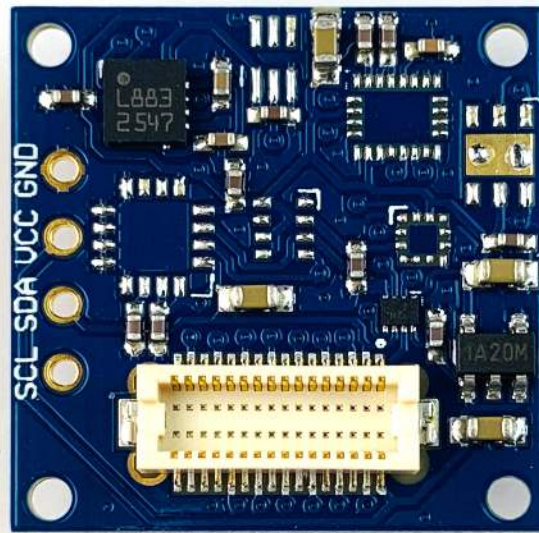# Compass TinyShield - ASD2511-R-C

tinycircuits.com/collections/sensors/products/compass-tinyshield

DESCRIPTION

This TinyShield features the high performance and low power Honeywell HMC5883L 3-axis compass**.** The HMC5883L includes 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° compass heading accuracy.

The Compass TinyShield incorporates level shifters and a local power supply to ensure proper and safe operation over the entire TinyDuino operating voltage range up to 5V.

To learn more about the ***TinyDuino Platform,*** *click* **here**

TECHNICAL DETAILS

> To see what other TinyShields this will work with or conflict with, check out the **TinyShield Compatibility Matrix**

Honeywell HMC5883L Compass Specs

- 3-axix (X, Y & Z)
- Digital resolution: 12bit (2 milli-gauss Field Resolution in ±8 Gauss Fields)
- 1° to 2° Degree Compass Heading Accuracy
- Wide Magnetic Field Range (+/-8 Oe)
- Low Power: 100uA

TinyDuino Power Requirements

- Voltage: 3.0V - 5.5V
- Current: 100uA Due to the low current, this board can be run using the TinyDuino coin cell option

Pins Used

- A5/SCL - I2C Serial Clock line
- A4/SDA - I2C Serial Data line

Dimensions

- 20mm x 20mm (.787 inches x .787 inches)
- Max Height (from lower bottom TinyShield Connector to upper top TinyShield Connector): 5.11mm (0.201 inches)
- Weight: .96 grams (.03 ounces)

Notes

- You can also use this shield without the TinyDuino – there are 0.1" spaced connections for power, ground, and the two I2C signals along the side of the TinyShield to allow you to connect a different system.
- Previous versions of this board will look a bit different and have the board number ASD2613-R, however they are functionally equivalent to this updated version and the compass circuitry is identical. Earlier versions also had two interrupt pins broken out to solder points, these are not present on the current version of this board.