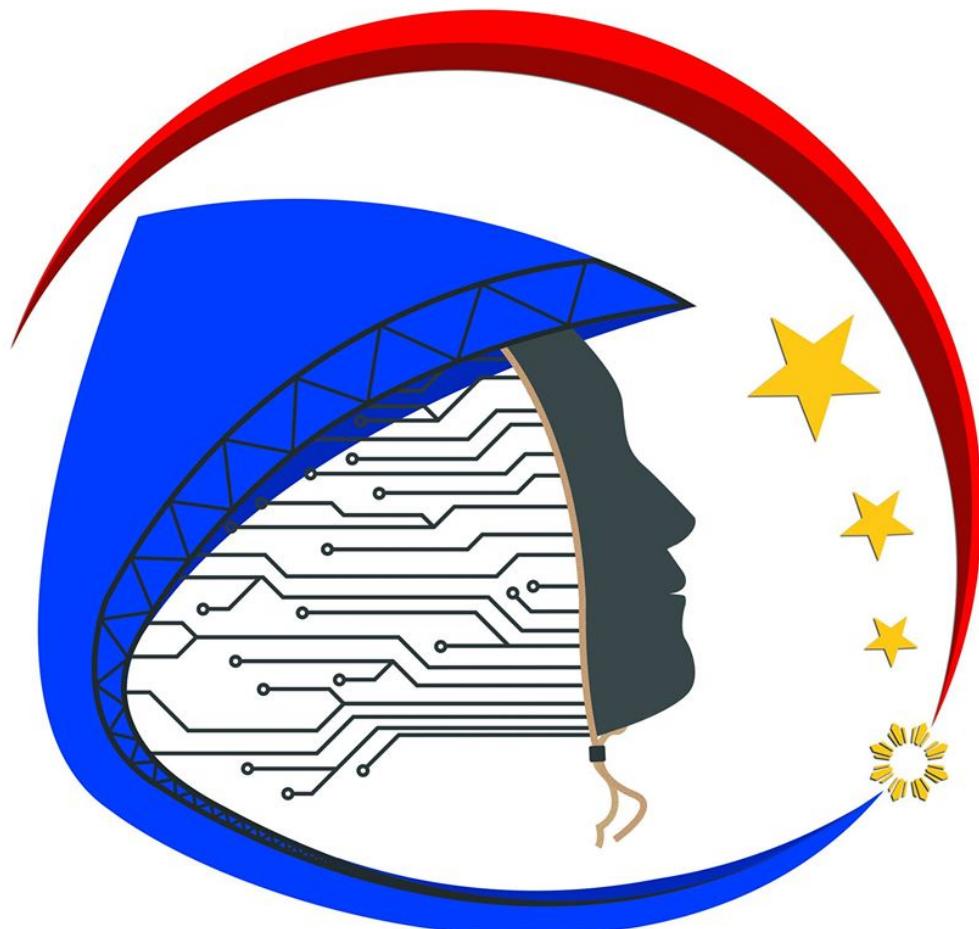
