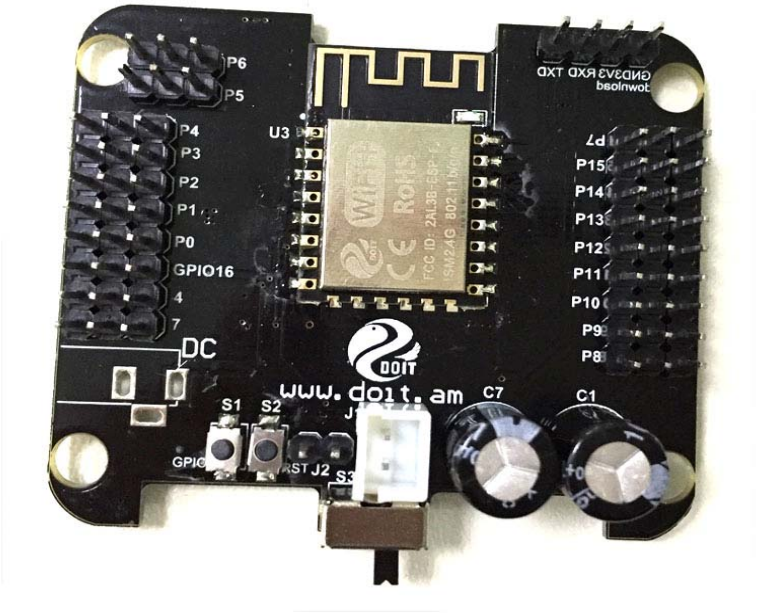
ViVi Robot Control Board

User Manual



Updation

date	version	content
2017-7-4	V1.0	first

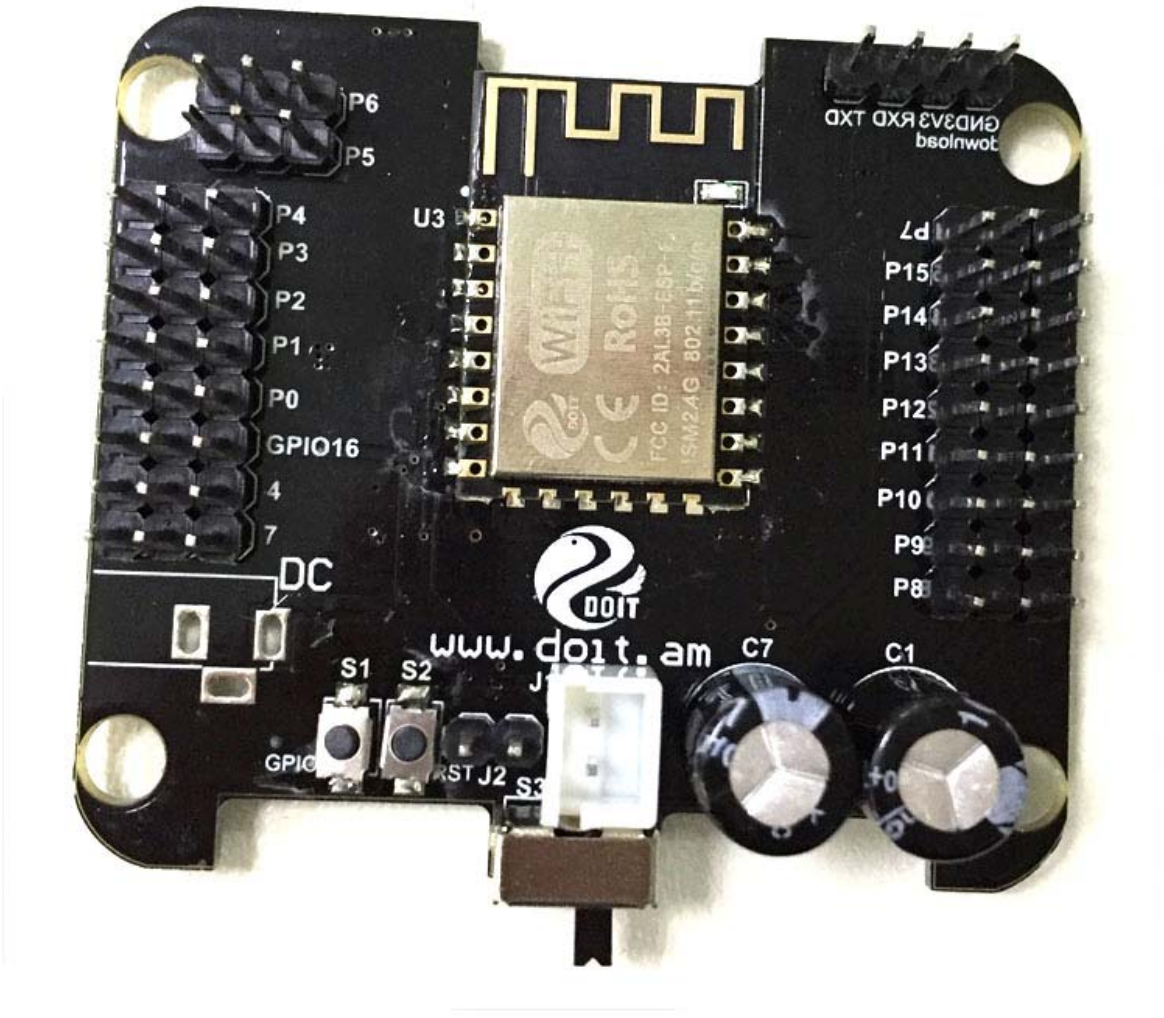
目　录

1. Introduction

ViVi robot control board is developed by DOIT company, which is already extended the serial TTL, EN, and STATE button. The firmware is already built-in this board, which can finish the transparent transmission, low power, power index function. This board can realize the data transmission and control by wireless communication. The specifications is as follows.

- fully compatible with the wifi transparent transmission function;
- the robot firmware is stable, and support download by web page, and the graphic motion is also can download;
- the wifi module is ESP-F, and teh size is 24mm×16mm×3mm;
- working voltage: 4.5V~6.4V， TTL voltage: 3.3V;
- the pins: 3.3V， TXD、RXD、GND;
- average current: 80mA; max current is 3000mA when send data.
- support AT command;
- support programmable， OTA update;
- built- in HTTP Web Server, support parameters by web pages;
- suppport AP、STA、AP+STA ;
