



TYWE1S Module & MCU serial communication instructions

Device Development > Access Mode MCU > Wi-Fi General Solution >

Hardware Design Reference Wi-Fi

Version: 20200410



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1 1. Typical Application diagram

Diagram 1 Module self-processing mode

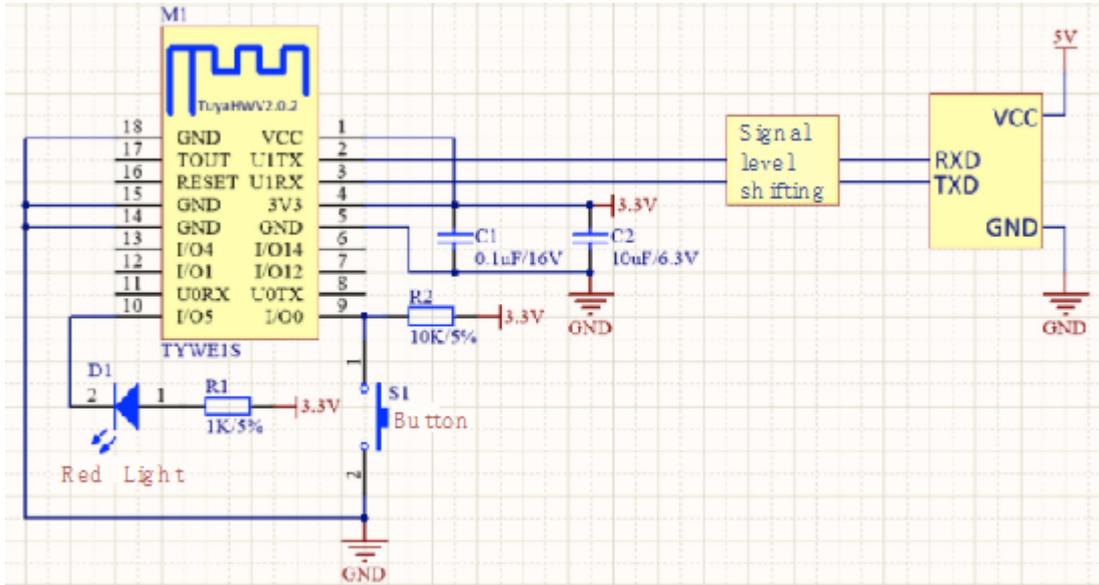


Figure 1 Module Self - Processing Mode

Diagram 2 MCU & Module cooperative processing mode

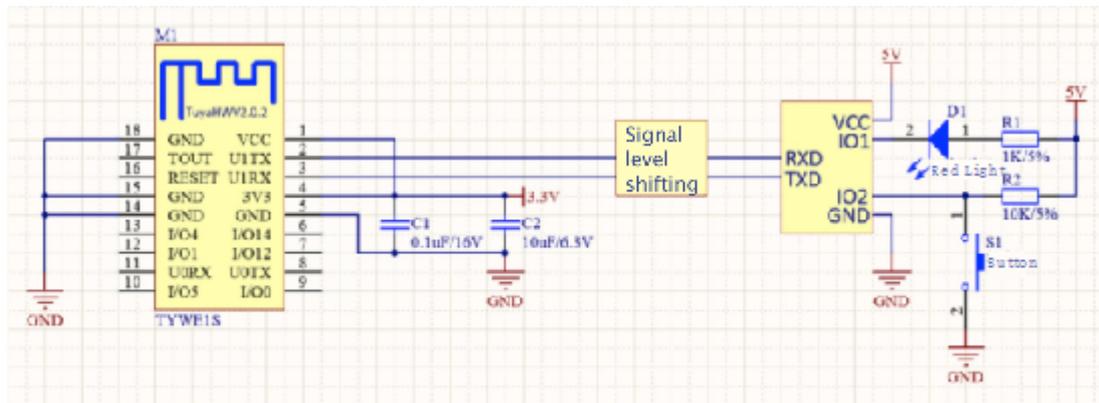


Figure 2 MCU and Module Processing Mode

2 2.Design specification

1. Module power supply consumption: 3.3V/100mA, instantaneous current(5us) 450mA. Proposed supply current \geq 300mA.
2. Power filter capacitor C1 & C2 should be distributed as close to the 3V3 pin as possible.
3. Serial port U1TX & U1RX are user interface. Default setting Baud rate: 9600, Data level: 8 bit, Stop bit: 1 bit, No check bit, No flow control. **If you need to use serial port 1 as a common IO port, please contact with the business.**
4. Serial port U0TX & U0RX are the interface related module printing, please don't link to user serial port
U0TX pin can't be used as an ordinary IO port, please suspend. if need to use U0RX pin as an ordinary IO port, please contact with the business.
5. TOUT pin is voltage collection pin, can't be used as an ordinary IO port. **If idle, plesase suspend.**
6. IO 0 participates in the module for normal startup, when the power is on, this pin's level needs the high level for normal startup. For the export, a pull-up resistor is recommended. For the import, the input level should be considered. If idle, it can be suspended processing.
