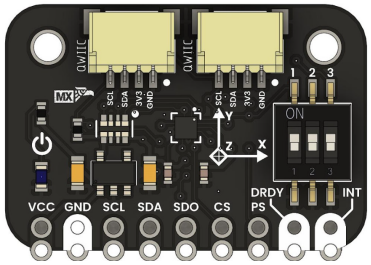
UNIT Magnetometer BMM150 Module Product Brief

A passive buzzer module is a sound-generating device that produces tones when controlled by a PWM signal from a microcontroller.

Version: 1.0 Modified: 2025-05-19

Introduction

The BMM150 is a compact, ultra-low-power 3-axis digital magnetometer designed for precise magnetic field sensing. It is ideal for applications such as electronic compasses, inertial navigation, and orientation detection in embedded systems. Supporting both I²C and SPI interfaces, the BMM150 integrates easily with popular microcontrollers like Arduino, ESP32, and Raspberry Pi. Its efficient power consumption and robust performance make it an excellent choice for portable devices, IoT projects, and wearable technology.



Functional Description

- 3-axis digital magnetometer
- I²C and SPI interfaces
- Ultra-low power consumption
- High sensitivity and resolution

Electrical Characteristics

- Supply Voltage: 3.3V
- Operating Current: 0.5 mA (typical)

Features

- Axes: 3 (X, Y, Z)
- Measurement Range: ±1300 µT
- Resolution: 0.3 µT
- Power Consumption:
- Interfaces:
- Supply Voltage: 3.3 V
- Operating Temperature:
- Additional Signals:
- DRDY (Data Ready)
- INT (Programmable Interrupt)
- SDO/ADDR (I²C address select / SPI MISO)

Applications

- Electronic compasses
- Inertial navigation systems
- Orientation detection
- Augmented reality
- Robotics
- Wearable technology
- IoT devices
- Smart home applications

Settings

Interface Overview

Interface	Signals / Pins	Typical Use
-	-	-

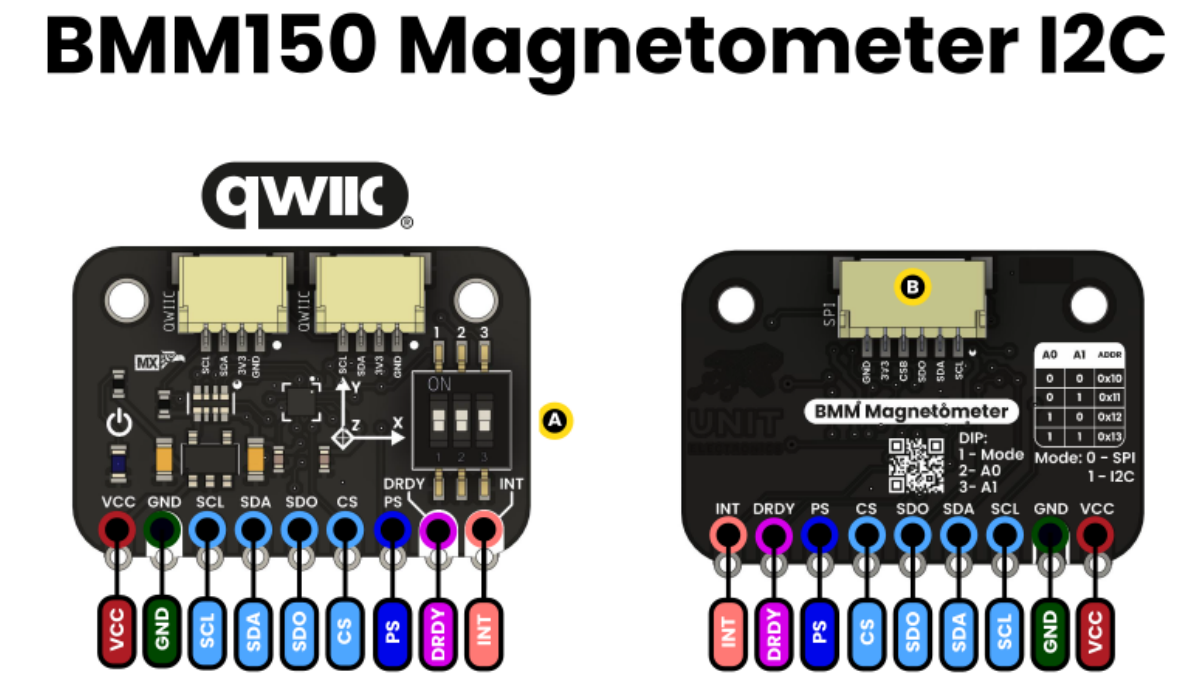
Supported Pins

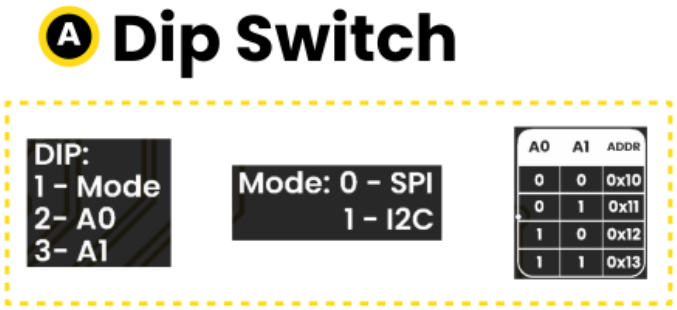
Symbol	I/O	Description
-	-	Power supply (3.3V)

