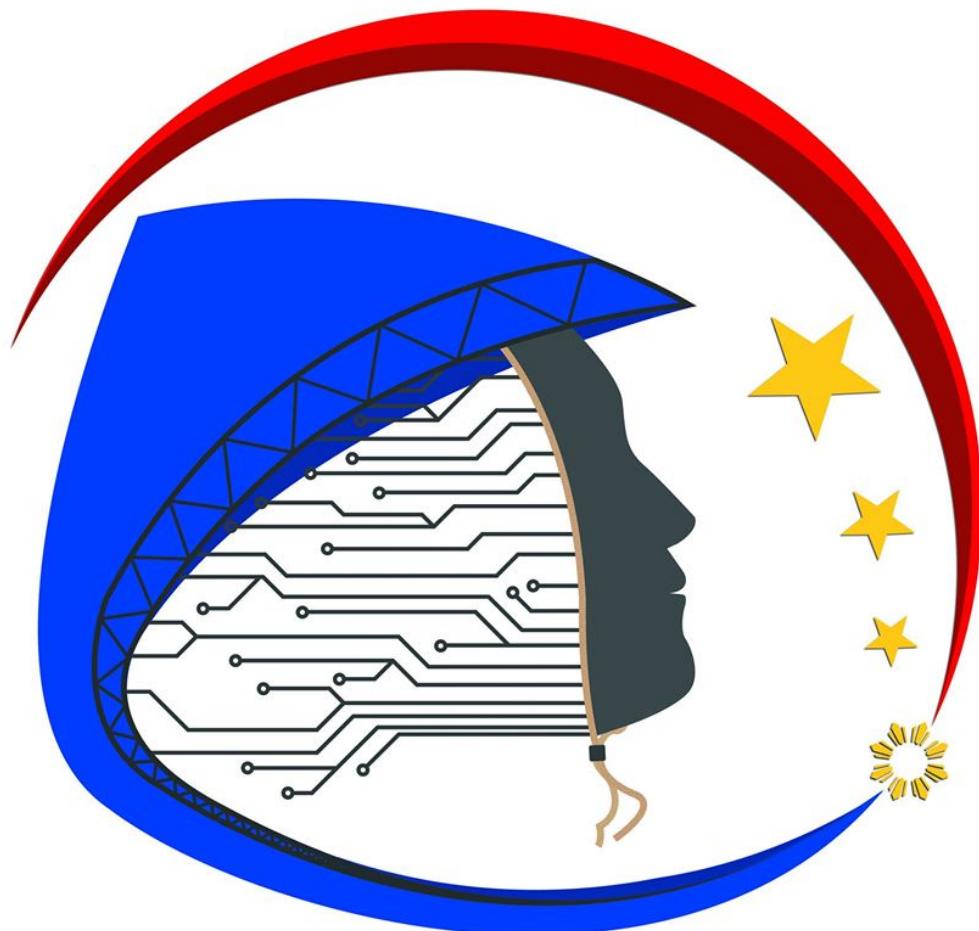
