



Single Joystick Remote Control Transmitter using NRF24L01 – Arduino Compatible

This is an Arduino compatible open-source hardware that includes 1 x joystick, NRF24L01 RF module, Atmega328D microcontroller, 3.3V regulator, power LED, function LED, and other required components. This board can be used for the development of various applications such as Gaming, Remote RC servo driver, RC Motor controller, Robotics, and many more.

Arduino Code is available for testing purposes and the project works as a transmitter and drives DC motor controller board with this code. The project is compatible with our DC Motor speed and direction controller board, and 8 Channel RC Servo Board.

Check the link below to learn more about programming a bare new ATMEGA328 chip.

<https://www.arduino.cc/en/Tutorial/BuiltInExamples/ArduinoToBreadboard>

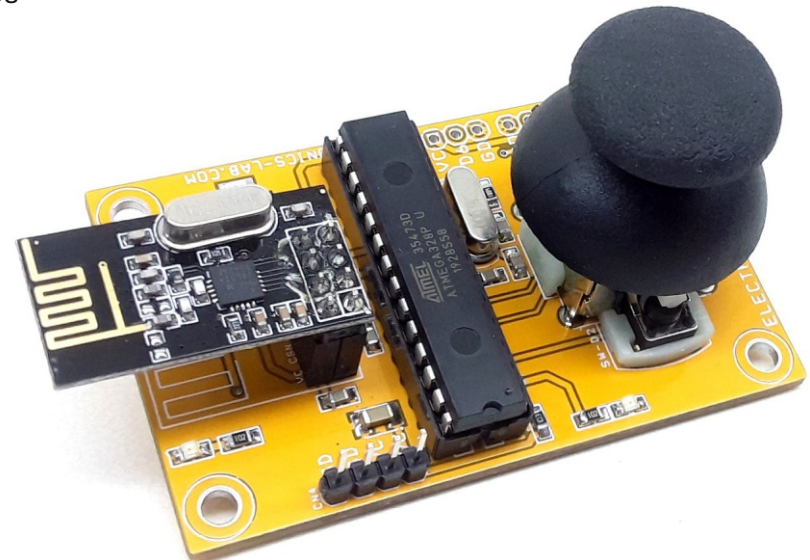
Credits: Arduino Code is modified and original author of this code is www.ForbiddenBit.com

