



DMP Electronics Inc.

8F, No 12, Wu-Quan 7 Rd., Wu Gu Industrial Park
Wu Gu Xiang, Taipei 248, Taiwan R.O.C.
TEL: 886 2 2298 0770 FAX: 886 2 2290 2335

RoBoard Module RM-G145

Manual V1.01

The Heart of Robotics

Jun 2010

DMP Electronics Inc

ROBOARD

● **Copyright**

The information in this manual is subject to change without notice for continuous improvement in the product. All rights are reserved. The manufacturer assumes no responsibility for any inaccuracies that may be contained in this document. And makes no commitment to update or to keep current the information contained in this manual.

No part of this manual may be reproduced, copied, translated or transmitted, in whole or in part, in any form or by any means without the prior written permission of the DMP Electronics Inc.

©Copyright 2010 DMP Electronics Inc.
Manual No. RM-G145-01 Ver.1.01 ● Jun, 2010

● **Trademarks Acknowledgment**

Other brand names or product names appearing in this document are the properties and registered trademarks of their respective owners. All names mentioned herewith are served for identification purpose only.



Table Of Contents

Chapter 1.....	4
Introduction.....	4
1.1 Packing List.....	4
1.2 Product Description.....	5
1.3 Specifications.....	6
1.4 I ² C Address.....	7
1.5 Board Dimension.....	8
.....	8
Chapter 2.....	9
Installation.....	9
2.1 Board Outline.....	9
2.2 Connectors & Pin 1 Location.....	10
2.3 Connectors & Jumpers Summary.....	11
2.4 Pin Assignments.....	12
J1: I²C connector (Top)	12
J2: I²C connector (Bottom)	12
Chapter 3.....	13
Development Note.....	13
Sample and development code.....	13

Chapter 1

Introduction

1.1 Packing List

Product Name	Package
RM-G144	RoBoard Module RM-G145
	
Cable-RM-1	1x6 pin Cable x 1
	

1.2 Product Description

The RoBoard Module RM-G145 is fully integrated 3-axis (X-Y-Z) integrated dual-axis angular rate sensor (gyroscope), with the IDG-650 and ISZ-650 simply and all done through I2C interface, the dimension of it is wee as 20 x 20 mm.

The IDG-650 gyro includes the integrated electronics necessary for application-ready functionality. It incorporates X- and Y-axis low-pass filters and an EEPROM for on-chip factory calibration of the sensor.

The ISZ-650 gyro includes the integrated electronics necessary for application-ready functionality. It incorporates a Z-axis low-pass filter and an OTP memory for on-chip factory calibration of the sensor.

1.3 Specifications

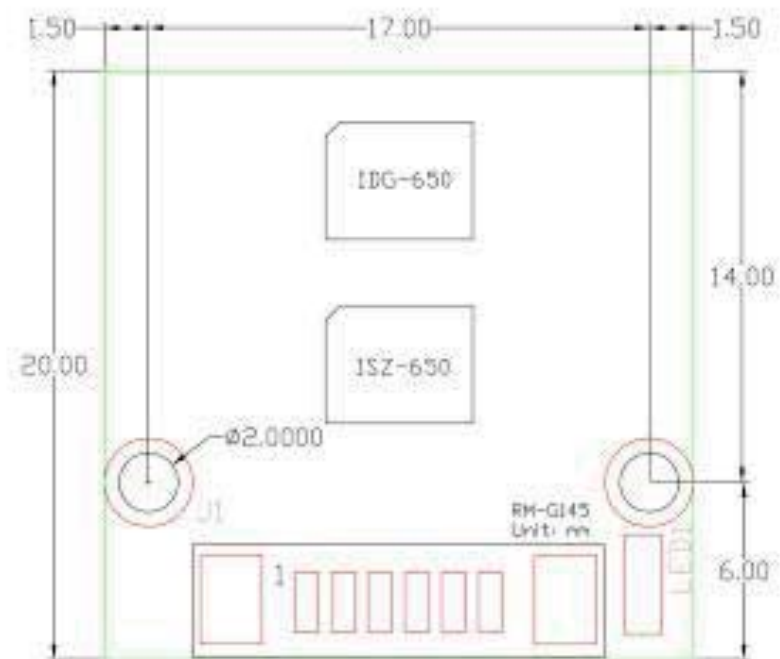
	RM-G145 Gyro Module
X and Y axis	Dual gyroscope IDG-650
Z axis	Z axis gyroscope ISZ-650
ADC	AD7998
Interface	I ² C
Default Address	0x21
Connectors	1.25mm 6-pin wafer for I ² C x 2
Power Input	DC-in 5V
Dimension	20mm X 20mm
Weight	2.5g

