



2 Axis Digital Compass

- Based on the HMC1052 Sensor
- Optional PIC12F675 Microprocessor
- Optional Voltage Regulator
- Built In Calibration Offset Circuitry
- In-Circuit Programming For MicroP Option
- Digital or Analog Interface
- EE Storage In MicroP To Correct Deviation
- Precision Amplifiers(2) For Compass Signals
- Size 1.262 x 1.0 in.



FUNCTIONAL DESCRIPTION

The 2 Axis Digital Compass is based on the Honeywell HMC1052 sensor element. The circuitry is configured for a variety of build options that allow it to operate as a standalone compass or under control of external circuitry. Refer to the Honeywell technical documentation for complete explanations of capabilities and limitations of this technology.

The Microprocessor build option provides 10 bits of resolution (< 0.5 degree) with customizable serial interface and eeprom storage for deviation correction. The microprocessor is able to constantly calibrate the sensor, to remove residual magnetic deviation, and calculate the heading to the nearest 0.5 degree based on X and Y vectors. In-circuit programming is provided for easy software modification.

The analog only build option allows the sensor to be controlled by external circuitry without the embedded microprocessor. In this option the amplified analog signals are routed directly to the interface port. Signal conditioning is provided by two precision differential instrumentation amplifiers.

An optional on-board voltage regulator is provided to ease integration into a variety of system voltage options.

The 2 Axis Digital Compass is 100% designed and manufactured in the USA. Support including customer service and customized software or hardware is readily available. Free software and custom design are available to qualified OEM customers. Code support is available at no charge to all developers.