



# TYWE1S Module Datasheet

Device Development > Module > Wi-Fi Module

Version: 20200221

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## 1 Module Overview

TYWE1S is a low power consumption module with built-in Wi-Fi connectivity solution designed by HangZhou Tuya Technology Corporation. The Wi-Fi Module consist a highly integrated wireless radio chip ESP8266EX and extra flash which has been programed with Wi-Fi network protocol and plenty of software examples. TYWE1S also has an 32-bit CPU, 1M byte flash, 36k SRAM and various peripheral resources.

TYWE1S is a RTOS platform, embedded with all the Wi-Fi MAC and TCP/IP protocol function examples, users can customize their Wi-Fi product by using these software examples.

### 1.1 Features

- Integrated low power consumption 32-bit CPU, also known as application processor
- Basic frequency can support both 80MHz and 160MHz
- Supply voltage range: 3V to 3.6V
- Peripherals: 6×GPIOs, 1×UART , 1×ADC
- Wi-Fi connectivity
  - 802.11 b/g/n
  - Channel 1 to 14 @ 2.4GHz
  - Support WPA/WPA2
  - +19.5dBm output power in 802.11b mode
  - Support STA/AP/STA+AP operation mode
  - Support Smart Link function for both Android and iOS devices
  - Standby power consumption is less than 0.1 mW (DTIM3)
  - On-board PCB antenna, or IPEX connector for external antenna
  - CE, FCC certified
  - Operating temperature range: 0°C to 70°C (Commercial grade), -40°C to 85°C (Industrial grade)

### 1.2 Main application Fields

- Intelligent Building
- Intelligent home, Intelligent household applications
- Health care

- Industrial wireless control
- Baby monitor
- Webcam
- Intelligent bus

## 2 Dimensions and Footprint

### 2.1 Dimensions

TYWE1S has 2 columns of Pins (2\_9). The distance between each Pin is 1.5mm. Size of TYWE1S: 18mm(W)\_ 23.5mm(L) \*3.1mm(H)

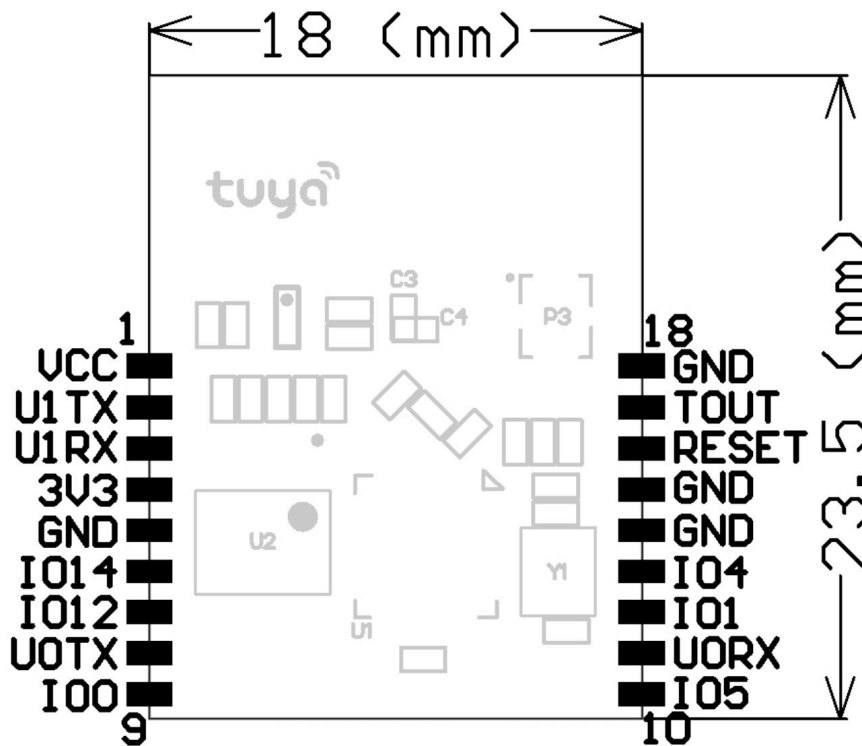


Figure 1: 尺寸封装

## 2.2 Pin Definition

PIN NO.	NAME	TYPE	DESCRIPTION
1	VCC	S	UART1 power (3.3V)
2	U1TX	I/O	UART1_TXD
3	U1RX	I/O	UART1_RXD
4	3V3	S	Supply voltage (3.3V)
5	GND	S	Ground
6	IO14	I/O	GPIO_14
7	IO12	I/O	GPIO_12
8	U0TX	I/O	UART0_TXD(used to print module's internal information)
9	IO0	I/O	GPIO_0(processing during initials, caution when used)
10	IO5	I/O	GPIO_5
11	U0RX	I/O	UART0_RXD(used to print module's internal information)
12	IO1	I/O	GPIO_1(status is uncertain during initials)
13	IO4	I/O	GPIO_4
14	GND	S	Ground
15	GND	S	Ground
16	RESET	I/O	External reset singal(negative level effects)
17	TOUT	AI	ADC terminal
18	GND	S	Ground