1.4 I²C Address

AD7998 I²C address (7 bit address) : 0x21

ROBBoard

1.5 Board Dimension

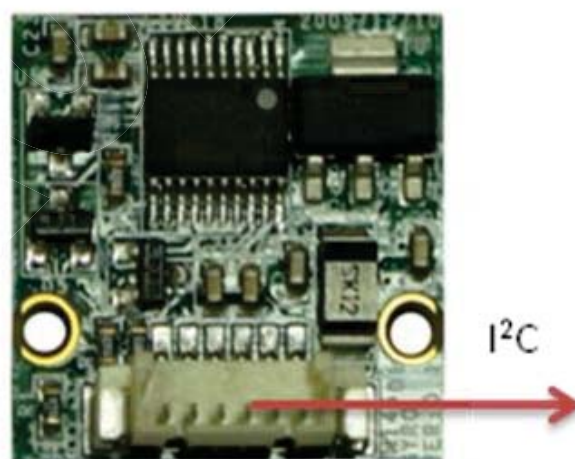


RC

Chapter 2

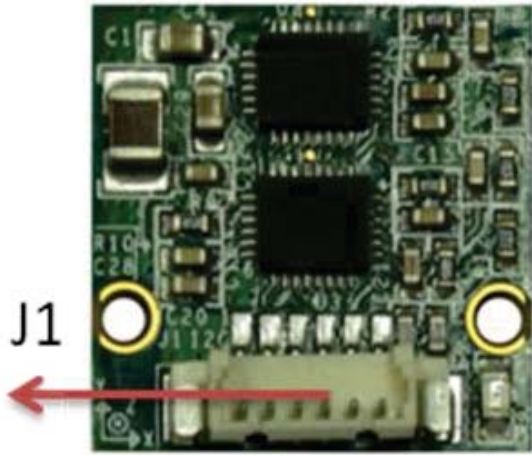
Installation

2.1 Board Outline

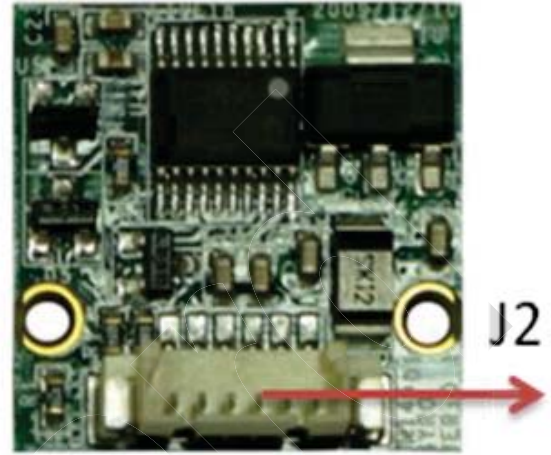


2.2 Connectors & Pin 1 Location

Connectors

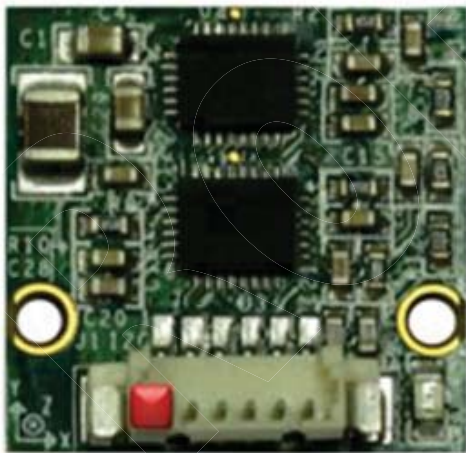


Top Side

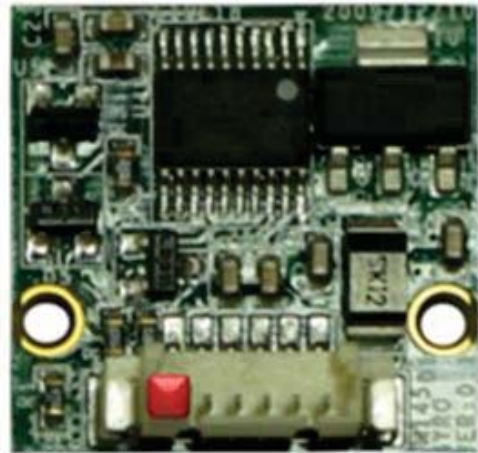


Bottom Side

Pin 1 Location



Top Side



Bottom Side

2.3 Connectors & Jumpers Summary

Summary Table

	Description	Type of Connections	Pin
J1	I ² C connector (Top)	Wafer, 2.54mm,6x1	6-pin
J2	I ² C 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: I²C connector (Bottom)

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

Chapter 3

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.