

[Back to Contents Page](#)

Regulatory: Dell^(TM) Wireless WLAN Card User Guide

● [Operational Information](#)

● [Regulatory information](#)

Operational Information

NOTE:

- EIRP = effective isotropic radiated power (including antenna gain)
- Your Dell wireless WLAN card transmits less than 100 mW of power, but more than 10 mW.

Wireless Interoperability

Dell wireless WLAN card products are designed to be interoperable with any wireless LAN product that is based on direct sequence spread spectrum (DSSS) radio technology and orthogonal frequency division multiplexing (OFDM) and to comply with the following standards:

- IEEE 802.11a Standard on 5-GHz Wireless LAN
- IEEE 802.11b-1999 Standard on 2.4-GHz Wireless LAN
- IEEE 802.11g Standard on 2.4-GHz Wireless LAN
- IEEE 802.11n Draft Standard on 2.4-GHz and 5-GHz Wireless LAN
- Wireless Fidelity (Wi-Fi[®]) certification, as defined by the Wi-Fi Alliance

Safety

Dell wireless WLAN cards, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by these devices, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. Dell wireless WLAN card devices operate 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 these devices 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 Dell wireless WLAN card equipment on board airplanes, or
Using the Dell wireless WLAN card equipment in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless devices in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the Dell wireless WLAN card device before you turn it on.

Regulatory information

Dell wireless WLAN card devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. For country-specific approvals, see [Radio Approvals](#). Dell Inc. is not responsible for any radio or television interference caused by unauthorized modification of the devices included with a Dell wireless WLAN card kit, or the substitution or attachment of connecting cables and equipment other than that specified by Dell Inc. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. Dell Inc. and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

USA Federal Communications Commission (FCC)

FCC radiation exposure statement



The radiated output power of Dell wireless WLAN card devices is far below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, you should keep a distance of at least 20 cm between you (or any other person in the vicinity) and the antenna that is built into the device. To determine the location of the antenna within your portable computer, check the information posted on the general Dell support site at <http://support.dell.com/>.

These devices have also been evaluated and shown to comply with the FCC RF exposure limits under portable exposure conditions (antennas are within 20 cm of a person's body) when installed in certain specific OEM configurations. Details of the authorized configurations can be found at <http://www.fcc.gov/oet/ea> by entering the FCC ID number on the device.

Radio Frequency Interference Requirements

NOTICE: Dell Wireless 1450, Dell Wireless 1470, Dell Wireless 1490, and Dell Wireless 1500/1505/1510 products.

These devices are restricted to indoor use because they operate in the 5.15 to 5.25-GHz frequency range. The FCC requires such products to be used indoors for the frequency range 5.15 GHz to 5.25-GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. High-power radars are allocated as primary users of the 5.25 to 5.35-GHz and 5.65 to 5.85-GHz bands. These radar stations can cause interference with or damage to these devices, or both.

Interference Statement

These devices comply with Part 15 of the FCC Rules. Operation of the devices is subject to the following two conditions: (1) The devices may not cause harmful interference, and (2) The devices must accept any interference that may cause undesired operation.

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. If the equipment is not installed and used in accordance with the instructions, the equipment may cause harmful interference to radio communications. There is no guarantee, however, that such 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 taking one or more of the following measures:

- Relocate this device.
- Increase the separation between the device and the receiver.
- Connect the device into an outlet on a circuit different from that of other electronics.
- Consult the dealer or an experienced radio technician for help.

NOTE: Dell wireless WLAN cards must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations. Modifications not expressly approved by Dell could void your authority to operate the equipment.

The radio(s) inside the laptop platform in this user guide are approved to be co-located. No other radio(s) can be co-located in this laptop platform without FCC approval.

Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Canada. Industry Canada (IC)

This device complies with RSS210 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 the potential radio interference to other users, the antenna type and gain should be chosen so 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.**

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit an RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website

• <http://www.hc-sc.gc.ca/rpb>.

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• interference to co-channel Mobile Satellite systems.

High-power radars are allocated as primary users of the 5.25 to 5.35-GHz and 5.65 to 5.85-GHz

• bands. These radar stations can cause interference with or damage to these devices, or both.

Europe EU declaration of conformity and restrictions

This equipment is marked with either the symbol  or the symbol  and can be used throughout the European Community. This mark indicates compliance with the R&TTE Directive 1999/5/EC and the relevant parts of the following technical specifications:

EN 300 328. Electromagnetic Compatibility and Radio Spectrum Matters (ERM). Wideband transmission systems, data transmission equipment operating in the 2.4 GHz industrial, scientific, and medical (ISM) band and using spread spectrum modulation techniques, harmonized EN standards covering essential requirements under article 3.2 of the R&TTE directive

EN 301 893. Broadband Radio Access Networks (BRAN). 5 GHz high-performance RLAN, harmonized EN standards covering essential requirements of 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 HIPERLAN Equipment

EN 60950-1. Safety of Information Technology Equipment

EN 50385. Product standard to demonstrate the compliances of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields

Marking by the alert symbol  indicates that usage restrictions apply.

Bulgarian

С настоящето Dell Inc. потвърждава, че това Безжично устройство е в съответствие със задължителните изисквания и другите приложими разпоредби на Директива 1999/5/EC.

