ZED

ZED Camera and SDK Overview

ZED DEPTH SENSOR The ZED Sensor is a stereo camera that provides high definition images and accurate measure of the environment depth. It has been designed for the most challenging applications, including autonomous vehicle control, mobile mapping, aerial mapping, security, and surveillance.

STEREOLABS

ZED Detailed Specifications

Technical Specifications

Camera

Output Resolution	Side by Side 2x (2208x1242) @15fps 2x (1920x1080) @30fps 2x (1280x720) @60fps 2x (640x480) @100fps
Output Format	YUV 4:2:2
Field of View	Max. 110° (D)
Depth Range	1 m to 15 m (3.5 to 49 ft)
Baseline	120 mm (4.7")
Interface	USB 3.0 - Integrated 1.5m cable

Electronics

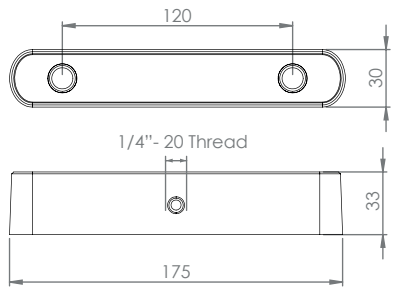
Sensor Type	1/2.7"
Active Array Size	4M pixels per sensor
Focal Length	2.8mm (0.11") - f/2.0
Shutter	Electronic synchronized rolling shutter
Pixel Size	2µm

Physical

Dimensions	175x30x33 mm (6.89 x 1.18 x 1.3")
Weight	159g - 0.35 lb
Power	380mA / 5V USB Powered
Operating Temperature	0°C to +45°C (32°F to 113°F)

Mechanical Drawing

Dimensions are in mm



System Requirements

Win 7, Win 8/8.1 32/64 bit
Linux (Ubuntu 12.04/14.04) 64 bit
USB3.0 Interface

SDK Requirements

Dual-core 2,4GHz or faster processor
Minimum 4GB RAM
Nvidia GPU (1) 1GB Memory
CUDA 6.5

(1) Compute capability ≥ 2.0
Compatible with NvidiaTegra K1.

C++ Compiler:
Windows : Visual Studio 2012 or Visual Studio 2013
Linux : GNU Compiler collection (GCC)

Camera Control

The ZED Driver provides low level access to the device and related sensors. The Driver allows control of common parameters such as frame rate, exposition time, white balance and gain. The API also provides access to different resolutions such as side-by-side 1080p30fps, 720p60fps, VGA at 100fps, and a maximal resolution of 2208x1242 pixels at 15fps.

Functional SDK Diagram