

User's Manual

(for ThinkPad X30 and X40 Series)

The attachment is the part of the user's manual of the specific host devices (IBM ThinkPad X30 and X40 Series) that indicates the regulatory notices concerning the FCC Part 15 and IC RSS-210/102.

Due to the large volume, the notices for other countries and other regulatory issues (e.g. Telecommunications, Safety, and EMC) are omitted.



Part Number: 13N6017

Regulatory Notice for ThinkPad® X40 Series

This notice is a supplementary document of the *ThinkPad X40 Series Service and Troubleshooting Guide*. Please read this document before you use the ThinkPad X40 Series computer.

The ThinkPad X40 Series 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 ThinkPad computer in strict accordance with the instructions as described hereafter.

Réglementation concernant les ordinateurs ThinkPad X40 Series

Le présent document complète le manuel *ThinkPad X40 Series - Guide de maintenance et d'identification des incidents*.

L'ordinateur ThinkPad X40 Series est conforme aux normes de radiofréquence et de sécurité en vigueur dans les pays ou régions où son utilisation sans fil a été acceptée. L'ordinateur doit être installé et utilisé conformément aux instructions fournies ci-après. Avant d'utiliser votre ordinateur ThinkPad X40, veuillez lire ce document.

Hinweis zu Einheiten für den ThinkPad X40 Series

Dieser Hinweis ergänzt die Informationen im Handbuch *ThinkPad X40 - Service und Fehlerbehebung*.

Der ThinkPad X40 erfüllt die Funkfrequenz- und Sicherheitsstandards der Länder und Regionen, in denen er für die Verwendung als drahtlose Einheit zugelassen ist. Der ThinkPad X40 muss exakt wie nachfolgend beschrieben installiert und verwendet werden. Lesen Sie unbedingt die entsprechenden Informationen in diesem Dokument, bevor Sie den ThinkPad X40 verwenden.

USA — Federal Communications Commission (FCC)

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.

User installable wireless modules

- Mini-PCI Cards
 - FCC ID: ANO20020201CLK, Model: WM3B2100 (Intel[®] PRO/Wireless LAN 2100 3B Mini PCI Adapter)
 - FCC ID: ANO20030400LEG, Model: PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter)
 - FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)
- Communication Daughter Card (CDC)
 - FCC ID: ANO20020100MTN, Model: BMDC200 (IBM Integrated *Bluetooth* III with 56K Modem)

For information concerning the wireless cards announced after the publication of this notice, visit the Web site at www.ibm.com/pc/qtechinfo/MIGR-43693.html

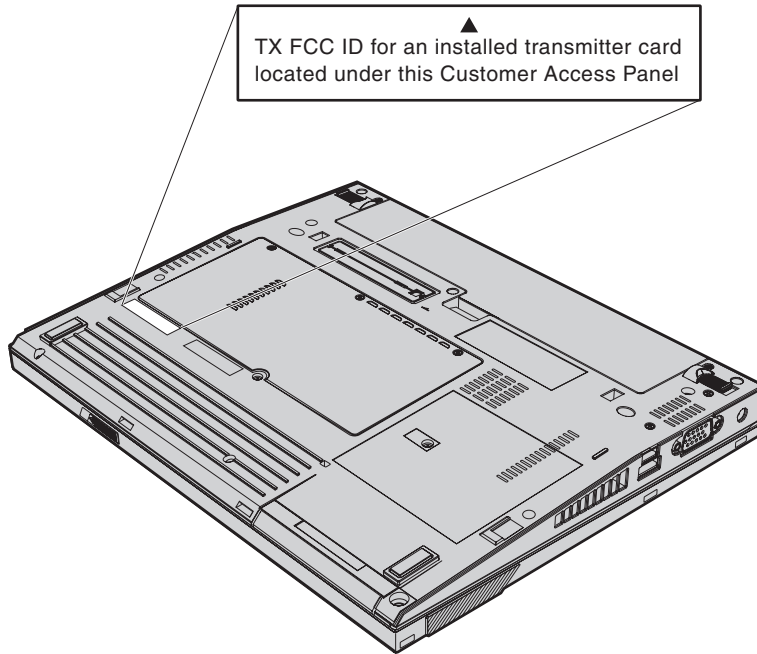
IBM 11b/g Wireless LAN Mini PCI Adapter marketed in US and Canada does not support nor function in the extended channels (12ch, 13ch).