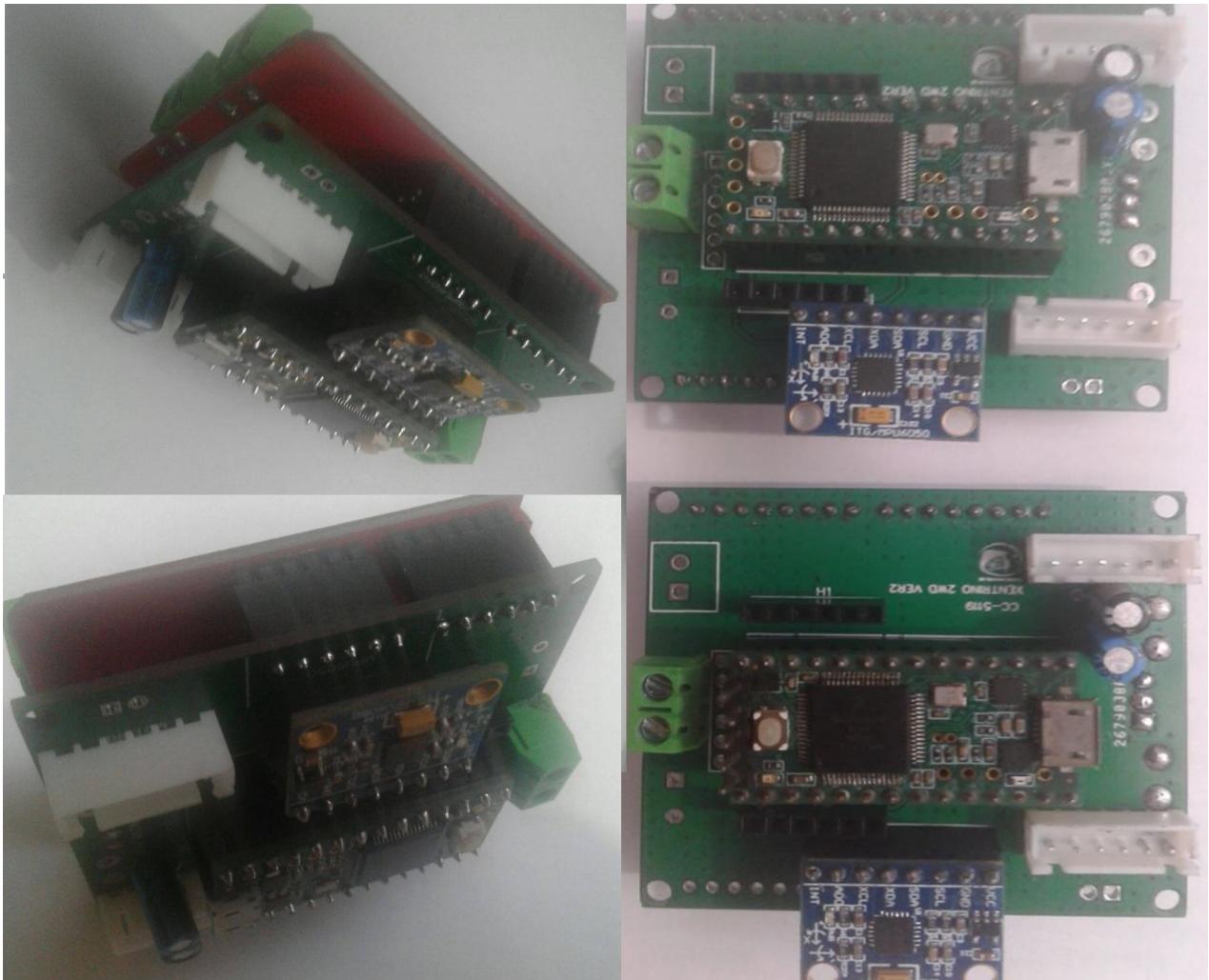


