W series WIFI Module

Product Summary

The W Series WiFi Modules are modules released by Galaxywind and specially designed for IOT applications, with the features of low power consumption, small size, strong signal, reliability and low price. These series combine all MCU, wireless RF transceiver, TCP/IP protocol stack and application together. The W Series WiFi Module requires only 3.3V power charging to work independently, and provides a variety of standard interfaces including UART, GPIO, I2C, SPI and etc. Meanwhile, it also includes a command interface, communication protocol and development SDK etc. It is much easier for companies to integrate with the final product, to improve the product development, but and quickly release to the market. Which is surely a low cost and more reliable solution.

Product Specification

Model / Specification	W1
Product Appearance	
Hardware Specification	
Physical Size	25.0mm×17.5mm，thickness 2.8mm
Interface	1 UART interface 1 SPI-Slave interface 8 GPIO interface
Antenna	Integrate high gain PCB antenna
Packaging	Stamp hole
Working Voltage	3.3V
Power	Deep sleep current：10uA Light sleep current：3.7mA Typical Frame Transmission Power：400mW Typical Receiving Power consumption：175mW
Consumption	Low consumption design, support dormancy mode, applicable to battery.
FR Specification	
Wireless Rate	802.11b 1, 2, 5.5, 11 Mbps 802.11g 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n 6.5-65Mbps, 7.2-72.2Mbps

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Power	
Wireless Receiving Sensitive	802.11n MCS7：-75 dbm 802.11g 54M：-76 dbm；6M：-93 dbm 802.11b 1Mbps：-97dbm
Software Specification	
SDK	Provide SDK, support the secondary development
App Server Application	Support, user can remote control the appliances in the house by mobile
Smart Config fast Networking Function	Support
Parameter Configuration Interface	Serial interface configuration/web configuration/network configuration
Protocols	TCP/UDP/DNS/HTTP
Command Configuration Interface	Support, can customize the communication protocol
Data transmission	Support IEEE 802.11b/g/n
Start	Support the start within one second
Access Mode	Support AP/terminal STA/Ad-HOC Network(ADHOC)/WIFI direct etc.
WIFI connection	Support all WIFI encryption protocol, applicable to all the routers, support Iphone/Android mobile connection

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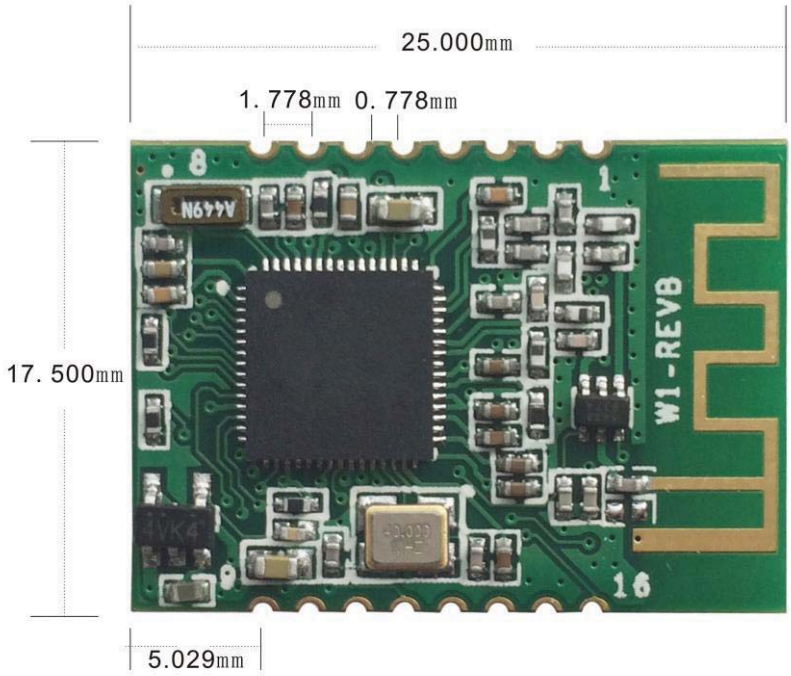
Interface Definition