i) FCC ID of wireless modules

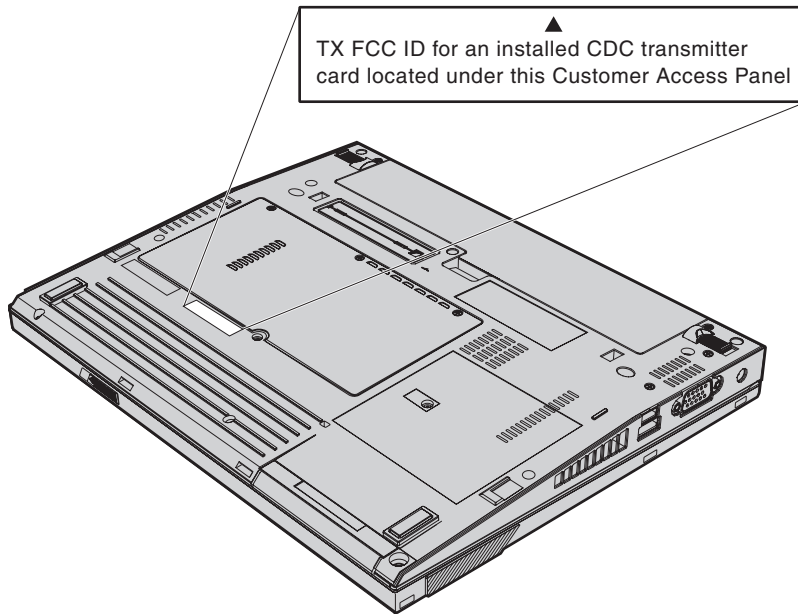
There is no FCC ID for Mini-PCI Cards shown on the enclosure of your ThinkPad computer. Instead you will find an indicator pointing to the location of the FCC ID on the bottom side of your ThinkPad computer as shown below in the figure i-1). Also the location of the FCC ID's indicator for CDC is shown by the figure i-2). The FCC IDs are affixed on each approved module installed in the Mini-PCI Card slot or the CDC slot.

i-1) Mini-PCI Cards:

- FCC ID: ANO20020201CLK, Model: WM3B2100 (Intel® PRO/Wireless LAN 2100 3B Mini PCI Adapter),
- FCC ID: ANO20030400LEG, Model: PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter), or
- FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)

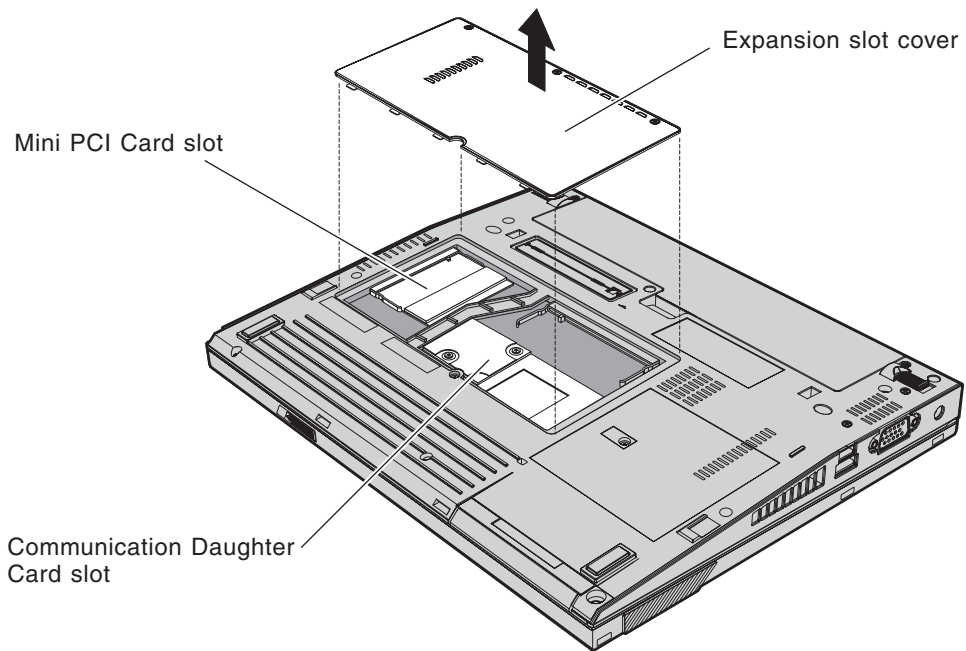


i-2) CDC (FCC ID: ANO20020100MTN, Model: BMDC200 (IBM Integrated *Bluetooth* III with 56K Modem))



ii) Installation of approved wireless modules

If no integrated wireless LAN Mini-PCI Card or RF CDC module is preinstalled in your ThinkPad computer, you can install one, provided by IBM as an option. Plug the wireless card option into the Mini-PCI Card slot or CDC slot located under the expansion slot cover of your ThinkPad computer as shown below.



