User Manual AirStation Nfiniti Wireless USB Adapter WLI-UC-G300N



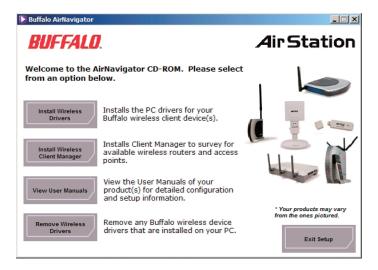


## **Getting Started**

Run			×
-	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you		
Open:	D:\Setup.exe		*
	OK Cancel Brow	se	

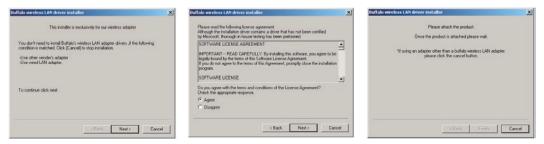
- Insert the AirNavigator CD into the CD-ROM drive of your computer. The AirNavigator Setup Wizard should launch automatically.
- To launch the AirNavigator Setup Wizard manually, click Start, then Run. Type "D:\ Setup.exe", where D is the drive letter assigned to your CDrom.
- Click *OK* to launch the wizard.

# **Installing Drivers**



• Select Install Wireless Drivers.

# **Installing Drivers**



- Click *Next* to install a driver for the USB adapter.
- Select *Agree* and click *Next* to continue the process after reviewing the license agreement.
- A window will appear prompting the insertion of the Wireless Adapter. Plug the Nfiniti AirStation Wireless USB Adapter into your PC's USB port.



## Installing Wireless Drivers



- When the 'Found New Hardware Wizard' launches, click *Next* to run the wizard.
- If the 'Digital Signature Not Found' page opens, click Yes.
- When the Wireless USB Adapter is successfully installed, click *Finish*. Restart your computer if prompted.

# **Connecting Wireless Clients to your Network**



Buffalo supports three different methods for connecting your wireless client device to your network.

If your AP supports it, use the simple, utterly secure AOSS to connect. Install the Client Manager from your AirNavigator CD (page 7) and turn to page 10.

You may also use the Client Manager software from your AirNavigator CD to configure your network manually. See page 15 for more on Client Manager.

If you're running Windows XP on your PC, you may use its built-in Zero Configuration tool to connect to your router/AP. See page 20 for more on Zero Configuration.

## **Client Manager**

Client Manager can be used to survey and connect to available access points, configure WPA/WEP encryption, and create connection profiles.

Note: When Client Manager is installed, Windows XP Wireless Zero Configuration is automatically disabled.



#### Installing Client Manager

Insert the AirNavigator CD into the CD-ROM drive of you computer. If the AirNavigator Setup Wizard does not launch automatically, launch it manually by clicking *Start* and then *Run*. Enter *D*: $\land$ *Setup.exe* in the dialog box that appears.

Click OK. Select Install Wireless Client Manager.

## **Client Manager**

💷 BUFFALO Client Manager 3 Installer	BUFFALO Client Manager 3 Installer
License Agreement SOFTWARE LICENSE AGREEMENT IMPORTANT READ CAREFULLY: By installing this software, you agree to be legally bound by the terms of this Software License Agreement. If you do not agree to the terms of this Agreement, promptly close the installation program. SOFTWARE LICENSE 1. GRANT OF LICENSE 1.1 The software contained in the packet(s) (The Software) is hereby licensed to you nonexclusively pursuant to the terms and conditions of this Agreement. 2. INTELLECTUAL PROPERTY RIGHT 2.1 The Software is protected by copyright and other intellectual property	Client Manager 3 will be installed and saved to the following folder:         Browse       C:\Program Files\BUFFALO\Client Manager3         Browse       Back
2.1. The Software is protected by copyright and other intellectual property laws and international treaty provisions. 2.2 The Software is licensed, not sold, and all intellectual property rights in the Software belong to the original licensor(s) of the Software.	
Agree Disagree	

- Once the Client Manager Installer launches, click Next.
- Press *Agree* to accept the license agreement and continue installation.





• Click *OK* when Client Manager installation is complete.

• Press Exit Setup to exit AirNavigator.

• Client Manager is now installed and running. Right-click on its icon (the black antenna) to use it.



