

# **User Manual**

## **mitsumi 802.11bgn wlan Module MODEL DWM-W046**

The purpose of this manual is to explain correct way how to integrate module DWM-W046 to the end product. It includes procedures that shall assist you to avoid unforeseen problems. This manual presents information that shows how module and OEM product, where module integrated, complies with regulations in certain regions. Any modifications, not expressly approved by the manufacturer could void the authority to operate in these regions.

The MITSUMI 802.11bgn wlan Module, model DWM-W046 has to be installed and used in accordance with the technical description/installation instructions provided by the manufacturer.

For detail information concerning type approval of this module (e.g. where this module is already pre-approved) please contact the authorized local distributor or the manufacturer.

The system may only be implemented in the configuration that was authorized. Note that any changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

## **Regulatory Information**

### **Operational Information**

#### **Wireless Interoperability**

The end product integrating this module is designed to be interoperable with any wireless LAN product that is based on direct sequence spread spectrum (DSSS) and orthogonal frequency division multiplexing (OFDM) radio technology and to comply with the following standards.

- IEEE Std 802.11b Standard on 2.4GHz Wireless LAN
- IEEE Std 802.11g Standard on 2.4GHz Wireless LAN
- IEEE Std 802.11n Standard on 2.4GHz Wireless LAN

#### **Safety**

The end product integrating this module, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this device, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The end product integrating this module operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the end product integrating this module may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations include the following:

- Using the end product integrating this module onboard airplanes, or
- Using the end product integrating this module in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If uncertain of the policy that applies to the use of wireless devices in a specific organization or environment (an airplane, for example), ask for authorization to use the end product integrated into this module before turning it on.

## **USA-Federal Communications Commission (FCC)**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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. If not installed and used in accordance with the instructions, it 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 tuning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to 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 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.

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

### **Labeling**

MITSUMI WiFi module DWM-W046 labelled as below.

FCC ID: EW4DWMW046

The proposed with FCC ID label format is to be placed on the module. If FCC ID is not visible when the module is installed into the system, "Contains FCC ID: EW4DWMW046" shall be placed on the outside of final host system.

### **Caution: Exposure to Radio Frequency Radiation.**

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any

other antenna or transmitter.

## **Canada-Industry Canada (IC)**

This device complies with RSS 210 of Industry Canada.

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 this device.

L' utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

- (1) il ne doit pas produire de brouillage et
- (2) l' utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.


Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence.

### **Caution: Exposure to Radio Frequency Radiation.**

To comply with IC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

## Europe-EU Declaration of Conformity and Restrictions

Hereby, MITSUMI declares that this Mitsumi 802.11bgn WLAN Module DWM-W046 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

This equipment is marked with the  symbol and can be used throughout the European community.

This indicates compliance with the R&TTE Directive 1999/5/EC and meets the relevant parts of following technical specifications:

**EN 300 328**, Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission Systems; Data transmission equipment operating in the 2.4GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

**EN 301 489-17**, Electromagnetic Compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific Conditions for Wideband Data and HYPERLAN Equipment.

**EN 60950-1**, Safety of Information Technology Equipment.

**EN 62311**, Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz-300 GHz).

Marking by the symbol  indicates that usage restrictions apply.

### France – 2.4GHz for Metropolitan France :

In all Metropolitan départements, wireless LAN frequencies can be used under the following conditions, either for public or private use:

- Indoor use: maximum power (EIRP) of 100mW for the entire 2400-2483.5MHz frequency band
- Outdoor use: maximum power (EIRP) of 100mW for the 2400-2454MHz band and with maximum power (EIRP) of 10mW for the 2454-2483.5MHz band

### Remark:

This module is fore a fixed application only. The OEM integrator will need to conduct full EMS testing in accordance with EN301 489-17 in the final use configuration.

**Caution: Exposure to Radio Frequency Radiation.**

To comply with FCC RF exposure compliance requirements, a separation distance of at least 1.0 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter, without further RF Exposure evaluation.

## NCC Warning Statement


### 低功率電波輻射性電機管理辦法

第十二條經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

模組認證合格標籤 (ID):

“  CCXXxxLPyyyZz ”

如果使用本模組之平台，無法在外部看見審驗合格標籤時，應在該平台的外部明顯標示

“內含射頻模  CCXXxxLPyyyZz” .

### Translation:

#### Article 12

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

#### Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

The foregoing legal communication refers to the wireless telecommunication operated according to the telecommunications laws and regulations.

The low power frequency electric machinery should be able to tolerate the interference of the electric wave radiation electric machineries and equipments for legal communications or industrial and scientific applications.

Information for OEM integrator  
Label for end product must include is

" Contains  XXXyyyLPDzzzz-x"