Attention: The ThinkPad X40 Series computer contains an authentication mechanism

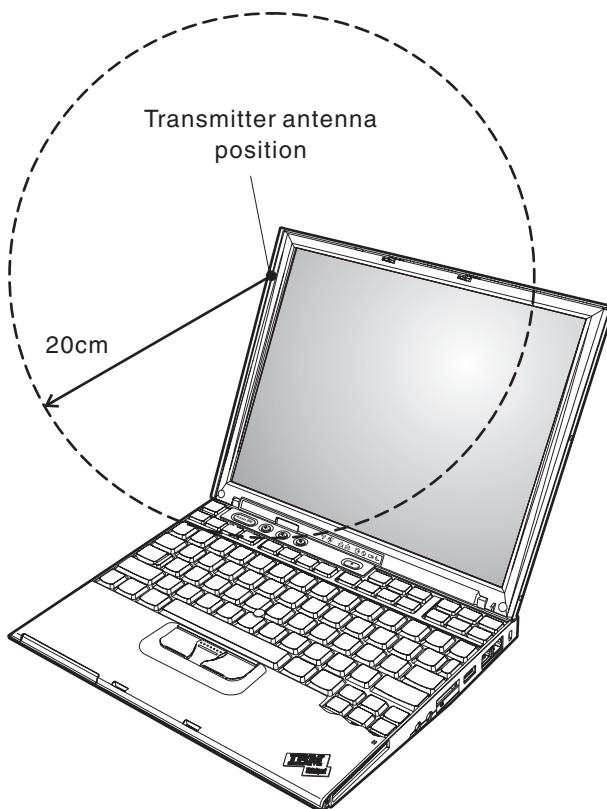
If you install an unauthorized wireless LAN Mini-PCI Card or RF CDC module that is not approved for use in the ThinkPad X40 Series computer, the computer will not start, but only displays an error message and emits beeps.

iii) The FCC RF safety requirement

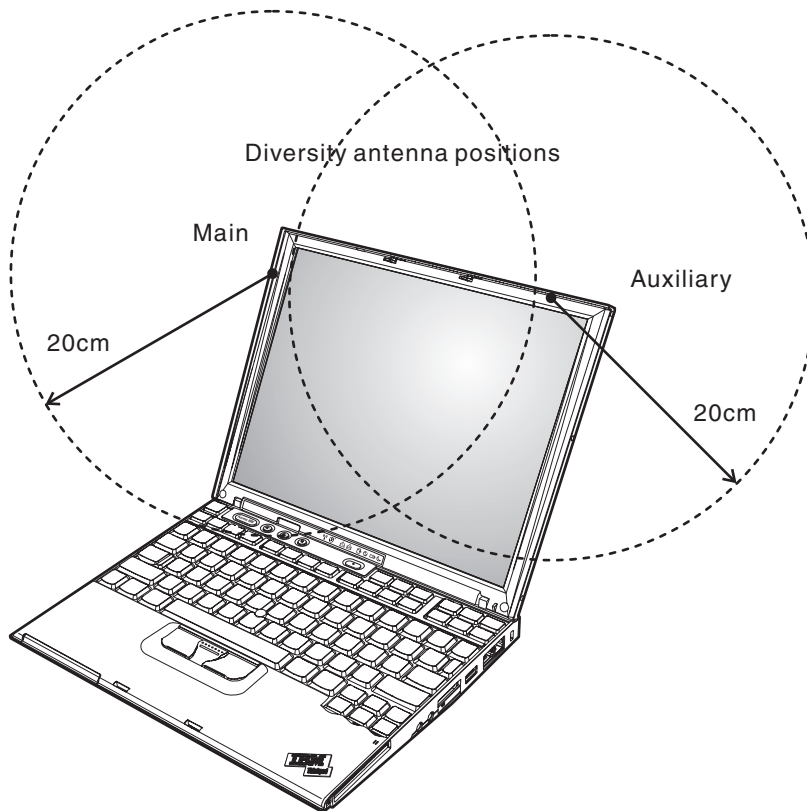
The radiated output power of the Wireless LAN Mini-PCI Cards or RF CDC module authorized to use for the ThinkPad X40 Series computer is far below the FCC radio frequency exposure limits. Nevertheless, the ThinkPad X40 Series computer shall be used in such a manner that the potential for human contact 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 Card built in to the screen section and all persons. You are not allowed to disable “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.

