

BELKIN

Wireless Notebook Network Card

Connect your laptop to a wireless network



User Manual

F5D6020

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INTRODUCTION

Thank you for purchasing the Belkin Wireless Notebook Network Card (the Card). Now you can take advantage of this great new technology and gain the freedom you need around the home or office without using cables. The Wireless Notebook Network Card works like a conventional network card, but without the wires. The easy installation and setup will have you networking wirelessly in minutes. Please be sure to read through this manual completely to be sure that you are getting the most out of your Wireless Notebook Network Card.

Features:

The Card complies with the IEEE 802.11b standard in order to communicate with other 802.11b-compliant wireless devices.

- 2.4GHz ISM (Industrial, Science, and Medical) band operation
- Wireless compliance with the IEEE 802.11b standard
- CardBus Interface
- 64- or 128-bit Wireless Encryption (WEP)
- Wireless access to networked resources
- Support for both Infrastructure and Ad-Hoc (peer-to-peer) networking modes
- Data rate of up to 11Mbps
- Supports 11, 5.5, 2 or 1Mbps rates (auto-rollback)
- Easy installation and use
- External antenna
- LED Link indicator

Applications and Advantages

- **Wireless roaming with a laptop around the home or office**
Offers the freedom of networking—without cables.
- **Difficult-to-wire environments**
Enables networking in buildings with solid or finished walls, or open areas where wiring is difficult to install.
- **Frequently changing environments**
Adapts easily in offices or environments that frequently rearrange or change locations.

INTRODUCTION

- **Temporary LANs for special projects or peak time**
Sets up temporary networks such as at trade shows, exhibitions, and constructions sites, which need networks on a short-term basis; also companies who need additional workstations for a peak activity period.
- **SOHO (Small Office/Home Office) networking needs**
Provides the easy and quick small network installation SOHO users need.

Product Specifications

Host Interface:	32-bit CardBus
Power Consumption:	300mA (max)
Certification:	FCC Class B, CE Mark, C-Tick
Operating Temperature:	32–131° F (0–55° C)
Storage Temperature:	-13–158° F (-25–70° C)
Typical Operating Range:	Indoor: 160' (50m) @ 11Mbps, 260' (80m) @ 5.5Mbps or lower Outdoor: 490' (150m) @ 11Mbps, up to 1800' (550m) @ 5.5Mbps or lower

System Requirements

- PC-compatible laptop with one available CardBus slot
- Windows® 98SE, Me, 2000, or XP

Package Contents

- Belkin Wireless Notebook Network Card
- Quick Installation Guide
- Installation Software CD
- User Manual
- Registration Card

KNOWING YOUR WIRELESS NOTEBOOK NETWORK CARD



- (a) **Link Light:** When the Card is linked to a wireless network, this light will be ON and GREEN. If the Card is not connected to a wireless network, the light will be OFF.
- (b) **Card Connector:** This is the side of the Card that fits into the CardBus slot of your laptop.
- (c) **Antenna:** The antenna extends outside of the laptop so the wireless radio signals can be transmitted and received.

INSTALLING THE CARD

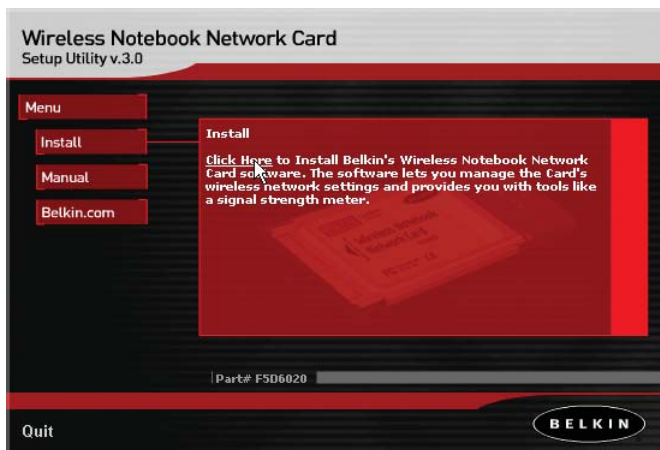
Installing your Card is done in three easy steps.

