MultiSense-SL

Compact & Accurate 3D

Carnegie Robotics™

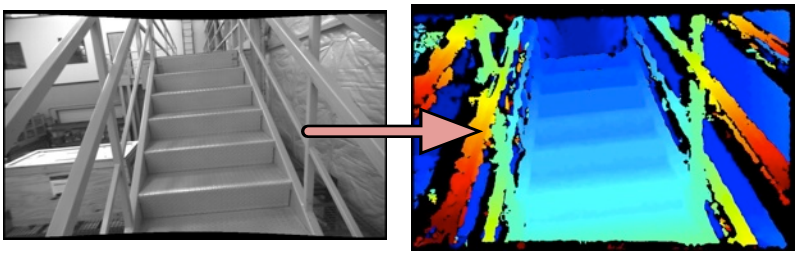
MultiSense-SL

Compact & Accurate 3D Data Collection

Physical Details	
Width & Height	18 cm x 18cm
Depth	13 cm
Bounding Circle	20 cm
Weight	2.6 kg
Temperature Range	-10°C to 50°C
Input Voltage	24v DC nominal
	18v to 28v max
Power Draw	20w nominal
	50w with full lighting
Physical Interfaces	Gigabit Ethernet
	Opto-Isolated Input
	Opto-Isolated Output

Stereo Details	
Lens FOV	80° x 45° f/1.4
Algorithm	Semi-global-matching
Output @ 2 megapixel	15 FPS, 240 disparities
@ 1 megapixel	30 FPS, 240 disparities
@ 0.5 megapixel	60 FPS, 240 disparities
@ VGA resolution	70 FPS, 240 disparities
Depth Resolution	
@ 1 meter	± 0.31 mm
@ 10 meter	± 30.0 mm
Range	0.4 m to 18 m
Imager Dynamic Range	60 dB (90 dB in HDR)
Imager Options	Greyscale & Color

Laser Details		
Data Rate		43,200 points / second
Scan Line Resolution		0.25°
Spindle Resolution		0.04°
Range		0.1 m to 30 m
Accuracy	< 10 m	± 30 mm
	> 10 m	± 50 mm



Stereo algorithms transform left and right images into 3D depth maps at 15 FPS or more

The stereo and laser data can be continuously combined into high resolution & high accuracy 3D maps

Images courtesy of Carnegie Mellon University

Software Toolkits	Base	A	B	C
C++ library	x	x	x	x
Test binaries	x	x	x	x
ROS node	x	x	x	x
Single pose 3D reconstruction & colorization		x	x	x
Visual odometry			x	x
Continuous 3D reconstruction & colorzation				x

Carnegie Robotics mission is to build highly reliable robotics products

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