- support reconnect under WiFi STA mode， reconnect at TCP Client mode;
- Serial port support set baud rate, data bit, parity check, stop bit, subcontract time;
- support(bps)：300/600/1200/2400/4800/9600/19200/38400/57600/74800/115200/ 230400/460800/921600/1152000/1500000
- working temperature：-40℃-125℃;

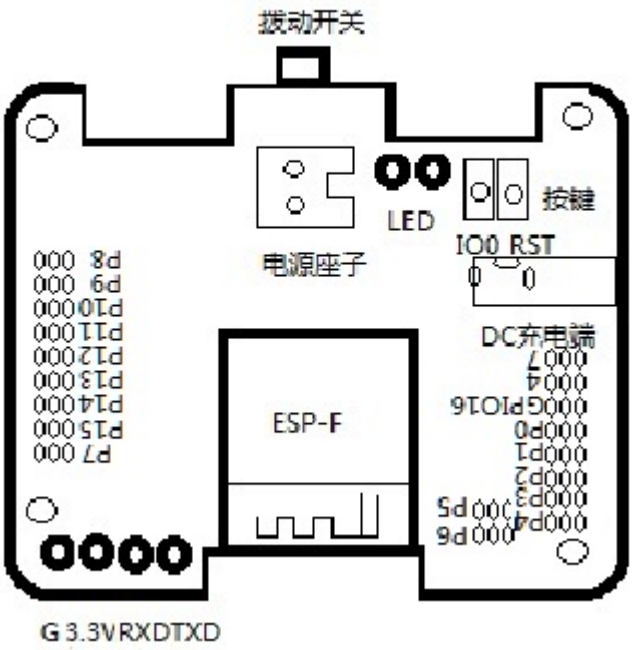
Pictrue:



ViVi robot board can realize the transimission and control in real-time. The transparent firmware can be configured by web page, and support AP, STA, and AP+STA configuration mode, support the buad 300bps~3686400bps, TCP Server/Client, UDP Server/Client and so on.

2. Interface Definition

The interface can be seen in the follows.



interface definition

Button and LED

Table 2.1 button and LED

num	type	function
1	LED	Power index
2	S1	Connect GPIO0 of wifi, to finish the firmware download with SW2
3	S2	Connect RST to finish firmware download with SW1

Note. when download the firmware, firstly press S1 button, and then press S2 button, and then loose S2, and then loose S1, after that, can finish the download.