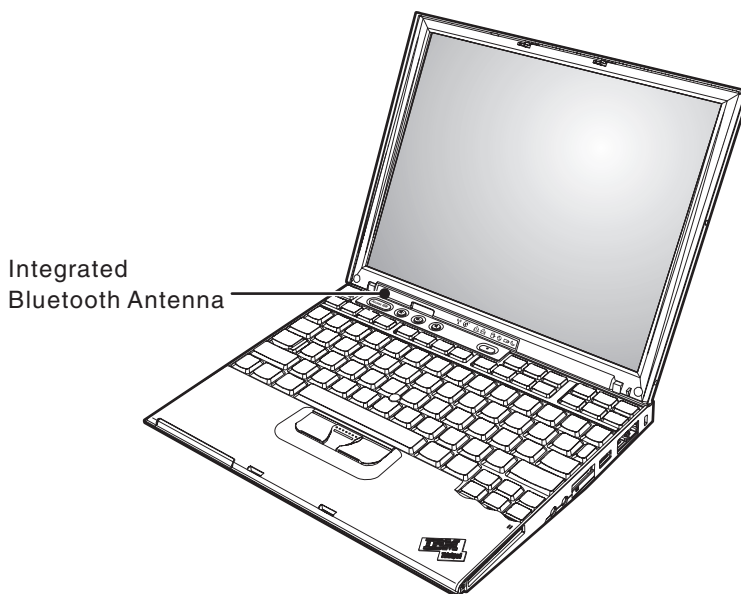
FCC ID: ANO20020201CLK, Model: WM3B2100 (Intel® PRO/Wireless LAN 2100 3B Mini PCI Adapter)



FCC ID: ANO20030400LEG, Model: PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter) or FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)



Note: The transmission diversity function is implemented for the Card (FCC ID: ANO20030400LEG, Model: PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter) or FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)). The function does not emit radio frequencies simultaneously from both antennas. One of the antennas is selected automatically or manually (by users) to have good quality of radiocommunication.



Note: The antenna of IBM Integrated *Bluetooth* III with 56K Modem is located on the bottom of the computer lid. Transmitted energy from the *Bluetooth* device is very low compared to other RF devices. Therefore a 20 cm separation from the *Bluetooth* antenna is not required.

Use of wireless options

Your ThinkPad computer is approved for use of one of the granted Wireless LAN Mini-PCI Cards together with the granted *Bluetooth* module in the CDC slot. Make sure of the following conditions on use of these wireless features.

1. Visit the IBM site at www.ibm.com/pc/qtechinfo/MIGR-43693.html and confirm the RF option devices that have been approved to cooperate with the integrated wireless feature.
2. When you use any other RF option device that is not listed on the IBM site, all other wireless features including the integrated transmitter in your ThinkPad computer are required to be turned off.
3. Users must follow the RF Safety instructions on wireless option devices that are included in the RF option device's user's manual.

iv) Radio Frequency interference requirements

- This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product 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.
- An improper installation or unauthorized use may cause harmful interference to radio communications. Also any tampering of the internal antenna will void the FCC certification and your warranty. Refer to the “Appendix D. Notices, Electronic emission notices” of the *ThinkPad X40 Series Service and Troubleshooting Guide* for more detail.

Canada — Industry Canada (IC)

