

# User's Manual

The attachment in the next page is the user's manual of the specific Lenovo host device (ThinkPad X300 Series) which indicates the regulatory notice concerning the FCC Part 2, 15B and 15F.

As shown in the notice, the applying UWB transmitter (FCC ID: HJY-LBUA0ZZKB1) is preinstalled by Lenovo, and no option card is provided for user installation. Therefore, there is no installation instruction provided to customers.

Also electronic user's guidance referred in the user's manual is provided associated with the host device and it is indicated on the host's LCD screen.

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## ThinkPad® Regulatory Notice

### Read first — regulatory information

Please read this document before you use the ThinkPad computer. ThinkPad computer complies with the radio frequency and safety standards of any country or region in which it has been approved for wireless use. You must install and use your computer in strict accordance with the instructions as described hereafter.

If your ThinkPad computer contains a Wireless WAN adapter, be sure to also read *ThinkPad Regulatory Notice for Wireless WAN adapter*, included with your computer.

**Note:** You cannot use the Wireless WAN adapter and the Wireless LAN adapter (Models: 4965AG or 4965AGN) simultaneously. If one of the adapters has established the connection to the network, the other will be disconnected automatically. To confirm the status of the network connection, check the power status indicators of your computer. For more information about the power status indicators, see the “Power status indicators” section in Access Help.

Veillez lire ce document avant d'utiliser l'ordinateur ThinkPad. L'ordinateur ThinkPad est conforme aux normes de sécurité et de radiofréquence du pays ou de la région où son utilisation sans fil est agréée. Vous devez installer et utiliser votre ordinateur en respectant scrupuleusement les instructions décrites ci-après.

Si votre ordinateur ThinkPad contient une carte de réseau étendu (WAN) sans fil, veuillez à lire également la consigne réglementaire *ThinkPad Regulatory Notice for Wireless WAN adapter*, fournie avec votre ordinateur.

**Remarque:** Vous ne pouvez pas utiliser simultanément la carte de réseau étendu sans fil et la carte de réseau local sans fil (Modèles: 4965AG ou 4965AGN). Si l'une de ces cartes a établi la connexion avec le réseau, l'autre carte sera automatiquement déconnectée. Pour confirmer l'état de la connexion réseau, contrôlez les voyants d'état d'alimentation. Pour plus d'informations, reportez-vous à la section “Voyants d'état de l'alimentation” dans l'aide Access.

## USA — Federal Communications Commission (FCC)

### I. The FCC RF safety requirement

The radiated output power of the Wireless LAN Mini PCI Express Card authorized to use for the your ThinkPad computer is far below the FCC radio frequency exposure limits. Nevertheless, it shall be used in such a manner that the potential for human contact during normal operation is minimized as follows:

**Caution: To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm (8 inches) must be maintained between the antenna for the integrated Wireless LAN Mini PCI Express Card built into the screen section and all persons. You are not allowed to disable “sleep (standby) mode” for the power management function, if you cannot maintain the sufficient antenna separation (at least 20 cm) in any case the LCD is left opened or closed.**

For the location of the antenna, see the “About your computer” section in Access Help.

**Note:** The transmission diversity function is implemented for this product. For WLAN cards (Models: 4965AG and 4965AGN) using Main and Auxiliary antennas for transmission in the IEEE 802.11 a/b/g transmission mode, radio frequency energy is not emitted simultaneously from both Main and Auxiliary antennas. One of the antennas is selected automatically or manually (by users) to have good quality of radiocommunication (transmission diversity function). For the WLAN card (Model: 4965AGN) using MIMO (Multiple In Multiple Out), multiple antennas (Main and Auxiliary) can transmit radio frequency energy simultaneously. Third antenna is also used with the model 4965AGN on some computers, and functions as Receive Only. It does not emit any radio frequency energy.