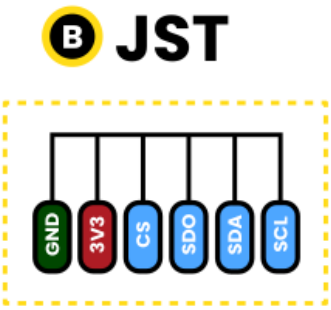
Pin & Connector Layout

PIN	Description
VCC	MCU logic voltage (3.3V)

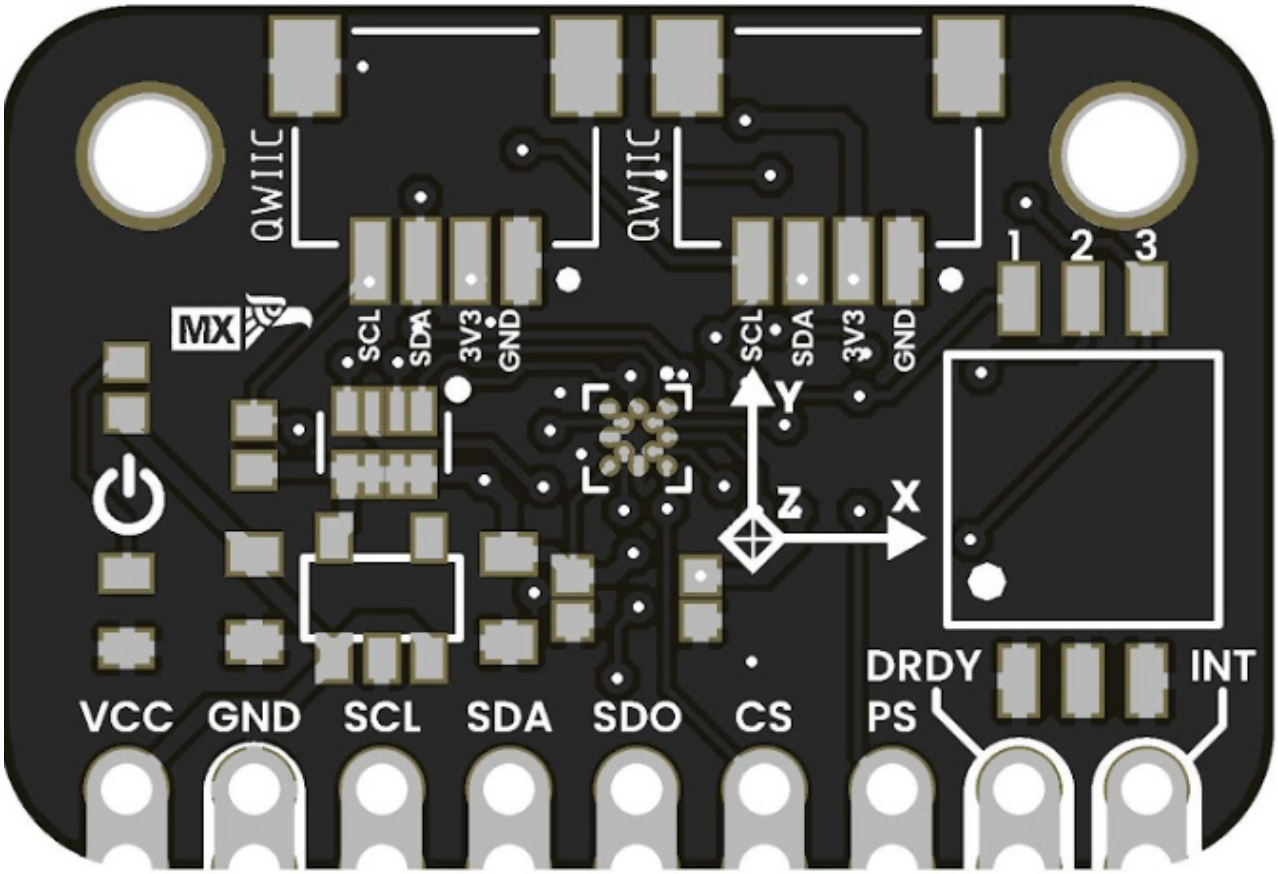
Block Diagram







Dimensions



Usage

- Arduino AVR
- Raspberry Pi RP2040
- ESP32

Downloads

- Schematic PDF

Purchase

- Buy from UNIT Electronics