1. Install the software **FIRST**. If you plug your Card into your laptop before you install the software, it will not work until you install the software.
2. Plug the Card into your laptop.
3. Let Windows finish installing the Card.

NOTE: INSTALL THE SOFTWARE FIRST BEFORE YOU INSTALL THE CARD INTO YOUR NOTEBOOK.

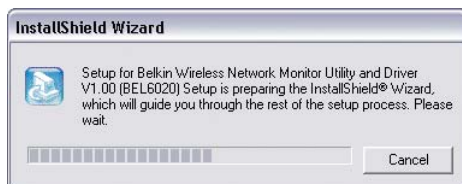
Step 1: Software and Driver Installation

1. Insert the CD into your CD-ROM drive.
2. The Belkin Wireless Notebook Network Card Setup Utility screen will automatically appear. If it does not appear within 15-20 seconds, then select your CD-ROM drive and double-click on the folder named "Files". Next double-click on the icon named "start.exe".
3. In the menu window, drag your mouse over the "Install" button then select "Click here" to start the software installation program.

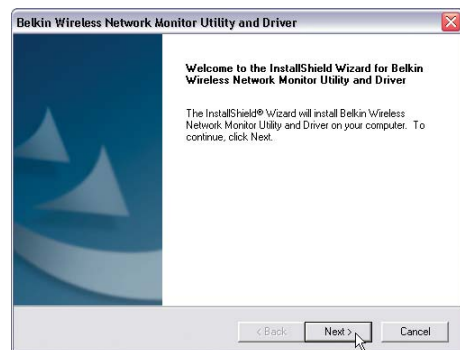


INSTALLING THE CARD

- The installer will start. You will see a progress screen. Go to the next step.



- Next, you will see an introduction screen. Click "Next" to continue with the installation of the Card.



- If you are using Windows 2000 or Windows XP, you may see a screen similar to the one below. **This does not mean there is a problem.** Select "Continue Anyway".



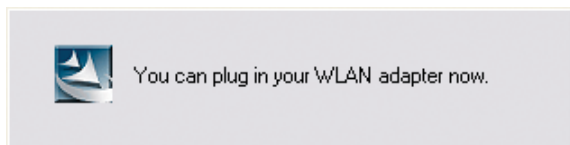
INSTALLING THE CARD

- When the software installation is complete, you will see a screen prompting you to finish. Click “Finish”.

Windows 98SE or Me users: You may be asked to restart the computer. Let the computer restart before going to the next step.



- If your computer did not need to restart, the message “You can plug in your WLAN adapter now” will appear.



INSTALLING THE CARD

9. With your computer ON, insert the Card, label side UP, into your computer's CardBus slot firmly until it stops.



10. After inserting your Card, Windows will detect that new hardware has been installed. Depending on which version of Windows you are using, a window similar to the one pictured below will appear. Select the option that will automatically install the software.

Windows 98 SE Users:

Windows may ask you to insert the Windows 98 CD. If you don't have the CD, you need to obtain one. Please do not call Belkin Tech Support, as Belkin cannot provide the files that are needed from the Windows 98 CD.



INSTALLING THE CARD

11. If you are using Windows 2000 or Windows XP, you may see a screen similar to the one below. **This does not mean there is a problem.** Select “Continue Anyway”.



12. When the installation is complete, you will see a screen prompting you to finish. Click “Finish”.

Windows 98SE or Me users: You may be asked to restart the computer. Let the computer restart before going to the next step.



INSTALLING THE CARD

- When the installation is complete or your computer has restarted, the Belkin Wireless Network Utility icon will appear on your desktop. To open the Monitor Utility, double-click on this icon. For information about using the Utility, see the next section in this manual.



Belkin Wireless
Network Utility

- A small icon in your system tray (bottom right corner of most screens) will appear. This is your shortcut to the Belkin Wireless Network Monitor. It also indicates the status of your connection:



Green: Connected to a wireless network.

