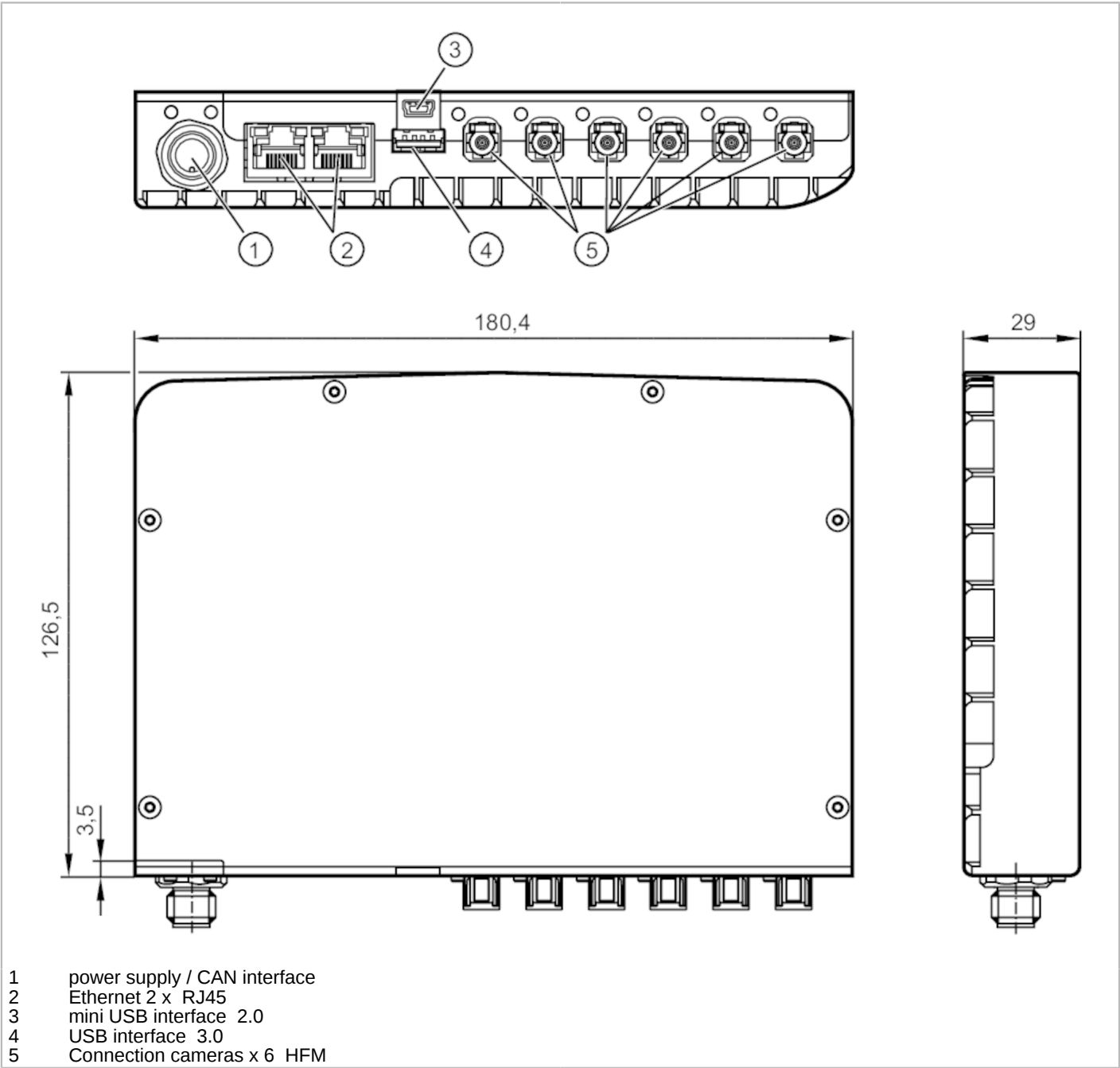


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Video processing unit (VPU)

OVPA/RO/E0/E1/NJ TX2/4GB/ODS



Application		
Application		ODS (obstacle detection) for collision avoidance
Electrical data		
Operating voltage	[V]	19.2...28.8 DC
Max. current consumption	[mA]	3025; (625 + (n x 800) n = number of cameras)
Power consumption	[W]	40.8; (15 + n x 8,6; n = number of cameras)
Interfaces		
Number of CAN interfaces		1

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Video processing unit (VPU)

OVPA4/RO/E0/E1/NJ TX2/4GB/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
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 (Obstacles 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]	978.131
Dimensions	[mm]	126.5 x 29 x 180.4
Materials		housing: aluminium
Tightening torque	[Nm]	< 5.5
Hardware		
Processor		CPU: Dual-Core NVIDIA Denver 2 64 Bit ; ARM Cortex A57; GPU: NVIDIA Pascal 256 CUDA Cores (1,3 TFLOPs) SOM: Nvidia Jetson TX2 4GB Module
RAM		4GB 128-bit LPDDR4, 1600 MHz - 51.2 GB/s
Mass storage		16GB eMMC 5.1 Flash

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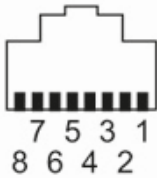
Video processing unit (VPU)

OVPA A/RO/E0/E1/NJ TX2/4GB/ODS

Remarks

Pack quantity	1 pcs.
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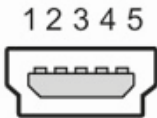
Electrical connection - Ethernet RJ45 connector



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



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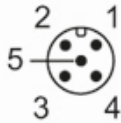


Video processing unit (VPU)

OVPA4/RO/E0/E1/NJ TX2/4GB/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)	camera 2 (3D)	camera 1 (2D)	camera 2 (2D)	camera 3 (3D)	camera 4 (3D)
example 2	camera 1 (2D)	camera 2 (2D)	camera 1 (3D)	camera 2 (3D)	camera 3 (2D)	camera 4 (2D)
example 3	camera 1 (3D)	camera 2 (3D)	camera 3 (3D)	camera 4 (3D)	camera 5 (3D)	camera 6 (3D)

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.

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Video processing unit (VPU)

OVPA/RO/E0/E1/NJ TX2/4GB/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