LC AC&DC supply single ESP8266 relay development board

LC-Relay-ESP12-1R-MV

AC/DC power ESP8266 WIFI single relay ESP-12F Dev board

Overview:

LC ESP8266 single relay development board onboard ESP-12F WiFi module, I/O orifice full lead ,support AC90-250V/DC7-12V/USB 5V etc.many supply power way. Provide Arduino develop environment reference code,suit for ESP8266 secondary development study, smart home wireless control.

The function characteristics

1.Onboard Mature and stable ESP-12F WiFi module, high capacity 4M Byte Flash

2. The I/O port of the WiFi module and the UART program download port are all extracted, convenient secondary development

3.Onboard AC-DC switch power module,supply power way support AC90-250V/DC7-12V/USB5V

4. Onboard Wifi module RST reset button

5.ESP-12F support use Eclipse/Arduino IDE etc.development tools, provide Arduino development environment reference program

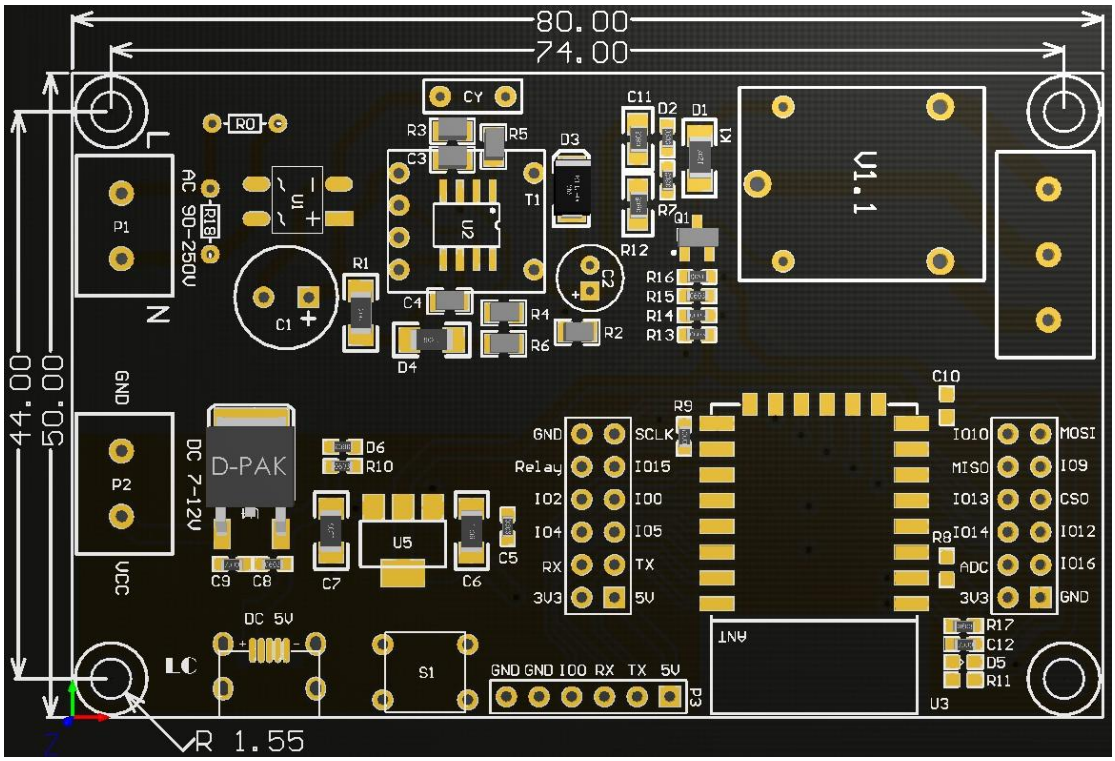
6.Onboard 1 channel 5V relay,output switch signal ,Suitable for

controlling and controlling the working voltage to be within the load of AC 250V/DC30V。

