Seagull #IMU

User Manual

Product: Seagull #IMU
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CONTENTS

GENERAL INFORMATION 3

#IMU INTEGRATION 4

- CALIBRATING #IMU 4
- MAGNETOMETER 4
- ACCELEROMETER 4
- GYROSCOPE 4

PORT / PIN DEFINITIONS 5

TECHNICAL SPECIFICATIONS 5

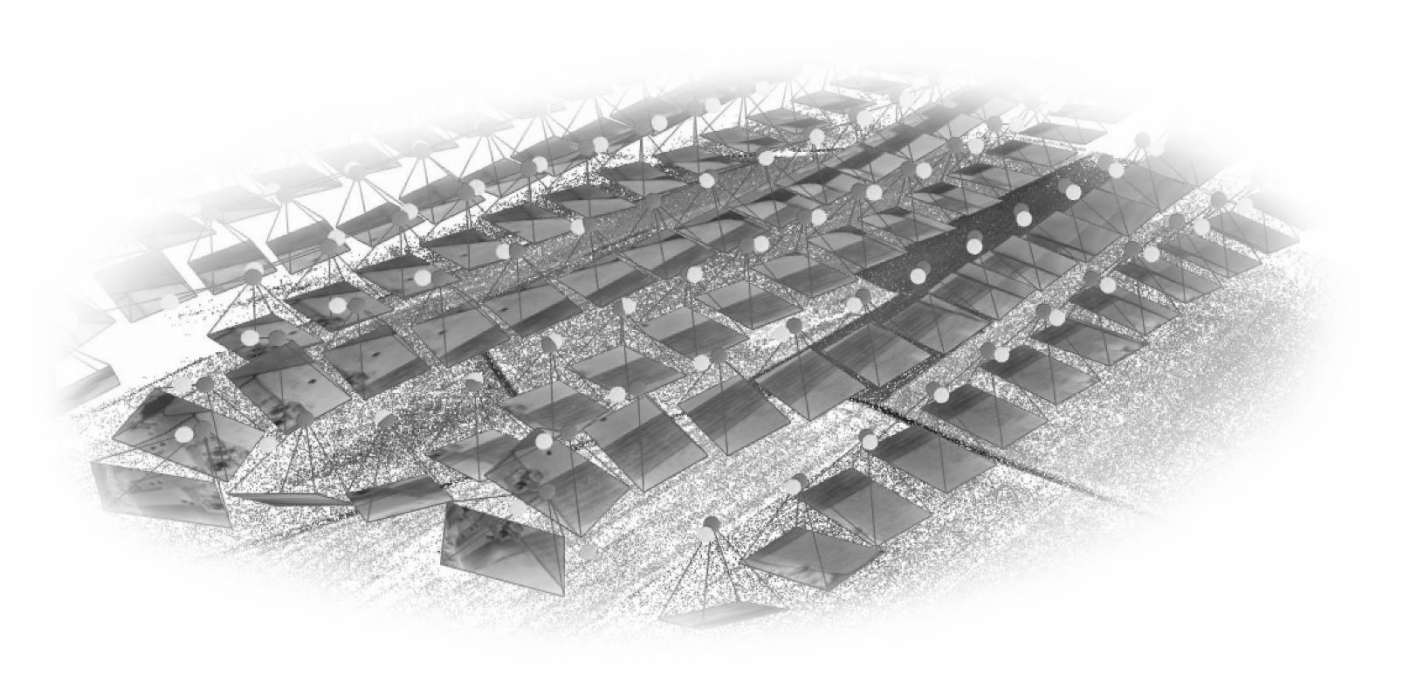
GENERAL INFORMATION

***** Please read this manual thoroughly before connecting Seagull #IMU *****

Seagull #IMU is an inertial measurement module designed for use with #MAP-X2. It enables #MAP-X2 to record inertial data for photos captured. Such extra data will help to increase accuracy and reduce processing times for generating orthophotos and 3D models - up to 40%. Highly recommended for professionals looking to improve their workflow and the accuracy of data generated.

#IMU features:

- High sensitivity - update rate at 100Hz (10mS)
- Accelerometer, Gyroscope, Magnetometer
- Integrates to #MAP-X2 to log azimuth data for photos
- Up to 40% faster processing in Pix4D - when using IMU data!



#IMU INTEGRATION

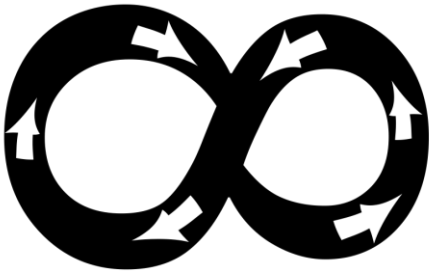
Use the cable with BLUE SLEEVE to interface with Seagull products such as #MAP-X2. Once #IMU has been plugged into the #MAP-X2 – you will need to enable the #IMU and calibrate it via #MAP-X2 config executable. When it has been enabled and calibrated – you do not need to repeat calibration process, as the offsets are saved within #MAP-X2.

