Overview

The Arduino 9 Axes Motion Shield is based on the BNO055 absolute orientation sensor (datasheet) from Bosch Sensortec GmbH.

The BNO055 is a System in Package (SiP), integrating a triaxial 14-bit accelerometer, a triaxial 16-bit gyroscope with a range of ±2000 degrees per second, a triaxial geomagnetic sensor and a 32-bit microcontroller running the BSX3.0 FusionLib software.

The sensor features three-dimensional acceleration, yaw rate and magnetic field strength data each in 3 perpendicular axes.

It also provides the sensor fusion signals such as

- Quaternion
- Euler angles
- Rotation vector
- Linear acceleration
- Gravity vector

In addition, it incorporates an intelligent interrupt engine, which allows for triggering interrupts based on

- slow or no motion recognition
- any motion (slope) detection
- high-g-detection.

The shield is TinkerKit compatible, which means you can quickly create projects by plugging TinkerKit modules to the board.

FEATURES

Chip based	BOSCH Sensortech BNO055
Thinker Kit interface	2x TWI, 2x OUT, 2x IN
Interfaces with Arduino Board	TWI
Motion sensors	Triaxial accelerometer, Triaxial gyroscope, Triaxial geomagnetic
Fusion Engine	32-bit microcontroller with BSX3.0 FusionLib

GENERAL

Operating Voltage	5 / 3.3 V
Current needs	10 mA
PCB size	53 x 68.5 mm
Weight	0.017 Kg
Product Code	A000070