RoBoard Module RM-G144
Manual V1.01
The Heart of Robotics

Jun 2010
DMP Electronics Inc

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Introduction

1.1 Packing List

Product Name	Package
RM-G144	RoBoard Module G144
Cable-RM-1	6 pin Cable x 1

1.2 Product Description

The RoBoard Module RM-G144 is fully integrated and combines 3-axis magneto-resistive sensor with the HMC5843 and 3-axis accelerometer with the ADXL345, simply and all done through I2C interface, the dimension of it is wee as 20 x 20 mm.

The HMC5843 is a surface mount multi-chip module designed for low field magnetic sensing with a digital interface for applications such as low cost compassing and magnetometry.

The ADXL345 is a 3-axis accelerometer with high resolution (13-bit) measurement at up to ±16 *g*. Digital output data is formatted as 16-bit twos complement and is accessible through I2C digital interface.

1.3 Specifications

	RM-G144 Compass + G-Sensor Module
Compass	3-Axis Digital Compass HMC5843
G-Sensor	3-Axis Accelerometer ADXL345
Interface	I^2C
Connectors	1.25mm 6-pin wafer for I^2C x 2
Power Input	DC-in 5V
Dimension	20mm X 20mm
Weight	2.5g

1.4 I^{2}C Address

- Digital Compass HMC5843 I^{2}C address (7 bit address) : 0x1e

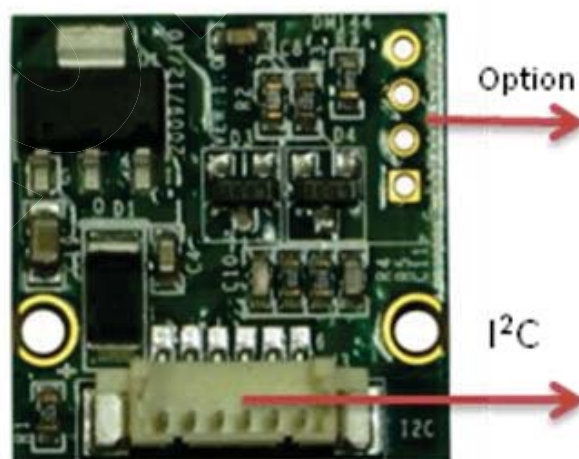- Accelerometer ADXL345 I^{2}C address (7 bit address) : 0x53
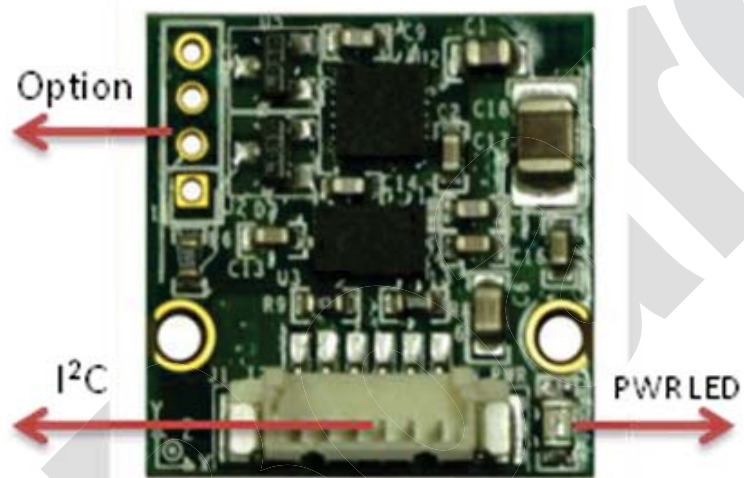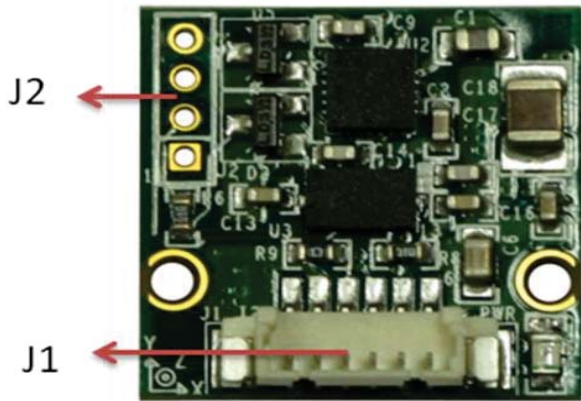
1.5 Board Dimension
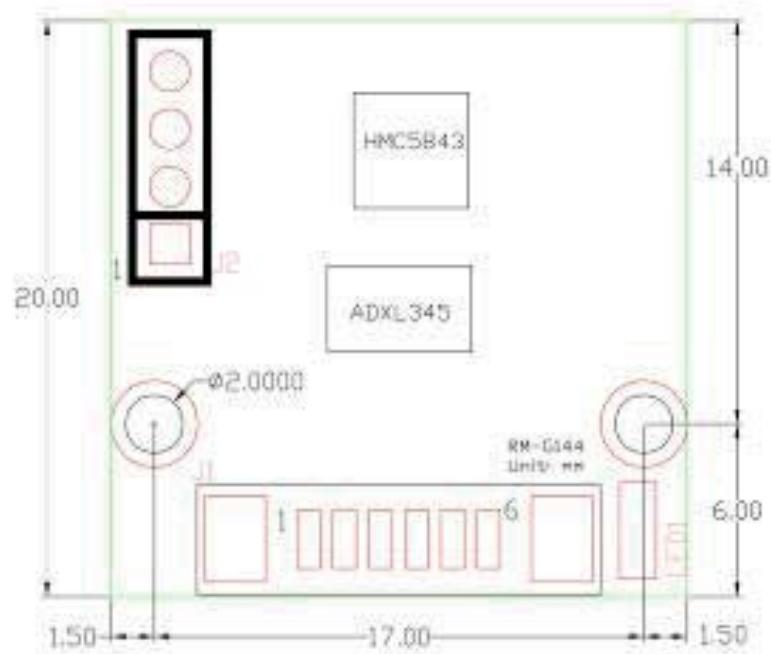
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Installation

