



WIFI+BT Module

IEEE 802.11 a/b/g/n/ac 2T/2R

Model Number: DCT2BM2501

Product Description

The DCT2BM2501 is a complete dual-band(2.4GHz and 5GHz)WIFI 2×2 MIMO module. This module provides a high level of integration with a dual-stream IEEE 802.11ac MAC/ base band /radio and Bluetooth 5.0.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,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 v5.0
- ◆ Two transmit and Two receive path(2T2R)
- ◆ 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,Win7, Win8, Win10,XP
- ◆ Low power consumption.
- ◆ Easy to install and configure.
- ◆ High speed USB 2.0 interface

Product Specification

Model	WIF+BT Module
Product Name	DCT2BM2501
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,n/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: 2400~2483.5 MHz 5G: 5150~5350MHz,5470~5725MHz,5725~5850MHz
Operation Mode	Infrastructure
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	3.3V±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

FCC standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247 and FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2016

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-DCT2B" any similar wording that expresses the same meaning may be used.

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

If power exceeds the limit and the distance(Over 20cm distance in actual use between the device

and user) is compliance with the requirement.

RF Exposure Compliance:

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 and any part of your body.

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.

When the module is installed inside another device, the user manual of the host contain below

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation

Antennas:

2.4G	5G	BT/BLE
PCB antenna & 2.79 dBi	PCB antenna & 3.97 dBi	PCB antenna & 1.91 dBi

The antenna is permanently attached, can't be replaced.

Canada Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d' Industrie Canada applicables aux appareils radio exempts de licence. L' exploitation est autorisée aux deux conditions suivantes :

- (1) l' appareil ne doit pas produire de brouillage;
- (2) l' utilisateur de l' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.

Please notice that if the ISED certification 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 IC:12290A-DCT2B" any similar wording that expresses the same meaning may be used.

l' appareil hôte doit porter une étiquette donnant le numéro de certification du module d' Industrie Canada, précédé des mots « Contient un module d' émission », du mot « IC:12290A-DCT2B » ou d' une formulation similaire exprimant le même sens, comme suit.



This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725–5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate;

Les dispositifs fonctionnant dans la bande 5150–5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux; pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas;

Frequency bands 5470–5600 MHz and 5650–5725 MHz

Until further notice, devices subject to this section shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada's weather radars operating in this band.

Bandes 5470–5600 MHz et 5650–5725 MHz

Jusqu'à nouvel ordre, les équipements visés par la présente section ne peuvent pas être transférés sur la bande de 5 600 à 5 650 MHz, afin de protéger l'environnement des radars météorologiques exploités par le Canada sur cette bande.

CE Statement

Herby, Hui Zhou Gaoshengda Technology Co., LTD declares that this WIFI+BT Module, DCT2BM2501 is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

In accordance with Article 10(2) and Article 10(10), this product allowed to be used in all EU member states.

Use the WIFI+BT Module in the environment with the temperature between 0°C and 70°C
5150–5250 indoor use only.

Operation Frequency:

For BT/BLE:

2402MHz~2480MHz

For 2.4G WIFI:

2412MHz~2472MHz (802.11b/802.11g/802.11n(HT20))

2422MHz~2462MHz (802.11n(HT40))



For 5G WIFI:

5150MHz-5350MHz, 5470MHz-5725MHz, 5725MHz~5875MHz

Max output power:

BT:0.0061W

BLE: 0.0061W

2.4G WIFI:0.0566W

5G WIFI:0.1671W

Manufacturer: Hui Zhou Gaoshengda Technology Co., LTD

Address: NO 2.Huaxing RD, Zhongkai High Technology Development Area, Huizhou, Guangdong, China

E-mail: guanh@gaosd.cn

DECLARATION OF CONFORMITY

I hereby declare that the product

Product:

Product Name: WIFI+BT Module

Model: DCT2BM2501

Brand Name: N/A

Hardware Version: V1.0

Software Version: V1.0

(Name of product, type or model, batch or serial number)

satisfies all the technical regulations applicable to the product within the scope of Council Directives 2014/53/EU, 2014/35/EU and 2014/30/EU:and declare that the same application has not been lodged with any other notified body.

EN IEC 62368-1:2020+A11:2020

EN 62311:2020

ETSI EN 301 489-17 V3.2.4 (2020-09)

Final draft ETSI EN 301 489-3 V2.2.0 (2021-11)

ETSI EN 301 489-1 V2.2.3 (2019-11)

ETSI EN 300 328 V2.2.2 (2019-07)

ETSI EN 301 893 V2.1.1 (2017-05)

ETSI EN 300 440 V2.2.1 (2018-07)

(Title(s) of regulations, standards, etc.)

All essential radio test suites have been carried out.

NOTIFIED BODY: MiCOM Labs Inc

– **Address:**

575 Boulder Court,

Pleasanton, California94566

USA

Identification Number: 2280

MANUFACTURER or AUTHORISED REPRESENTATIVE:

– **Address:**

Hui Zhou Gaoshengda Technology Co., LTD



This declaration is issued under the sole responsibility of the manufacturer and, if applicable, his authorised representative.

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(Name, telephone and fax number)

2022-02-21

(Place, date of issue)

Hui Guan

(Signature)

Hui Guan, engineer

(Name and title in block letters)