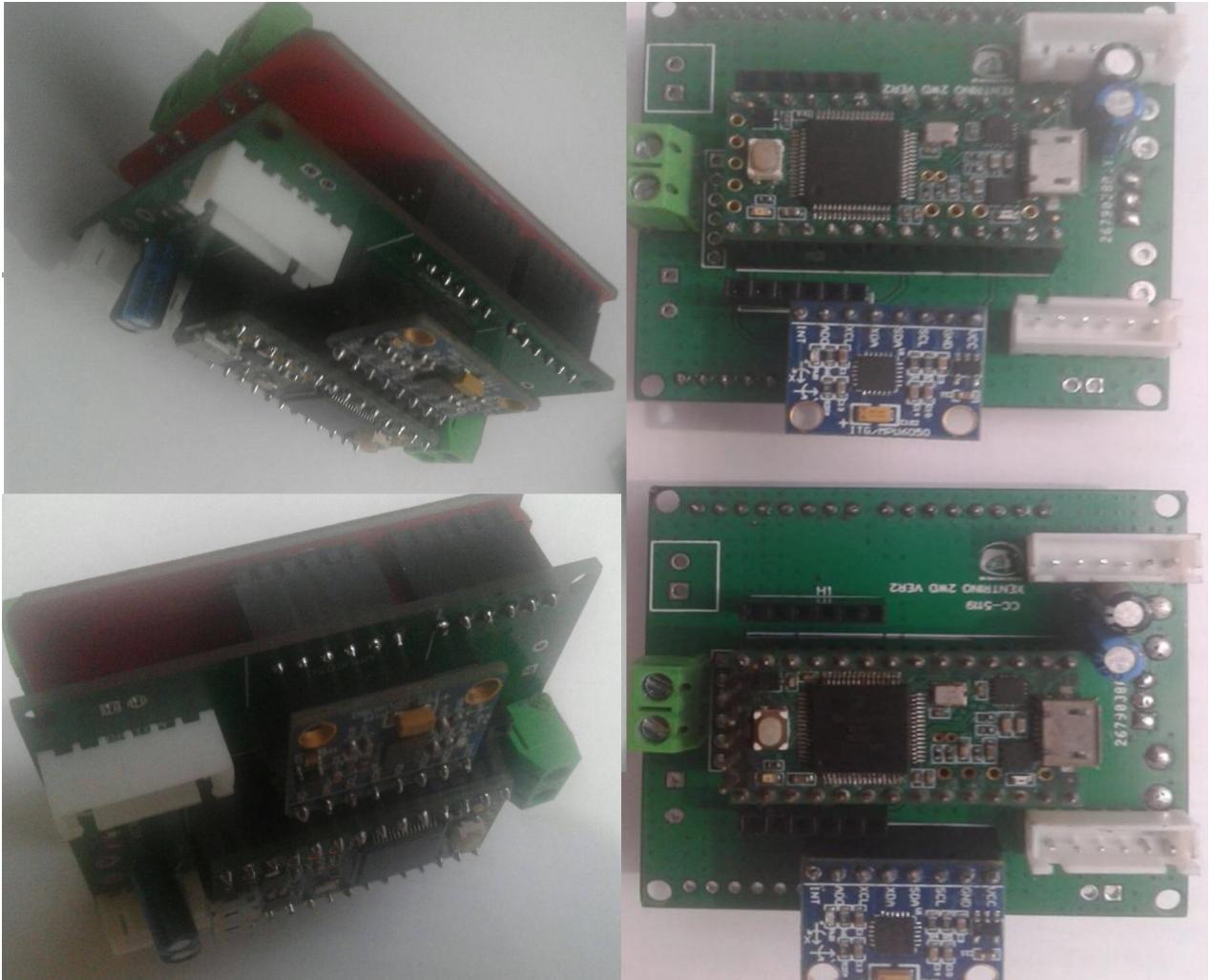