### II. User installable Wireless LAN module

Mini PCI Express Cards:

- FCC ID: PD9LEN4965AG (Model: 4965AG)
- FCC ID: PD9LEN4965AGN (Model: 4965AGN)

Wireless LAN Mini PCI Express Cards marketed in the USA and Canada do not support nor function in the extended channels (12ch, 13ch).

**i) FCC ID of wireless module:** There is no FCC ID for Mini PCI Express Card shown on the enclosure of your ThinkPad computer. Instead you will find an indicator pointing to the location of the FCC ID on the bottom side of your computer. For the location of the FCC ID indicator, see the “Location of the FCC ID and IC Certification number label” section in Access Help. The

FCC ID is affixed on the approved module installed in the Mini PCI Express Card slot. For the location of the slot, see the "PCI Express Mini Card slot for wireless LAN" section in Access Help.

**ii) Installation of approved wireless module:** If no integrated wireless LAN Mini PCI Express Card has been preinstalled in your ThinkPad computer, you can install one, provided by Lenovo as an option. Plug the wireless card option into the Mini PCI Express Card slot. For the installation procedure, see the "Installing and replacing the PCI Express Mini Card for wireless LAN connection" section in Access Help.

**Attention:** The ThinkPad computers contain an authentication mechanism. If you install an unauthorized wireless LAN Mini PCI Express Card that is not approved for use in your computer, the computer will not start, but only displays an error message and emits beeps.

**iii) Radio Frequency interference requirements:**

- The devices have been tested and found to comply with the limits for a Class B digital device pursuant to FCC Part 15 Subpart B. The models 4965AG and 4965AGN underwent the certification process, thus FCC ID PD9LEN4965AG for model 4965AG, and FCC ID PD9LEN4965AGN for model 4965AGN include all compliances of Part 15 Subpart B, C, and E.
- Each device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires these products to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.
- High power radar 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 and/or damage this device.

**III. Preinstalled integrated *Bluetooth* module**

- FCC ID: MCLJ07H081 (Model: J07H081)

**i) FCC ID and installation of the module:** If you find the FCC ID "MCLJ07H081" on the label at the bottom side of your computer, your computer integrates the *Bluetooth* transmitter module (Model: J07H081). The *Bluetooth* module is preinstalled by Lenovo, and no option card is provided for user installation. If your card requires replacement, contact the Lenovo Customer Support Center by following the proper steps described in "Getting help and service" of the *Service and Troubleshooting Guide*, shipped with your computer.

**ii) The FCC RF safety requirement:** The radiated output power of the *Bluetooth* module is far below the FCC radio frequency exposure limits. Therefore, a 20 cm of separation between the *Bluetooth* antenna and human body is not required.

For the location of the *Bluetooth* module “J07H081” and its built-in antenna, see the “About your computer” section in Access Help.

**iii) Radio Frequency interference requirements:** The device has been tested and found to comply with the limits for both a Class B digital device regarding FCC Part 15 Subpart B and an intentional radiator regarding FCC Part 15 Subpart C; then it underwent the certification processes for both rules. Thus the FCC ID MCLJ07H081 of this device includes both certifications of Part 15 Subpart B and C.

#### **IV. Preinstalled integrated Wireless USB module**

- FCC ID: HJY-LBUA0ZZKB1 (Model: LBUA0ZZKB1-214)

**i) FCC ID and installation of the module:** If you find the FCC ID “HJY-LBUA0ZZKB1” on the label at the bottom side of your computer, your computer integrates the Wireless USB card (Model: LBUA0ZZKB1-214). The Wireless USB card is preinstalled by Lenovo, and no option card is provided for user installation. If your card requires replacement, contact the Lenovo Customer Support Center by following the proper steps described in “Getting help and service” of the *Service and Troubleshooting Guide*, shipped with your computer.

