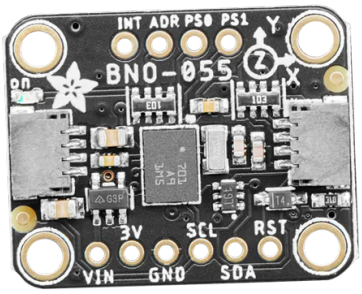
9-DOF Absolute Orientation IMU Fusion Breakout

Product Overview

09/08/2022

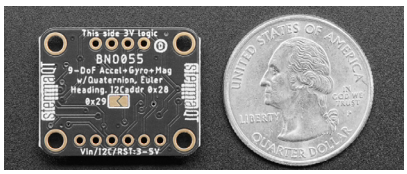
For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description



Adafruit 9-DOF Absolute Orientation IMU Fusion Breakout is designed to turn the sensor data from an accelerometer, gyroscope, and magnetometer into 3D space orientation. This breakout board features the BNO055, a smart 9-DOF sensor that provides the data over the I²C interface. The BNO055 sensor can output various data including absolute orientation (Euler Vector and Quaternion), angular velocity vector, acceleration vector, magnetic field strength vector, linear acceleration vector, gravity vector, and temperature. Both Arduino (C/C++) and CircuitPython libraries are available for use with any microcontroller or computer board and get data readings in under 5 minutes. The 9-DOF Absolute Orientation IMU Fusion Breakout board is RoHS 2 compliant and features STEMMA QT connectors for the I²C bus and is 3V and 5V logic safe.

Features



- Absolute Orientation (Euler Vector, 100Hz):
  - Three-axis orientation data based on a 360° sphere
- Absolute Orientation (Quatenrion, 100Hz):
  - Four-point quaternion output for more accurate data manipulation
- Angular Velocity Vector (100Hz):
  - Three-axis of 'rotation speed' in rad/s
- Acceleration Vector (100Hz):
  - Three-axis of acceleration (gravity + linear motion) in m/s^2
- Magnetic Field Strength Vector (20Hz):
  - Three-axis of magnetic field sensing in micro Tesla (uT)
- Linear Acceleration Vector (100Hz):
  - Three-axis of linear acceleration data (acceleration minus gravity) in m/s^2
- Gravity Vector (100Hz):
  - Three-axis of gravitational acceleration (minus any movement) in m/s^2
- Temperature (1Hz):
  - Ambient temperature in degrees celsius
- RoHS 2 compliant

Mouser Part Number

View Part

To learn more, visit https://www.mouser.com/new/adafruit/adafruit-bno055-imu-stemma-qt/