XENTRINOBOT BOARDS  
2 WD Version



# Hi-Techno Barrio

Distributed by:  
[Xentrino Tech](#)



### **DESCRIPTIONS:**

Xenrtrinobot Board is suitably design to drive wheeled mobile robots. The board contains a complete electronic modules that can be used to program and control robots. The 2WD version include microcontroller, inertial measurement unit sensors (IMU) and motor controller. There are extra IOs pins included in the header port which can be used as external interface , i,e LCD,LDR, relays and etc.

The board was developed as an all in one electronic module , the purpose of a compact dauther board is to avoid time consuming messy circuits. Hence, this supports as a controller board for the hobbyists, enthusiast to build mobile robots as quick as possible. Ultimately the purpose is to involved roboticist in the academe, research and development sectors in the application of Robotic Operating System.

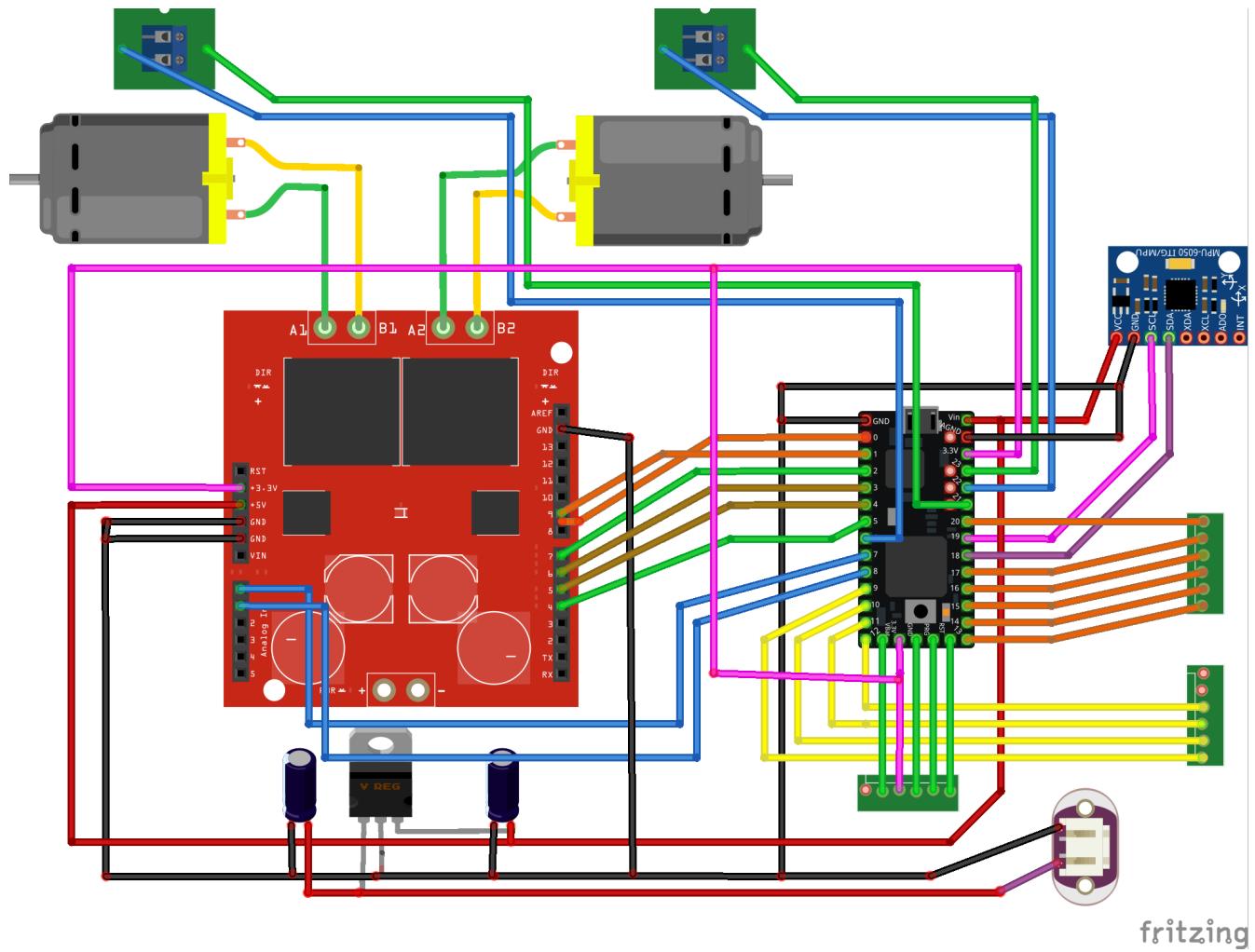
The board define the means of simplifying difficulty in the hardware setup experienced by benthusiast who want to build robots using ROS. Also the selected electronic modules are readily and locally available and the selected hardware is cost effective.

