



# GSD WCTA3M2511 Dual-Band WiFi 2x2 MIMO Module Instructions

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## GSD WCTA3M2511 Dual-Band WiFi 2x2 MIMO Module



**Model Number:** WCTA3M2511

## **Product Description**

The WCTA3M2511 is a complete dual-band(2.4GHz and 5GHz)WIFI 2×2 MIMO module base on 7663BUN. This module provides a high level of integration with a dual-stream IEEE 802.11ac MAC/ baseband /radio and Bluetooth 5.1.The WLAN operation supports 20MHz,40MHz and 80MHz channels for data rates up to 866.7Mbps. It fully complies with IEEE 802.11 a/b/g/n/ac feature rich wireless connectivity at high standards, and delivers reliable, cost-effective, throughput from an extended distance.

## **Product Features**

- Complies with IEEE 802.11b/g/n for 2.4GHz and IEEE 802.11a/n/ac 5GHz Wireless LAN.
- Bluetooth v5.1
- Works with all existing network infrastructure.
- Capable of up to 128-Bit WEP Encryption.
- Freedom to roam while staying connected.
- UP to 866.7 Mbps High-Speed Transfer Rate in 802.11ac mode of operation.
- Operating Systems Linux, Windows
- Low power consumption.
- Easy to install and configure.
- High speed usb 2.0 interface.
- ROHS compliant

## **Product Specification**

Model	WIF+BT Module
Product Name	WCTA3M2511
Standard	802.11 a/b/g/n/ac
Interface	USB
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 866.7Mbps
Modulation Method	GFSK, $\pi/4$ -DQPSK, 8DPSK (bluetooth) DQPSK, DBPSK, CCK (802.11b) QPSK, BPSK, 16QAM, 64QAM with OFDM (802.11g) QPSK, BPSK, 16QAM, 64QAM with OFDM (802.11n) QPSK, BPSK, 16QAM, 64QAM with OFDM (802.11a)  QPSK, BPSK, 16QAM, 64QAM, 256QAM with OFDM (802.11ac)
Frequency Band	BLUETOOTH 2402~2480 MHz  WIFI  2.4G: 2412~2462 MHz  5G: 5150~5350MHz, 5470~5725MHz 5725~5850MHz
Operation Mode	Infrastructure
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	5V $\pm$ 10%
Current Consumption	1000mA
Antenna Type	PCB
Operating Temperature	0 ~ 70°C ambient temperature
Storage Temperature	-40 ~ 80°C ambient temperature
Humidity	5 to 95 % maximum (non-condensing)

#### NOTICE:

- please keep this product and accessories attached to the places which children can't touch;
- do not splash water or other liquid onto this product, otherwise it may cause damage;
- do not put this product near the heat source or direct sunlight, otherwise it may cause deformation or malfunction;
- please keep this product away from flammable or naked flame;
- please do not repair this product by yourself. Only qualified personnel can be repaired.

#### FCC Statement

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.

This equipment 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.

Please notice that 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 FCC ID: 2AC23-WCTA3" any similar wording that expresses the same meaning may be used.

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

The module is limited to OEM installation ONLY. The OEM integrator is responsible for ensuring that the end-user has no manual instruction to remove or install module.

The module is limited to installation in mobile application.

A separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and difference antenna configurations. There is requirement that the grantee provide guidance to the host manufacturer for compliance with Part 15B requirements.

The module complies with FCC Part 15.247 / Part 15.407 and apply for Single module approval. Trace antenna designs: Not applicable.

#### **Antennas:**

2.4G	5G
Antenna 1&2: PCB antenna & 3 dBi	Antenna 1&2: PCB antenna & 4 dBi

#### **BT Antenna:**

BRADE	TYPE	GAIN
GSD	PCB antenna	2 dBi

#### **Note:**

1. The antenna is permanently attached, can't be replaced.
2. Must use the same antenna type and gain equal to or lower than in the tables above.

The device must be professionally installed The intended use is generally not for the general public.It is generally for industry/commercial use.The connector is within the transmitter enclosure and can only be accessed by disassembly of the transmitter that is not normally required. the user has no access to the connector. Installation must be controlled. Installation requires special training This module has been assessed against the following FCC rule parts: CFR 47 FCC Part 15 C (15.247, DTS and DSS) and CFR 47 FCC Part 15 E (NII). It is applicable to the modular transmitter

This radio transmitter FCC ID: 2AC23-WCTA3 has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

The concrete contents to check are the following three points.

1. Must use the same antenna type and gain equal to or lower than in the tables above.;
2. Should be installed so that the end user cannot modify the antenna;
3. Feed line should be designed in 50ohm

Fine tuning of return loss etc. can be performed using a matching network.

## Notice to OEM integrator

Must use the device only in host devices that meet the FCC RF exposure category of mobile, which means the device is installed and used at distances of at least 20cm from persons.This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The end user manual shall include FCC Part 15 compliance statements related to the transmitter as show in this manual(FCC statement). Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B. Host manufacturer is strongly recommended to confirm compliance with FCC requirements for the transmitter when the module is installed in the host.

Must have on the host device a label showing Contains FCC ID: 2AC23-WCTA3

The use condition limitations extend to professional users, then instructions must state that this information also extends to the host manufacturer's instruction manual.

This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system. 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, 15.407, 15B class B requirement, only if the test result comply with FCC part 15C: 15.247 and 15.209 & 15.207, 15.407, 15B class B requirement.

Then the host can be sold legally. This modular transmitter is only FCC authorized for the specific rule parts ( 47CFR Part 15.247 and 15.407) listed on the grant, 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. Host manufacturer is strongly recommended to confirm compliance with FCC requirements for the transmitter when the module is installed in the host.

Must have on the host device a label showing Contains FCC ID: 2AC23-WCTA3

## Documents / Resources

	<p><b><a href="#">GSD WCTA3M2511 Dual-Band WiFi 2x2 MIMO Module [pdf] Instructions</a></b> WCTA3, 2AC23-WCTA3, 2AC23WCTA3, WCTA3M2511, Dual-Band WiFi 2 2 MIMO Module, WCTA3M2511 Dual-Band WiFi 2 2 MIMO Module</p>
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