



PX4FLOW – Smart Camera

QUICK START – HARDWARE VERSION 1.3

Description

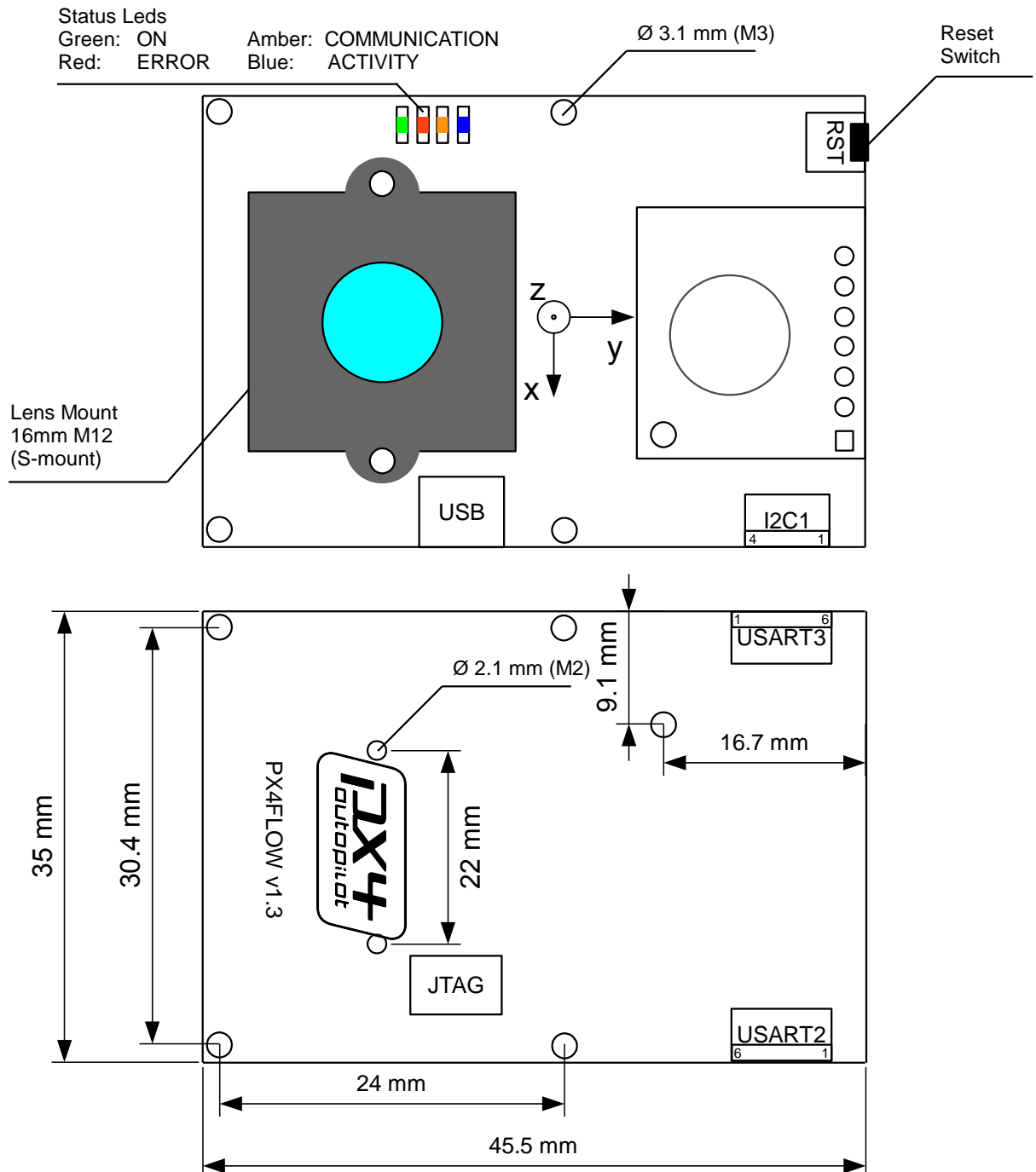
PX4Flow is an optical flow smart camera. It has a native resolution of 752x480 pixels and calculates optical flow on a 4x binned and cropped area at 250 Hz (bright, outdoors), giving it a very high light sensitivity. Unlike many mouse sensors, it also works indoors and in low outdoor light conditions without the need for an illumination LED at 120 Hz (dark, indoors). It can be freely reprogrammed to do any other basic, efficient low-level computer vision task.