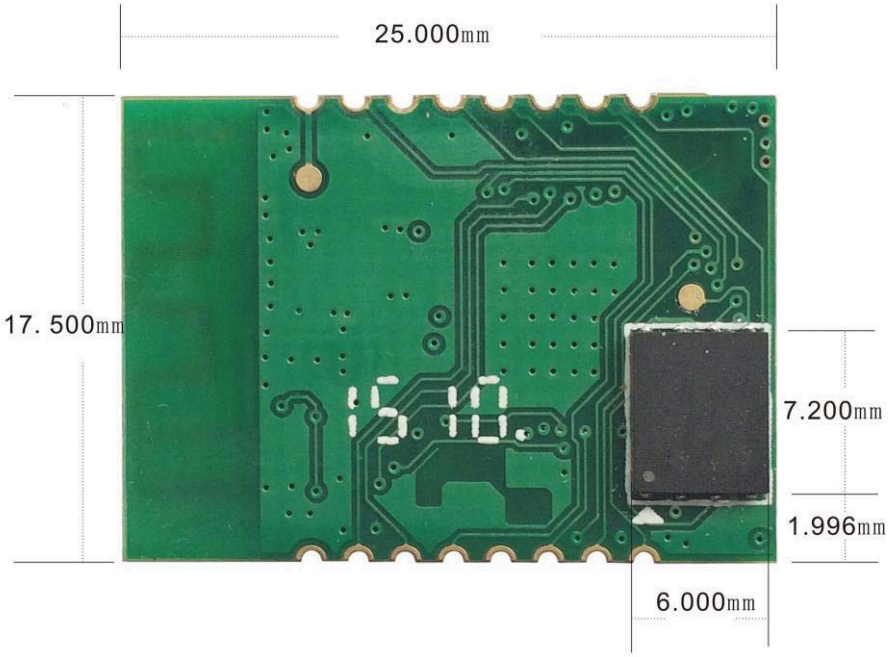
Key Specialty

- Size 25.0×17.5mm，thickness 2.8mm，Stamp hole packaging；
- PCB antenna；
- 3.3V power supply，can supply 1 UART interface, 1 SPI-Slave interface，8 GPIO interface。

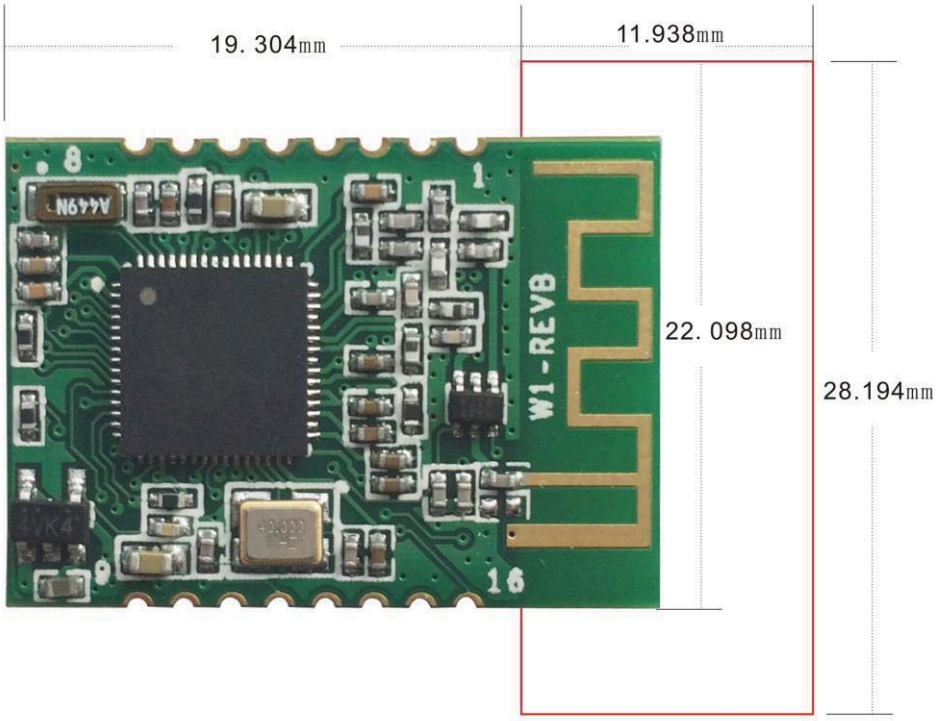


Picture 1-W1 Front View

W Series WIFI Module



Picture 2-W1 Back View



Picture 3-W1 keepout area size

Keep-out area specification: It prohibits wiring and coppering to all the layer for the keep-out area, and the space in all around is not permitted to put over 2mm height of the components. Suggesting that the metal structures are put to the border of the baseboard and the position with empty space of organism for all sides.

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Pin No.	Name	Specification
1	VCC33	3.3V power supply
2	P4	GPIO P4，please hang if no using
3	GND	Ground connection
4	P3	GPIO P3，please hang if no using
5	P1 / LED STATUS	GPIO P1，default LED Module status light
6	P2 / RESET	GPIO P2，reset to defaults, low level is valid.
7	RXD	UART interface，Reusable for GPIO connector
8	TXD	UART interface，Reusable for GPIO connector
9	P5	GPIO P5，please hang if no using
10	P6	GPIO P6，please hang if no using
11	P7	GPIO P7，please hang if no using
12	SPIS_CS	SPI Slave interface，Reusable for GPIO connector
13	SPIS_MOSI	SPI Slave interface，Reusable for GPIO connector
14	SPIS_MISO	SPI Slave interface，Reusable for GPIO connector
15	SPIS_CLK	SPI Slave interface，Reusable for GPIO connector
16	P0	GPIO P0，please hang if no using，if you need use the pin, please consult the vendor.

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FCC Warning 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
The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden.
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: 2AES6WMODULE Or Contains FCC ID: 2AES6WMODULE ”
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

Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C 15.247 and 15.209 requirement， Only if the test result comply with FCC part 15C 15.247 and 15.209 requirement，then the host can be sold legally