

## 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 four 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 it can be integrated directly, with typically no need for external computers. Using ego-motion estimations (VINS), the rc\_visards determine their 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	rc_visard 65 / rc_visard 160					
Baselines	65 mm / 160 mm					
Calibration	Factory-calibrated					
Mono/color	monochrome (m) and color (c) version available					
Shutter	Global					
Focal length	Standard: 4 mm 6 mm available for rc_visard 160m					
Field of view	4 mm lens: Horizontal 61°, Vertical 48° 6 mm lens: Horizontal 43°, Vertical 33°					
Image resolution	1280 x 960 pixels					
Computing unit	Nvidia Tegra K1					
Ego-motion	200 Hz, low latency					
Depth image resolution & FPS	1280 x 960 pixel (Full) @ 1 Hz (with StereoPlus license) 640 x 480 pixel (High) @ 3 Hz 320 x 240 pixel (Medium) @ 15 Hz 214 x 160 pixel (Low) @ 25 Hz					
Depth range (recommended)	rc_visard 65: 0.2 m to infinity rc_visard 160: 0.5 m to infinity					
	rc_visard	at 200 mm	at 500 mm	at 1000 mm	at 2000 mm	at 3000 mm
Lateral resolution (mm)	<b>65-4</b> <b>160-4</b> <b>160-6</b>	0.2 - -	0.5 0.5 0.3	0.9 0.9 0.6	1.9 1.9 1.3	2.8 2.8 1.9
Depth resolution (mm)	<b>65-4</b> <b>160-4</b> <b>160-6</b>	0.04 - -	0.2 0.1 0.06	0.9 0.4 0.3	3.6 1.5 1.0	8.0 3.3 2.2
Average depth accuracy (mm)	<b>65-4</b> <b>160-4</b> <b>160-6</b>	0.2 - -	0.9 0.4 0.3	3.6 1.5 1.0	14.2 5.8 3.9	32.1 13.0 8.8





# roboception

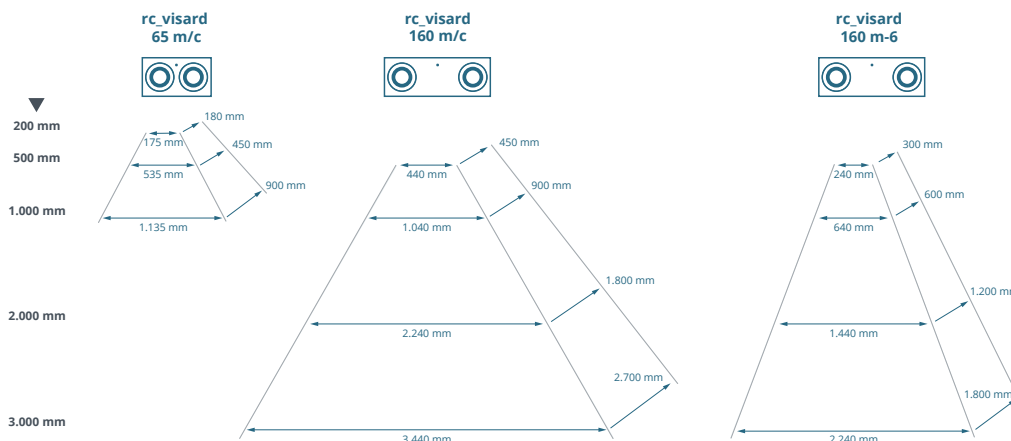
Connectors	M12 plug, 8 Pin, A-coded (power, GPIO) M12 socket, 8 Pin (GigE-network)	
Dimensions	135 mm x 96 mm x 75 mm (W x L x H)	
Weight	0.68 kg	
Supply voltage	18 to 30 V	
Max power consumption	25 W	
Storage/transport temperature	-25° C to 70° C	
Operating temperature	0° C to 50° C	
Relative humidity (non-condensing)	20 % to 80 %	
Vibration	5 g	
Shock	50 g	
Cooling	Passive	
IR cutoff	650 nm	
Approvals	CE, IP 54, NTRL, FCC	
Interface	WebGUI, REST-API, GenICam, GigEVision 2.0, UDP based ego-motion interface	
Warm-up time	No warm-up time required after power-up	

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 an 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](https://doc.rc-visard.com)

Inquiries via [sales@roboception.de](mailto:sales@roboception.de)

Possible workspace range of the rc\_visard variants:



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