



**RoBoard**

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# RoBoard Servo Motor RS-1270

## Manual V1.01

### The Heart of Robotics

May 2011  
DMP Electronics Inc.

ROBOARD

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# CHAPTER 1

## Introduction

### 1.1 Packing List

Product Name	Package
RS-1270	RoBoard RC Servo Motor RS-1270
	
Horn Type	Cross, Disk, Star
	

## 1.2 Product Description

The RoBoard RS-1270 is the standard size digital servo dedicated for Robotics, with precise-made steel gears and back horn design, the aluminum chassis design not only exudes an exquisite style but helps operating and making your Robot more active.

- Coreless servo motor
- Digital 4096 with steel gear & 2 ball bearings
- Back-horn design
- Weight: 70g
- Torque force: 35.0 kg-cm@7.4V / 486.0 oz-in@7.4V
- Speed: 0.11 sec/60 degrees
- Max voltage: 7.4 V

## 1.3 Specifications

### Electronics Specification

Item	6.0V	7.4V
Operating Speed (at no load)	0.14 sec / 60°	0.11 sec / 60°
Running current (at no load)	120 mA	150 mA
Stall torque (at locked)	26 kg-cm/ 361 oz-in	35 kg-cm / 468 oz-in
Stall current (at locked)	4000 mA	5000 mA
Idle current (at locked)	5 mA	5 mA

### Mechanical Specification

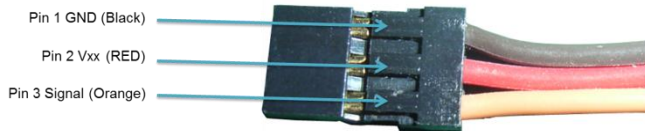
Overall Dimension	See the drawing
Limit angle	220° ±10°
Weight	70 g (without servo horn)
Connector wire gauge	#22 AWG
Connector wire length	450 ±5 mm
Horn gear spline	∅ 6 * ∅ 5.2 *25T
Horn type	Cross, Disk, Star

### Control Specification

Control system	Pulse width modification
Amplifier type	Digital controller
Operating travel	100° (when 1000 → 2000 μ sec)
Neutral position	1500 μ sec
Dead band width	3 ~ 5 μ sec
Rotating direction	Counterclockwise (when 1000 → 2000 μ sec)
Pulse width range	800 → 2200 μ sec
Maximum travel	Approx. 130° (when 900 → 2100 μ sec)

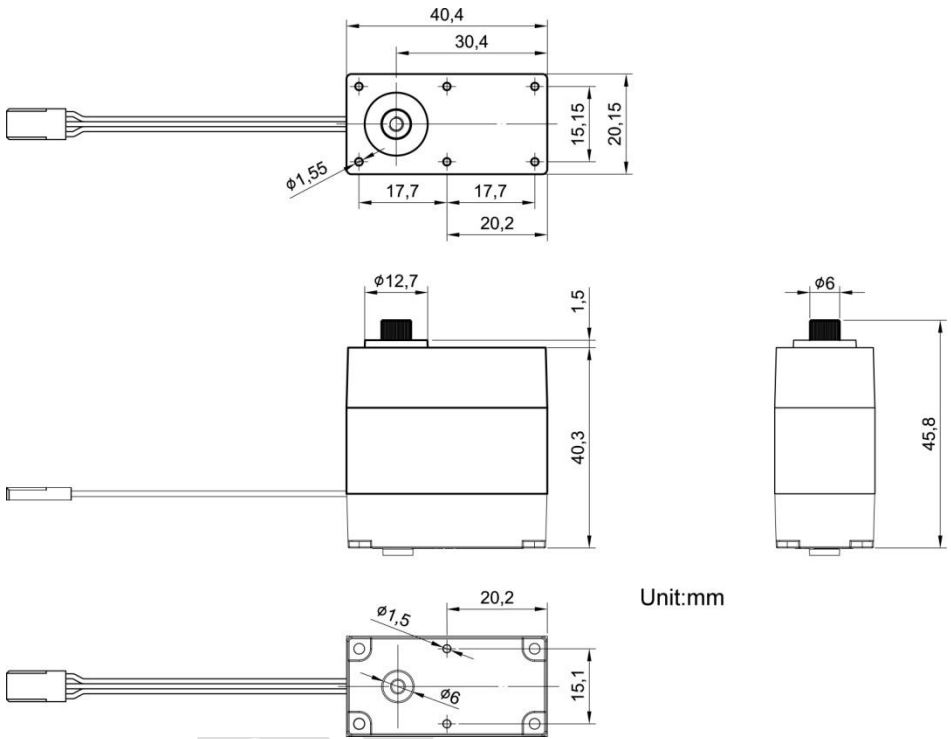
## 1.4 Pin Assignment

The connector pin assignments are as the following



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## 1.5 Dimension





## CHAPTER 2

### **Development Note**

#### **Sample and development code**

The 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.