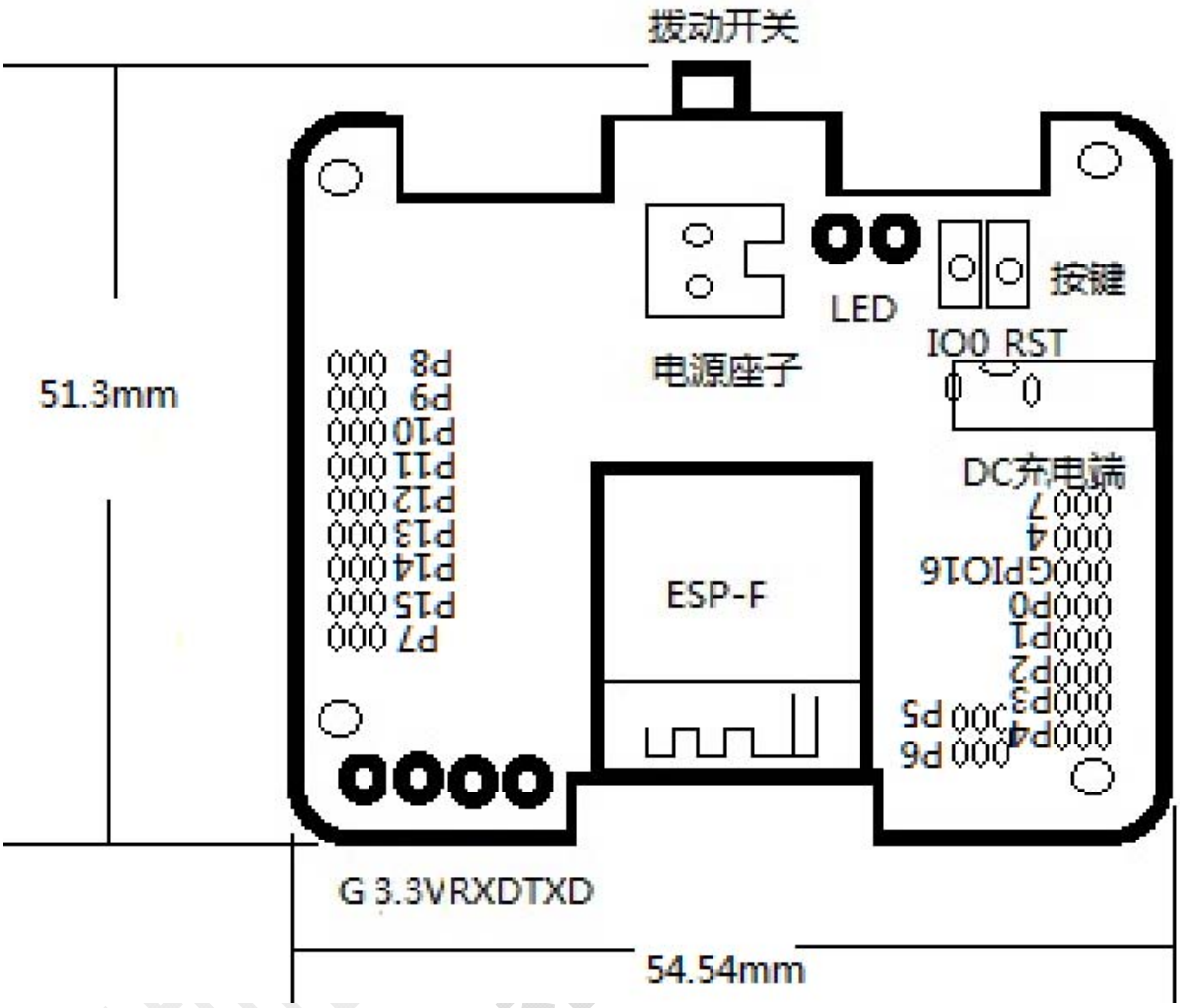
pins definitions

Table 2.2 pins definition

num	Pin name	type	function
1	P0-P16、4、7	PWM	Output pwm to control servo motion
2	RXD	I/O	When write Flash, as UART RXD;
3	TXD	I/O	When write Flash , as UART TXD

4	GND	P	GND
5	VCC	P	Module power 2.8-3.6V, recommend 3.3V

3. shape and size



length* width 54.54*51.3mm

high 16.5mm

4. Electronic parameters

DC charge	Use battery charger 6.4V
Battery	4.8V-6.4V Ni-MH Battery for lithium battery is recommended
Servo input	4.8V-6.4V
Starting current	Power-on instantaneous current up to 5000mA
Stable current	180mA~210mA

Note: The current is not enough when the robot is not controlled, the movement of the shoulder slight jitter is normal!

WiFi (ESP-F), see the wiki.doit.am

Appendix.2

From DOIT	
Official site	*www.doit.am*
Chinese book	*ESPDuino 智慧物联开发宝典*
Online shop	www.smartarduino.com, www.vvdoit.com

Forum	wiki.doit.am
IoT Application	*智能建筑云*
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WhatsAPP	**008618676662425**
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QQ	**123433772**

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Chip	*ESP8266 Quick Start Guide*
Software	*ESP8266 SDK Start Guide*
	ESP8266 SDK
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	ESP8266 Resources

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