7. RESET pin is module hardware reset pin, effective under the low level. Without external circuitry, it can be directly connected to the IO port of MCU for use.
8. The module also needs the button and Wi-Fi status indicator. The button is used to clear network information of the module. The indicator is used to indicate the current status of the Wi-Fi module. If choose the module self-processing mode, refer to Diagram 1. If choose MCU & Module cooperative processing mode, refer to Diagram 2. Mode instructions can refer to "3.3 Query module work mode of MCU settings" in "Tuya general serial communication protocol".
9. If MCU supply voltage is 3.3V, circuit section about the signal level conversion in the reference diagram can be omitted.
10. Other idle pins can be suspended processing.
11. For Diagram 3, the antenna is susceptible to the shadow part of the package, don't wire and cover with copper, so as not to affect the antenna performance.



12. The exposed measuring point is located on the back of the module, as shown in Diagram 3 - The purple ring of TYWE1S recommended packaging. Please pay attention to avoidance when wiring. **Note: if need to recommend package, download it online or achieve it from the business.**

3 3. Antenna area instructions

Diagram 3 The shadow part is susceptible area for antenna, please don't wire and cover with copper. If the structure allows, please empty this area of PCB, so as not to affect the antenna performance.

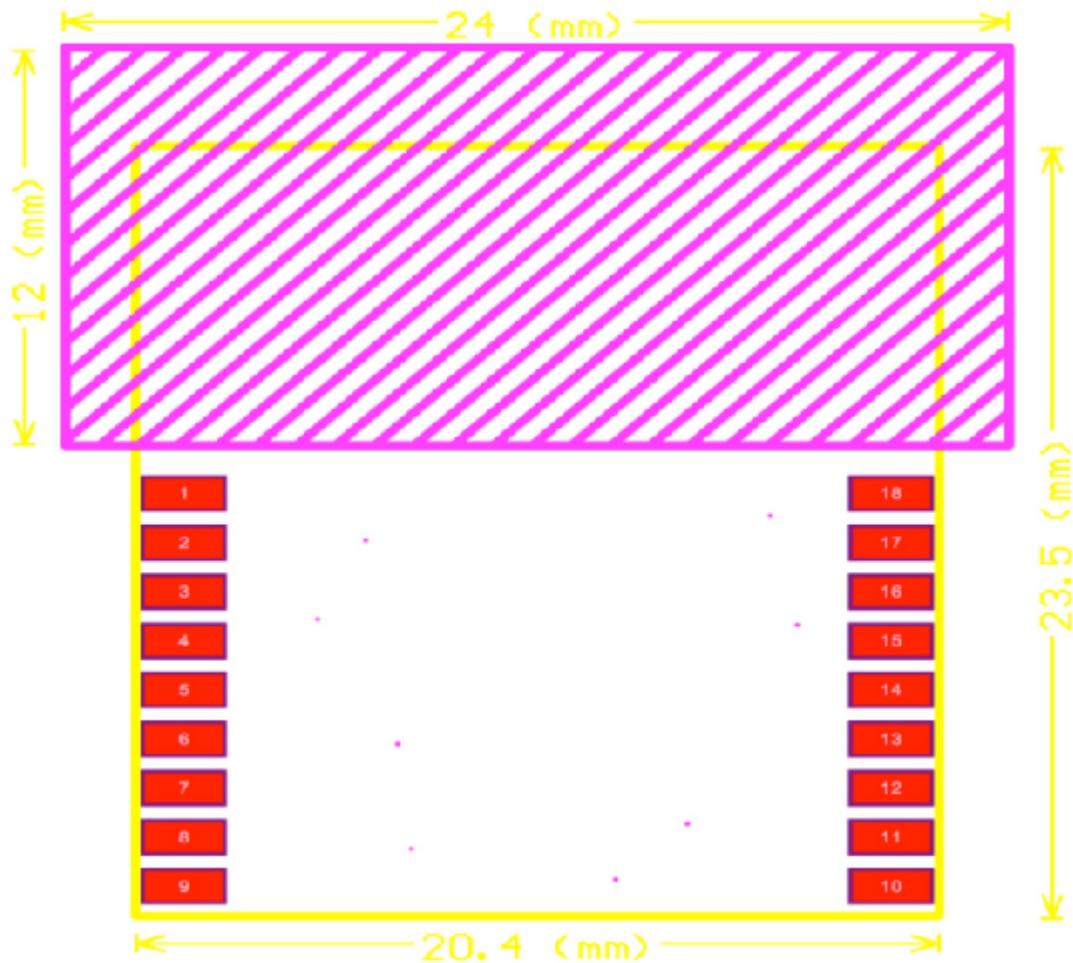


Figure 3 TYWE1S Package