**Figure 2:** 模块引脚定义

### 3 PCB Packaging

#### 3.1 Mechanical Dimensions

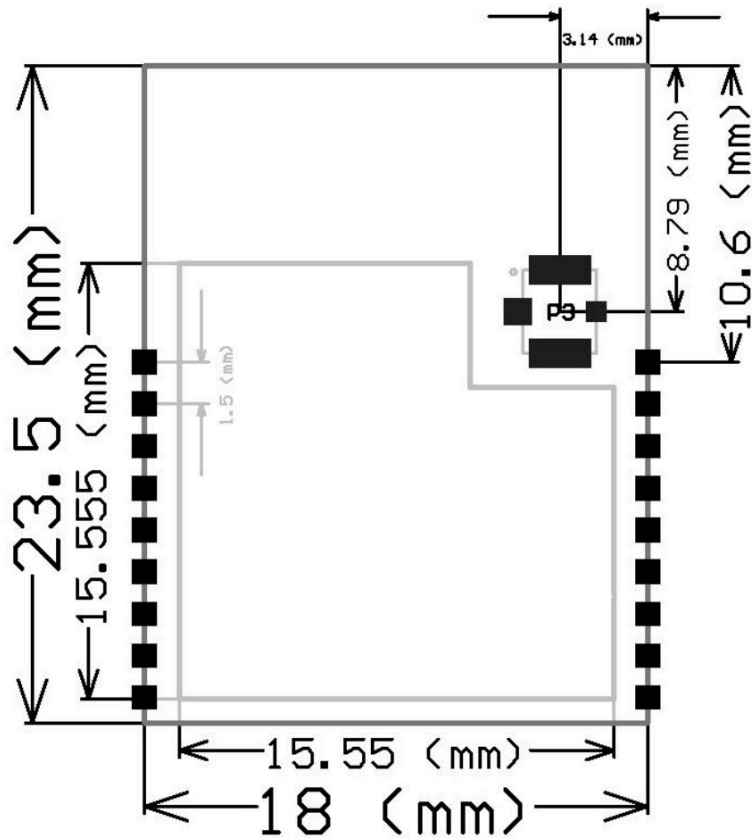


Figure 3: 机械尺寸 2



Figure 4: 机械尺寸 2

3.2 PCB Recommended Package

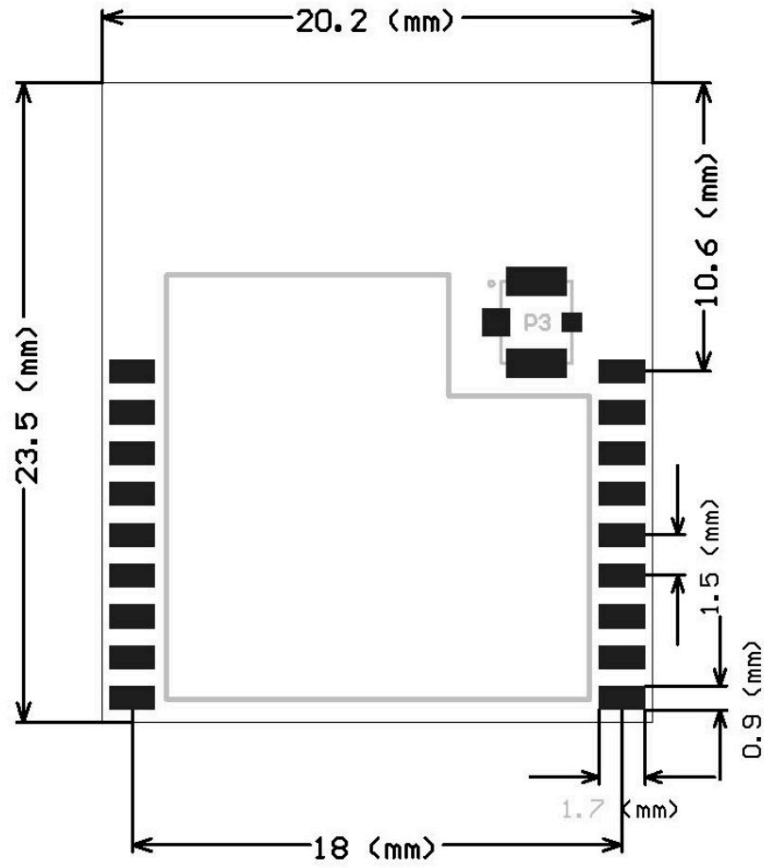


Figure 5: 生产封装