Back to Contents Page

Technical Specifications and Regulatory Information: Wireless USB Adapter User's Guide

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Information for the User

Wireless Interoperability

The Wireless Network Adapter devices are designed to be interoperable with any wireless LAN product that is based on direct sequence spread spectrum (DSSS) and orthogonal frequency division multiplexing (OFDM) radio technology and to comply with the following standards:

- IEEE Std 802.11b-1999. Standard on 2.4 GHz Wireless LAN
- IEEE Std 802.11g-2003. Standard on 2.4 GHz Wireless LAN
- IEEE Std 802.11a-1999. Standard on 5 GHz Wireless LAN

Safety Instructions

The Wireless USB Adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this device, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The Wireless device operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the wireless 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 Wireless equipment on board airplanes,
- Using the Wireless equipment in medical facilities, or
- Using the Wireless 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 Wireless device before you turn it on.

Back to Top

Regulatory information

The Wireless network device 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. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of the

devices included with this Wireless kit, or the substitution or attachment of connecting cables and equipment. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. The manufacturer 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.

Unauthorized modifications made to the wireless network device could void the operator's right to use the device

Canada-Industry Canada (IC)

This device complies with RSS210 of Industry Canada.

Back to Top

USA-Federal Communications Commission (FCC) and Canada – Industry Canada (IC)

WARNING: The radiated output power of the Wireless Network Adapter devices is far below the FCC radio frequency exposure limits. Nevertheless, the Wireless Network Adapter devices 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 Wireless Network Adapter.

The Wireless Network Adapter should not be co-located with any other transmitters

Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 GHz to 5.25 GHz frequency range. The FCC requires this product 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 GHz to 5.35 GHz and 5.65 GHz to 5.85 GHz bands. These radar stations can cause interference with this device, or can cause damage to this device, or both.

Interference statement

This device complies with Part 15 of the FCC Rules. Operation of the device is subject to the following two conditions:

- This device may not cause harmful interference.
- This device 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 the device.
- Increase the distance between the device and the receiver.
- Connect the deviceto 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.

Back to Top

Technical Specification

Wireless interoperability

Wireless products are designed to be interoperable with any wireless LAN product that is based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b-1999. Standard on Wireless LAN.
- IEEE Std. 802.11g-2003. Standard on Wireless LAN.
- IEEE Std 802.11a-1999. Standard on 5 GHz Wireless LAN
- Wireless Fidelity (WiFi) certification, as defined by the WECA (Wireless Ethernet Compatibility Alliance).
- Cisco Compatibility Extenstions (CCX)

Driver support

- Microsoft Windows XP
- Microsoft Windows 2000

Standards supported

- IEEE Std 802.11b-1999. Standard on 2.4 GHz Wireless LAN
- IEEE Std 802.11g-2003. Standard on 2.4 GHz Wireless LAN
- IEEE Std 802.11a-1999. Standard on 5 GHz Wireless LAN
- USB 2.0

Environment

- Max. Humidity: 95% Non-condensing

Radio specification

Range:

- Per cell indoors approx. 35-100 meters or more
- Per cell outdoors up to 100-300 meters
- The range of your wireless devices can be affected when the antennas are placed near metal surfaces and solid high-density materials.
- Range is also impacted due to "obstacles" in the signal path of the radio that may either absorb or reflect the radio signal.
- In Open Office environments, antennas can "see" each other, i.e. there are no physical obstructions between them.
- In Semi-open Office environments, work space is divided by shoulder-height, hollow wall elements; antennas are at desktop level.
- In Closed Office environments, work space is separated by floor-to-ceiling brick walls.

Mobility:

- Seamless roaming across cell boundaries with handover

Specific features

Supported bit rates:

- 54 Mbps
- 48 Mbps
- 36 Mbps
- 24 Mbps
- 18 Mbps
- 12 Mbps
- 11 Mbps
- 9 Mbps
- 6 Mbps
- 5.5 Mbps
- 2 Mbps
- 1 Mbps

Data encryption:

- 64 /128 bit WEP Encryption
- TKIP
- AES

Security:

- Supports PEAP, TLS/Smartcard, WPA, WPA-PSK, EAP - Cisco Wireless (LEAP), MD5 Challenge and TTLS authentication

Utility Software:

- Management utility software

LED indicator:

LED 1	**INDICATION**
Off	Power is off and the unit is disconnected, or the Windows driver has not loaded
On	Power is on, the unit is connected and the Windows driver has loaded
LED 2	**INDICATION**
Off	Unit is off or disconnected
On	Radio is on and associated
Slow Flash	Radio is on and scanning for a wireless network
Fast Flash	Radio is on, associated, transmitting and receiving data

Back to Top

Back to Contents Page