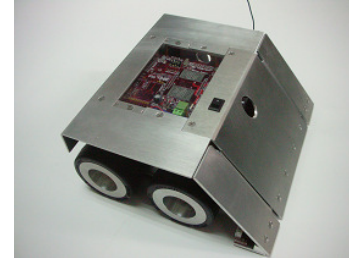


iNOVA-RBT-1000

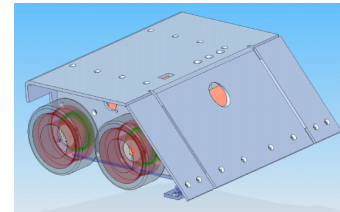
Differential Drive Mobile Robot Platform

Key Features

- 2 mode of control **Autonomous** or **RC**
- Differential drive moving platform with **PID close-loop control**
- **4 IR sensor** act as floor boundary sensor
- **4 Ultra-sonic sensor** act as object sensor
- **One** RS-232 port
- **One** I2C port
- **Switching power supply** for best battery power efficiency
- **40Mhz** Microchip processor
- **64K** program memory, 4K data memory
- **Easy programming and debugging using C and MPLAB IDE**
- Robot size: 200mmX195mmX95mm(LxWxH)
- Weighted at 3 kg



Actual Robot



Mechanical Drawing

Descriptions and Applications

iNOVA-RBT-1000 the *Differential Drive Mobile Robot Platform* is a high-quality compact 2-axis robot designed for both **autonomous** and **RC** capabilities.

Autonomous mode during this mode, the robot can be programmed to perform specific task for example: This mobile robot platform can be programmed to be a Sumo robot, which to assail and overpower its opponent or retreat to prepare for battle. 4 ultra-sonic sensors are mounted around the robot to detect an opponent. Upon detection, it instructs the brain of SUMO to "charge", and to win the match by pushing the opponent out of the ring.

RC mode during this mode, user become the controller of the robot. Whereby user can instruct the robot to desire movement by transmitting RC standard pulse through transmitter to this mobile robot wirelessly; it's on board 2 PWM signal input ports able to read in the data through receiver and allows the controller to do the interpretation. Hence, robot starts to move to position you like.

Technical Specification

Item	Specification	
Power Supply Voltage	7-24V	
Power Consumption	4W (Without Motor)	
Processor Speed	40MHz	
Program Memory	64KB	
Data Memory	4KB	
DC Motor	12V, Rated Torque: 6.5 kg-cm, Speed: 405 RPM, Encoder Resolution: 512CPR x 2	
IR Sensor	Digital Output x 4	
Ultrasonic Sensor	Digital/Analog Output x 4	
RC Servo Motor Channel	TTL, 25Hz (1.5ms Neutral) x 16	
Digital IO Port	TTL/CMOS X 10	
Analog Input Port	0V-5V x 4	
I2C Port	1	
UART	1	
2.4GHz Transmitter	1	
2.4GHz Receiver	1	
Battery	Li-poly 14.8V 1600mAH x 1	
Charger	Selectable 1-4cells, 500mAH x 1	
Dimension	200mmX195mmX95mm(LxWxH)	
Weight	3kg	

Ordering Information

Our Part No.	Description	Price
iNOVA-RBT-1000	Differential Drive Mobile Robot Platform	SGD 2130
Manufacturer: iNOVA Microsystems Pte Ltd #04-01, BLK 12 Lorong Bakar Batu Kolam Ayer Industrial Estate Singapore 348745 Tel: (65)67434072 Fax: (65)62344235 Email: sales@inovamicro.com		Authorized Sole Distributor: Worldwide: iNOVA Microsystems Pte Ltd