



Dual Joystick RF Remote Transmitter, Open-Source Arduino Compatible Hardware with NRF24L01 RF Module, 2 Joystick

This is an Arduino compatible open-source hardware that includes 2 x Joysticks, NRF24L01 RF module, Atmega328D microcontroller, 3.3V regulator, power LED, function LED, Arduino programming connector, and other required components. This board can be used for the development of various applications such as Gaming, Remote RC servo driver, Robotics, and many more. Connector CN3 was provided to program the ATMEGA328 microcontroller using Arduino IDE.

A new ATMEGA328 microcontroller requires a bootloader to be programmed using Arduino IDE and then upload the firmware, more information is available here:
<https://www.arduino.cc/en/Tutorial/BuiltInExamples/ArduinoToBreadboard>

Example code is provided to test the board, with this code the project works as a transmitter and drives 4 Servos. Project is compatible with our **8 channel RC Servo driver**, User will able to drive 4 RC servo with this transmitter.

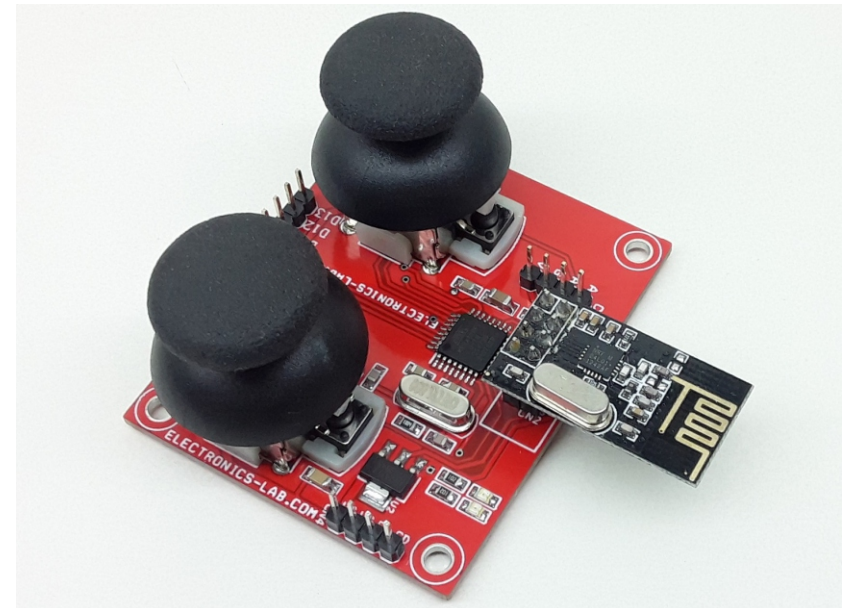
Note: Remove NRF24L01 RF module when programming the board as its share the same Pin connections.