Red: No connection to a wireless network.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

The Wireless Network Monitor Utility is a central point on your computer that allows you to control your Wireless Notebook Network Card. Among the things you can do using the Utility, you can:

- Choose the wireless network you want to connect to
- See a list of all available networks in the area
- See information about the networks in the area that are available to you
- Store profiles for each network that you connect to
- Set power saving options
- Enable/Disable the Card's radio
- Select the default view you will use to connect to your networks
- View and refresh the Card's network IP information

Opening the Wireless Network Monitor Utility

After you have installed the Card and the Utility, you will see an icon in the lower right corner of your screen (near the clock). This is called the system tray. The icon will be green when your Card is connected to a network and it will be red when there is no connection to a wireless network. After installation, the Card will connect to your wireless network automatically. Double-clicking on the system tray icon will open the Utility. Also, the installation software placed a shortcut icon on your desktop. Double-clicking this shortcut will open the Utility.



System Tray icon



**Belkin Wireless
Network Utility**

Shortcut icon



THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Window XP Users

If you are using Windows XP, please read this section first.

Windows XP integrates a wireless management utility referred to as Windows XP Wireless Zero Configuration service (WZC). The WZC can be used to control your Card or you can use the Belkin Wireless Network Monitor Utility. We suggest that you use the Belkin Utility to control your Card. If you choose to use the WZC, directions for operation of the WZC are available in the Windows XP help file. When you first install the Card, the Belkin Utility will be enabled. If you want to disable the Belkin Utility in order to use the WZC, follow the steps below to disable the Belkin Utility.

Disabling the Belkin Wireless Network Monitor Utility in Windows XP

1. Right-click on the system tray icon ().
2. Select "Use Windows to Configure my Wireless Connection".
3. The Belkin Utility will disable itself and enable the WZC. This may take up to 30 seconds.
4. To re-enable the Belkin Utility, double-click on the desktop shortcut (). This will disable the WZC and enable the Belkin Utility. This may take up to 30 seconds.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Using the Belkin Utility (Windows 98SE, Me, 2000, XP)

When the Utility opens, you will see the Utility screen. The view will be of the Configuration screen. This is the screen you will use most often to choose and change networks.

Navigation Buttons

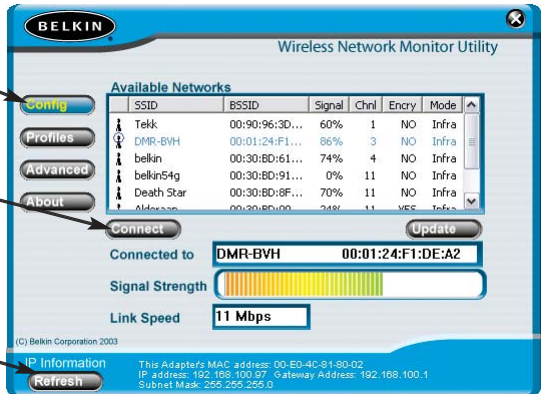
Pressing these buttons will change the view.

Connect Button

Select a network from the Available Networks window and click to connect to the network.

Refresh Button

Pressing this button will refresh the settings of the Card. The IP information is displayed next to the button. This button is sometimes used when you switch from one network to another.



Available Networks

Displays the available networks and their settings.

Update Button

Re-scans for more wireless networks in your area.

Connected to Window

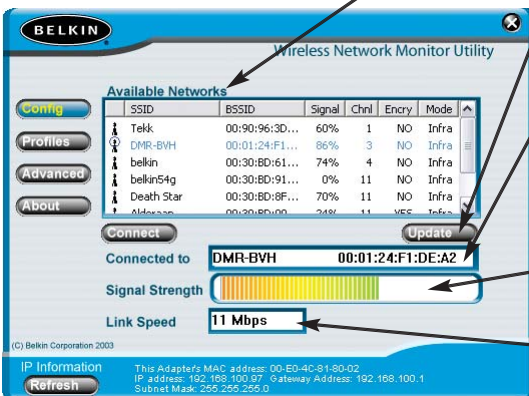
Shows you the name and MAC address of the network you are currently connected to.

