



MULTISENSE S27

An ultra-rugged stereo computer sensor with on-board processing, intelligently designed to facilitate complete and stand-alone sensor solutions in harsh outdoor environments.

MULTISENSE S27

PHYSICAL

Height:	6.0 cm
Width:	35.0 cm
Depth:	16.0cm
Construction:	Aluminum
Mounting:	3x M6 or 3x 1/4" -20

ENVIRONMENTAL

Operating Temperature:	-40 to 80 C
Environmental Rating:	IP 67
Operating Relative Humidity:	93%

RUGGEDIZATION

Regulatory:	RoHS
Shock:	100 G
Vibration:	15 Grms
Gravel Bombardment:	Rock chip resistant objective elements
Blunt Object Strike:	Resilient silicone rubber lens hoods
Water Accumulation:	Hydrophobic lens coating
Mud/Grime Accumulation:	100% convex design

STEREO IMAGE SENSOR

Color:	Monochrome
Resolution:	1920 x 1280
Shutter Type:	Global Shutter
Frame Rate:	30 FPS max

COLOR IMAGE SENSOR

Color:	RGB
Resolution:	1920 x 1188
Shutter Type:	Rolling shutter, backside illuminated
Frame Rate:	30 FPS max

STEREO VISION

Algorithm:	SGM (Semi-global stereo matching)
Baseline:	27.0 cm
Stereo Algorithm Speed:	30 FPS @ 0.5MP, 256 Disp.
Range:	1.4 - 30 m
View Angle:	24° below horizontal

OPTICS

Color Field of View (Raw):	135° H x 84° V
Stereo Field of View (Raw):	91° H x 54° V
Focal Length:	3.9mm (stereo)/2.5mm (color)

ON-BOARD PROCESSING

Processor:	Quad Core ARM A53
Real-Time Processing:	ARM Cortex R5
GPU:	ARM Mali-400 MP2
RAM:	4 GB DDR4 w/ ECC
Operating System:	Petalinux
Available Programmable Logic:	Up to 150,000 logic cells

ELECTRICAL

Voltage (range):	9-36 VDC
Overvoltage:	48 VDC
Cold Cranking:	6 V
Load Dump:	Up to 2000 J
Power (nominal):	10-15 W (algorithm dependant)

INTERFACE

Network Interface:	1 Gigabit ethernet port (1000BASE-T)
Protocol:	CAN, CAN-FD
Connector 1:	8-pin Deutsch
Connector 2:	8-pin x-coded M12