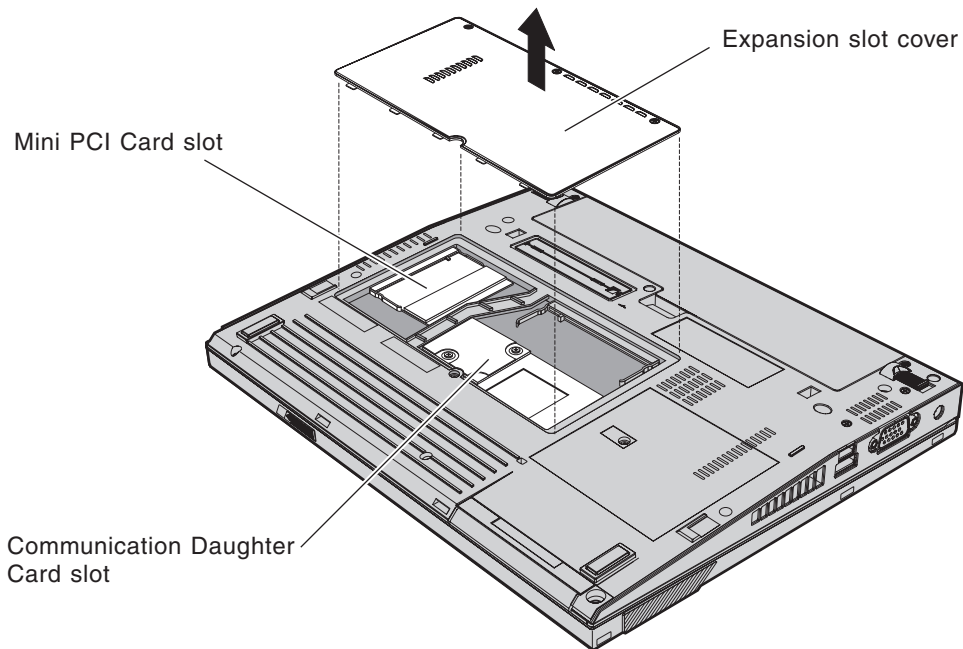
Certification number

The certification number of Industry Canada for each approved Mini-PCI wireless card or RF Communication Daughter Card (CDC) is affixed on each module installed in the Mini-PCI Card slot or the CDC slot as shown below.

The applied wireless cards are:

- IC: 349E-PH12127E, Model: PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter)
- IC: 349E-T60H786U, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)
- IC: 349E-WM3B2100, Model: WM3B2100 (Intel PRO/Wireless LAN 2100 3B Mini PCI Adapter)
- IC: 349E-BMDC200, Model: BMDC200 (IBM Integrated *Bluetooth* III with 56K modem)

For information concerning the wireless cards announced after the publication of this notice, visit the Web site at www.ibm.com/pc/qtechinfo/MIGR-43693.html



Attention: The ThinkPad X40 Series 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 with the ThinkPad X40 Series computer, the computer does not start, but only displays an error message and emits beeps.

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.

When you use the model PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter):

- The device for the band 5150–5250 MHz is 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)

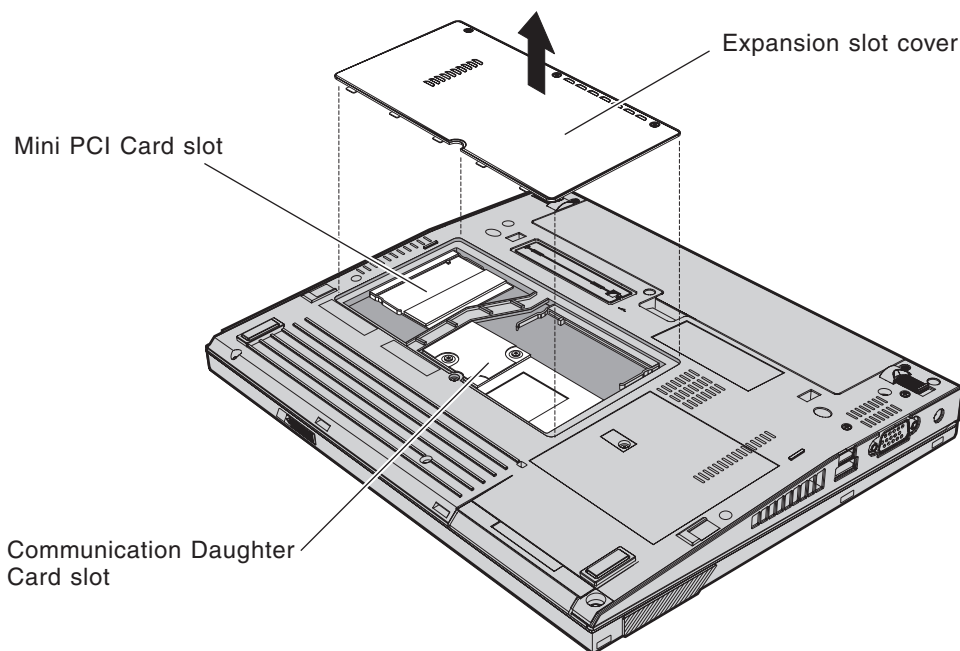
ThinkPad X40 Series computers employ low gain integral antennas that do not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's Web site at www.hc-sc.gc.ca/rpb

Numéro d'homologation

Le numéro d'homologation d'Industrie Canada pour chaque carte Mini-PCI sans fil homologuée ou carte RF CDC (Communication Daughter Card) est indiqué sur chaque module installé dans l'emplacement Mini-PCI Card ou CDC comme illustré ci-dessous.