# Using AOSS

n	Current connection status	- (
	Content connection status.	н
FOOCA		_
SSID:FOOCA	Conne	rtart 6
		1
Adapter Name	WLFCB-054HP	
Network Type	Infrastructure Mode	
Transmission Speed	64.0Mbps	
Channel	Channel 1	
Security	WDM4	
IP Address	192.168.8.161	
MAC Address	00.00.09.97.60.10	
Duration	00:00:12	

AOSS (AirStation One-Touch Secure System) is a simple, one-touch setup for connecting wireless clients to an access point while enforcing the most secure possible connection encryption type. Users no longer need to worry about choosing the proper security protocols, IP addresses, or SSID. AOSS determines the optimal connection and configures itself in seconds. If your router doesn't support AOSS, turn to page 6 to configure your connection manually with Client Manager or Wireless Zero Config.

The AOSS button for this wireless client is in its Client Manager software. Start Client Manager by right clicking on the black antenna icon in your System Tray, or by launching the Client Manager from your Start Menu: Programs >> Buffalo >>AirStation Utility >> Client Manager.

## **Using AOSS**



- From the Status Screen, select the *Profiles* tab.
- Click the blue AOSS button on the Client Manager's screen. The AOSS wizard will appear.
- Now, press the AOSS button on the Access Point. Hold it down until the AOSS LED begins to flash.

# Using AOSS

AirStation One Touch Secure System	AirStation One Touch Secure System	AirStation One Touch Secure System
	D > 🔂 > 🔂	( ) AirStation One-Touch Secure System
Progress	Progress	Progress
Please initialize AOSS on the Access Point	Please wait while setup information is being renewed.	Connection with the Access Point has been completed.
Searching for an AOSS-mode Access Point	Renewing Setup	54.0 MbpsTransmitting encryption type.AES
Cancel	Cancel	Cancel

Once AOSS is complete (about 30 seconds), the connection is archived as a profile for later use. To minimize Client Manager to the system tray, click the 'X' in the top right corner.

#### Notes:

AOSS will scan for an AOSS partner for about two minutes. If it times out before finding one, just press the AOSS buttons again.

Output power is reduced to 25% of normal during AOSS for security reasons. If you're having trouble making an AOSS connection, temporarily move the devices closer together.

AOSS will automatically use the highest level of security available for all currently connected wireless devices.

If you have trouble connecting with AOSS, temporarily disable all personal firewalls on your PC, such as ZoneAlarm or Microsoft Personal Firewall. These programs may be reenabled after AOSS has finished. You may use Client Manager to configure your wireless network. Client Manager consists of the Status page, the Survey page, and the Profiles page. You can access each page by clicking the corresponding button on Client Manager. In addition to these pages, several dialog boxes are also available. You can access the Edit Profile dialog box, New Profile dialog box, IP Configuration dialog box, or WEP Configuration dialog box using the Client Manager pages. You may also initiate AOSS.

## Status Page

rSi	tation	Current connection status.	He
			1
	FOOCA		
	\$\$ID:FOOCA	Connec	ted 🔗
	Adapter Name	WLI-CB-G54HP	
	Network Type	Infrastructure Mode	
	Transmission Speed	54.0Mbps	
	Channel	Channel 1	
	Security	WEP64	
	IP Address	192.168.8.151	
	MAC Address	00.0D.0B.97.60.1C	
	Duration	00:00:12	
	Y → Signal Strength		

Click *Status* to open this page. By default, this page is displayed when you start Client Manager. Details of connection status are displayed.

This page only displays connection information; no changes to settings are made here.

This page includes the following components:

• Adapter Name – Displays the part number of the wireless adaptor that is being used.

# **Client Manager Configuration**

- **Network Type** Displays whether network is in Ad-Hoc or Infrastructure mode.
- **Rate** The speed of communication between wireless devices. If the Client Manager is not connected to a remote wireless device (access point or another client), no rate will be displayed.
- **Channel –** The channel that the two wireless clients are using for communication. If the Client Manager is not connected to a remote wireless device, no channel will be displayed. Channels 1-11 may be used.
- **Security –** The type of encryption in use. If the Client Manager is not connected to a remote wireless device, then 'No Encryption' will be displayed.
- **IP Address –** The IP address of the machine the Client Manager is installed on. If the Client Manager is not connected to a network with DHCP, then no IP address will be displayed.
- **MAC Address –** The MAC address of the wireless client device inside the computer Client Manager is installed on. If no wireless device is present in the computer, then no MAC Address will be displayed.
- **Signal Strength –** Displays the signal strength of the peak signal level the wireless adapter receives from the wireless device to which it is connected. Next to the signal level is the wireless hardware being used for this measurement.

