

Arduino Pinout (hardware configuration for sw version 0.0.1.0) Jan 15,2016

	IC pin	UNO	NANO	Self-Balanced PT function
PC6 (PCINT14/RESET)	1	RESET	RESET	RESET
PD0 (PCINT16/RXD)	2	D0	D0	RX
PD1 (PCINT17/TXD)	3	D1	D1	TX
PD2 (PCINT18/INT0)	4	D2	D2	INT MPU-6050
PD3 (PCINT19/OC2B/INT1)	5	D3	D3	
PD4 (PCINT20/XCK/T0)	6	D4	D4	Rider Loaded
VCC	7			
GND	8			
PB6(PCINT6/XTAL1/TOSC1)	9			
PB7 (PCINT7/XTAL2/TOSC2)	10			
PD5 (PCINT21/OC0B/T1)	11	D5	D5	Ready Switch
PD6 (PCINT22/OC0A/AIN0)	12	D6	D6	
PD7(PCINT23/AIN1)	13	D7	D7	
PB0 (PCINT0/CLKO/ICP1)	14	D8	D8	
PB1 (OC1A/PCINT1)	15	D9	D9	
PB2 (SS/OC1B/PCINT2)	16	D10	D10	
PB3 (MOSI/OC2A/PCINT3)	17	D11	D11	ISP
PB4 (MISO/PCINT4)	18	D12	D12	ISP
PB5 (SCK/PCINT5)	19	D13 (led)	D13 (led)	ISP
AVCC	20			
AREF	21			
GND	22			
PC0 (ADC0/PCINT8)	23	A0	A0	
PC1 (ADC1/PCINT9)	24	A1	A1	
PC2 (ADC2/PCINT10)	25	A2	A2	
PC3 (ADC3/PCINT11)	26	A3	A3	
PC4 (ADC4/SDA/PCINT12)	27	A4	A4	SDA MPU-6050
PC5 (ADC5/SCL/PCINT13)	28	A5	A5	SCL MPU-6050

question

step

buy motor

buy driver and batterie

testing motor with batterie and driver. Add the speed variation (2 independant PWMs above

optimise PWM frq to 7.5KHz

Dual H bridge design

select Arduino: Uno or Nano? Add Xbee for wireless

system architecture: bloc schematic, interfaces, sensors, motors, controller, recharging, volt:

re-use PD controller with MPU6050

com protocol for debug and calibration (save MPU cal in MPU nv memory)

monitor and data logger

→ audible freq)

age monitor, direction control (poti or by angle difference with a second MPU?)