



# Grove - IMU 9DOF

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Wiki: [http://www.seeedstudio.com/wiki/Grove - IMU 9DOF](http://www.seeedstudio.com/wiki/Grove_-_IMU_9DOF)

Bazaar: <http://www.seeedstudio.com/depot/Grove-IMU-9DOF-p-1728.html>

## Document Revision History

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Revision	Date	Author	Description
1.0	Sep 21, 2015	Victor.He	Create file

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*For physical injuries and possessions loss caused by those reasons which are not related to product quality, such as operating without following manual guide, natural disasters or force majeure, we take no responsibility for that.*

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## 1. Introduction

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Grove - IMU 9DOF is a high performance 9-axis motion tracking module, which is based on MPU-9150. The MPU-9150 is the world's first integrated 9-axis motion tracking device designed for the low power, low cost, and high performance requirements of consumer electronics equipment including smartphones, tablets and wearable sensors. MPU-9150 features three 16-bit ADC for digitizing the gyroscope outputs and three 16-bit ADCs for digitizing the accelerometer outputs and three 13-bit ADCs for digitizing the magnetometer outputs.



## 2. Features

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- I2C interface
- Low cost
- 400kHz Fast Mode I2C for communicating with all registers
- Digital-output X-, Y-, and Z-Axis angular rate sensors (gyroscopes) with a user-programmable full-scale range of  $\pm 250$ ,  $\pm 500$ ,  $\pm 1000$ , and  $\pm 2000^\circ/\text{sec}$
- Digital-output 3-Axis accelerometer with a programmable full scale range of  $\pm 2g$ ,  $\pm 4g$ ,  $\pm 8g$  and  $\pm 16g$
- 3-axis silicon monolithic Hall-effect magnetic sensor with magnetic concentrator

### 3. Parts list

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**Part List:**

- Grove - IMU 9DOF
- [Grove - Universal 4 Pin 20cm Unbuckled Cable](#)