Introduction

The Fermion: BMM350 3-axis geomagnetic sensor is designed to measure magnetic fields across three vertical axes and functions as a compass. Utilizing Bosch's patented FlipCore technology, this sensor provides accurate spatial orientation without the need for calibration. It maintains compatibility with the previous BMM150 series while delivering enhanced performance, including lower power consumption and improved measurement capabilities. The BMM350 is powered by the groundbreaking TMR (tunnel magnetoresistance) technology, coupled with a distinctive field shock recovery feature that fortifies the device against interference from external magnetic fields, guaranteeing consistent high-precision measurements.

Field Shock Recovery for Stable Performance

The BMM350 is equipped with a robust field shock recovery function, powered by TMR technology. This ensures that the sensor maintains high performance even when exposed to external magnetic field disturbances. The shock recovery feature allows the sensor to provide consistent, reliable data in challenging environments, making it well-suited for use in mobile or dynamic systems.

High Sample Rate for Real-Time Data

Supporting a high sample rate of up to 400Hz, the BMM350 is capable of providing real-time, precise data critical for applications that demand rapid response times, such as AR/VR systems, geomagnetic navigation in AGVs, and drone flight control. The high sample rate ensures accurate spatial orientation and movement tracking.

Wide Measurement Range and High Resolution

With a measurement range of ±2000μT across all three axes (XYZ), the BMM350 can accurately capture magnetic fields over a broad spectrum. This expanded range is complemented by a high resolution of 0.1μT, allowing the sensor to detect even the smallest fluctuations in the magnetic field. This makes it ideal for high-precision

applications in advanced technology systems.

Comparison Table of BMM150 and BMM350

	BMM150	BMM350
Working Current	0.5mA (Normal Mode)	200μA (Normal mode @100Hz sample rate)
Sample rate	10Hz	400，200，100，50，25，25/2，25/4，25/8，25/16 (Optional)
Measurement Range	±1300μT（x,y axis) ±2047μT（z axis)	±2000μT（xyz axis)
Resolution	0.3μT	0.1μT

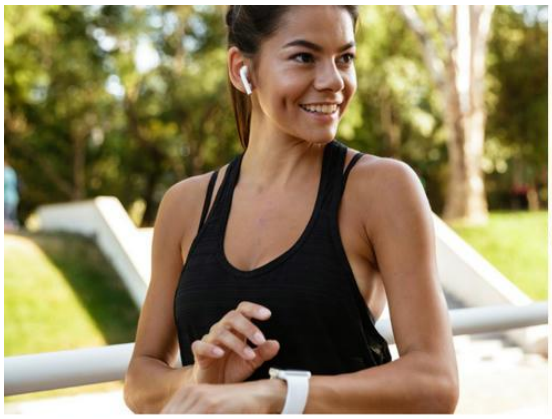
Applications

AR / VR

E-compass

AGV Geomagnetic Navigation

Drones



Wearables & hearables

AR & VR

Specification

Working voltage: 3.3~5V DC

Working current: 200μA (Normal mode@100Hz Sample Rate)

Zero-fild offset: ±25μT

Protocol: I2C

Working Temperature: -40~+85℃

Start-up time: 2.5ms

Documents

Product wiki

Shipping List

Fermion: BMM350 Triple Axis Magnetometer Sensor x1

XH2.54-10pin Header x1