**ii) The FCC RF safety requirement:** The standard FCC rule for RF exposure compliance requires a separation distance of at least 20 cm (8 inches) between the integrated Wireless USB antenna and all persons. However the radiated output power of the Wireless USB card authorized to use for your ThinkPad computer is far below the FCC radio frequency exposure limits. Therefore, a 20 cm of separation between the Wireless USB antenna built into the screen section of your computer and human body is not required.

For the location of the antenna, see the “About your computer” section in Access Help. For the location of the Wireless USB card “LBUA0ZZKB1-214”, see the “Wireless USB card slot” section in Access Help.

**iii) Radio Frequency interference requirements:** The device has been tested and found to comply with the limits for a Class B digital device regarding FCC Part 15 Subpart B and was subject to DoC. Refer to “Electronic emission notices” on page 9. Also it has been certified as an intentional radiator regarding FCC Part 15 Subpart F under the FCC ID: HJY-LBUA0ZZKB1.

#### **V. Simultaneous use of RF transmitters**

Your ThinkPad computer is approved for simultaneous use of the transmitters listed below:

- Wireless LAN adapter (FCC ID: PD9LEN4965AG or PD9LEN4965AGN)
- *Bluetooth* module (FCC ID: MCLJ07H081)
- Wireless USB adapter (FCC ID: HJY-LBUA0ZZKB1)

Please make sure of the following conditions on use of these wireless features:

1. When you use any other RF option device, all other wireless features including the above integrated devices in your ThinkPad computer are required to be turned off.
2. Users must follow the RF Safety instructions on wireless option devices that are included in the RF option device's user's manual.

## Canada — Industry Canada (IC)

### IC Certification number

#### I) User installable Wireless LAN modules:

- IC: 1000M-L4965AG (Model: 4965AG)
- IC: 1000M-L4965AGN (Model: 4965AGN)

Wireless LAN Mini PCI Express Cards marketed in the USA and Canada do not support nor function in the extended channels (12ch, 13ch).

There is no certification number of Industry Canada for Mini PCI Express Card shown on the enclosure of your ThinkPad computer. Instead you will find an indicator pointing to the location of the IC Certification number on the bottom side of your computer. For the location of the IC Certification number indicator, see the "Location of the FCC ID and IC Certification number label" section in Access Help. The IC certification number is affixed on the approved module installed in the Mini PCI Express Card slot. For the location of the slot, see the "PCI Express Mini Card slot for wireless LAN" section in Access Help.

**Attention:** The ThinkPad computer contains an authentication mechanism. You can install or remove each wireless feature by yourself. If you install an unauthorized wireless adapter that is not approved for use in the ThinkPad computer, the computer will not start, but only displays an error message and emits beeps.

#### II) Preinstalled integrated *Bluetooth* module:

- IC: 2878D-J07H081 (Model: J07H081)

If you find an indication "Contains Transmitter Module: Canada IC: 2878D-J07H081" on the label at the bottom side of your computer, your computer integrates the *Bluetooth* transmitter module. The *Bluetooth* module is preinstalled by Lenovo, and no option card is provided for user installation. If your card requires replacement, contact the Lenovo Customer Support Center by following the proper steps described in "Getting help and service" of the *Service and Troubleshooting Guide*, shipped with your computer.

#### Low power license-exempt radiocommunication devices (RSS-210):

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 the device.

The transmitter devices have been designed to operate with the antennas integrated in ThinkPad computer, and having a maximum gain of within 3 dBi.

The maximum antenna gain permitted for devices in the 5250-5350 MHz and 5725-5825 MHz bands complies with the e.i.r.p. limit in section A9.2 of RSS-210.

When you use the model 4965AG or 4965AGN:

- The devices for the band 5150–5250 MHz are only for indoor usage to reduce potential for harmful interference to co-channel Mobile Satellite systems.
- High power radars are allocated as primary users (meaning they have priority) of 5250–5350 MHz and 5650–5850 MHz and these radars could cause interference and/or damage to LELAN (Licence-Exempt Local Area Network) devices.