**NATHANIELBOT BOARDS**  
Nano Board Version



# Hi-Techno Barrio

Distributed by:  
**Xentrino Tech**



## DESCRIPTIONS:

Nathanielbot Board is suitably design to drive wheeled mobile robots. The board contains a complete electronic modules that functions as a robot controller. The 2WD version include single board computer,microcontroller, inertial measurement unit sensors (IMU) and motor driver. There are extra IOs pins grouped in the header ports that can be used as interface for other peripeherals such as LCD,LDR, relays and etc.

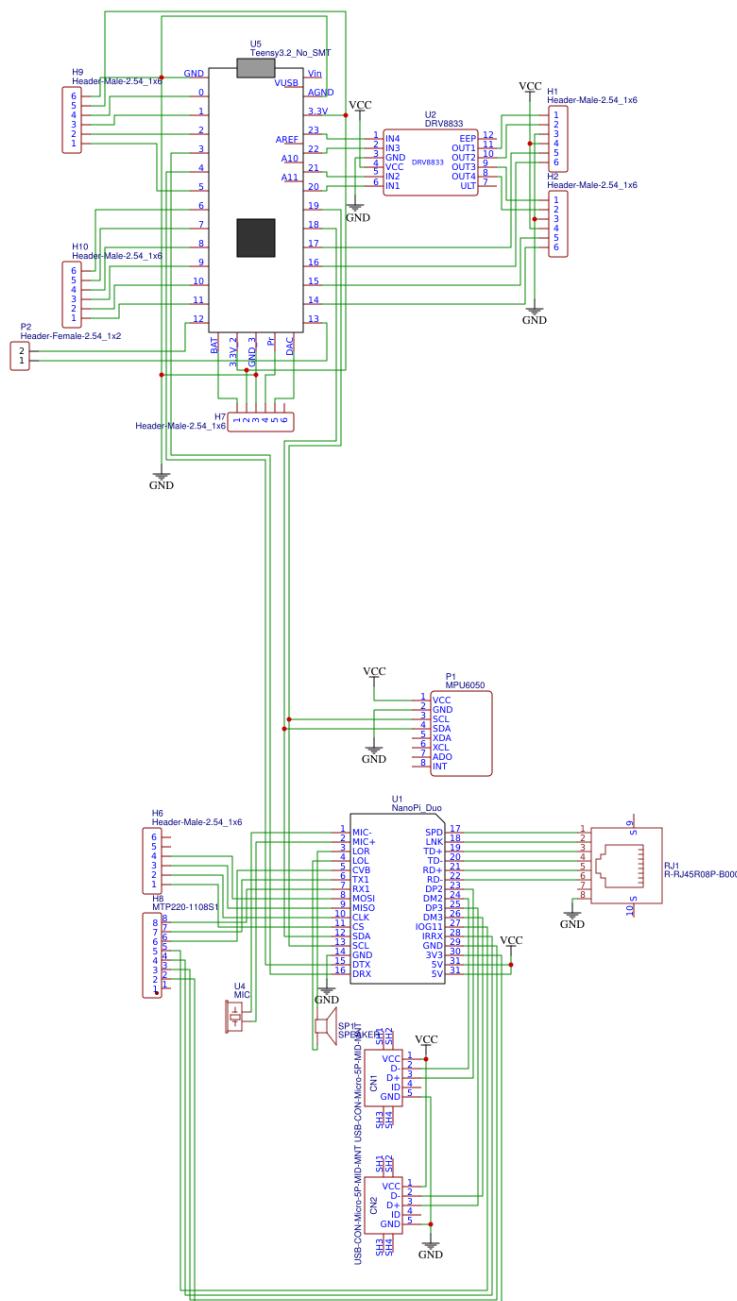
The board as an all in one electronic eliminates the difficulty of building messy circuits instead of ready made customized board. Thus the developer can easily focus on ROS programming instead of time consuming hardware setup. Also the selected electronic modules are readily and locally available and the selected hardware is cost effective.

