

Wifi module

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

Model Number: WXT2JM2511

Product Description

The WXT2JM2511 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 802.11ax 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 and IEEE 802.11a/n/ac/ax 5GHz 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, Win7, Win8, Win10, XP
- ◆ Low power consumption.
- ◆ Easy to install and configure.
- ◆ High speed USB 2.0 interface
- ◆ ROHS compliant

Product Specification

Product Name	Wifi module
Model	WXT2JM2511
Standard	802.11 a /b/g/n/ac/ax
Interface	USB
Data Transfer Rate	BT: GFSK:1Mbps, π/4-DQPSK: 2Mbps, 8DPSK:3Mbps BLE: GFSK: 1Mbps, 2Mbps, 125kbps, 500kbps WIFI 2.4GHz: 802.11b: 1, 2 ,5,5.11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: MCS0-MCS15, HT20/HT40 802.11ax: MCS0-MCS11, HE20/HE40 WIFI 5GHz: 802.11a: 6,9,12,18,24,36,48,54Mbps 802.11n: MCS0-MCS15, HT20/HT40 802.11ac: MCS0-MCS9, VHT20/40/80 802.11ax: MCS0-MCS11, HE20/HE40/HE80
Modulation Method	BT: GFSK, π/4-DQPSK, 8DPSK BLE: GFSK 2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 5GHz 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Frequency Band	BLUETOOTH 2402~2480 MHz WIFI 2.4G: 2412~2462 MHz 5G: 5150MHz-5250MHz, 5250MHz-5350MHz, 5470MHz -5725MHz, 5725MHz -5850MHz
Operation Mode	Infrastructure
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	5V±10%
Current Consumption	<1000mA
Antenna Type	PIFA
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

§ 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.

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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Country Code selection feature to be disabled for products marketed to the US.

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, and
2. The transmitter module may not be co-located with any other transmitter or antenna,
3. For all products market in US, OEM has to limit the operation channels in CH1 to CH11 for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change. (if modular only test Channel 1-11)

As long as the three conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Requirement per KDB996369 D03

2.2 List of applicable FCC rules

List the FCC rules that are applicable to the modular transmitter. These are the rules that specifically establish the bands of operation, the power, spurious emissions, and operating fundamental frequencies.

DO NOT list compliance to unintentional-radiator rules (Part 15 Subpart B) since that is not a condition of a module grant that is extended to a host manufacturer. See also Section 2.10 below concerning the need to notify host manufacturers that further testing is required.³

Explanation: This module meets the requirements of FCC part 15.247&15.407).

2.3 Specific operational use conditions

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.

2.4 Limited module procedures

Not applicable

2.5 Trace antenna designs

Not applicable

2.6 RF exposure considerations

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

2.7 Antennas

This radio transmitter FCC ID: 2BPYR-WXT2JM2511has 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.

Antenna	BT/BLE: 4.01dbi WiFi2.4GHz: Antenna A: 4.98dBi; Antenna B: 4.38dBi WiFi 5GHz 5150MHz - 5250MHz: ANT A:6.51dBi; ANT B:6.28dbi 5250MHz - 5350MHz: ANT A:6.51dBi; ANT B:6.30dbi 5450MHz - 5700MHz: ANT A:5.66dBi; ANT B:6.26dbi 5750MHz - 5850MHz: ANT A:5.62dbi; ANT B:6.16dbi
---------	--

2.8 Label and compliance information

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: 2BPYR-WXT2JM2511.

2.9 Information on test modes and additional testing requirements

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.

2.10 Additional testing, Part 15 Subpart B disclaimer

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.