## FEATURES:

- Teensy 3.20
- Monster Moto Shield
- MPU6050/GY-85

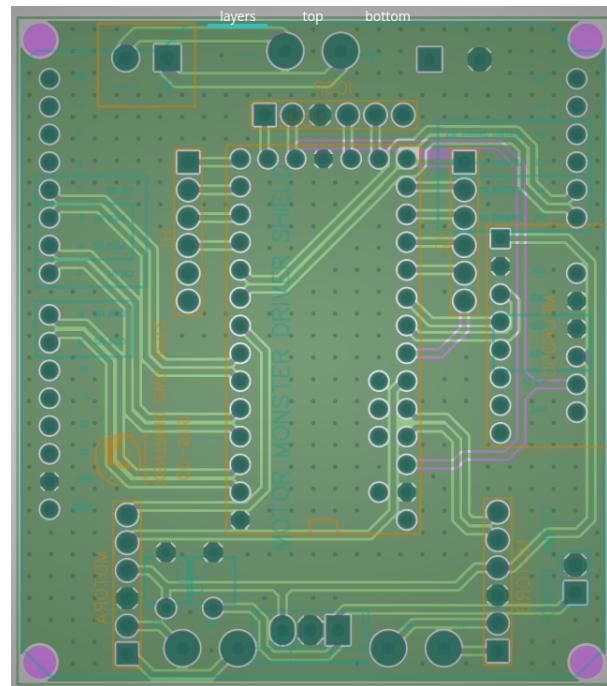
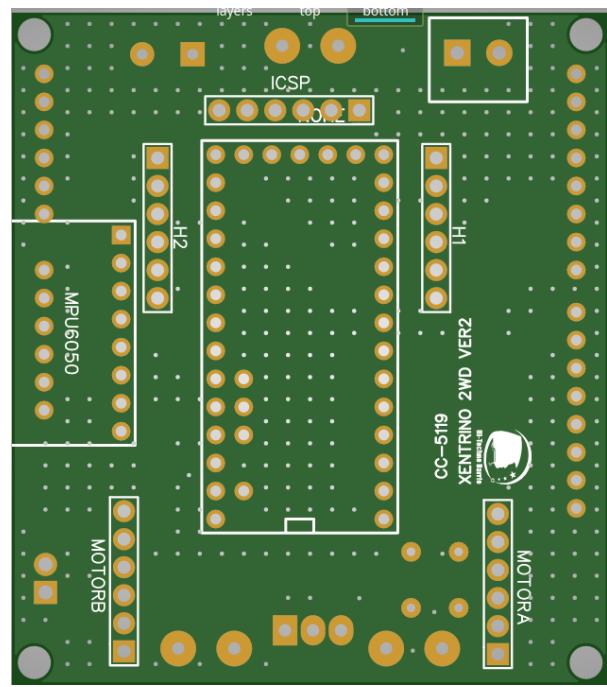
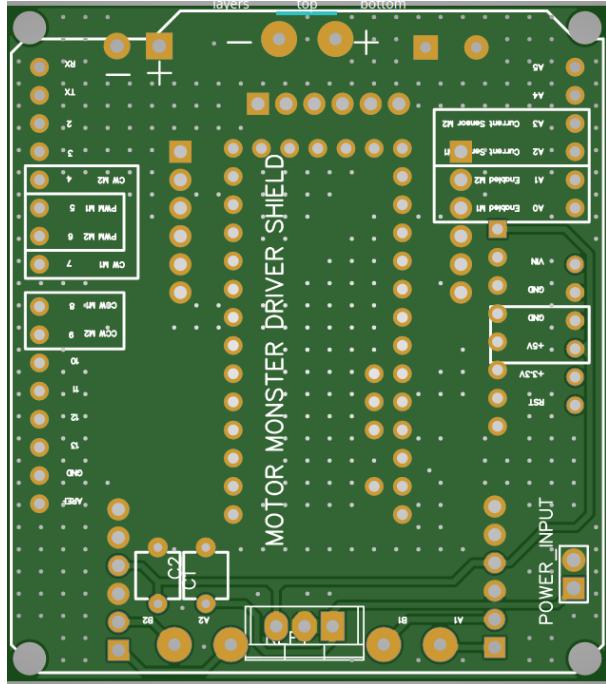
## DOCUMENTATIONS:

Schematic



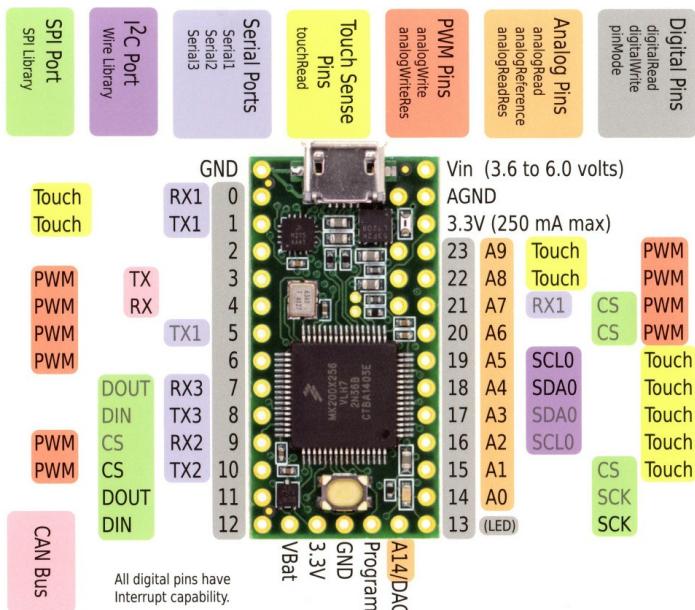
fritzing

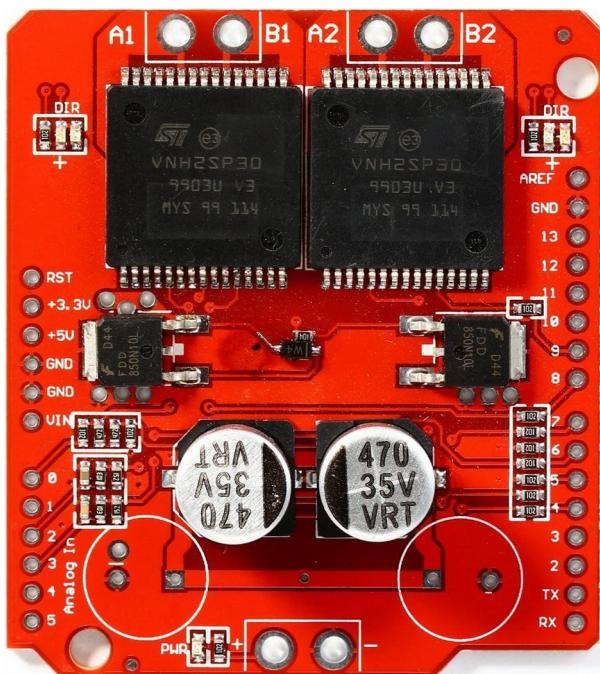
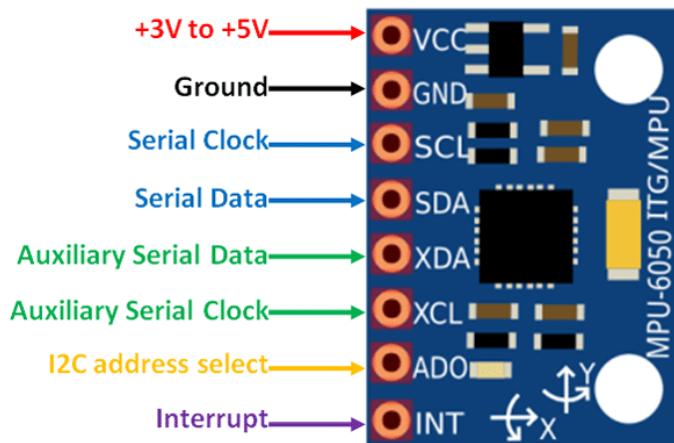
## Gerber Block Diagram