# **Client Manager Configuration**

Click the *Scan* tab to open this page. Here, you can survey the area, display available access points, and connect to available access points.

This page includes the following components:

SSID Vikrelese mode Channel Strength Encryption Ignite: 11911b 1 d B FOOCA 11911b 1 d B BT 11911b 5 d B	Ir Station Ient Manager Dis	Q Scan	E P		0
FOOCA 11g/11b 1 📶 🔒	SSID	Wireless mode	Channel	Strength	
FOOCA 11g11b 1 📶 🔒	Ignited	11g/11b	1	d	
BT 11911b 6 🚮 🎍				d .	
	DT	11g/11b	5	d b	

- Wireless SSID The SSID is the "name" of a wireless network. Each wireless device on a network must use identical SSIDs to successfully communicate.
- Wireless Mode Displays available modes for each available remote wireless device.
- **Strength** Displays the relative signal strength of the wireless networks.
- **Encryption** Displays whether the wireless network is using any sort of encryption.
- Click *Connect* to connect to a highlighted SSID, or *Refresh* to update the list of available wireless devices.

This dialog will open for you to enter any necessary encryption information.

Connect	
Connect	Help 🕜
	FOOCA
Encryption Method	WEP ASCII 5-char
Encryption Key	
① 1	
C 2	
C >	
O 4	
	Register Profile
	Connect Cancel

The correct encryption type should already be selected automatically in the *Encryption Method* drop down list. Only change this setting if necessary.

The *Encryption Key* is where the actual key for the wireless network should be entered. Some wireless networks allow you to enter multiple keys; four separate fields are available for this. If your network only uses one encryption key, then please use the first field (#1) to enter your key.

The *Register Profile* option will store this wireless network in your profiles. You will then automatically connect to this network when inside its range. This is recommended if you plan on using this wireless network again.

Press the Connect button once you have completed entering encryption information.

# **Client Manager Configuration**

## **Profiles Page**

	1 <i>0</i>	Status	Q Scan	E	Profiles	-
rStation		Creat	e profile and display p	riority level.		() Help
			Profile Name			
	DCA Ifalo-High	Power				
3						
	_	NDA 🖻	Edit		((III))	
	ect	1 1 1 1 1				

Click the *Profiles* tab to open this page. Use this page to access your profiles. Profiles allow you to save the information associated with a specific wireless network so you can quickly and easily connect to that network when you are in that location. The Profiles page allows you to add, delete, and edit your profiles, as well as import and export data.

- **Connect** Click the *Connect* button to connect to the selected profile and return to the Status page.
- **Edit** Click the *Edit* button to edit the selected profile's settings. The Edit button also allows you to delete profiles that are no longer used or required.
- **Add** Click the *Add* button to add a profile manually. You will need important information such as SSID, encryption settings, and network type.

# **Client Manager Configuration**

## New Profile Dialog Box

Basic	Network	Browser	Printers	nets 🚱
Display		e Weiser	C West	
Profile Na		Buffalo-HighPor		_
Network 1	lype	Infrastructure M		
SSID		Buffalo-HighPor	Her .	
Channel		Auto-Channel		-
Bioryptio	n Method	WEP ASCII 5-of	ar .	
Transmiss	tion Key	1		-
Encryptio	n Kiny	****		_
E Set A	P to exclusive conne	ction.		
			_	_

- **Select Profile** Select whether the profile is for a wireless or wired connection.
- **Profile Name** Enter the name you want to associate with the new profile.
- **Network Type** Select the network mode you want to associate with the new profile. Select *Infrastructure* if your network consists of both wired and wireless devices that communicate through a central device, such as an access point. Select *Ad-hoc* if your network consists of only wireless devices that communicate with each other directly.
- **Network Name SSID** Enter the *SSID* of your network. The SSID is the name of your wireless network. All wireless

devices on a network must use identical SSIDs to successfully associate with other devices on the network. MYSSID is an example of a valid SSID.

- **Channel** The channel setting is only used for Ad-hoc connections. When using an Ad-hoc connection, select a channel and make sure the other Ad-hoc devices are configured to use the same channel. Otherwise, use *Auto-Channel*.
- **Encryption Method** Displays the types of encryption available. Once encryption is selected, you will be required to enter an Encryption Key. For the Transmission Key Number, 1 is recommended.
- **OK** Click *OK* to save your specifications and return to the Profiles page.