2.1 Board Outline

Top Side

Bottom Side

2.2 Connectors & Pin 1 Location
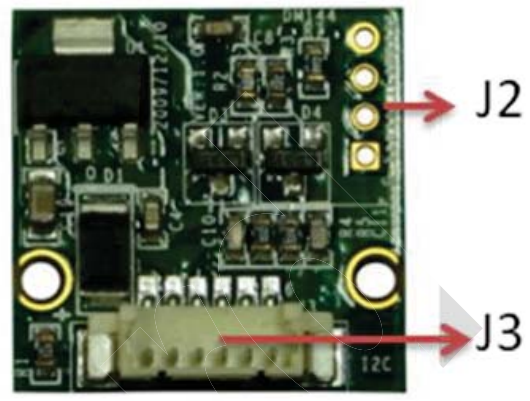
Connectors

Top Side

Bottom Side

Pin 1 Location
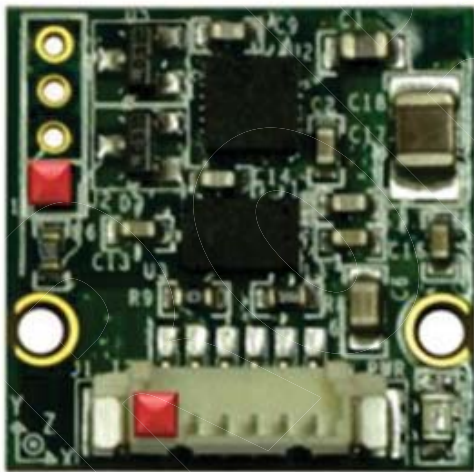
Top Side
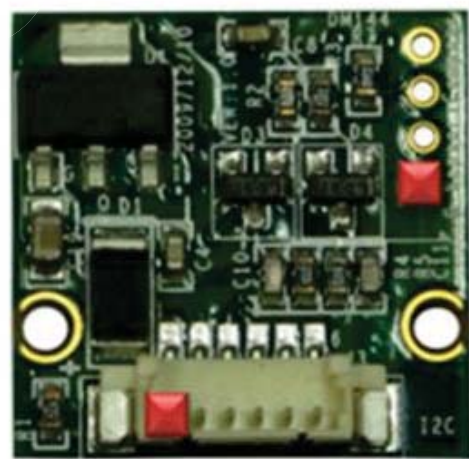
Bottom Side

2.3 Connectors & Jumpers Summary

Summary Table			
	Description	**Type of Connections**	**Pin**
J1	I²C connector (Top)	Wafer, 2.54mm,6x1	6-pin
J2	Interrupt	Hole 4x1	
J3	I²C connector (Bottom)	Wafer, 2.54mm,6x1	6-pin

2.4 Pin Assignments

J1: I²C connector (Top)

Pin #	Signal Name
1	Vcc (Red)
2	GND (Black)
3	SCL (Blue)
4	SDA (Green)
5	X (White)
6	X (Orange)

J2: Option (for G-Sensor)

Pin #	Signal Name
1	+3.3V out
2	INT1
3	INT2
4	GND

J3: I²C connector (Bottom)

Pin #	Signal Name
1	Vcc (Red)
2	GND (Black)
3	SCL (Blue)
4	SDA (Green)
5	X (White)
6	X (Orange)

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Development Note

Sample and development code

The RM-G144 provides sample and development code.
Please download from official website: http://www.roboard.com

Warranty

This product is warranted to be in good working order for a period of one year from the date of purchase. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster. Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, originality to use this product. Vendor will not be liable for any claim made by any other related party. Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.