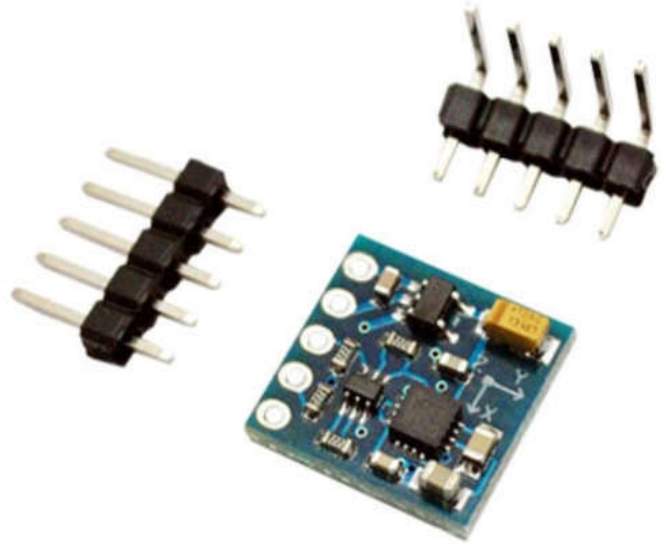


HMC5883L 3-Axis Digital Compass



Technical Manual Rev 2r0

The **HMC5883L Digital Compass** is a surface-mount, multi chip designed for low field magnetic sensing with a digital interface for applications such as low cost compassing and magnetometry. the HMC5883L includes a state of the art high resolution HMC118X series magneto-resistive sensors plus an ASIC containing amplification, automatic degaussing strap drivers, offset cancellation and a 12-bit ADC that enables 1 to 2 degrees compass heading accuracy. the I2C serial bus allows for easy interface. The HMC588L is a 3.0x3.0x0.9mm surface mount 16-pin leadless chip carrier (LCC). Applications for the HMC5883L include Mobile Phones, Netbooks, Consumer Electronics, Auto Navigation Systems, and Personal Navigation Devices.



FEATURES/SPECIFICATIONS:

- 12-Bit ADC Coupled with Low Noise AMR Sensors
- 3-Axis Magneto-resistive sensors
- Wide Magnetic Field range ($\pm 80\text{Oe}$)
- I2C Digital Interface
- Fast 160 Hz Maximum Output Rate

GENERAL SPECIFICATION:

- IC: HMC5883CL IC
- Input Supply: 3 to 5V DC
- Low Power Consumption: 100uA
- Interface: I2C Digital
- PCB Dimensions: 14.8x135x3.5 mm

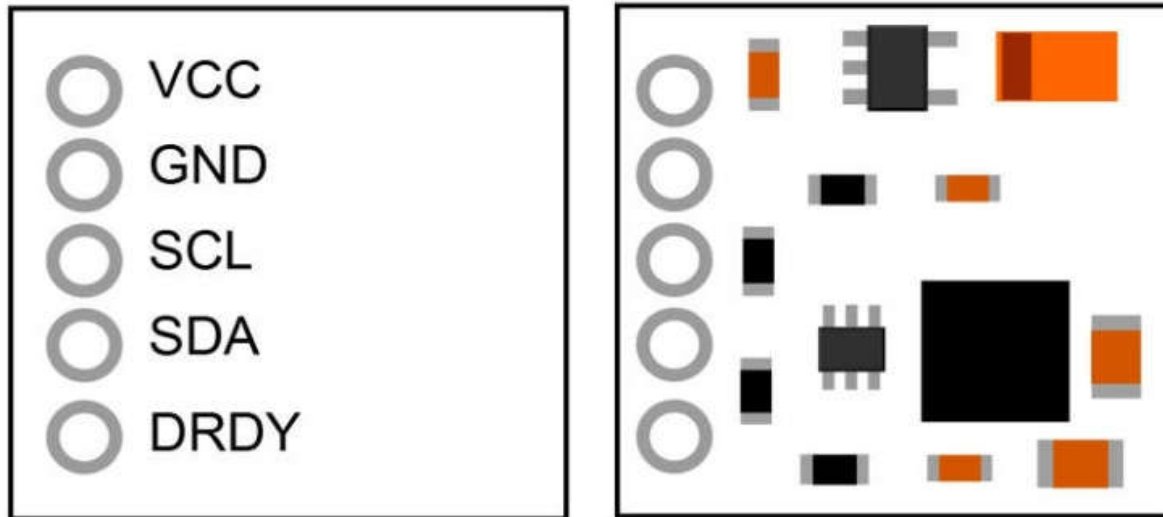


Figure 1. Major Parts presentation of 3-Axis Digital Compass HMC5883CL

Table 1. Pin Descriptions

Pin Name	Descriptions
VCC	Power Supply
GND	Ground
SCL	Serial Clock - I2C Master/Slave Clock
SDA	Serial Data - I2C Master/Slave Data
DRDY	Data Ready, Interrupt Pin, Internally pulled high, Optional connection. Low for 250 microsecond when data is placed in the data output registers

**Wiring Connections:
GizduinoPLUS to HMC5883L module**

5V	VCC
GND	GND
SCL	D24/SCL
SDA	D25/SDA

**For:
GizduinoV328 to HMC5883L module**

5V	VCC
GND	GND
SCL	D19/A5/SCL
SDA	D18/A4/SDA