## **Advanced Profile Options**

- **Network Tab** Displays the network information tab. A static IP can be specified for this wireless profile here. It is not recommended to change any of these settings unless specified by an administrator.
- **Browser Tab** Displays settings to change your browser preferences for this wireless profile. A specific home page can be specified when connected to this wireless profile as can specific proxy server addresses.
- **Printers Tab** Displays the printers tab. A specific default printer can be associated to this profile. Thus, when connected to this profile, a specific printer will be used as the default printer.
- **OK** Click the *OK* button to save your specifications and return to the Profiles page.



• **AOSS Icon** – To automatically add the USB wireless client to your network, just click this icon and then hold down the AOSS button on your wireless router for a few seconds.

Check your package for an AOSS Manual, which will give more information on using AOSS.

# Zero Configuration Service



vailab	vle wireless networks:
1 FC	DOCAGROUP
!	This wireless network is not secure. Because a network key (WEP) is not used for authentication or for data encruption, data sent over this network might be subject
	unauthorized access.
2	Allow me to connect to the selected wireless network even though it is not secure

Windows XP includes the Zero Configuration Service, a built in service to configure your wireless clients from within Windows. Turn to page 7 if you would rather use Buffalo's Client Manager to configure your wireless client.

- If the Wireless Zero Configuration Service is activated, Windows will scan for available wireless access points once the Wireless USB Adapter is properly installed. If Windows detects one or more access points, a networking icon appears within the system tray. "One or more wireless networks are available" will appear as a caption accompanying the icon.
- To start Wireless Zero Configuration manually, click Start >> Control Panel >> Administrative Tools >> Services. Select Automatic in the Startup Type field of Wireless Zero Configuration Service.
- Right click the networking icon in the taskbar and select *View Available Wireless Networks*. Select an SSID and click *Connect*. You may need to check the box indicating you are connecting to an unsecured network. See page 21 if you need to enter an SSID network name or WEP/WPA encryption key.

# Zero Configuration Service

	and the second
Use Windows to configure my wireless network settings	Network name (SSID): NEWGROUP
Available petworks:	Wireless network key
To connect to an available network, click Configure.	This network requires a key for the following:
FOOCAGROUP     Configure	Network Authentication: Open
Refresh	Data encryption: Disabled
Preferred networks:	Network key.
Automatically connect to available networks in the order listed below:	Confirm network key:
FOOCAGROUP     Move up     Move down	Key inde <u>x</u> (advanced):
Add Remove Properties	The key is provided for me automatically
Learn about setting up wireless network	
configuration Advanced	This is a computer-to-computer (ad hoc) network; wireless access points are not used

• Click the *Advanced* tab to enter an SSID network name or WEP/WPA encryption key if necessary. To add an SSID network name that is not listed, click *Add*.

# Zero Configuration Service

*
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- To configure a WEP/WPA encryption key, select the wireless network and click *Configure*.
- From the pull down menu, select the Network Authentication and Data Encryption types for the wireless network. Enter and confirm the Network Key and Key Index. Click *OK* when finished.

## Wireless Zero Configuration Service (Windows XP)

Windows XP offers the Wireless Zero Configuration Service to support 802.11b and 802.11g wireless networking. This service automatically polls the area for available wireless access points. If an available wireless access point is found, Windows attempts to connect to the access point. If no available wireless access points are found, you must manually add the access point information to connect (for example when the SSID is not broadcasted).

Note: The Wireless Zero Configuration Service and Client Manager do not function properly together. If you want to use Client Manager, you must disable the Wireless Zero Configuration Service.

## Enabling the Wireless Zero Configuration Service

Click Start >> Control Panel >> Administrative Tools >> Services to open the Services configuration window. Select Automatic in the Startup Type field of Wireless Zero Configuration Service to enable the Wireless Zero Configuration Service and click apply. Note: The default Startup Type value of Wireless Zero Configuration Service is Automatic.

## **Disabling the Wireless Zero Configuration Service**

Click Start >> Control Panel >> Administrative Tools >> Services to open the Services configuration window. Select Disabled in the Startup Type field of Wireless Zero Configuration Service to disable the Wireless Zero Configuration Service.

## Antenna Information



The WLI-UC-G300N has three built-in antennas. External antennas cannot be attached to the WLI-UC-G300N.

