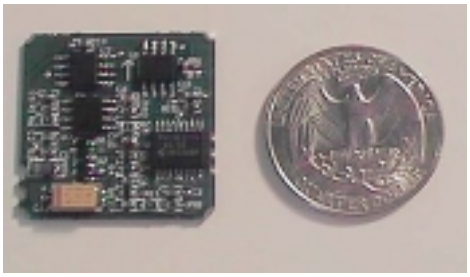
RDCM-802

Digital Compass Module **geosensory.com**



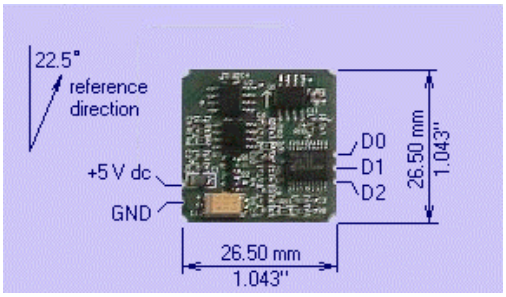
The RDCM-802 Compass Module is a miniature low-cost orientation-sensing building block suitable for industrial, scientific or hobbyist applications. The module determines the direction in terms of the eight principal compass points, and outputs the result as a 3-bit binary code. The entirely solid-state device contains no moving parts and no coils.

Applications

- Robotics
- Industrial
- Scientific
- Educational
- Toys

The module is a miniature square-shaped board which contains no moving parts or coils. The RDCM-802 is based on the magnetoresistive effect and eliminates unreliability of mechanical sensors with their "sticking" problems and slow response times, as well as the weight, size and large power consumption of modules relying on conventional methods such as flux coils.

The board contains its own low-power microprocessor which makes interfacing very simple. The device is operated from a standard 5V power supply.



The module outputs direction in basic 8-points (N, NE, E, SE, S, SW, W, NW). The output is 3-bit parallel (TTL or CMOS compatible).

	N	NE	E	SE	S	SW	W	NW
D0	0	0	1	1	0	0	1	1
D1	1	1	1	0	0	0	0	1
D2	1	0	0	0	0	1	1	1

An evaluation board is also available, designed to demonstrate the RDCM-802 compass functionality. The EBCM-802 board contains one RDCM-802 module in a convenient arrangement, including a battery holder for a standard 9V battery, a power switch, regulator, and three indicator LEDs which turn on and off according to the geographical orientation of the board.

(Battery not included.)

Technical Specifications

Accuracy	± 5°
Tilt tolerance	± 10°
Settling time	500ms max
Hysteresis	± 5°
Supply voltage	5Vdc ± 10%
Supply current	12mA max
Output voltage	V_L=0.6V max V_H=V_S-0.6V min
Output current	5mA max
Operating temperature	-5 to +60°C
Storage temperature	-25 to +75°C
Dimensions	26.5 x 26.5 x 5mm (1.043x1.043x0.197 in)

(Specifications are subject to change without notice.)

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