

Optical flow sensor board

Users Manual

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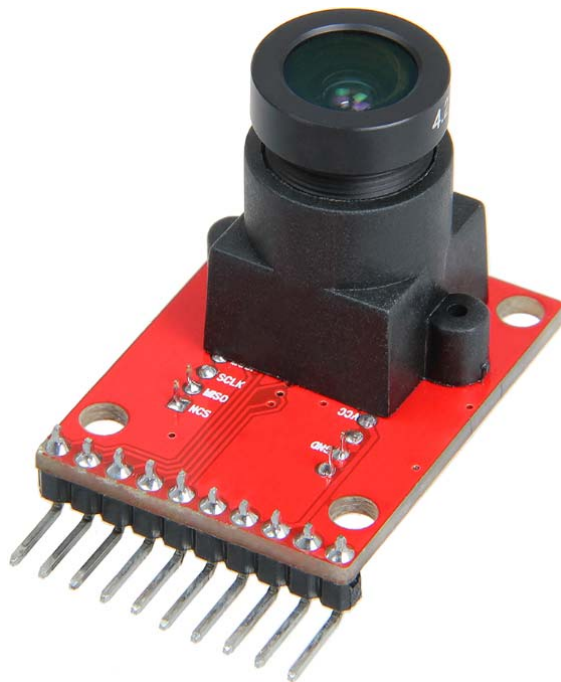
Date: Mar 2 nd, 2015

Reviewer: Jesse, Jenny,Andy,Chueng

Date: Mar 11th, 2015

Approver: Linda.Fan

Date: Mar12th, 2015



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1 Introduction

This is the optical flow sensor board that is based on the optical effect of mouse sensor that allows you hover with your multi-rotor platform at low altitudes (like indoor environment) without the need for GPS. This device also has more advanced features concerning odometry and obstacle avoidance.

Specifications:

Standard 4.2mm IR MeGa lens

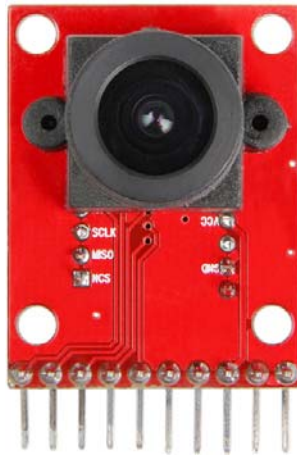
High speed motion detection

ADNS-3080 optical sensor

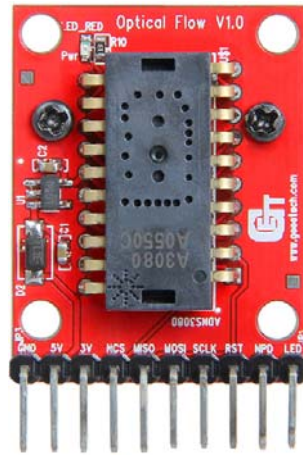
Up to 6400 fps update rate

30x30 pixel resolution

1.1 Overview and Hardware Resources



Front



rear

1-1

Dimension: 40mm*25mm*34mm

Net weight: 11.6g

1.2 Software Resources

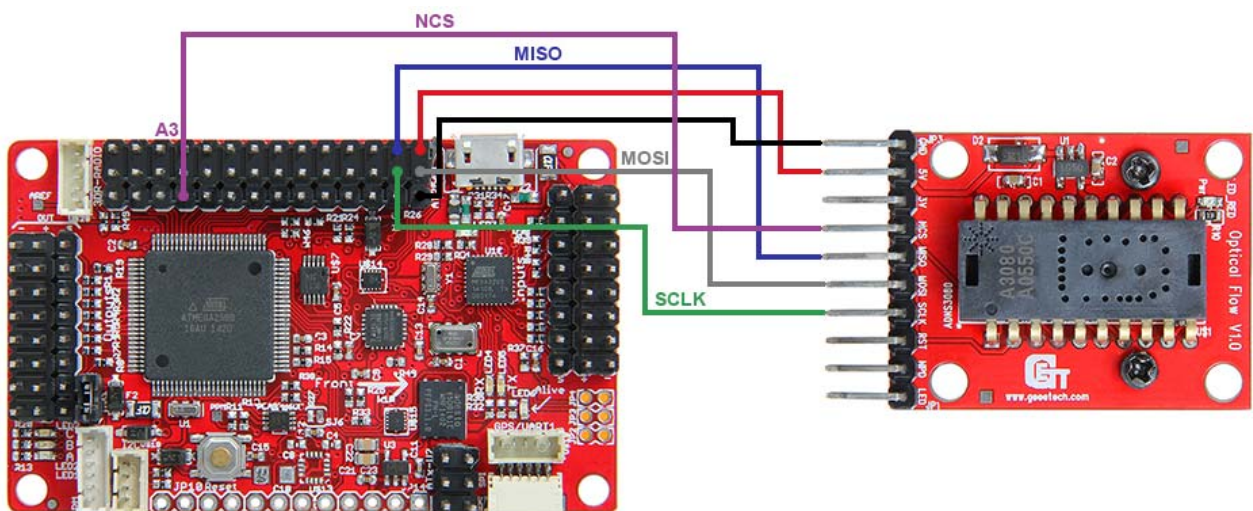
1.3 Source

MissionPlanner:

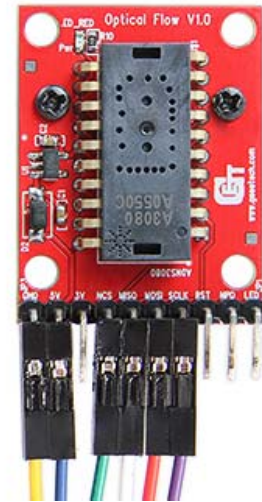
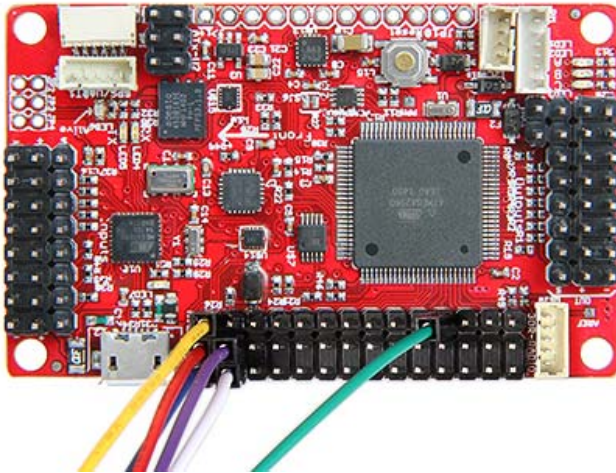
<http://www.geeetech.com/wiki/images/8/85/MissionPlanner-1.2.59.rar>

2 Interfaces

2.1 Interface Layout



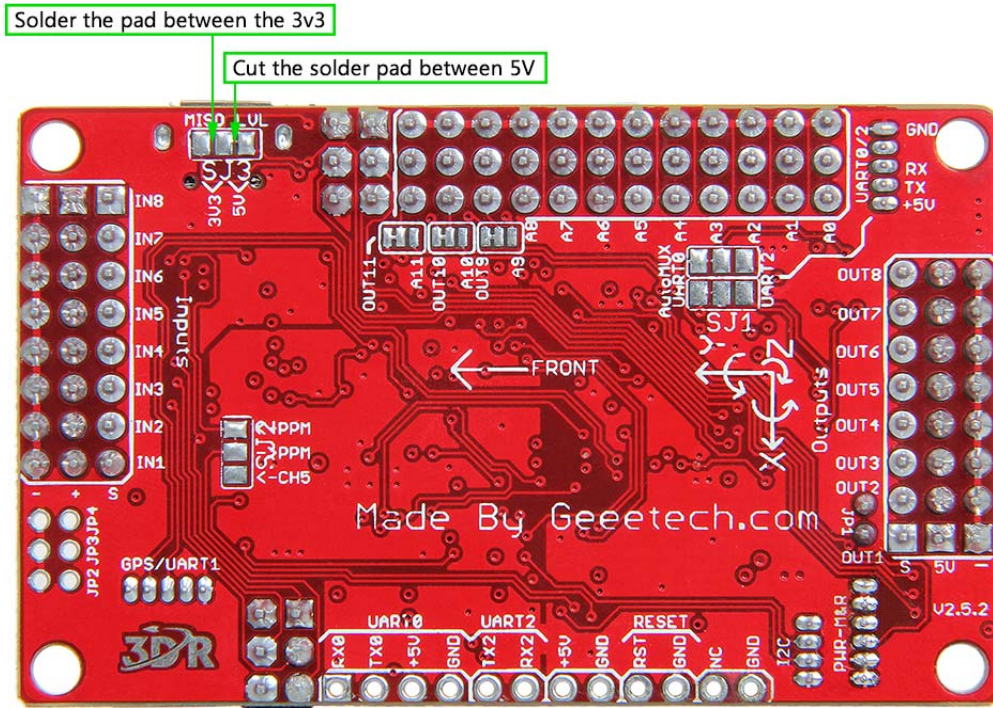
2-1 Connect optical flow sensor to APM 2.52



2-2 Connect optical flow sensor to APM 2.52

Note please:

1. Cut and re-solder the MISOLVL jumper on the back of the board to switch the MISO pin to work on 3.3v. This is critical to ensure the optical flow sensor does not interfere with the M PU6000.
2. After you connect all the board and accessories, please take the first flight at places with wide-open space, please refer to the instructions of APM2.52 or APM 2.6 to operate.