## Wireless LAN Interface

Standards Compliance	Draft-N (802.11n Draft Specification 1.0) IEEE 802.11g IEEE 802.11b
Communication Protocol	Direct Sequence Spread Spectrum (DSSS)
	Orthogonal Frequency Division Multiplexing
Frequency Range	2.412 - 2.462 Ghz
Transmission Rate	Draft-N: Up to 300 Mbps (Auto)
	802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps (Auto)
	802.11b: 1, 2, 5.5, 11 Mbps (Auto)
Access Mode	Infrastructure Mode
Security	128/64 Bit WEP, WPA-PSK (TKIP & AES)
Other	
Interface	USB 2.0
Environmental Operation	32° - 113° Fahrenheit (0° - 45° Celsius)
	Relative Humidity 20 - 80 % (non-condensing)

# Troubleshooting / FAQ

#### What should I do if I already have a version of Client Manager on my PC?

Update your Client Manager to the version on the CD. If you do not update your Client Manager, there could be a loss of functionally, as some older versions of Client Manager will not work properly with the G300N Wireless Notebook Adapter. Before updating Client Manager, uninstall any previous versions of Client Manager. To update your Client Manager, load the Air Navigator CD and select *Install Client Manager*. Profiles can first be exported from the *Profiles* tab of Client Manager and then imported back into Client Manager after installation.

## Why won't Client Manager function properly?

The Wireless Zero Configuration Service in Windows XP conflicts with Client Manager. If you use Windows XP, make sure that the Wireless Zero Configuration Service is disabled.

Click *Start* >> *Control Panel* >> *Administrative Tools* >> *Services*. Select *Disabled* in the Startup Type field of Wireless Zero Configuration Service to enable the Wireless Zero Configuration Service. The default value of Wireless Zero Configuration Service is Automatic.

#### I have more than one Air Navigator CD. Do I need more than one CD?

No. The same Air Navigator CD works with all Buffalo Technology access points and wireless adapters. Please use the newest CD you have, with the highest revision number on it.



**10BaseT or 100BaseTX:** 802.3 based Ethernet network that uses UTP (Unshielded twisted pair) cable and a star topology. 10 is 10 Mbps and 100 is 100 Mbps.

**802.1x:** The standard for wireless LAN authentication used between an AP and a client. 802.1x with EAP will initiate key handling.

**Ad-Hoc Network:** The wireless network based on a peer-to-peer communications session. Also referred to as Adhoc.

**Bandwidth:** The transmission capacity of a computer or a communication channel, stated in Megabits per second (Mbps).

**BSS (Basic Service Set):** An 802.11 networking framework that includes an Access Point.

**Bus Mastering:** A system in which the specified Input/Output device (e.g. NIC Card) can perform tasks without the intervention of the CPU. Client: A PC or workstation on a network.

**Cross-Over Wiring:** A UTP cable that has its transmit and receive pair crossed to allow communications between two devices.

**DCE (Data Communications Equipment):** Hardware used for communication with a Data Terminal Equipment (DTE) device.

**Default Gateway:** The IP Address of either the nearest router or server for the LAN.

**Default Parameter:** Parameter set by the manufacturer.

**Destination Address:** The address portion of a packet that identifies the intended recipient station.

#### DHCP (Dynamic Host Configuration

**Protocol):** Based on BOOTP, it uses a pool of IP addresses, which it assigns to each device connected to it, and retrieves the address when the device becomes dormant for a period of time.



**DNS (Domain Name System):** System used to map readable machine names into IP addresses

**Driver:** Software that interfaces a computer with a specific hardware device.

#### DSSS (Direct Sequence Spread Spectrum):

Method of spreading a wireless signal into wide frequency bandwidth.

**DTE (Data Terminal Equipment):** Device that con10BaseT or 100BaseTx: 802.3 based Ethernet network that uses UTP (Unshield-ed twisted pair) cable and a star topology. 10 is 10 Mbps and 100 is 100 Mbps.

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## **DSSS (Direct Sequence Spread Spectrum):** Method of spreading a wireless signal into wide frequency bandwidth.

**DIE (Data Terminal Equipment):** Device that controls data flowing to and from a computer.

## Glossary

**Dynamic IP Address:** An IP address that is automatically assigned to a client station in a TCP/IP network, typically by a DHCP server.

**ESS (Extended Service Set):** A set of two or more BSSs that form a single sub-network. ESS-ID is user identification used in the ESS LAN configuration.

**Ethernet:** The most widely used architecture for Local Area Networks (LANs). It is a shared-media network architecture. The IEEE 802.3 standard details its functionality.

**Ethernet cable:** A wire similar to telephone cable that carries signals between Ethernet devices.

**File and Print Sharing:** A Microsoft application that allows computers on a network to share files and printers. **Firmware:** Programming inserted into programmable read-only memory, thus becoming a permanent part of a computing device.