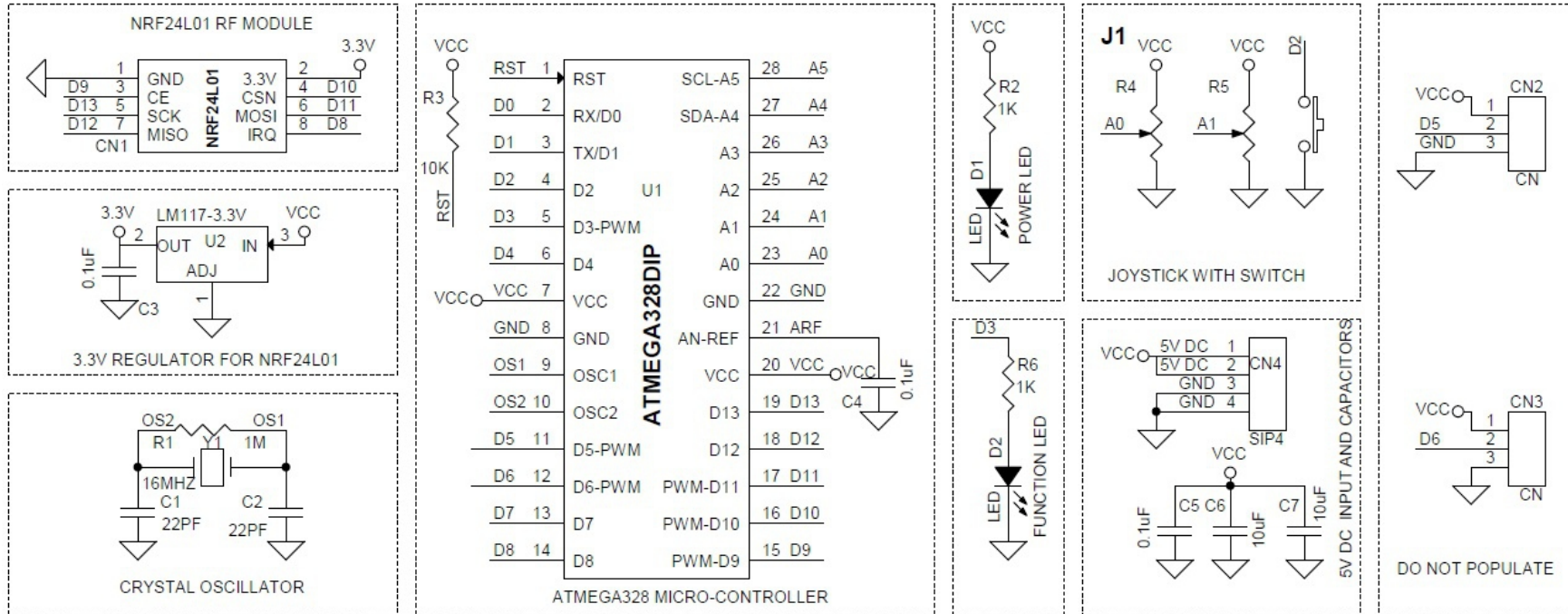
Arduino Pins

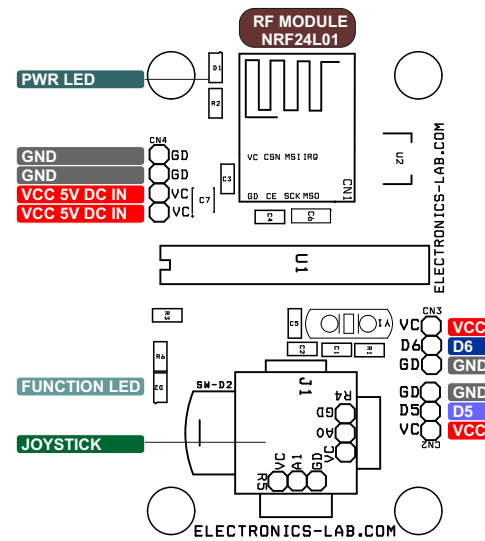
- Joystick J1 >> Arduino Analog Pin A0 and A1
- Joystick Tactile Switch=Digital Pin D2
- Function LED D2 = Arduino Digital Pin D3 (Optional, Solder If required)
- NRF24L01 RF Module >> CE=D9, CSN=D10, MOSI=D11, MISO=D12, SCK=D13, IRQ=D8
- Connector CN2 and CN3 Optional (Optional, Do Not Populate)

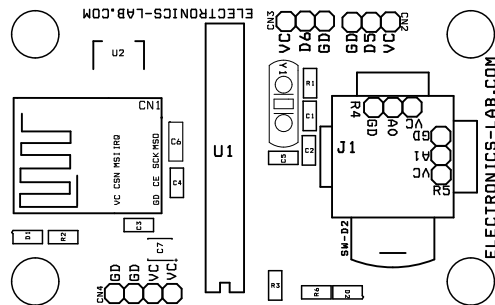
Features

- Supply 5V DC (Cn4)
- On board Power LED D1
- On Board Function LED D2
- One Joystick 2 Axis
- PCB Dimensions 65.41MM X 40.32MM

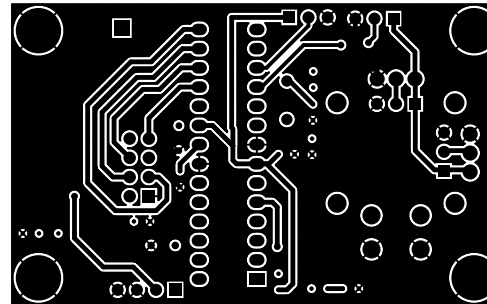




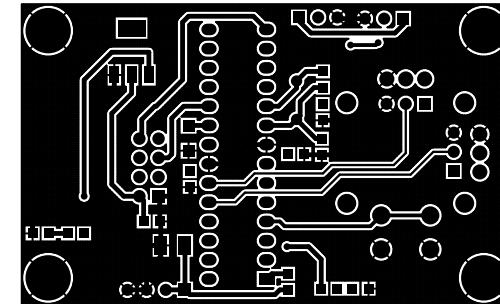




SILK SCREEN TOP



BOTTOM LAYER



TOP LAYER

PCB DIMENSIONS 65.41MM X 40.32MM

BOM						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	NRF24L01	CHINA	ALIEXPRESS	
2	2	CN2,CN3	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
3	1	CN4	4 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5317-ND
4	2	C1,C2	22PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
5	3	C3,C4,C5	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
6	2	C6,C7	10uF/6.3V SMD SIZE 1206	MURATA/YAGEO	DIGIKEY	
7	2	D1,D2	LED RED SMD SIZE 0805	OSRAM	DIGIKEY	475-1278-1-ND
8	1	R1	1M 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
9	2	R2,R6	1K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	1	R3	10K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
11	2	J1	JOYSTICK WITH TACTLE SWITCH	C&K	DIGIKEY	108-THB001P-ND
12	1	U1	ATMEGA328DIP	MICROCHIP	DIGIKEY	ATMEGA328-PU-ND
13	1	U2	LM117-3.3V	TI	DIGIKEY	LM1117MP-3.3/NOPBCT-ND
14	1	Y1	16MHZ	ECS INC	DIGIKEY	X1103-ND
15	1	SCK	28 PIN DIP IC SOCKET	ON SHORE	DIGIKEY	ED3050-5-ND