

WIFI+BT Module

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

Model Number: WXT2HM2001

Product Description

The WXT2HM2001 is a complete 2.4GHz/5GHz/6GHz WIFI 2x2 MIMO module. This module provides a high level of integration with a dual-stream IEEE 802.11ax MAC/ base band /radio and Bluetooth 5.2. The WLAN operation supports 20MHz,40MHz and 80MHz channels for data rates up to 1201Mbps. It fully complies with IEEE 802.11 a/b/g/n/ac/ax 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/ax for 2.4GHz, IEEE 802.11a/n/ac/ax for 5GHz, IEEE 802.11ax for 6GHz Wireless LAN.
- ◆ Bluetooth v5.2
- ◆ 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 1201 Mbps High-Speed Transfer Rate in 802.11ax mode of operation.
- ◆ Operating Systems: Linux.
- ◆ Low power consumption.
- ◆ Easy to install and configure.
- ◆ ROHS compliant

Product Specification

Model	WIFI+BT Module
Product Name	WXT2HM2001
Standard	802.11 a/b/g/n/ac/ax
Interface	SDIO
Data Transfer Rate	Max 1201Mbps
Modulation Method	GFSK,π/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) QPSK,BPSK,16QAM,64QAM,256QAM,1024QAM with OFDMA (802.11ax)
Frequency Band	BLUETOOTH 2402~2480 MHz WIFI 2.4G: 2412~2462 MHz 5G: 5150~5350MHz, 5470~5725MHz, 5725~5850MHz 6G: 5925~7125MHz
Operation Mode	Infrastructure
Antenna Type	PCB(Two optional antennas(YY2085C and YY2087C) with different antenna gains mounted on the module)
Max Antenna Gain (CUS P/N: YY2085C)	Ant-1: 2.4 GHz WiFi: 2.88 dBi 5 GHz WiFi: 3.31 dBi 6 GHz WiFi: 3.28 dBi Ant-2: Bluetooth: 2.75 dBi Ant-3: 2.4 GHz WiFi: 3.69 dBi 5 GHz WiFi: 4.24 dBi 6 GHz WiFi: 4.37 dBi
Max Antenna Gain (CUS P/N: YY2087C)	Ant-1: 2.4 GHz WiFi: 2.31 dBi 5 GHz WiFi: 3.56 dBi

	6 GHz WiFi: 4.74 dBi Ant-2: Bluetooth: 2.67 dBi Ant-3: 2.4 GHz WiFi: 2.75 dBi 5 GHz WiFi: 4.71 dBi 6 GHz WiFi: 4.71 dBi
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	5V±10%
Current Consumption	<1000mA
Antenna Type	FPC
Operating Temperature	-10 ~ 70°C ambient temperature
Storage Temperature	-40 ~ 80°C ambient temperature
Humidity	5 to 95 % maximum (non-condensing)
Compliance	FCC part 15 subpart C & E, RSS-247, RSS-248

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 NOTICE:

This device complies with Part 15 of the FCC rules. Operation is subjected 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 your authority to operate the equipment.

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.

Cet appareil est conforme aux CNR exemptes de licence d'Industrie Canada . Son fonctionnement est soumis aux deux conditions suivantes :

- (1) Ce dispositif ne peut causer d'interférences ; et
- (2) Ce dispositif doit accepter toute interférence , y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

The host product shall be properly labelled to identify the modules within the host product.

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: AK8WXT2HM2001 Or Contains FCC ID: AK8WXT2HM2001";

The Innovation, Science and Economic Development Canada certification label of a module shall be clearly visible at all times when installed in the host product; otherwise, the host product must be labelled to display the Innovation, Science and Economic Development Canada certification number for the module, preceded by the word "Contains" or similar wording expressing the same meaning, as follows: Contains IC: 409B-WXT2HM2001

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, and
- (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.

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.
- 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 host product manufacturer is responsible for compliance to any other FCC and ISED 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.

FCC/ISED 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/ ISED RSS-102 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.

Le module peut être installé ou intégré dans des appareils mobiles ou fixes uniquement. Ce module ne peut être installé dans aucun appareil portable, par exemple, des dongle USB comme des émetteurs est interdit.

Ce module est conforme aux limites d'exposition aux rayonnements RF FCC/ ISED RSS-102 établies pour un environnement non contrôlé. Cet émetteur ne doit pas être localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur. Ce module doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et le corps de l'utilisateur.

For WiFi 5G device

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;

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

For WiFi 6G device

As demonstrated in the test report, Contention-Based Protocol is permanently embedded in the module and is not host-dependent.

Statement acknowledging device restrictions:

- a. Low-power indoor Access Point. An Access Point operating in the 5.925-7.125 GHz band shall be supplied power from a wired connection, have an integrated antenna, not be battery-powered, and not have a weatherized enclosure.
- b. This device's operation will not be allowed on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet only in the 5.925-6.425 GHz band.
- c. Control of or communications with unmanned aircraft systems is prohibited, including drones.
- d. The device for operation in the band 5.925-7.125 GHz is only for indoor use.