<http://pixhawk.ethz.ch/px4/>

Features

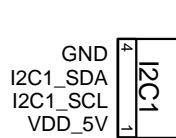
- 168 MHz Cortex M4F CPU (128 + 64 KB RAM)
- 752x480 MT9V034 image sensor
- L3GD20 3D Gyro
- 16mm M12 lens (IR block filter)
- Size 45.5 mm X 35 mm
- Power consumption 115mA / 5V

Connectors and Dimensions

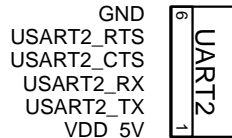


Pinout and absolute maximum Ratings

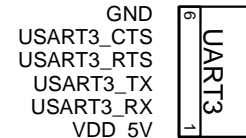
- Input: 4.3-6 V (VDD_5V), 115mA onboard use, max. 800 mA for peripheral load
- Output: 3.3 V (VDD_3V3), 500 mA



Mates 4 pos Hirose DF13 housings
Part # DF13-4S-1.25C
Crimp terminals
Part # DF13-2630SCF (for AWG 26-30 wire)



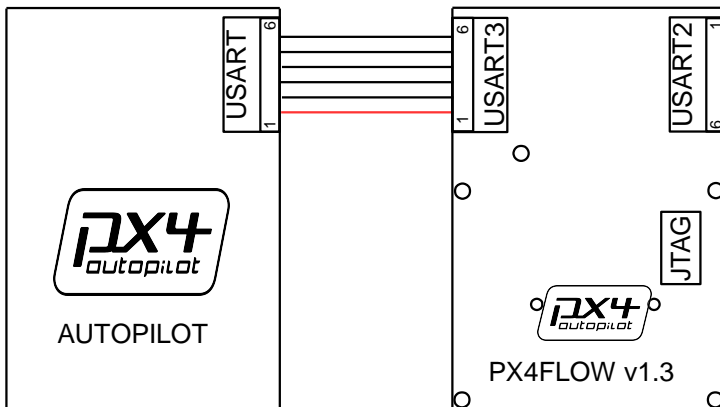
Mates 6 pos Hirose DF13 housings
Part # DF13-6S-1.25C
Crimp terminals
Part # DF13-2630SCF (for AWG 26-30 wire)



Mates 6 pos Hirose DF13 housings
Part # DF13-6S-1.25C
Crimp terminals
Part # DF13-2630SCF (for AWG 26-30 wire)

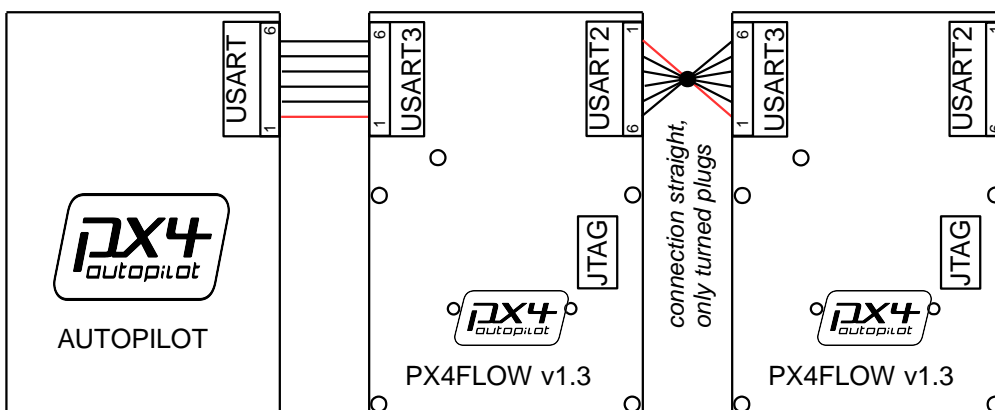
Assembly Instructions

• Slave Configuration



- PX4FLOW acts as a slave and is connected to a host device e.g. autopilot board using the USART3 port.

• Daisy Chain Configuration



PX4FLOW modules can be connected in series to attach several modules on a single USART port of a host device

Open Hardware License

PX4FLOW open hardware design, following the OSHW 1.1 definition licensed under the Creative Commons Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license.

UNLESS OTHERWISE MUTUALLY AGREED TO BY THE PARTIES IN WRITING, LICENSOR OFFERS THE WORK AS-IS AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING THE WORK, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCH EXCLUSION MAY NOT APPLY TO YOU.

EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

<http://creativecommons.org/licenses/by-sa/3.0/>