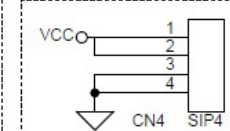
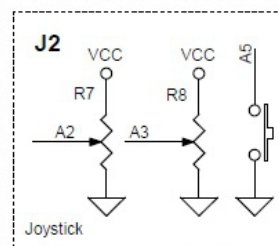
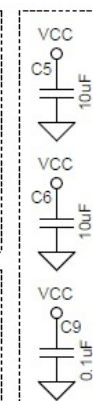
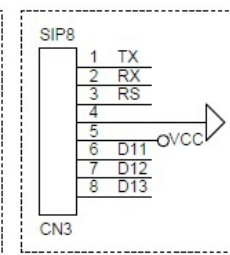
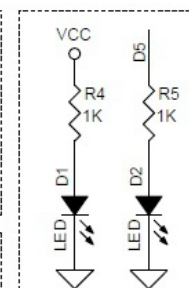
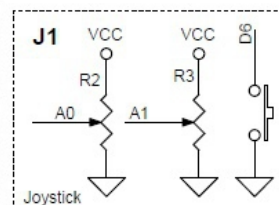
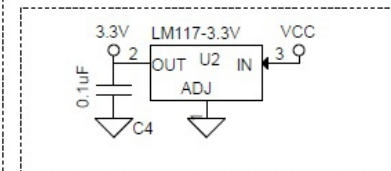
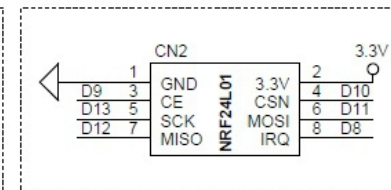
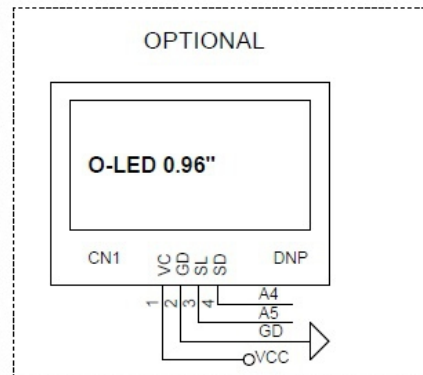
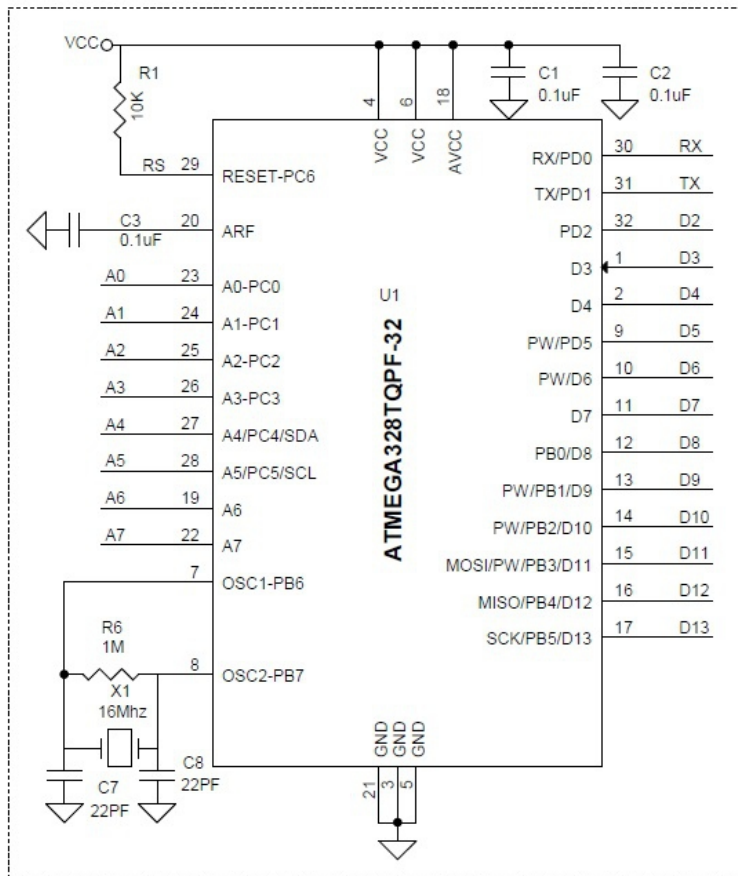
Arduino Pins

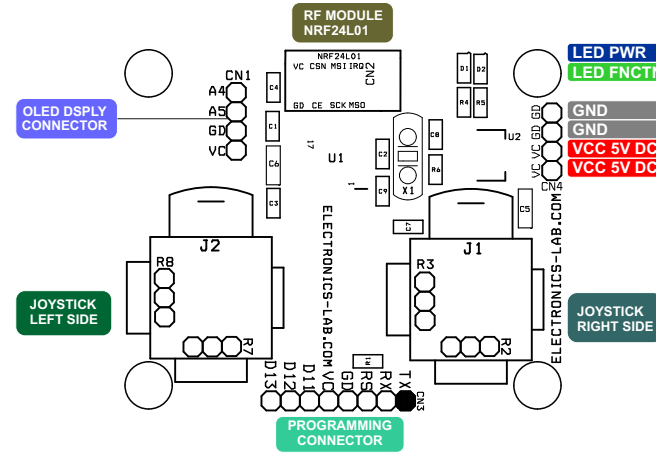
- Joystick J1 >> Arduino Analog Pin A1 and A2
- Joystick J2 =>> Arduino Analog Pin A2 and A3
- Joystick Tactile Switches = J2>> A5 and J1>>D6
- CN1 >> OLED Display 0.96Inch
- CN3 >> Programming Connector (Boot-Loader + Arduino IDE)
- NRF24L01 RF Module >> CE=D9, CSN=D10, MOSI=D11, MISO=D12, SCK=D13, IRQ=D8
- Function LED D5

Features

- Supply 5V DC (Cn4)
- On board Power LED D1
- On Board Function LED D2
- On board Programming Connector CN3 (Boot-Loader + Arduino IDE)
- 2 X Joysticks 4Axis