**Exposure of humans to RF fields (RSS-102):** ThinkPad computers employ low gain integral antennas that do not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's Web site at [www.hc-sc.gc.ca/rpb](http://www.hc-sc.gc.ca/rpb)

## **Numéro d'homologation IC**

**I) Module sans fil installable par l'utilisateur:** Les cartes Express mini-PCI de réseau local sans fil:

- IC: 1000M-L4965AG (Model: 4965AG)
- IC: 1000M-L4965AGN (Model: 4965AGN)

Les cartes de réseau local sans fil Express mini-PCI commercialisées aux Etats-Unis et au Canada ne prennent pas en charge les canaux étendus (12ch, 13ch) et ne fonctionnent donc pas sur de tels canaux.

Le boîtier de votre ordinateur ThinkPad ne comporte pas de numéro d'homologation IC (Industry Canada) pour la carte mini-PCI Express ; mais sous votre ThinkPad, vous trouverez un indicateur pointant vers l'emplacement du numéro d'homologation IC. Pour connaître l'emplacement du numéro d'homologation IC, consultez la section correspondante dans l'aide Access. Le numéro d'homologation IC est apposé sur le module installé dans le logement pour carte mini-PCI Express. Pour connaître l'emplacement de ce logement, consultez la section correspondante dans l'aide Access.

**Attention:** L'ordinateur ThinkPad contient un mécanisme d'authentification. Vous pouvez installer ou désinstaller tout dispositif sans fil. Si vous installez une carte sans fil qui n'est pas homologuée pour l'ordinateur ThinkPad, l'ordinateur ne démarrera pas; un message d'erreur sera affiché et des bips sonores seront émis.

## **II) Module *Bluetooth* intégré préinstallé:**

- IC : 2878D-J07H081 (Modèle : J07H081)

Si la mention "Contains Transmitter Module: Canada IC: 2878D-J07H081" figure sur l'étiquette située au bas de votre ordinateur, cela signifie que ce dernier intègre le module de transmission *Bluetooth*. Le module *Bluetooth* est préinstallé par Lenovo et ne peut pas être retiré par les utilisateurs. Si votre carte doit être remplacée conformément aux étapes du Chapitre relatif à l'aide et la maintenance dans le manuel *Guide de maintenance et d'identification des incidents*, Lenovo vous demandera de lui envoyer votre ordinateur accompagné de la carte pour réparation.

**Remarque relative aux appareils de communication radio de faible puissance sans licence (CNR-210):** Le fonctionnement de ce type d'appareil est soumis aux deux conditions suivantes:

1. Cet appareil ne doit pas perturber les communications radio, et
2. cet appareil doit supporter toute perturbation, y compris les perturbations qui pourraient provoquer son dysfonctionnement.

Les périphériques d'émission sont conçus pour fonctionner avec des antennes intégrées aux ThinkPad et ayant un gain maximal de moins de 3 dBi.

Le gain d'antenne maximal pour les périphériques dans les bandes de fréquence 5250-5350 MHz et 5725-5825 MHz est conforme à la limite p.i.r.e énoncée dans la section A9.2 de la CNR-210.

Lorsque vous utilisez le modèle 4965AG ou 4965AGN :

- Tout appareil destiné à la bande 5150-5250 MHz devra être exclusivement utilisé en intérieur afin de réduire les risques de perturbations électromagnétiques gênantes sur les systèmes de satellite mobile dans un même canal.
- Les radars à forte puissance sont désignés comme les utilisateurs principaux (c'est-à-dire qu'ils sont prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz. Ils peuvent provoquer des perturbations électromagnétiques sur les appareils de type LELAN (réseau de communication local sans licence) ou les endommager.