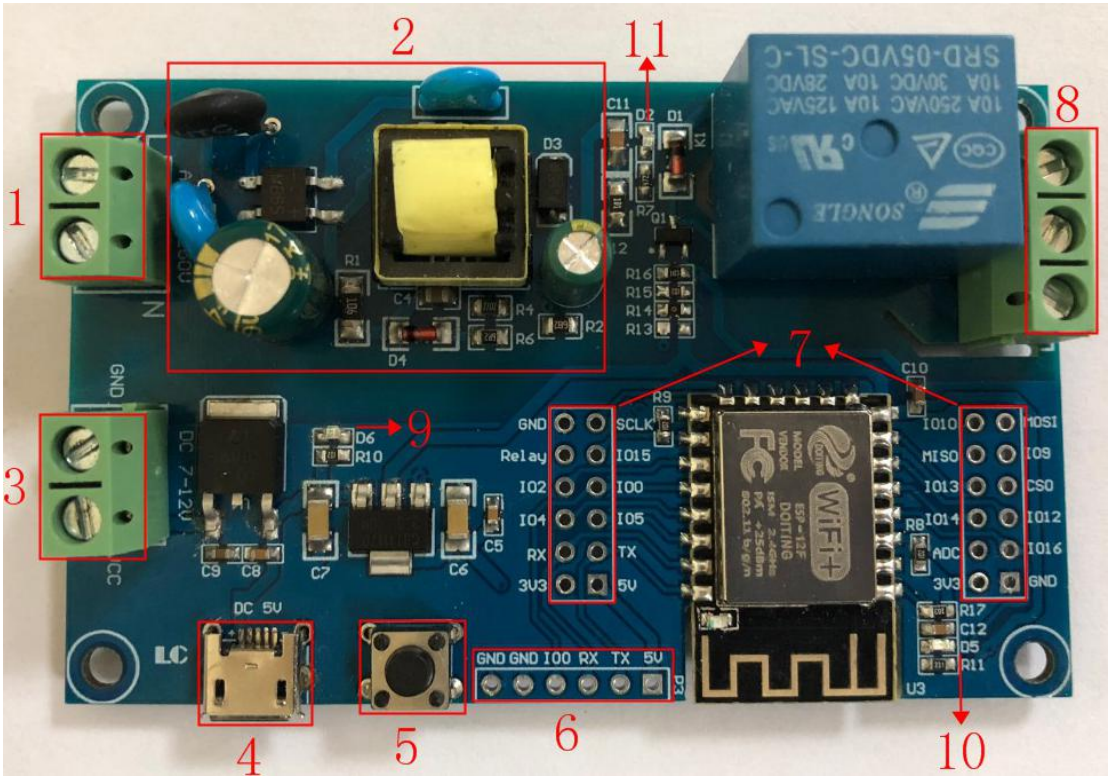
7.Onboard power indicator ,1 programmable LED and relay indicator.

Hardware introduction and description

1.board size : 80*50mm
Weight :34g



Introduce of interface



1，L，N：AC90-250V power supply

2，AC90-250V turn DC5V switch power supply (when adopt AC supply power please don’t directly touch here by hand !!!)

3.VCC，GND：DC7-12V power supply

4.Micro USB：DC5V USB power supply

Mark: AC90-250V，DC7-12V，DC5V USB Choose one of the three power supply methods.

5. 6X6mm press button, ESP8266 reset button

6. UART Program download port: ESP8266 GND，RX，TX，5V separately connect external TTL Serial module GND，TX，RX，5V, IO0 need with GND connect when download .

7.GPIO Pinout port

8. relay output end:

NC: Normally close,the NC disconnect with COM when relay closed and connect with COM when relay released.

COM: Common end

NO: Normally open end,the NO disconnect with COM when relay released and connect with COM when relay closed.

9.Power indicator LED

10.programmable LED

11.Relay indicator LED.