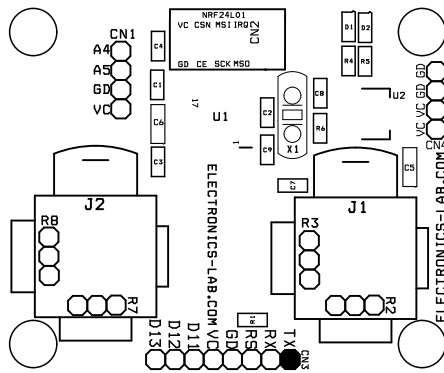




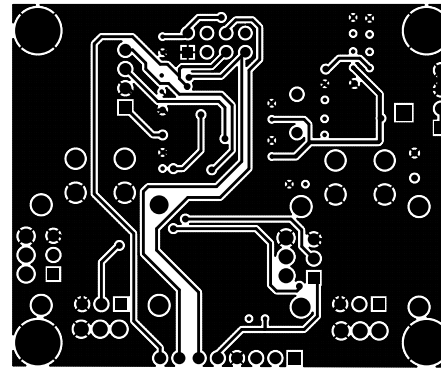


BOM

NO	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	4 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5317-ND
2	1	CN2	NRF24L01 MODULE	AMAZON/ALIEXPRESS		
3	1	CN3	8 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5321-ND
4	1	CN4	4 PIN MALE HEADER PITCH 2.54MM		DIGIKEY	732-5317-ND
5	2	C5,C6	10uF/6.3V SMD SIZE 1206	MURATA/YAGEO	DIGIKEY	
6	5	C1, C2,C3,C4,C9	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
7	2	C7,C8	22PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
8	2	D1,D2	LED RED SMD SIZE 0805	OSRAM	DIGIKEY	475-1278-1-ND
9	1	R1	10K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	2	J1,J2	THUMB JOYSTICK	C&K	DIGIKEY	108-THB001P-ND
11	2	R4,R5	1K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
12	1	R6	1M 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
13	1	U1	ATMEGA328TQPF-32	MICROCHIP	DIGIKEY	ATMEGA328PB-AURCT-ND
14	1	U2	LM117-3.3V	TI	DIGIKEY	LM1117MP-3.3/NOPBCT-ND
15	1	X1	16Mhz	ECS INC	DIGIKEY	X1103-ND

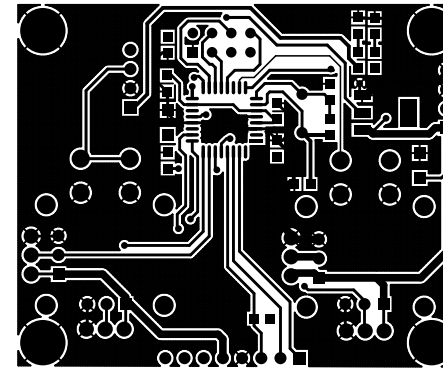


PCB SILK SCREEN TOP

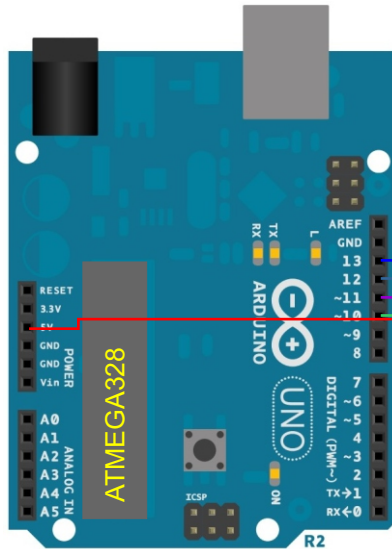


BOTTOM LAYER

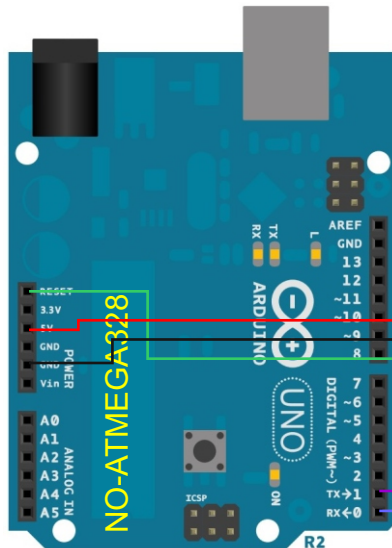
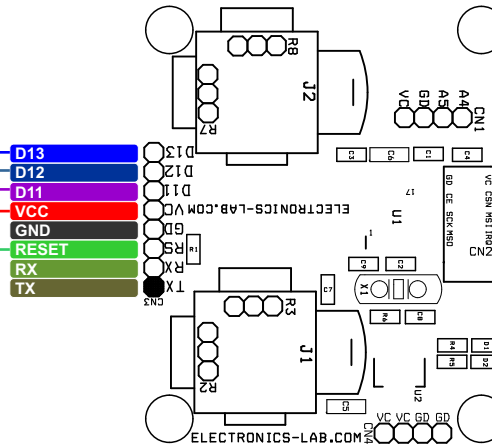
PCB DIMENSIONS 58.42MM X 48.58MM



TOP LAYER



Boot-Loader Connections



Arduino Programming Connections

