XinaBox Datasheet SI01 - IMU 9DoF

Contents

Overview

This xCHIP module comprises 3 sensors, an accelerometer (https://en.wikipedia.org/wiki/Accelerometer) that measures movement of the X,Y and Z axes, a magnometer (https://en.wikipedia.org/wiki/Magnetometer) that computes orientation to magnetic north, on the X,Y and Z axes, therefore we can calculate which direction we are facing as well as the angle at which we are leaning. The last sensor is the gyroscope (https://en.wikipedia.org/wiki/Gyroscope) that measures our orientation to the center of the earth.

Product Highlights

- 3 acceleration channels, 3 angular rate channels, 3 magnetic field channels-nine degrees of freedom (9DOF - Nine Degrees of Freedom)

Applications

- Indoor navigation
- Smart user interfaces
- Advanced gesture recognition
- Gaming and virtual reality input devices
- Display/map orientation and browsing

Specifications

- Based on LSM9DS1 From ST
- 3 acceleration channels, 3 angular rate channels, 3 magnetic field channels
- ±2/±4/±8/±16 g linear acceleration full scale
- ±4/±8/±12/±16 gauss magnetic full scale
- ±245/±500/±2000 dps angular rate full scale
- 16-bit data output
- SPI / I^{2}C serial interfaces
- Programmable interrupt generators
- Embedded temperature sensor
- Embedded FIFO
- Position and motion detection functions
- Click/double-click recognition
- Intelligent power saving for handheld devices
- Operating temperature range: -40°C to 85°C

External Links

Documents

- LSM9DS1 From ST Micro Electronics (http://www.st.com/content/ccc/resource/technical/document/datasheet/1e/3f/2a/d6/25/eb/48/46/DM00103319.pdf/files/DM00103319.pdf/jcr:content/translations/en.DM00103319.pdf)
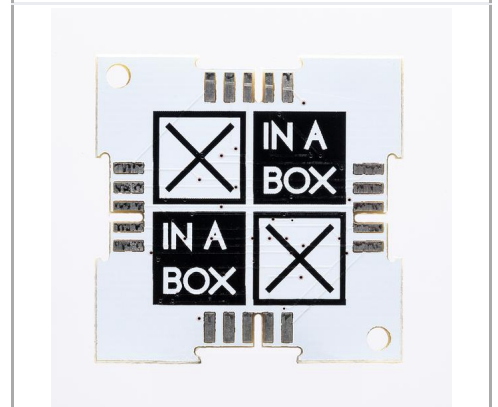
Shop

- Buy SI01 (https://xinabox.cc/collections/sensors/products/SI01)

GitHub

- SI01 on GitHub (https://github.com/xinabox/xSI01)

SI01 - IMU 9DoF (LSM9DS1)

Front

Back

⊠CHIP	
Main Category	Sensor
Sub Category	IMU
Introduced	1 January 2017
Current version	1.0.1
Current version date	1 January 2017
Dimensions	
Size	2x2U (32x32mm)
Weight	3 g
Height	2.5/1/0 mm
Main Chip Set	
Main Chip	LSM9DS1
I²C Configuration	
Default Address	0x1C 0X6A
Alternative Addresses	0x1E 0X6B
Change Setting	Solder