Signal Strength

Shows you the signal strength (in real time) of the network you are currently connected to.

Link Speed



The Card is operating at the speed indicated in this window.



THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Connecting to a Wireless Network

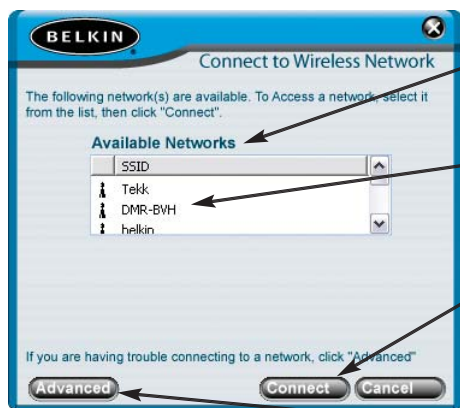
After you install your Card for the first time, it will connect to your wireless network automatically. You should not have to do anything further to connect to a network. To manually connect to a wireless network, see the steps below.

1. Open the Utility by double-clicking the system tray icon () or the desktop shortcut. ( Belkin Wireless Network Utility)
2. All networks in your area will be displayed in the “Available Networks” window. Select the network that you want to connect to by clicking the name (under the SSID column) of the network. Once you have selected the network, click the “Connect” button.
Note: If the network that you are attempting to connect to is using encryption, you will be prompted to enter the network key. If you don't know the key, you will need to obtain it from the system administrator. Also, see the section of this manual called “Creating and Using a Profile” for advanced encryption setup options.
3. The name of the network will appear in the “Connected to” window and the Signal Strength indicator will show the network's signal strength. Your computer is now connected to the wireless network.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Using the Quick Connect Screen

The Utility was designed to offer you two methods of connecting to a wireless network. The Card ships with the Utility configured so you use Configuration view to select wireless networks. A second option allows you to choose to have the Utility open to the Quick Connect screen. The Quick Connect screen (pictured below) is a simplified window that shows you the names of the available networks only, excluding other information like signal strength, MAC address, network type, channel, etc.






Available Networks
Displays the available networks and their settings.

Network Name
This is the name of the wireless network.

Connect Button
Select a network from the Available Networks window and click to connect to the network.

Advanced Button
Click this button to go to the Advanced configuration window.

You may find it easier to use the Quick Connect screen to connect to networks. To switch to the Quick Connect screen, right-click on the Utility system tray icon (). In the menu that appears, select "Use Quick Connect screen". After you have selected this option, the next time you double-click on the system tray icon () or the desktop shortcut () to open the Utility, you will be presented with the Quick Connect screen.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Connecting to a Network Using the Quick Connect Screen

When the Quick Connect screen appears, you will see all of the available networks in the window. Select a network by clicking on the name, then click the “Connect” button. *Note: If the network that you are attempting to connect to is using encryption, you will be prompted to enter the network key. If you don’t know the key, you will need to obtain it from the system administrator. Also, see the section of this manual called “Creating and Using a Profile” for advanced encryption setup options.*

Using the Profiles Manager View

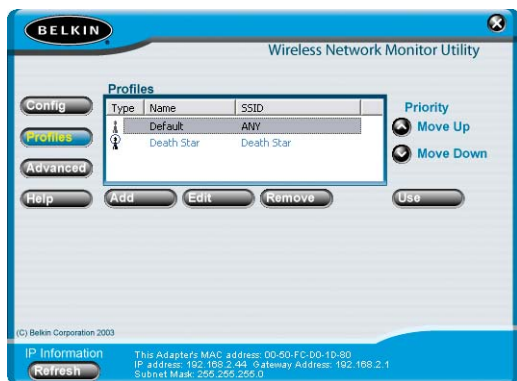
Using profiles is a convenient way to quickly and easily connect to networks if you travel between multiple wireless networks. For example, your primary wireless network may be at home, but you also use a wireless network at work and also at the local café. Each of these networks likely has different settings. For instance, the network at your workplace uses encryption, but home and the café don’t. Also, each of these networks has a different name. Trying to keep track of these differences just got easier with the profile manager. Every time you successfully connect to a network, the profile manager will remember that network’s settings for a later time. This means that after the first time you connect your computer to the network at your workplace, you won’t have to reenter the encryption settings again. The profile manager will recognize the network and automatically connect to it. You can also create custom profiles, delete profiles, and edit profiles when needed.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Creating and Using a Profile