## Graphical Datasheet

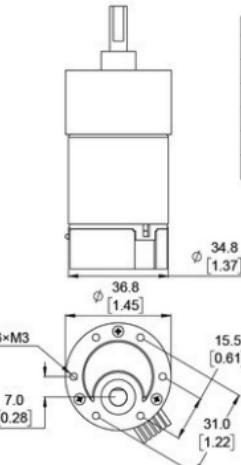
Pin	description	ENC1	ENC2	DUAL-1	MPU6050	Header-1
3.20		GND	GND			
	RESET					
	D0					MOTOR-1
	D1					M1 M2 GND VCC ENC1 ENC2
	D2		P_1			MOTOR-2
	D3		P_2			M3 M4 GND VCC ENC3 ENC4
	D4		VIN			
	D5	ENC1				MPU6050
	D6	ENC2				VCC GND SCL SDA
	D7		ENC3			
	D8		ENC4			
	D9		VIA			
	D10		SCL			
	D20		SDA			
	D10		1B			HEADER -2
	D11		2A			VCC GND SVB VIN D1 D0
	D12		2B			
	D13					HEADER -1
	A0			1		A0 A1 A2 A3 A4 A5
	A1			2		
	A2			3		HEADER -3
	A3			4		VCC GND SVB AREF RESET D13
	A4			5		
	A5			6		
	SVB					
	AREF					
	GND					
	VIN					
MOTOR1				M1		
				M2		
MOTOR2				M3		
				M4		



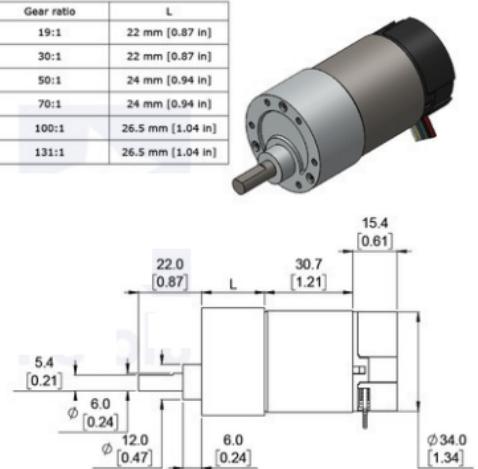


No.	Colour	Description
VCC	Red	Power Supply
GND	Black	Ground
A0	Brown	Enable for motor 1
A1	Dark Green	Enable for motor 2
A2	Purple	Current sensor for motor 1
A3	Yellow	Current sensor for motor 2
D7	Cyan	Clockwise for motor 1
D8	Light Purple	Counterclockwise for motor 1
D4	Green	Clockwise for motor 2
D9	Blue	Counterclockwise for motor 2
D5	Dark Blue	PWM for motor 1
D6	Olive Green	PWM for motor 2

Color	Function
Red	motor power (connects to one motor terminal)
Black	motor power (connects to the other motor terminal)
Green	encoder GND
Blue	encoder Vcc (3.5 – 20 V)
Yellow	encoder A output
White	encoder B output



Gear ratio	L
19:1	22 mm [0.87 in]
30:1	22 mm [0.87 in]
50:1	24 mm [0.94 in]
70:1	24 mm [0.94 in]
100:1	26.5 mm [1.04 in]
131:1	26.5 mm [1.04 in]



## Datasheet

Monster Moto  
MPU6050  
Teensy 3.20

GitHub:  
<https://github.com/hi-techno-barrio/XentrinoBot-BOARD>

## APPLICATION SETUP