## **Exposition des êtres humains aux champs radioélectriques (RF) (CNR-102):**

L'ordinateur ThinkPad utilise des antennes intégrales à faible gain qui n'émettent pas un champ électromagnétique supérieur aux normes imposées



par le Ministère de la santé canadien pour la population. Consultez le Safety Code 6 sur le site Web du Ministère de la santé canadien à l'adresse "[www.hc-sc.gc.ca/rpb](http://www.hc-sc.gc.ca/rpb)".

## Electronic emission notices

### *Federal Communications Commission (FCC) Statement*

- Model: LBUA0ZZKB1-214

**Note:** The compliances of the FCC Part 15 Subpart B for models 4965AG, 4965AGN, and J07H081 were proceeded by certification under each respective FCC ID: PD9LEN4965AG, PD9LEN4965AGN, and MCLJ07H081.

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 an authorized dealer or service representative for help.

Lenovo is not responsible for any radio or television interference caused by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the 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.

### Responsible Party:

Lenovo (United States) Incorporated  
1009 Think Place-Building One  
Morrisville, NC 27560  
Telephone: 1-919-294-5900

 Tested To Comply  
With FCC Standards  
FOR HOME OR OFFICE USE

*Industry Canada Class B Emission Compliance Statement*

This Class B digital apparatus complies with Canadian ICES-003.

*Avis de conformité à la réglementation d'Industrie Canada*

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

**Trademarks**

The following terms are trademarks of Lenovo in the United States, other countries, or both:

Lenovo  
ThinkPad

Other company, product, and service names may be trademarks or service marks of others.


The screen copies of electronic user's guidance are extracted hereafter.



## Operation instruction of UWB device

### Using Wireless USB

If your computer is equipped with Wireless USB features, you can enable or disable those features by pressing Fn+F5. If you press Fn+F5, a list of wireless features is displayed. You can enable or disable the Wireless USB radio with a single click.

 **Note:** Only a Wireless USB device can be connected to your ThinkPad® computer.

### Using a Wireless USB device with your computer for the first time

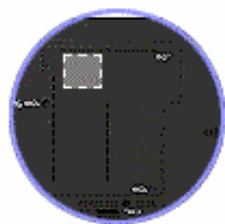
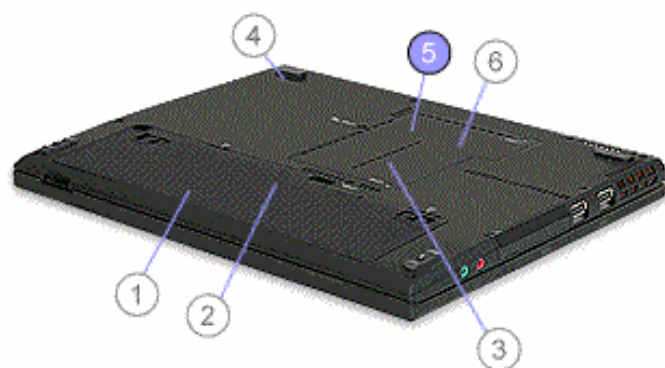
When a Wireless USB device is used for the first time, you must associate it with your ThinkPad computer, by doing the following:

1. Open the Wireless USB Control Center by clicking **Start --> All Programs --> Lenovo Wireless USB --> Wireless USB Control Center.**
2. Connect the Wireless USB device to your computer, using a USB cable.
3. Wait until the Wireless USB device is listed in the Wireless USB Control Center with the status "Cable-attached."
4. Remove the USB cable.
5. Wait until the status of the Wireless USB device in the Wireless USB Control Center changes to "Connected."

Once the device is associated, it will automatically connect without a USB cable as long as it is within a range of availability. For more details, refer to the manual provided with the device.

## UWB card slot location

### Bottom view



### 5. Wireless USB card slot

If your computer has a wireless USB feature, a wireless USB card is preinstalled in this slot.

## UWB antenna location

### Front view



### 12. [UltraConnect wireless antenna:](#)

If your computer comes with a wireless USB feature, its antenna is located here.