Calibrating #IMU

Magnetometer

Hold the sensor parallel to the ground and perform figure 8 pattern as shown in the illustration below:

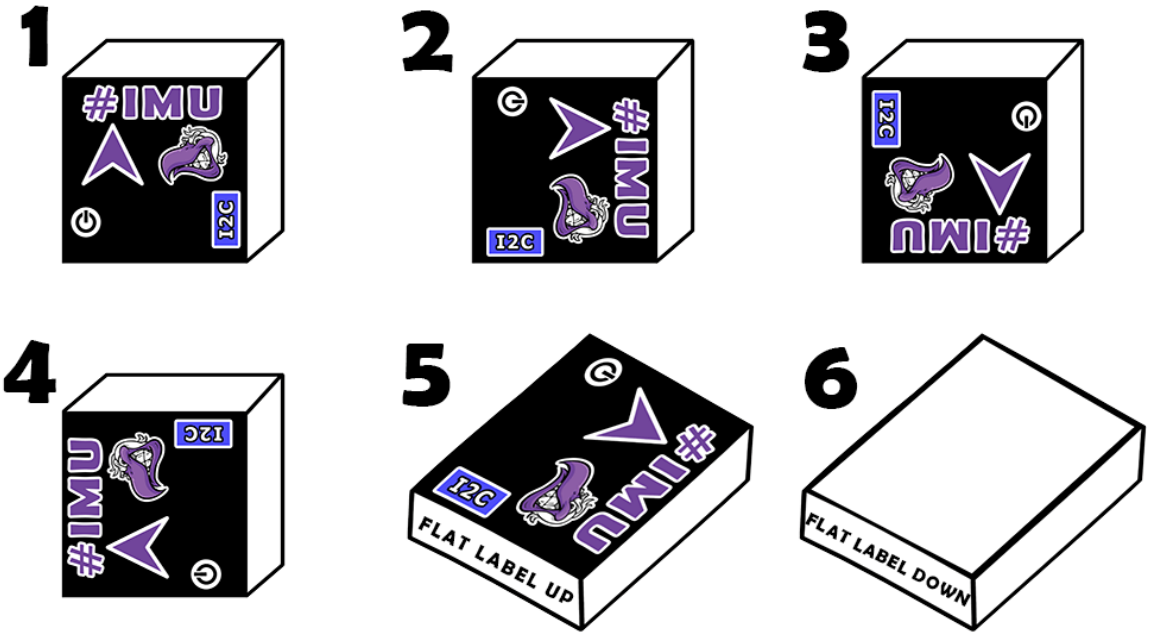
Once the magnetometer is fully calibrated the bar on the config will be full green.



Accelerometer

Place the #IMU in all of the six position as illustrated and hold it for few seconds in each of the positions.

Once the accelerometer is fully calibrated the bar on the config will be full green.

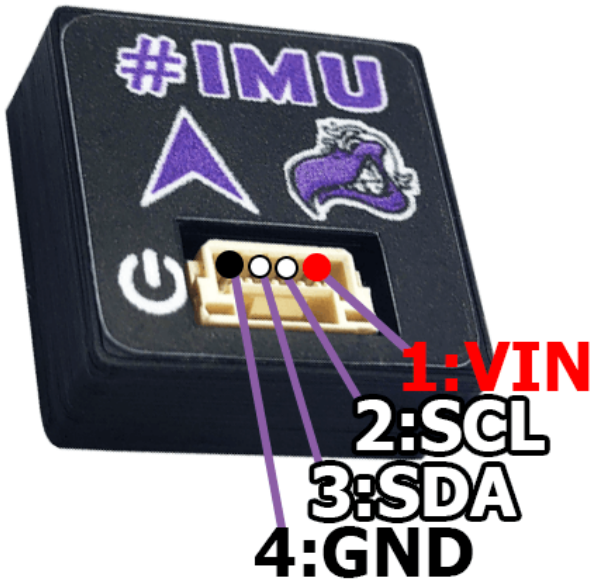


Gyroscope

Simply place it in any stable position for few seconds until the GYRO value on the config bar is full green.

PORT / PIN DEFINITIONS

PORT	DEFINITION	PINS			
I2C	I2C Port	1: VIN (3.9 -12V)	2: SCL (3.3V)	3: SDA (3.3V)	4: GND
⏻	Power LED				



*Do not exceed the voltages specified for the VIN PIN and **do not exceed communication voltage levels for the SCL/SDA pins - if used with other hardware than Seagull UAV products.**

TECHNICAL SPECIFICATIONS

- Supply voltage: 3.9 – 12v (5v recommended – do NOT exceed 12v!)
- Communication level: 3.3V
- Current draw: 29.3mA
- Accelerometer ranges: ±2g/±4g/±8g/±16g
- Gyroscope ranges: ±125°/s to ±2000°/s
- Magnetometer: magnetic field ranges ±1300µT (X & Y axis) and ±2500µT (Z axis) with resolution of 0.3µT
- Dimensions: 19mm x 19mm x 7.8mm
- Weight: 3g