Profiles are automatically created when you connect to a network. From the factory, Belkin has also created one profile called “Default”. This is a special profile that will connect to the first wireless network that the Card detects. You can remove this profile if you wish. If you want to create the default profile again, simply create a profile with the name “Default” and the SSID is “ANY” (all caps). Here is how:

1. Open the Utility.
2. Click the “Profiles” button. You will see the below screen.



3. Click “Add”. The following screen will appear.



THE BELKIN WIRELESS NETWORK MONITOR UTILITY

4. Name the profile by typing in a name in the Profile Name field.
5. Type in the name of the wireless network in the Network Name (SSID) field.
6. If the network you are going to be connecting to uses an Access Point (this is the most common configuration), leave the box next to "This Network uses an Access Point" checked. If it is a peer-to-peer network that you are creating a profile for, check that box.
7. If the network uses encryption, select the type of encryption (64-bit or 128-bit) by placing a checkmark next to the type you need.
8. Type in the network key for the network in the Network Key field. If the network key is a hexadecimal key, check "Hex Key". If your key is in the form of a passphrase, check "Passphrase". Check the number of the key that you need to use. Most of the time, this is "1". *Note: The network key and format are determined by the network administrator. If you don't have the key, contact your administrator.*
9. Click "Save" to save the profile.
10. Your profile will now appear in the profiles window. To use the profile, select the profile by clicking on it, then press the "Use" button. The Utility will switch to the Configuration view again. Your Card will now be connected to the network specified in your profile.

Prioritizing your Profiles

You can change the priority of your profiles so the Utility will connect to the first network in the profile priority list. This feature is useful if you are in an area where you use more than one wireless network. Put simply, the profile at the top of the list will be the first network that the Utility automatically connects to. If the network in the top of the priority list is not available (you are not near it) then the Utility will go to the next profile in the list, and so on.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Advanced Options

Clicking on the “Advanced” button will take you to the Advanced view. In the Advanced view you can do the following:

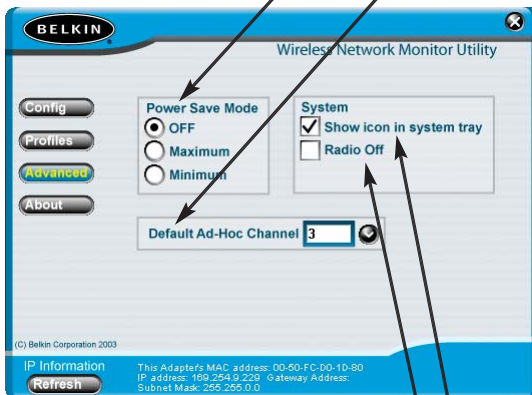
- Enable Power Save mode
- Enable/Disable the system tray icon
- Turn off the radio on the Card
- Select the default Ad-Hoc channel

Power Save Mode

Allows you to select the Power Save mode. Default is OFF.

Default Ad-Hoc Channel

Allows you to select the default Ad-Hoc channel.



Show Icon in System Tray

Choose to display or NOT display the icon in the system tray.

Radio Off

Allows you to turn the radio (the Card) on or off.

THE BELKIN WIRELESS NETWORK MONITOR UTILITY

Using Power Save Mode

Enabling Power Save will help reduce battery consumption on a laptop by turning the Card or parts of the Card OFF after each data set is sent or received to or from the network. Enabling this mode will decrease performance of the Card, but may greatly enhance your battery life. Use this feature only if necessary. Minimum Power Save mode will partially shut the Card off to reduce power consumption, but the radio will still be on ready to transmit or receive. Maximum Power Save mode will completely shut the Card down when there is no activity. When there is activity, the Card will turn itself back on and begin transmitting or receiving data. This introduces a short delay, but will save the most battery power on your laptop.

