

User Manual

WIFI MODULE

Model No: HN030-01

FCC ID: 2AXAA-HN030-01

1. Product overview

Shw-tuyawb3s-0-10v is a low-power independent WiFi protocol module jointly developed by Sunhiway Electronics using graffiti intelligent WB3S.

It consists of a high level of integration of radio frequency chip BK7231T and a small number of peripheral devices, built-in Wi-Fi network protocol stack and rich library functions.

WB3S also includes 32-bit MCU with low power consumption, IT1R WLAN, the highest master frequency of 120MHz, built-in 256K SRAM, 2Mbyte FIFlash and abundant peripheral resources. WB3S is an RTOS platform, which integrates all function libraries of Wi-Fi MAC and TCP/IP protocols. On this basis, Sunhiway converts 3.3V PWM driver signal into 0-10V voltage signal, which can be applied to products with 0-10V signal externally.

1.1 features

- Operating voltage range :5V-12V(limit 15V)
- Built-in 32-bit LOW-power CPU, which doubles as an application processor
- frequency 120 MHZ
- Peripherals: 9×GPIOs, 1×UART, 1×ADC
- Wi-Fi connectivity

802.11 b/g/n

- channel 1-11 @2.4ghz
- Support WEP, WPA/WPA2, PSK(AES) safe mode
- Operating temperature: -20°C to 80°C
- BLE \ Support low power Bluetooth

1.2 Application Fields

- Smart buildings
- Smart home/appliances
- Smart socket, smart lamp
- Industrial wireless control
- 0-10V dimming products

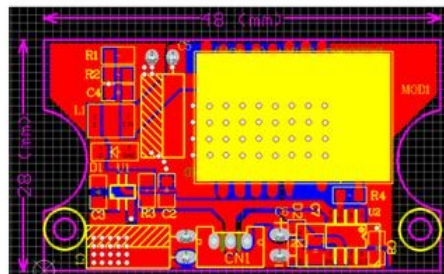
2. Module interface

2.1 Dimensional packaging

There are three pins. Size: 48mm (W)×28mm (L) ×11mm (H).

Note: The default size tolerance is $\pm 0.35\text{mm}$. If the customer has specific requirements for the key size, please communicate it in the specification

Perform explicit calibration.



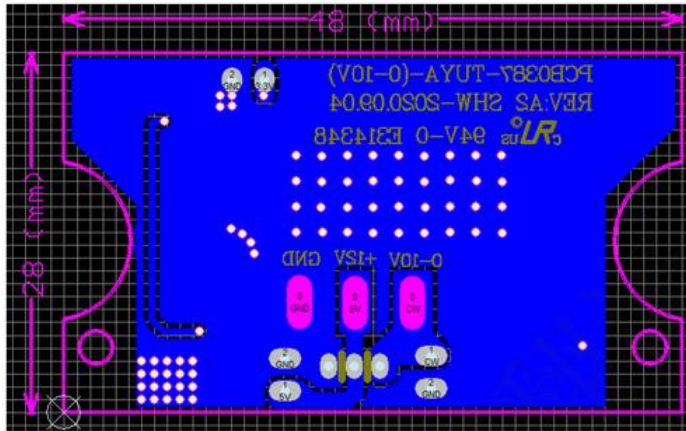
2.2 Pin definition

Pin symbol function

1 pin GND power reference ground

2 pins +12V power supply pin, working voltage range :5V-12V(limit 15V)

3-pin 0-10V 0-10V signal output control pin



3 Electrical parameters

Parameter describes the minimum maximum unit

Storage temperature -40, 150 °C

Electrostatic discharge voltage

TAMB=-25°C 2 KV

Electrostatic discharge voltage

TAMB=-25°C 0.5kV

VCC supply voltage 5V 15V

4 Working Conditions

Parameter describes the minimum value a typical unit of maximum value

Ta operating temperature -20-85 °C

VCC power supply voltage: 10.5, 12, 15 V

FCC Statement

FCC standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Integral PCB antenna with antenna gain 0dBi

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device If not to apply for any further FCC approval related to SAR, etc.

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID:2AXAA-HN030-01 Or Contains FCC ID:2AXAA-HN030-01"

When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Any company of the host device which install this modular should perform the test of radiated & conducted emission and spurious emission, etc. according to FCC part 15C : 15.247 and 15.209 & 15.207 , 15B Class B requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 & 15.207 , 15B Class B requirement, then the host can be sold legally.