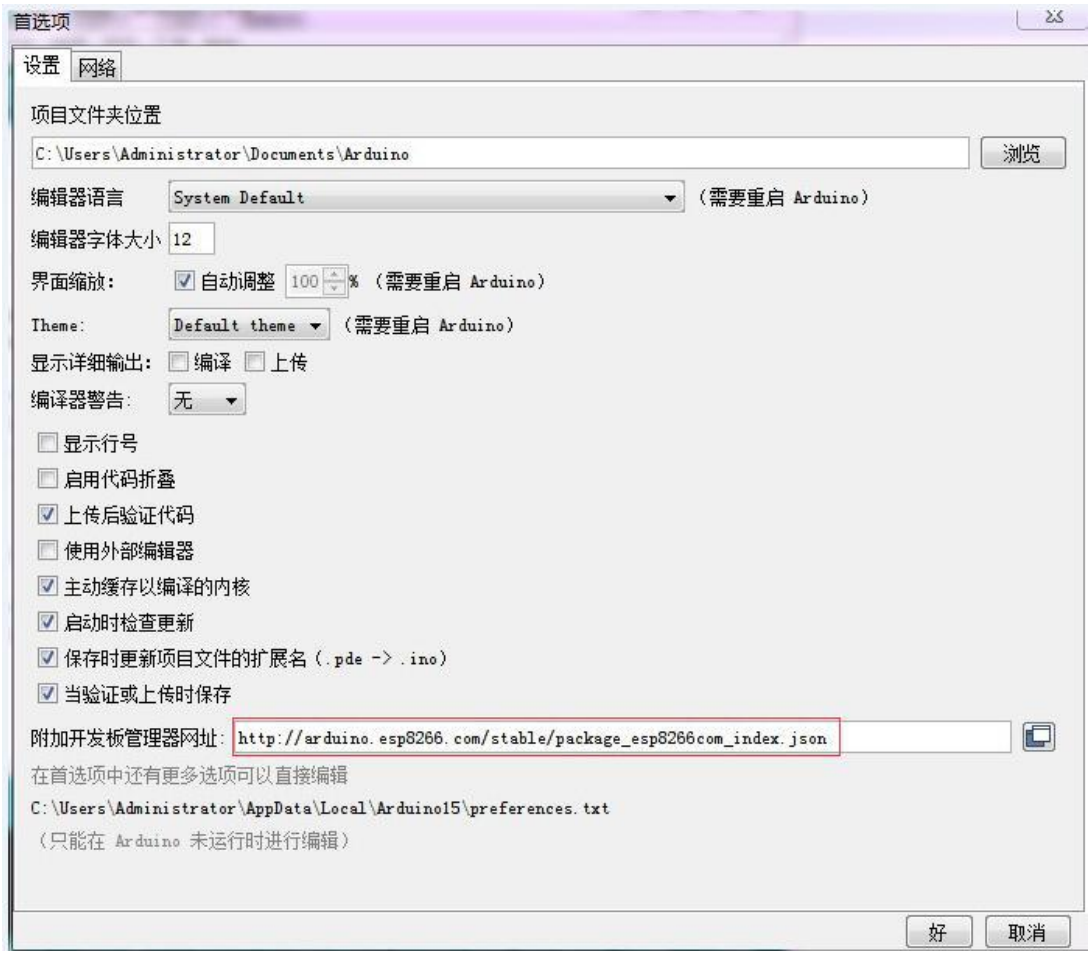
GPIO Pinout port introduce

NO.	Name	Function	NO.	Name	Function
1	GND	Power ground	13	IO10	GPIO10
2	Relay	Relay drive port , using IO5 drive by default. If need use other I/O drive relay, please remove R14, then use the I/O connected to this relay pin.	14	MISO	Slave output master input
3	IO2	GPIO2; UART1_TXD	15	IO13	GPIO13; HSPI_MOSI; UART0_CTS
4	IO4	GPIO4	16	IO14	GPIO14; HSPI_CLK
5	RX	UART0_RXD; GPIO3	17	ADC	A/D Conversion result. Input voltage range 0~1V, ranging from 0 to 1024
6	3V3	3.3V power	18	3V3	3.3V power
7	SCLK	CLOCK	19	MOSI	Master output Slave input
8	IO15	GPIO15; MTDO; HSPICS; UART0_RTS	20	IO9	GPIO9
9	IO0	GPIO0	21	CS0	chip select
10	IO5	GPIO5	22	IO12	GPIO12; HSPI_MISO
11	TX	UART0_TXD; GPIO1	23	IO16	GPIO16
12	5V	5V power	24	GND	Power ground

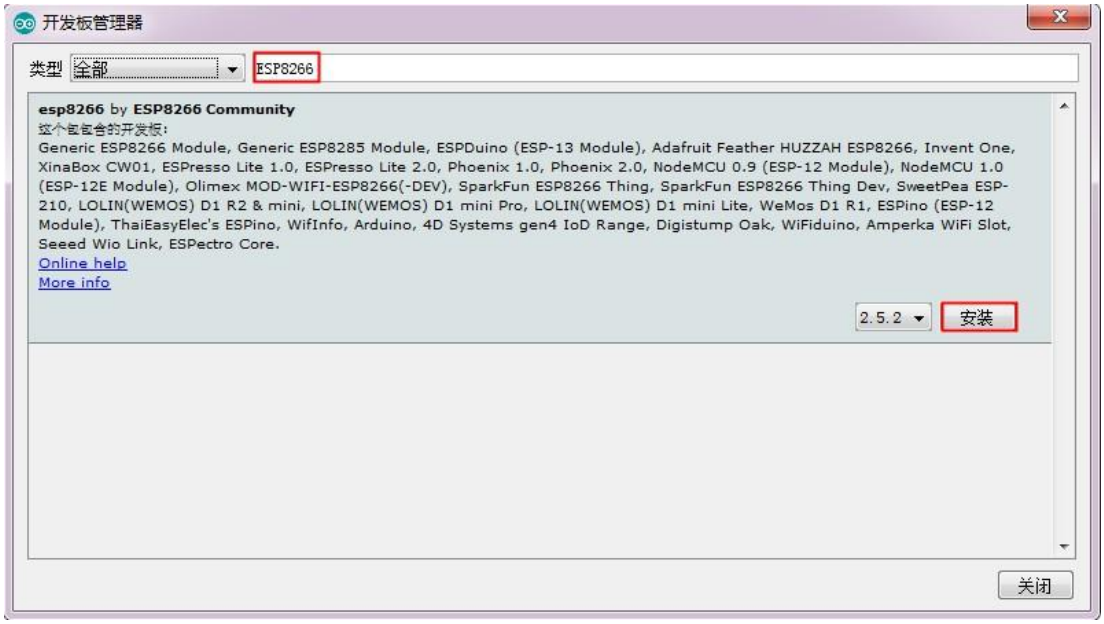
Arduino development environment building