Les cartes sans fil applicables sont les suivantes:

- IC: 349E-PH12127E, Model: PH12127E (IBM 11a/b/g Wireless LAN Mini PCI Adapter)
- IC: 349E-T60H786U, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)
- IC: 349E-WM3B2100, Model: WM3B2100 (Intel PRO/Wireless LAN 2100 3B Mini PCI Adapter)
- IC: 349E-BMDC200, Model: BMDC200 (IBM Integrated *Bluetooth* III avec modem 56K)



Remarque relative au 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 X40 Series, l'ordinateur ne démarrera pas; un message d'erreur sera affiché et des bips sonores seront émis.

Remarque relative aux appareils de communication radio de faible puissance sans licence (RSS-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.

Fonctionnement dans la bande 5 GHz

- 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) (RSS-102)

Le ThinkPad X40 Series 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".



Part Number: 13N6137

Regulatory Notice for ThinkPad® X30 Series (X31)

This notice is a supplementary document of the *ThinkPad X30 Series Service and Troubleshooting Guide*. Please read this document before you use the ThinkPad X30 Series computer.

The ThinkPad X30 Series computer complies with the radio frequency and safety standards of any country or region in which it has been approved for wireless use. You are requested to install and use your ThinkPad computer in strict accordance with the instructions as described hereafter.

Réglementation concernant les ordinateurs ThinkPad X30 Series

Le présent document complète le manuel *ThinkPad X30 Series- Guide de maintenance et d'identification des incidents*. Avant d'utiliser votre ordinateur ThinkPad X30, veuillez lire ce document.

L'ordinateur ThinkPad X30 series est conforme aux normes de radiofréquence et de sécurité en vigueur dans les pays ou régions où son utilisation sans fil a été acceptée. L'ordinateur doit être installé et utilisé conformément aux instructions fournies ci-après.

Hinweis zu Einheiten für den ThinkPad X30

Dieser Hinweis ergänzt die Informationen im Handbuch *ThinkPad X30 - Service und Fehlerbehebung*. Lesen Sie unbedingt die entsprechenden Informationen in diesem Dokument, bevor Sie den ThinkPad X30 verwenden.

Der ThinkPad X30 erfüllt die Funkfrequenz- und Sicherheitsstandards der Länder und Regionen, in denen er für die Verwendung als drahtlose Einheit zugelassen ist. Der ThinkPad X30 muss exakt wie nachfolgend beschrieben installiert und verwendet werden.

USA — Federal Communications Commission (FCC)

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.

Wireless modules for IBM ThinkPad X30 Series (X31)

This Regulatory Notice consists of two packages: Part Number 13N6137 (this notice) and Part Number 13N5908.

This document contains only information about model T60H786-U, (FCC ID: ANO20030500CMR, IBM 11b/g Wireless LAN Mini PCI Adapter).

For information about the following wireless adapters, see the other package, Part Number 13N5908.

FCC ID	Model Number
ANO20020201CLK	WM3B2100 (Intel PRO/Wireless LAN 2100 3B Mini PCI Adapter)
ANO20030400LEG	PH12127-E (IBM 11a/b/g Wireless LAN Mini PCI Adapter)
ANO20020304T2L	PH11107-E (IBM Dual-Band 11a/b Wi-Fi Wireless Mini PCI Adapter)
ANOU58H004	U58H004 (Cisco Aironet Wireless 802.11b)
ANO20020100MTN	BMDC200 (IBM Integrated <i>Bluetooth</i> III with 56K Modem)

For information concerning the wireless cards announced after the publication of this notice, visit the Web site at www.ibm.com/pc/qtechinfo/MIGR-43693.html

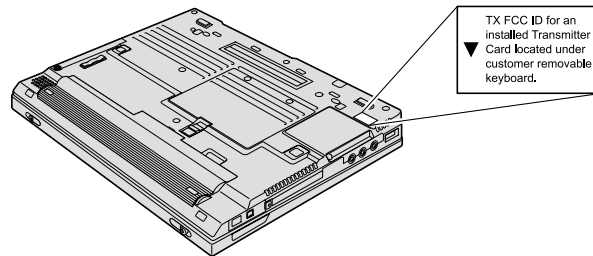
Note: IBM 11b/g Wireless LAN Mini PCI Adapter marketed in US and Canada does not support nor function in the extended channels (12ch, 13ch).

i) FCC ID of wireless modules

There is no FCC ID for Mini-PCI Cards 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 ThinkPad computer as shown below in the figure i-1). The FCC IDs are affixed on each approved module installed in the Mini-PCI Card slot or the CDC slot.

