



## WIFI+BT Module IEEE 802.11b/g/n/a 2T/2R

Model Number: WT38M2001T

### Product Description

The WT38M2001T is a high-gain and low power consumption wifi module . It fully complies with IEEE 802.11n and IEEE 802.11b/g/a feature rich wireless connectivity at high standards, delivers reliable, cost-effective, throughput from an extended distance. When 3.3V, USB bus and GND were connected, This module is working. The Bluetooth part supports latest 4.2+HS operation.

### Product Features

- ◆ Complies with IEEE 802.11g; 802.11b; 802.11n ; 802.11a standard for 2.4GHz and 5GHz Wireless LAN.
- ◆ TWO Transmit and TWO Receive path(2T2R)
- ◆ Supports Ad-Hoc/Infrastructure modes
- ◆ Works with all existing network infrastructure.
- ◆ Capable of up to 128-Bit WEP Encryption.
- ◆ Freedom to roam while staying connected.
- ◆ UP to 300 Mbps High-Speed Transfer Rate in 802.11n mode of operation.
- ◆ Operating Systems: Windows XP 32/64, 2000, Windows 7, Vista 32/64, Linux, Macintosh
- ◆ Low power consumption.
- ◆ Easy to install and configure.
- ◆ Bluetooth v4.2 Low Energy(LE);
- ◆ Bluetooth specification v2.1+EDR;

### Product Specification

Model	WT38M2001T
Product Name	WIFI+BT Module
Standard	802.11b/g/n /a
Interface	/
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 300Mbps
Modulation Method	QPSK , BPSK , CCK(802.11b) QPSK , BPSK , 16QAM ,64QAM with OFDM (802.11g) BPSK , QPSK , 16QAM ,64QAM with OFDM(802.11n) QPSK , BPSK , 16QAM ,64QAM with OFDM (802.11a)
Frequency Band	2.4GHz: CH 1~CH13 for FCC 5GHz: 5150~5250MHz, 5250~5350MHz 5470~5725MHz,5725~5850MHz
Transmit Power	< 18dBm
Operation Mode	Ad hoc, Infrastructure
Operation Range	Up to 300 meters in open space
OS Support	Windows XP 32/64, 2000, Windows 7, Vista 32/64, Linux, Macintosh
Security	WEP, TKIP, AES, WPA, WPA2
Operating Voltage	5V±10%
Operating Temperature	-10 ~ 70°C ambient temperature
Storage Temperature	-55 ~ 125°C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)



## 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 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.

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

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.

## Radiation Exposure Statement

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.

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/Canada.

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,

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.

## Important Note:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

## End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: Contains FCC ID: 2AC23-WT38M2001.

## Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

## Industry Canada

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

- This device may not cause interference; and
- 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:

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



# PRODUCTS USERMANUAL

WT38M2001T

This radio transmitter (IC: 12290A-WT38M2001) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 12290A-WT38M2001) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Model	Type	Connector	Peak gain ( dBi )				
			2400~2483.5 MHz	5150~5250 MHz	5250~5350 MHz	5470~5725 MHz	5725~5850 MHz
N/A	External	R-SMA	3.53	5.51	5.51	5.51	5.51
N/A	External	R-SMA	3.59	5.47	5.47	5.47	5.47
N/A	External	R-SMA	3.30	4.10	4.10	4.10	4.10
N/A	External	R-SMA	3.50	4.58	4.58	4.58	4.58

## Caution:

- (i) 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;
- (ii) Operations in the 5.25-5.35GHz band are restricted to indoor usage only.

## Avertissement:

- (i) les dispositifs fonctionnant dans la bande de 5150 à 5250MHz 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;
- (ii) Les opérations dans la bande de 5.25-5.35GHz sont limités à un usage intérieur seulement.

## Radiation Exposure Statement

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

## Déclaration d'exposition aux radiations

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.

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

The transmitter module may not be co-located with any other transmitter or antenna.

As long as the condition above is met, further transmitter test 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.

## Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes:

Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

Tant que les 1 condition ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

## Important Note:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

## Note Importante:

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

## End Product Labeling

The final end product must be labeled in a visible area with the following: Contains IC: 12290A-WT38M2001.

## Plaque signalétique du produit final

Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: Contient des IC: 12290A-WT38M2001.



## **Manual Information to the End User**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

## **Manuel d'information à l'utilisateur final**

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.

Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

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