ESP8266 support Eclipse/Arduino IDE development tools, use Arduino will easy，Arduino development environment build way as below:
1. Install Arduino IDE 1.8.9 or latest version
2. Open Arduino IDE ,Click on File - Preferences in the menu bar,Click on Add URL in the "Additional Development Board Manager URL" after entering the preferences:

http://arduino.esp8266.com/stable/package_esp8266com_index.json,



3.click menu's tool --development board -development manager, search for "ESP8266" to install Arduino support package for ESP8266 2.5.2 or the latest version



Note : because the download website is foreign, the access speed is slow.There may be a download error,please try again when you have good internet status.

Program download:

1. Use the jumper cap to connect the IO0 and GND pins, prepare one TTL serial module(such as ： FT232) plug into computer USB, serial module and development board connecting way as below:

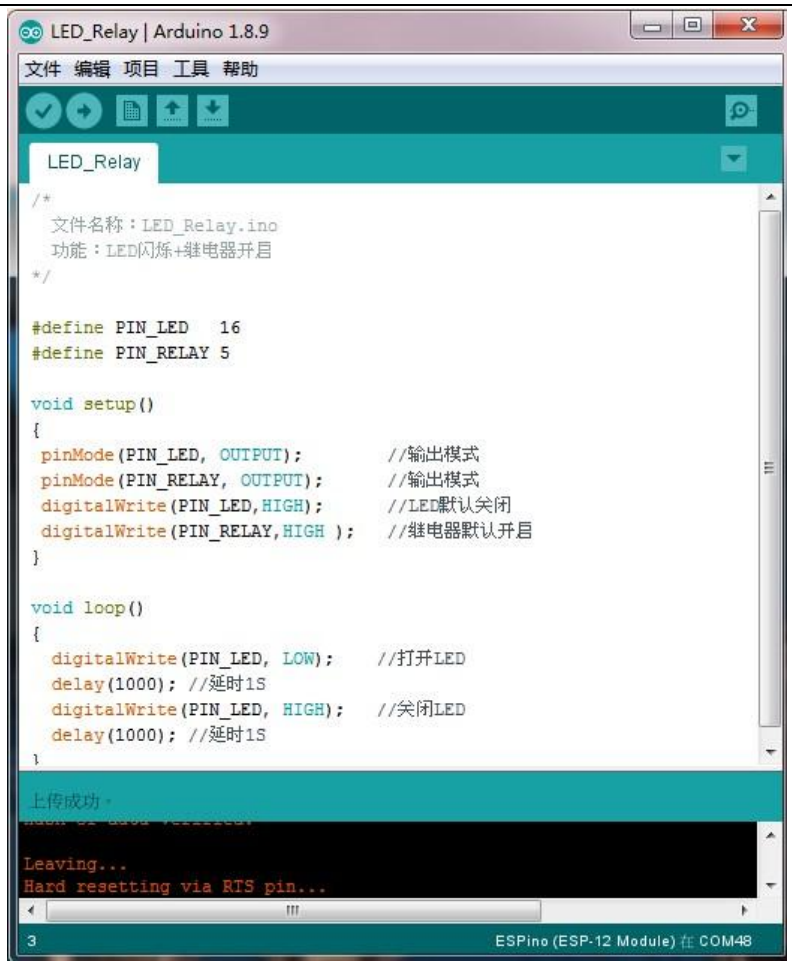
TTL serial module	ESP8266 development board
GND	GND
TX	RX
RX	TX
5V	5V

2.click menu bar tool--development board ,choose development board for ESPino (ESP-12 module)

3. open need download program,click menu bar's tool---interface Choose the correct port number

4.after click upload program will automatically compile and download to the development board,as below:

5. Finally cut IO0 with GND connect, the board can be powered up by pressing the power button again or by pressing the reset button.



Shenzhen LC Technology Co., Ltd.
Address: Room 1803-1804, Block C, Huangdu Plaza, No.3008 Yitian Road, Futian District, Shenzhen,Guangdong,China,518000

Web: www.lctech-inc.com/www.chinalctech.com