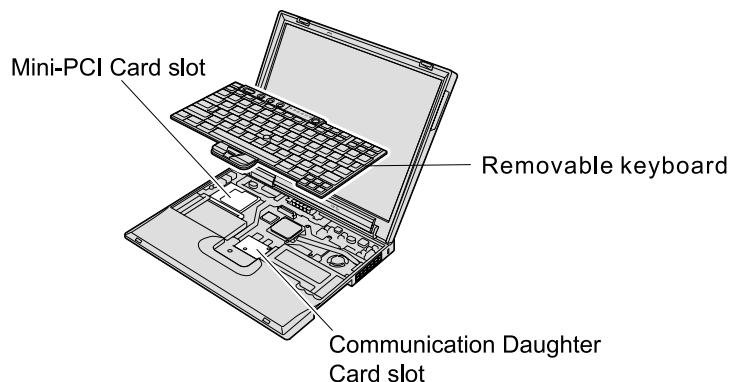
i-1) Mini-PCI Card:

FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)



ii) Installation of approved wireless modules

If no integrated wireless LAN Mini-PCI Card or RF CDC module has been preinstalled in your ThinkPad computer, you can install one, provided by IBM as an option. Plug the wireless card option into the Mini-PCI Card slot or CDC slot located under the keyboard of your ThinkPad computer as shown below.



Attention: The ThinkPad X30 Series computer contains an authentication mechanism

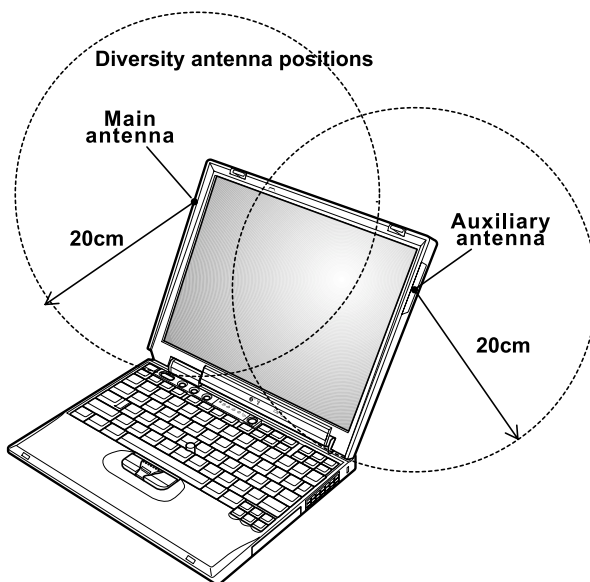
If you install an unauthorized wireless LAN Mini-PCI Card or RF CDC module that is not approved for use in the ThinkPad X30 Series computer, the computer will not start, but only displays an error message and emits beeps.

iii) The FCC RF safety requirement

The radiated output power of the Wireless LAN Mini-PCI Cards or RF CDC module authorized to use for the ThinkPad X30 Series computer is far below the FCC radio frequency exposure limits. Nevertheless, the ThinkPad X30 Series computer 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 Card built in to the screen section and all persons. You are not allowed to disable “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.

FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)



Note: The transmission diversity function is implemented for the Card (FCC ID: ANO20030500CMR, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)). The function does not emit radio frequencies simultaneously from both antennas. One of the antennas is selected automatically or manually (by users) to have good quality of radiocommunication.

Use of wireless options

Your ThinkPad computer is approved for use of one of the granted Wireless LAN Mini-PCI Cards together with the granted *Bluetooth* module in the CDC slot, and one or more wireless option PC Cards in the PC Card slot or USB port simultaneously. Make sure of the following conditions on use of these wireless features.

1. Visit the IBM site at www.ibm.com/pc/qtechinfo/MIGR-43693.html and confirm the updated list of RF option devices that have been approved to cooperate with the integrated wireless feature.
2. When you use any other RF option device that is not listed on the IBM site, all other wireless features including the integrated transmitter in your ThinkPad computer are required to be turned off.
3. Users must to follow the RF Safety instructions on wireless option devices that are included in the RF option device's user's manual.

iv) Radio Frequency interference requirements

An improper installation or unauthorized use may cause harmful interference to radio communications. Also any tampering of the internal antenna will void the FCC certification and your warranty. Refer to the "Appendix D. Notices, Electronic emission notices" of the *ThinkPad X30 Series Service and Troubleshooting Guide* for more detail.