Czech

Dell Inc. tímto prohlašuje, že tento Wireless Device je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Danish

Undertegnede Dell Inc. erklærer herved, at følgende udstyr Wireless Device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Dutch

Hierbij verklaart Dell Inc. dat het toestel Wireless Device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

English

Hereby, Dell Inc. declares that this Wireless Device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Estonian

Käesolevaga kinnitab Dell Inc. seadme Wireless Device vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Finnish

Dell Inc. vakuuttaa täten että Wireless Device tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

French

Par la présente Dell Inc. déclare que l'appareil Wireless Device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

German

Hiermit erklärt Dell Inc., dass sich das Gerät Wireless Device in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Greek

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Dell Inc. ΔΗΛΩΝΕΙ ΟΤΙ Wireless Device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.

Hungarian

Alulírott, Dell Inc. nyilatkozom, hogy a Wireless Device megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Italian

Con la presente Dell Inc. dichiara che questo Wireless Device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latvian

Ar šo Dell Inc. deklarē, ka Wireless Device atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lithuanian

Šiuo Dell Inc. deklaruoja, kad šis Wireless Device atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Maltese

Hawnhekk, Dell Inc., jiddikjara li dan Wireless Device jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

Polish

Niniejszym Dell Inc. oświadcza, że Wireless Device jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.

Portuguese

Dell Inc. declara que este Wireless Device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Romanian

Prin aceasta, Dell Inc. declară că acest Dispozitiv Wireless este în conformitate cu cerințele esențiale și alte dispoziții relevante ale Directivei 1999/5/CE.

Slovak

Dell Inc. týmto vyhlasuje, že Wireless Device spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Slovenian

Dell Inc. izjavlja, da je ta Wireless Device v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Spanish

Por medio de la presente Dell Inc. declara que el Wireless Device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Swedish

Härmed intygar Dell Inc. att denna Wireless Device står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Icelandic

Hér með lýsir Dell Inc. yfir því að Wireless Device er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.

Norwegian

Dell Inc. erklærer herved at utstyret Wireless Device er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

This product is intended to be used in all countries of the European Economic Area with the following restrictions:

Restrictions on IEEE 802.11a or Draft IEEE 802.11n operation:

- Dell Wireless 1450, Dell Wireless 1470, Dell Wireless 1490, and Dell Wireless 1500/1505/1510 products, which are capable of IEEE 802.11a or Draft IEEE 802.11n operation, are for indoor use only
 - when they are using channels 36, 40, 44, 48, 52, 56, 60, or 64 (5150–5350 MHz).
Dynamic frequency selection (DFS) and transmit power control (TPC) must remain enabled to ensure
 - product compliance with EC regulations.
To ensure compliance with local regulations, be sure to set your computer to the country in which
 - you are using a wireless network adapter (see [Radio Approvals](#)).
- Dell Wireless 1450, Dell Wireless 1470, Dell Wireless 1490, and Dell Wireless 1500/1505/1510 products can be used only indoors in the following countries: Austria, Belgium, Bulgaria, Czech Republic, Germany, Cyprus, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, Ireland,
- Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Portugal, Poland, Romania,

Spain, Slovak Republic, Slovenia, Sweden, Switzerland, Turkey, and United Kingdom.

There may be restrictions on using 5-GHz, 40-MHz wide channels in some EU countries. Please check
•with local authorities.

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

Korea



1. 기기의 명칭(모델명): BCM943XX series
2. 인증발은자의 상호: Broadcom Corporation
3. 제조년월: 07/2005
4. 제조자(제조국가): Broadcom Corporation/미국

Radio Notice

당해 무선설비는 운용중
전파혼신 가능성이 있음

당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수
없습니다.

This radio equipment may cause interference during operation. Therefore, this radio equipment cannot be operated in an area that is providing services related to human safety.

Taiwan DGT/NCC

General WLAN Products

Article 12

Unless granted permission by Taiwan DGT/NCC, no company, firm, or user shall alter the frequency, increase the power, or change the characteristics and functions of the original design of an approved low-power radio frequency device.

Article 14

Low-power radio frequency devices shall not affect navigation safety nor interfere with legal communications. If an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

Legal communications refers to the wireless telecommunication operations that comply with telecommunications laws and regulations. Low-power radio frequency devices should be able to tolerate any interference from legal communications or industrial and scientific applications.

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。

5.25-GHz to 5.35-GHz Band Products

Radio devices using the 5.25-GHz to 5.35-GHz bands are restricted to indoor use only.

低功率電波輻射性電機管理辦法

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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。

在 5.25G ~5.35G 頻帶內操作之無線資訊傳輸設備僅適於室內使用

Appendix:

模組認證合格標籤 (ID):



“內含射頻模組，XXXyyvLPDzzz-x”

如果使用本模組之平台，無法在外部看見審驗合格標籤時，應該

平台的外部明顯標示內含射頻模組 XXXyyyLPDzzz-x 字樣。

Radio Approvals

It is important to ensure that you use your Dell wireless WLAN card only in countries where it is approved for use. To determine whether you are allowed to use your Dell wireless WLAN card in a specific country, check to see if the radio type number that is printed on the identification label of your device is listed on the radio approval list posted on the Dell support site at <http://support.dell.com/>.

In countries other than the United States and Japan, verify that the location setting on the **Location** tab in Regional and Language Options (from Control Panel) has been set to the country in which you are using your Dell wireless WLAN card. This ensures compliance with local regulatory restrictions on transmit power and optimizes network performance. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

[Back to Contents Page](#)