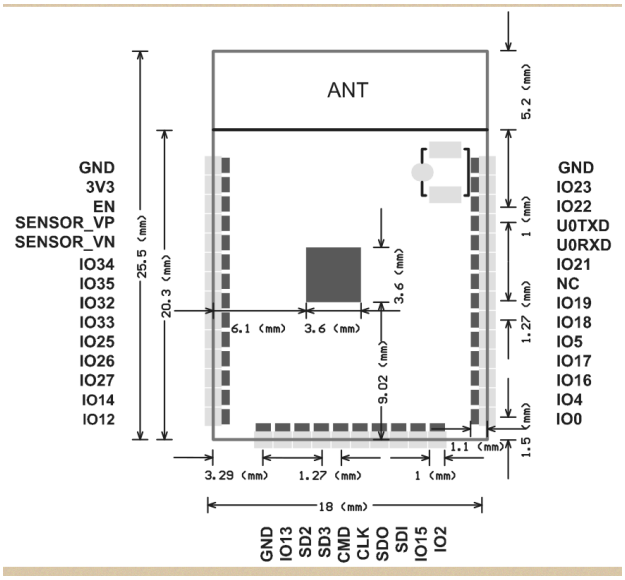
ESP32-S Wi-Fi+BT SoC Module



Features

- The smallest 802.11b/g/n Wi-Fi BT SoC Module
- Low power 32-bit CPU,can also serve the application processor
- Up to 160MHz clock speed，Summary computing power up to 600 DMIPS
- Overview built-in 520KB SRAM
- Supports UART/SPI/I2C/PWM/ADC/DAC
- SMD-38 package for easy welding
- Support for OpenOCD debugging interface
- Deep sleep current as low as 6.5μA
- Embedded Lwip and FreeRTOS
- Supports STA/AP/STA+AP operation mode
- Support Smart Config/AirKiss technology
- General AT commands can be used quickly
- Support for serial port local and remote firmware upgrades (FOTA)

Overview

Esp32-S has a highly competitive package size and ultra-low power technology.

Esp32-S can be widely used in various of networking, for home automation, industrial wireless control, baby monitors, wireless position sensing devices, wireless positioning system signals and other networking applications.

Esp32-S is packaged in SMD,through the standard SMT equipment to achieve rapid production of products,to provide customers with High reliability of the connection,especially for Automation, large-scale, low-cost modern production methods,It’s suitable for all kinds of Internet of things hardware terminal occasions.

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Product Specifications

Module Model	ESP32-S
Package	SMD-38
Size	18.0*25.8*2.8（±0.2）mm
SPI Flash	Default 32Mbit
Bluetooth	Bluetooth 4.2 BR/EDR and BLE standards
Wi-Fi	802.11 b/g/n/e/i
Interface	UART、SPI、SDIO、I2C、PWM、I2S、IR、ADC、DAC
On-chip Sensor	Hall sensor, Temperature sensor, Capacitive touch sensor
IO Port	22
UART Baudrate	Support 300~4608000bps,De115200 bps
Frequency Range	2412 ~2462MHz for wifi/2402-2480 for bluetooth
Antenna	PCB Antenna
Transmit Power	802.11b: 20± 2 dBm (@11Mbps) 802.11g: 24± 2 dBm (@54Mbps) 802.11n: 24± 2 dBm (@MCS7)
Receiving Sensitivity	CCK, 1 Mbps : -90dBm CCK, 11 Mbps: -85dBm 6 Mbps (1/2 BPSK): -88dBm 54 Mbps (3/4 64-QAM): -70dBm MCS7 (65 Mbps, 72.2 Mbps): -67dBm
Power Dissipation	300mA@3.3V
Security	WPA/WPA2/WPA2-Enterprise/WPS
Power Supply Range	3.0V ~ 3.6V
Operating Temperature	-20 ℃ ~ 85 ℃
Storage Environment	-40 ℃ ~ 90 ℃ , < 90%RH
Weight	1.5g

Contact US

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FCC Statement

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.

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

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.

Modular shall be used for fixed or mobile operations only. Minimum 20 cm must be maintained between device and user body during normal operations.

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:2AHMR-ESP32-S Or Contains FCC ID: 2AHMR-ESP32-S”

when the module is installed inside another device, the user manual of this device 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.

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

The modular transmitter is only FCC authorized for FCC part 15 subpart C, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.