2-3

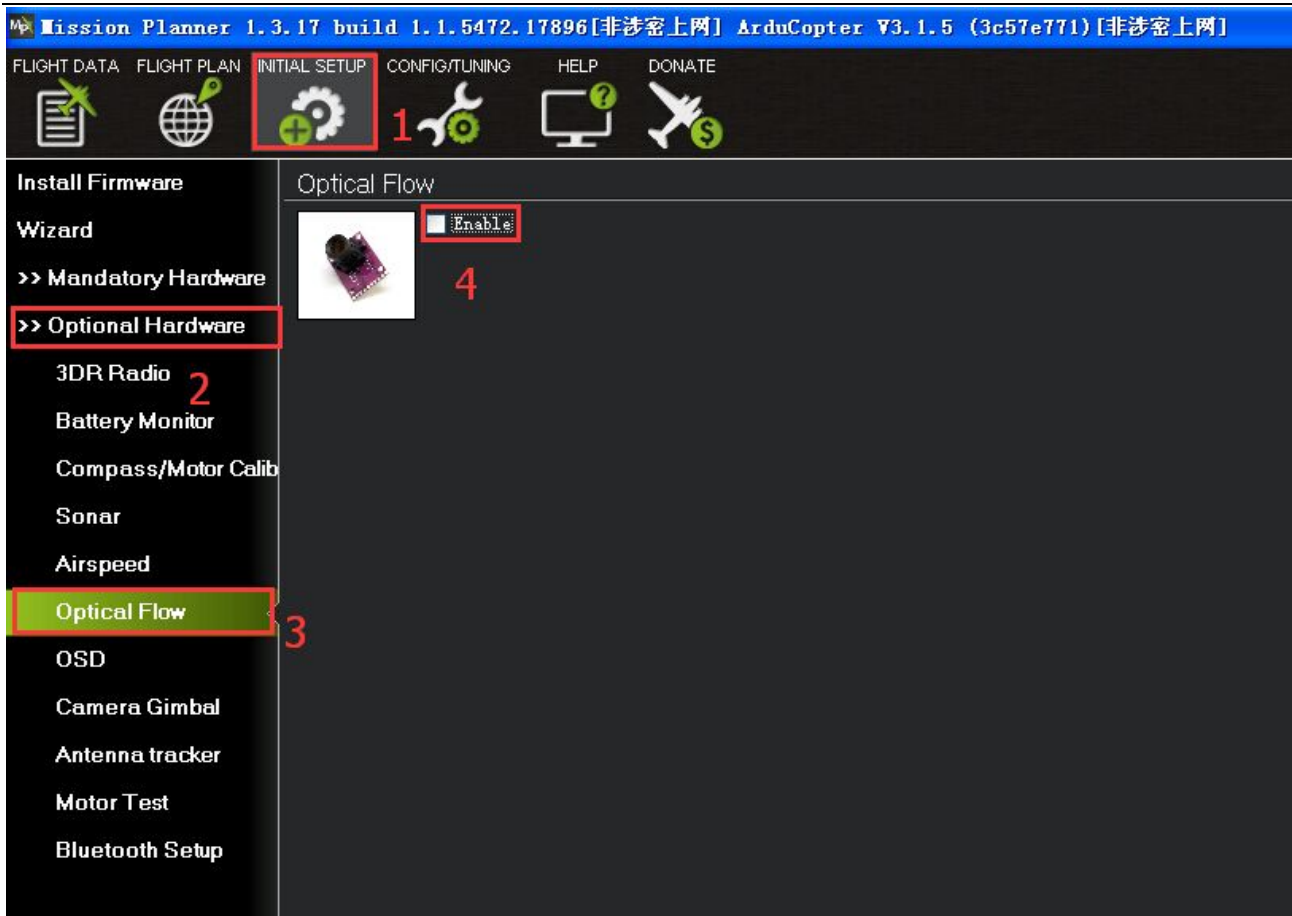
3 Software Setting

1. Open Mission Planner, choose the correct COM port and baud rate, then click connect icon.



2-4

2. Enable the optical flow sensor referring to the following steps, tick "Enable".



2-5