## FEATURES:

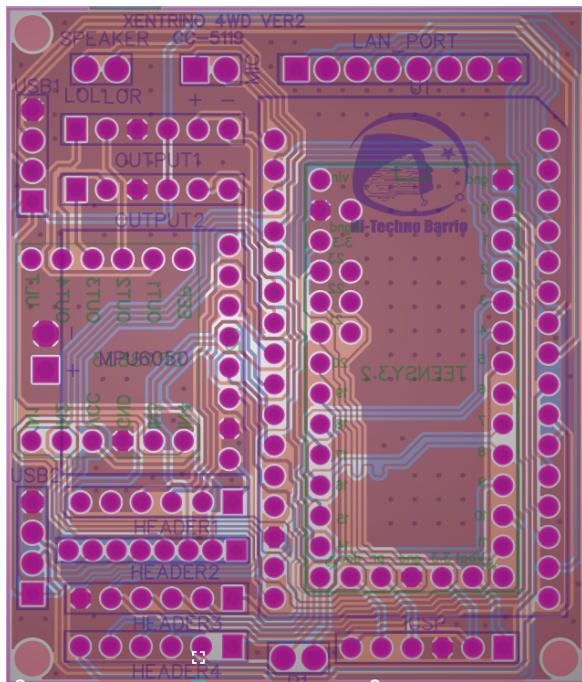
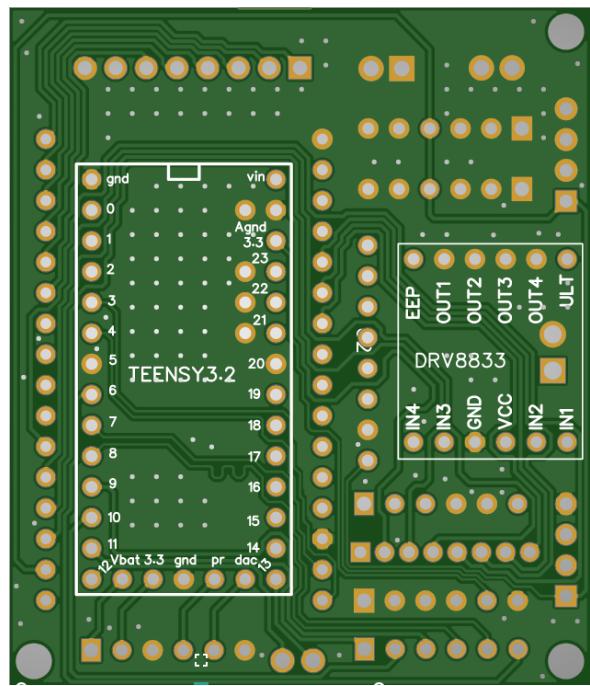
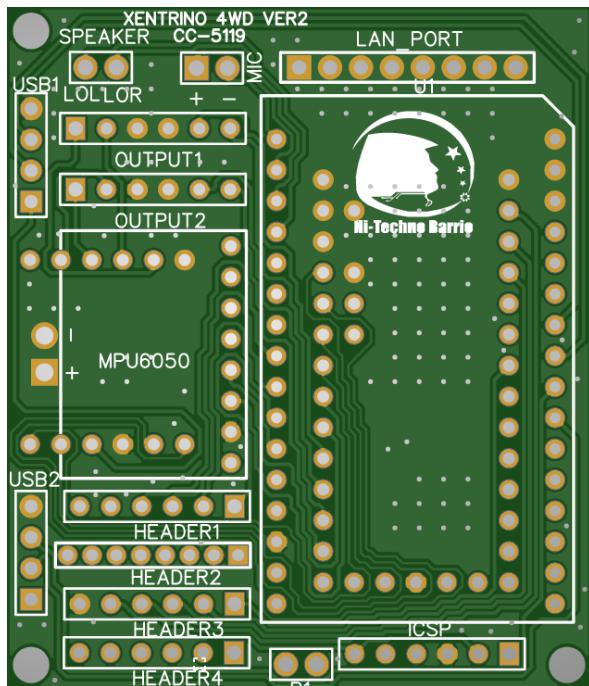
- Teensy 3.20
- Monster Moto Shield
- MPU6050/GY-85
- DRV8833

## DOCUMENTATIONS:

Schematic



## Gerber Block Diagram



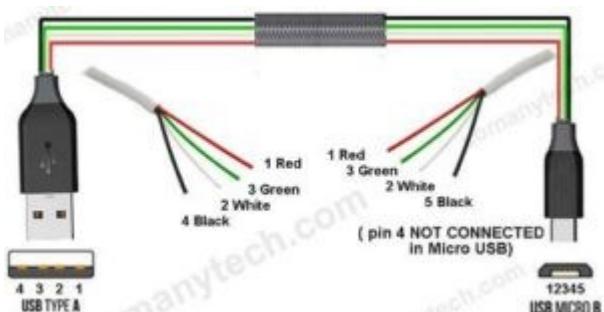
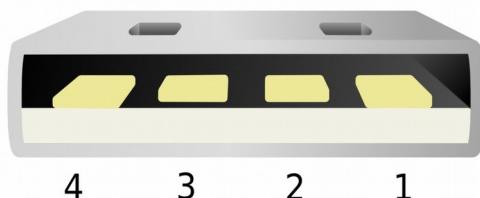
## Graphical Datasheet

Header	PIN	description	ENC1	ENC2	DUAL -1	MPU6050	Header-1
3.20	GND						
	RESET						
	D0						
	D1						
	D2		P_1				
	D3		P_2				
	D4		EN				
	D5	ENC1					
	D6	ENC2					
	D7		ENC3				
	D8		ENC4				
	D9		1A				
	D21			SCA			
	D20			SDA			
	D10		1B				
	D11		2A				
	D12		2B				
	D13						
	A0				1		
	A1				2		
	A2				3		
	A3				4		
	A4				5		
	A5				6		
	V3						
	AREF						
	GND						
	VIN						
MOTOR1					M1		
					M2		
MOTOR2					M3		
					M4		