Showing the Icon in System Tray

You can choose to display the Utility icon in the system tray. By placing a check in the box, the icon will be displayed in the system tray. Removing the check will remove the icon. When there is no icon in the system tray, you can access the Utility by using the desktop shortcut.

Turning the Radio Off

You can manually turn the radio off by placing a check in the box. This will disable the Card until you turn it back on.

Setting the Default Ad-Hoc Channel

You can select the channel you want the Card to operate in when it is set for Ad-Hoc (peer-to-peer) mode. In an Ad-Hoc configuration, one client initiates the connection by broadcasting its presence as an Ad-Hoc client. The rest of the clients will connect to the initial client, making the initial client's channel the channel that all of the clients will operate on. The default Ad-Hoc channel is 11.

TROUBLESHOOTING

You can find technical support information at www.belkin.com/networking or www.belkin.com through the tech support area. If you want to contact technical support by phone, please call **877-736-5771**. Technical support is available 24 hours a day, 7 days a week.

Belkin Corporation Limited Lifetime Product Warranty

Belkin Corporation warrants this product against defects in materials and workmanship for its lifetime. If a defect is discovered, Belkin will, at its option, repair or replace the product at no charge provided it is returned during the warranty period, with transportation charges prepaid, to the authorized Belkin dealer from whom you purchased the product. Proof of purchase may be required.

This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication; if the product has been modified without the written permission of Belkin; or if any Belkin serial number has been removed or defaced.

THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE IN LIEU OF ALL OTHERS, WHETHER ORAL OR WRITTEN, EXPRESSED OR IMPLIED. BELKIN SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

No Belkin dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

BELKIN IS NOT RESPONSIBLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO, LOST PROFITS, DOWNTIME, GOODWILL, DAMAGE TO OR REPROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED IN, OR USED WITH, BELKIN PRODUCTS.

Some states do not allow the exclusion or limitation of incidental or consequential damages or exclusions of implied warranties, so the above limitations of exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

FCC Statement

DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin Corporation, of 501 West Walnut Street, Compton, CA 90220, declare under our sole responsibility that the product,

F5D6020

to which this declaration relates, 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.

Caution: Exposure to Radio Frequency Radiation.

The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such manner that the potential for human contact normal operation is minimized.

When connecting an external antenna to the device, the antenna shall be placed in such a manner to minimize the potential for human contact during normal operation. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

Federal Communications Commission Notice

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 not installed and used in accordance with the instructions, it may 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 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 an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications to this device that are not expressly approved by Belkin Corporation may void the users authority to operate the equipment.

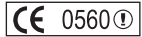
Canada-Industry Canada (IC)

The wireless radio of this device complies with RSS 139 & RSS 210 Industry Canada. This Class B digital complies with Canadian ICES-003.

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

Europe-European Union Notice

Radio products with the CE 0560 or CE alert marking comply with the R&TTE Directive (1995/5/EC) issued by the Commission of the European Community.



Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards).

- EN 60950 (IEC60950) – Product Safety
- EN 300 328 Technical requirement for radio equipment
- ETS 300 826 General EMC requirements for radio equipment.



To determine the type of transmitter, check the identification label on your Belkin product.

Products with the CE marking comply with the EMC Directive (89/336/EEC) and the Low Voltage Directive (72/23/EEC) issued by the Commission of the European Community. Compliance with these directives implies

conformity to the following European Norms (in brackets are the equivalent international standards).

- EN 55022 (CISPR 22) – Electromagnetic Interference
- EN 55024 (IEC61000-4-2,3,4,5,6,8,11)- Electromagnetic Immunity
- EN 61000-3-2 (IEC61000-3-2) - Power Line Harmonics
- EN 61000-3-3 (IEC610000) – Power Line Flicker
- EN 60950 (IEC60950) – Product Safety



Products that contain the radio transmitter are labeled with CE 0560 or CE alert marking and may also carry the CE logo.



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