Canada — Industry Canada (IC)

This Regulatory Notice consists of two packages: Part Number 13N6137 (this notice) and Part Number 13N5908.

This document contains only information about model T60H786-U, (IC Certification Number: 349E-T60H786, IBM 11b/g Wireless LAN Mini PCI Adapter).

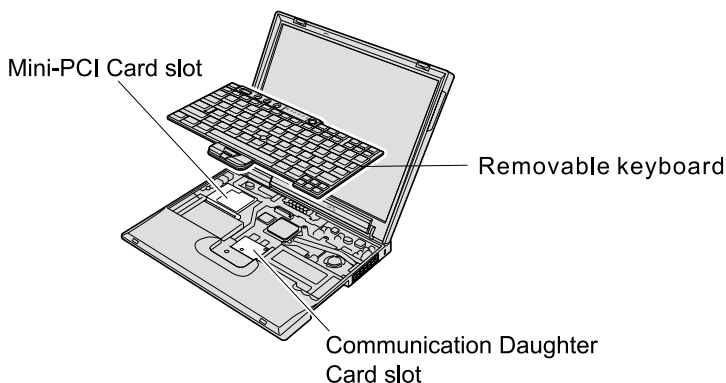
For information about the following wireless adapters, see the other package, Part Number 13N5908.

IC Certification Number	Model Number
349E-WM3B2100	WM3B2100 (Intel PRO/Wireless LAN 2100 3B Mini PCI Adapter)
349E-PH12127E	PH12127-E (IBM 11a/b/g Wireless LAN Mini PCI Adapter)
349E-PH11107E	PH11107-E (IBM Dual-Band 11a/b Wi-Fi Wireless Mini PCI Adapter)
349E-U58H004	U58H004 (Cisco Aironet Wireless 802.11b)
349E-BMDC200	BMDC200 (IBM Integrated <i>Bluetooth</i> III with 56K Modem)

Note: IBM 11b/g Wireless LAN Mini PCI Adapter marketed in US and Canada does not support nor function in the extended channels (12ch, 13ch).

Certification number

The certification number of Industry Canada for each approved Mini-PCI wireless Card or RF Communication Daughter Card (CDC) is affixed on each module installed in the Mini-PCI Card slot or the CDC slot as shown below.



Attention: The ThinkPad X30 Series 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 X30 Series computer, the computer will not start, but only displays an error message and emits beeps.

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

Common information

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.

Exposure of humans to RF fields (RSS-102)

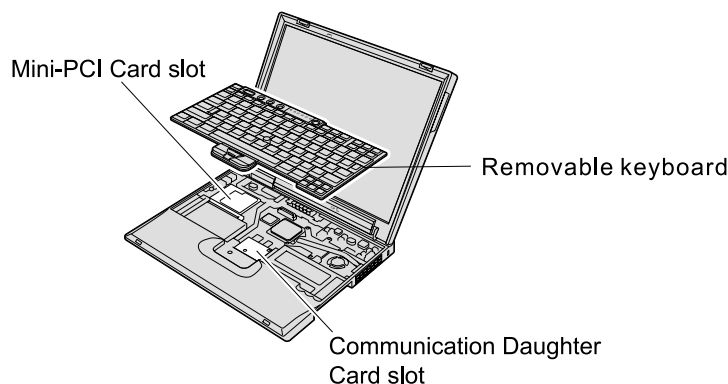
ThinkPad X30 Series computers employ low gain integral antennas that do not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's Web site at www.hc-sc.gc.ca/rpb

Numéro d'homologation

Le numéro d'homologation d'Industrie Canada pour chaque carte Mini-PCI sans fil homologuée ou carte RF CDC (Communication Daughter Card) est indiqué sur chaque module installé dans l'emplacement Mini-PCI Card ou CDC comme illustré ci-dessous.

Les cartes sans fil applicables sont les suivantes:

- IC: 349E-T60H786, Model: T60H786-U (IBM 11b/g Wireless LAN Mini PCI Adapter)



Remarque relative au 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 X30 Series, l'ordinateur ne démarrera pas; un message d'erreur sera affiché et des bips sonores seront émis.

Remarque relative aux appareils de communication radio de faible puissance sans licence (RSS-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.

Exposition des êtres humains aux champs radioélectriques (RF) (RSS-102)

Le ThinkPad X30 Series 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".