roboception

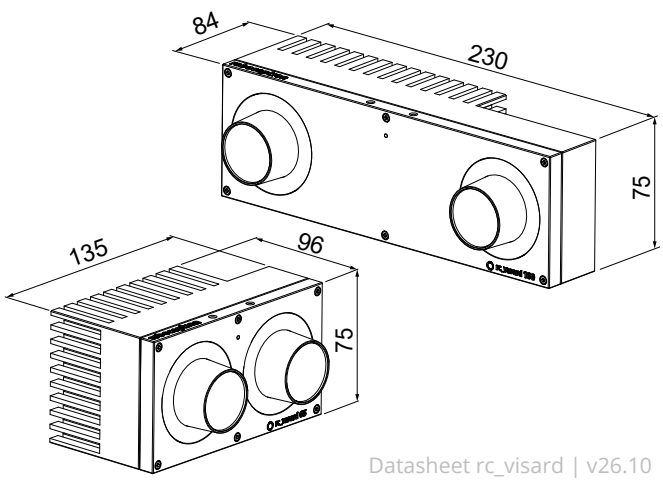
rc_visard - Smart 3D Stereo Sensor

Technical Specifications

The rc_visard sensor family enables robots to generate and process time and location-related data in real time. This plug-and-play machine vision solution is designed to support robotic applications ranging from bin-picking to navigation. The five versions of the rc_visard feature two different baselines (65 mm, 160 mm) and a color or monochrome acquisition capacity. With its onboard processing capabilities powered by an Nividia Tegra K1 it can be integrated directly, typically without the no need for external computers. Using ego-motion estimations (VINS), the rc_visard determines its position and orientation with millimetric precision and very low latencies. The passive stereo sensor works in natural and artificial light. Precise ego-motion data is generated reliably, even in case of vibrations.

Model (Type)	**rc_visard [65|160] [m|c] - [|6]**
Baseline	65mm | 160 mm
Calibration	Factory-calibrated
Sensor type (global shutter)	Monochrome | Color
Resolution	1280 x 960 Pixels
Ego-motion	200 Hz, low latency
Depth image resolution, framerate and latency	1280 x 960 pixel (Full), 1.1 Hz, 1500 ms 640 x 480 pixel (High), 2.8 Hz, 520 ms
Connectors	M12 plug, 8 Pin, A-coded (power, GPIO) and M12 socket, 8 Pin, A-coded (GigE-network)
Dimensions	135 mm x 96 mm x 75 mm (W x L x H) for rc_visard 65 and 230 mm x 84 mm x 75 mm (W x L x H) for rc_visard 160
Weight	0.68 kg for rc_visard 65 and 0.86 kg for rc_visard 160
Supply voltage, maximum power consumption	24 V (18 V - 30 V), 25 W
Storage/transport temperature	-25° C to 70° C
Operating temperature	0° C to 50° C
Relative humidity (non-condensing)	20 % to 80 %
Environment	5 g Vibration, 50 g Shock
Warm-up time	No warm-up time required after power-up
Cooling	Passive
Approvals	CE, IP 54, NRTL, FCC, ROHS
Interface	WebGUI, REST-API, GenICam, GigEVision 2.0, ego-motion





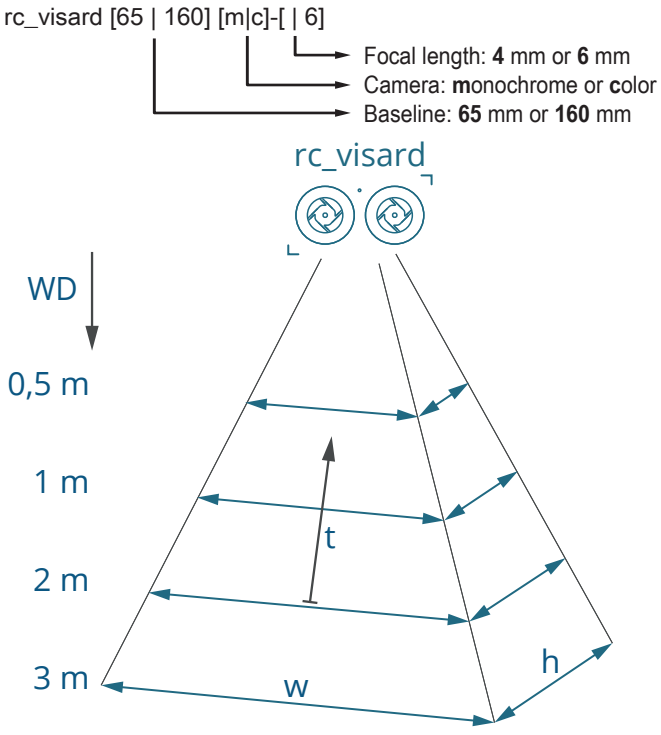


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Model	65 [m|c]	160 [m|c]	160m-6	Working Distance (WD)
Field of view	Horizontal: 61° Vertical: 48°	Horizontal: 61° Vertical: 48°	Horizontal: 43° Vertical: 33°	
Workspace w x h [mm]	530 x 450 1130 x 900 2330 x 1800 -	- 1040 x 900 2240 x 1800 3440 x 2700	- 640 x 600 1440 x 1200 2240 x 1800	@ 0,5 m WD @ 1 m WD @ 2 m WD @ 3 m WD
Lateral resolution [mm]	0.5 | 1.0 1.0 | 1.9 1.9 | 3.8 -	- 1.0 | 1.9 1.9 | 3.8 2.9 | 5.7	- 0.7 | 1.3 1.3 | 2.5 1.9 | 3.8	@ 0,5 m WD @ 1 m WD @ 2 m WD @ 3 m WD
Depth resolution [mm]	0.3 | 0.5 1.0 | 1.9 3.7 | 7.3 -	- 0.4 | 0.8 1.5 | 3.0 3.3 | 6.6	- 0.3 | 0.5 1.0 | 2.0 2.2 | 4.4	@ 0,5 m WD @ 1 m WD @ 2 m WD @ 3 m WD
Average depth accuracy [mm]	1.0 | 1.9 3.7 | 7.3 14.5 | 28.9 -	- 1.5 | 3.0 5.9 | 11.8 13.2 | 26.4	- 1.0 | 2.0 4.0 | 7.9 8.8 | 17.6	@ 0,5 m WD @ 1 m WD @ 2 m WD @ 3 m WD
Depth range t [m]	0.24 | 0.34 0.65 | 0.84 1.57 | 1.84 -	- 0.43 | 0.60 1.20 | 1.60 2.07 | 2.60	- 0.33 | 0.60 1.00 | 1.60 1.80 | 2.60	@ 0,5 m WD @ 1 m WD @ 2 m WD @ 3 m WD

Values shown are for [full | high] depth image quality.
Depth range: the height above the ground plane (or load carrier bottom) within which objects are detected, with the working distance set to the ground plane. Depth range depends on depth image quality and working distance. Depth range at closer distance is much smaller than depth range at far distance.

All rc_visards come with the same on-board software package that can be further enhanced by optional components from the rc_reason software suite – e.g. SLAM, TagDetect or ItemPick. An intuitive web interface enables easy set-up and configuration. Last, but not least, multiple sensors can easily operate without interference in the same work space.



Find more information on
doc.rc-visard.com

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