



WIFI+BT Module

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

Model Number: WXT2PM2003

Product Description

The WXT2PM2003 is a complete 2.4GHz/5GHz 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 5.4. 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
- ◆ Bluetooth v5.4
- ◆ 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, Windows
- ◆ Low power consumption
- ◆ Easy to install and configure
- ◆ ROHS compliant

Product Specification

Model No.	WXT2PM2003
Product Name	WIFI+BT Module
Standard	802.11 a/b/g/n/ac/ax
Interface	PCIE for WIFI, USB for BT
Data Transfer Rate	MAX of 1201Mbps
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) QPSK, BPSK, 16QAM, 64QAM, 256QAM, 1024QAM with OFDMA
Frequency Band	BLUETOOTH: 2402~2480 MHz WIFI 2.4G: 2412-2472MHz (CE, MIC); 2412-2462MHz (FCC) 5G: 5180-5240MHz, 5260-5320MHz, 5500-5700MHz, 5745-5825MHz (CE, FCC) 5180-5240MHz, 5260-5320MHz, 5500-5720MHz (MIC)
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	3.3V \pm 10%
Current Consumption	<1000mA
Antenna Type	FPC Antenna
Operating Temperature	-40 ~ 85°C ambient temperature
Storage Temperature	-55 ~ 125°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.

Frequency Band(s)

This module operates with the following frequency bands and maximum frequency power.

NOTE:

The product is compliant with these power limits required by the European Union. Frequency bands supported by the product vary by model.

2.4G&5G WIFI: <20dBm

BLE: <13dBm

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK(NI)

EU DECLARATION OF CONFORMITY

Hereby, Hui Zhou Gaoshengda Technology Co.,LTD declare that WIFI+BT Module with model WXT2PM2003 is in compliance with Directive 2014/53/EU.

Note: This module applies for client without radar detection.



FCC Statement

§ 15.19 Labelling requirements.

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.

§ 15.21 Information to user.

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

§ 15.105 Information to the user.

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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in mobile exposure condition without 20cm distance.

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 applies for Single module approval.

Trace antenna designs: Not applicable.

Antennas:

2.4G	5G	BT
FPC antenna0 & 0.52dBi	FPC antenna & 2.72dBi	FPC antenna & 1.19dBi
FPC antenna1 & 0.48dBi	FPC antenna & 2.73dBi	

2.2 List of applicable FCC rules

The device compliance with FCC Part 15.247 and FCC Part 15.407.

2.3 Summarize the specific operational use conditions

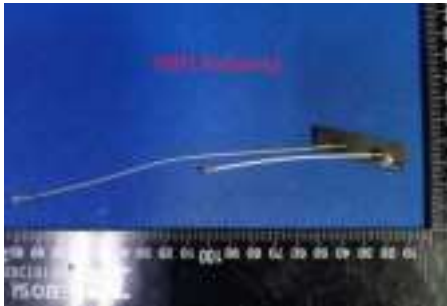
The OEM integrator is still responsible for testing their end-product for any additional compliance requirements required for the installed module.

2.4 Limited module procedures

Device is single module approval.

2.5 Trace antenna designs

FPC antenna. Shown as below:



2.4G WIFI (2400-2500MHz) antenna gain is 0.52dBi and 0.48dBi.

5G WIFI (5000-6000MHz) antenna gain is 2.72dBi and 2.73dBi.

BT (2400-2500MHz) antenna gain is 1.19dBi.

2.6 RF exposure considerations

Compliance with FCC Part 2.1091

This device is intended only for OEM integrators under the following conditions:

1. The antenna must be installed such that 20 cm is maintained between the antenna and users.
2. The transmitter module may not be co-located with any other transmitter or antenna. As long as the two conditions above are met, additional transmitter testing will not be required.

2.7 Antennas

FPC antenna. WIFI Antenna is dual antenna.

2.4G WIFI (2400-2500MHz) antenna gain is 0.52dBi and 0.48dBi.

5G WIFI (5000-6000MHz) antenna gain is 2.72dBi and 2.73dBi.

BT (2400-2500MHz) antenna gain is 1.19dBi.

2.8 Label and compliance information

The label compliance with FCC requirement and the end product must be labeled in a visible area with the following: "Contains, FCC ID: 2AC23-WXT2P"

2.9 Information on test modes and additional testing requirements

The module under Continuous transmit ion and lager than 98% duty cycle

2.10 Additional testing, Part 15 Subpart B disclaimer

The test results compliance with FCC Part 15B requirement.