inhomogeneous surface