## USB

Standard A

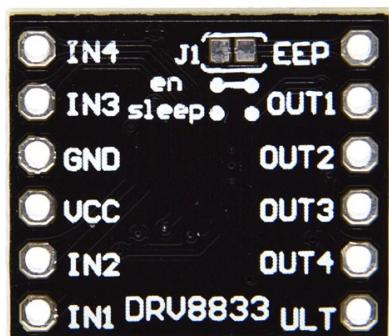
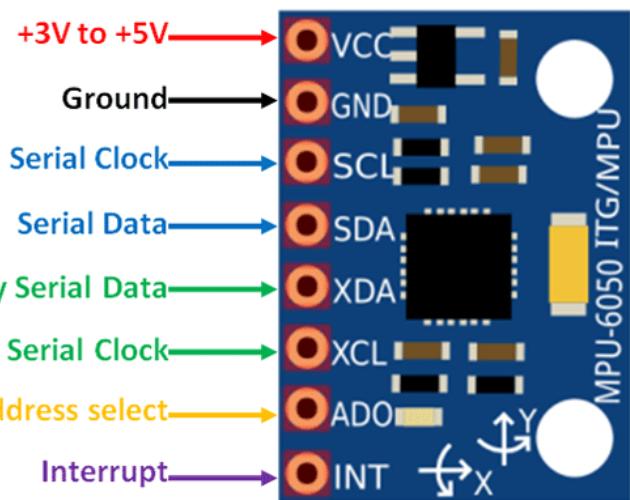
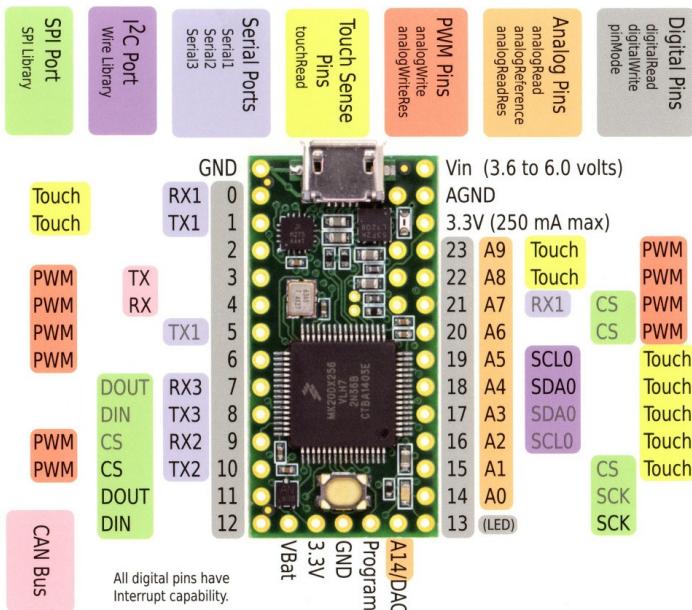
- D+ D- +



N		MIC	MICN
P			MICP
R		LINEOUT	LOR
L			LOL
CVBS		CVBS	CVB
IOG6	TX	UART1	TX1
IOG7	RX		RX1
IOA15	MOSI		MO
IOA16	MISO		MI
IOA14	CLK	SPI1	CLK
IOA13	CS		CS
IOA12	SDA	I2CO	SDA
IOA11	SCL		SCL
GND			GND
IOA4	TX	DEBUG	DTX
IOA5	RX	UARTO	DRX



SPD	LED-SPD
LINK	LED-LINK
TD+	TXP
TD-	TXN
RD+	RXP
RD-	RXN
DP2	D+
DM2	D-
DP3	D+
DM3	D-
IOG11	IOG11
IRRX	IOL11
GND	GND
3V3	OUT
5V in	IN/OUT



## Datasheet

Monster Moto  
MPU6050  
Teensy 3.20

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

## APPLICATION SETUP

