User Manual

MITSUMI WiFi Module MODEL

DWM-W028

The purpose of this manual is to explain correct way how to integrate module DWM-W028 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 WiFi Module, model DWM-W028 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

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-W028 labeled as below.

FCC ID: EW4DWMW028

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: EW4DWMW028" shall be placed on the outside of final host system.

Canada-Industry Canada (IC)

This device complies with Industry Canada license-exempt RSS standard(s).
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.

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:

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, only the authorized antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that required for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

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 empecher que cet appareil cause du brouillage au service faisant l’objet d’une licence, il doit etre utilize a l’interieur et devrait etre place loin des fenetres afinde Fournier un

ecram de blindage maximal. Si le matriel (ou son antenne d'emission) est installe a l'exterieur, il doit faire l'objet d'une licence.

Labeling

MITSUMI WiFi module DWM-W028 labeled as below.

IC: 4250A-DWMW028

The proposed with IC label format is to be placed on the module. If IC number is not visible when the module is installed into the system, "Contains IC number: 4250A-DWMW028" shall be placed on the outside of final host system.

THE installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website at www.hc-sc.gc.ca/rpb.

Antennas

This radio transmitter IC: 4250A-DWMW028 has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type 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: 4250A-DWMW028 été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Antennas and Maximum Antenna Gain (all antenna's nominal inpedance is 50ohm)

For the host: Nintendo DS CTR Target Board

DCA-P08: -1.91dBi

For the host: CTR-001 / CTR-001(-01)

DCA-P17 ES3: -6.52dBi
DCA-P17 ES4: -6.20dBi
DCA-P17 CS: -6.35dBi
361.00194.005 CS: +1.15dBi
DCA-P17 CS2: -5.39dBi
361.00194.005 CS2: -5.10dBi

For the host: CTR-001(-05)

361.00194.005 CS: +1.15dBi
361.00194.005 CS2: -5.10dBi

Detachable Antenna

According to RSS-Gen 7.1.4, if the detachable antenna DN57 2.4GHz SMA-PR is used with the module DWMW028 for the hosts included PARTNER-CTR Debugger, PARTNER-CTR Capture and PARTNER-CTR Capture Debugger, the following condition must be considered:

This device has been designed to operate with the antennas listed below, and having a maximum gain of 2.62dB. Antennas not included in this list or having a gain greater than 2.62dB are strictly prohibited for use with this device. The required antenna impedance is 50ohms.

Detachable antenna: DN57 2.4GHz SMA-PR

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