**Frame:** A fixed block of data, transmitted as a single entity. Also referred to as packet.

**Full-Duplex:** To transmit on the same channel in both directions simultaneously.

**Gbps (Giga Bits per second):** One billion bits per second.

**Half-duplex:** To transmit on the same channel in both directions, one direction at a time.

**Hub:** A device which allows connection of computers and other devices to form a LAN.

**IEEE (Institute of Electrical and Electronics Engineers):** The professional organization which promotes development of electronics technology.



**IP (Internet Protocol) Address:** A unique 32-binary-digit number that identifies each sender or receiver of information sent in packets.

**Infrastructure:** A wireless network or other small network in which the wireless network devices are made a part of the network through the Access Point.

**ISP (Internet Service Provider):** A company that provides access to the Internet and other related services.

**IV (Initialization Vector):** The header section of a message packet.

**LAN (Local Area Network):** A group of computers and peripheral devices connected to share resources.

**LED (Light Emitting Diode):** The lights on a hardware device representing the activity through the ports.

**MAC (Medium Access Control) Address:** A unique number that distinguishes network cards.

**Mbps (Mega Bits Per Second):** A measurement of millions of bits per second.

**MDI/X (Media Dependent Interface/Crossover):** Port on a network hub or switch that crosses the incoming transmit lines with the outgoing receive lines.

**MHz (MegaHertz):** One million cycles per second.

**MIB II:** A database containing performance information and statistics on each device in a network.

**MIPS (Million Instructions Per Second):** A measurement of processing speed.

**NAT (Network Address Translation):** An internet standard that enables a LAN to use one set of IP addresses for internal traffic and a second set for external traffic.



#### NIC (Network Interface Card): An

expansion card connected to a computer so the computer can be connected to a network.

**Packet:** A block of data that is transferred as a single unit, also called a frame or a block.

**Packet Filtering:** Discarding unwanted network traffic based on its originating address or its type.

## PCI (Peripheral Component Interconnect):

A bus that is connected directly to the CPU.

# **PCMCIA (Personal Computer Memory Card International Association) Card:** Removable module that adds features to a portable computer.

**Ping (Packet Internet Groper):** An Internet utility used to determine whether a particular IP address is online.

**Plug and Play:** Hardware that, once installed ("plugged in"), can immediately be used ("played"), as opposed to hardware that requires manual configuration.

**PoE (Power over Ethernet):** A mechanism to send DC power to a device using a CAT5 Ethernet cable.

#### PPPoE (Point-to-Point Protocol over

**Ethernet):** A specification for connecting users on an Ethernet line to the Internet through a common broadband medium.

**Protocol:** A standard way of exchanging information between computers.

#### **RADIUS (Remote Authentication Dial In User Service):** A server that issues authentication key to clients.

**RAM (Random Access Memory):** Nonpermanent memory.



**Repeater Hub:** A device that collects, strengthens and transmits information to all connected devices, allowing the network to be extended to accommodate additional workstations.

**RC4**: The encryption algorithm that is used in WEP.

**RJ-45 connector:** An 8-pin connector used between a twisted pair cable and a data transmission device.

**ROM (Read Only Memory):** Permanent memory.

**Router:** Device that can connect individual LANs and remote sites to a server.

**Roaming:** The ability to use a wireless device while moving from one access point to another without losing the connection.

**Script:** A macro or batch file containing instructions and used by a computer to perform a task.

**Server:** Any computer that makes files or peripheral devices available to users of the network and has a resident Network OS.

#### SMTP (Simple Mail Transfer Protocol):

The protocol used to define and deliver electronic mail (E-mail) from one location to another.

#### SNMP (Simple Network Management

**Protocol:** An application layer protocol that outlines the formal structure for communication among network devices.

**Static IP Address:** A permanent IP address is assigned to a node in a TCP/IP network. Also known as global IP.

**STP (Shielded Twisted Pair):** Twisted Pair cable wrapped in a metal sheath to provide extra protection from external interfering signals.

**Subnet Mask:** An eight-byte address divided into 4 parts separated by periods.



**TCP/IP (Transmission Control Protocol/ Internet Protocol:** Protocol used by computers when communicating across the Internet or Intranet.

**TFTP (Trivial File Transfer Protocol):** Simple form of FTP (File Transfer Protocol), which Uses UDP (User Datagram Protocol), rather than TCP/IP for data transport and provides no security features.

#### **TKIP (Temporal Key Integrity Protocol):**

An encryption method replacing WEP. TKIP uses random IV and frequent key exchanges.

**Topology:** The shape of a LAN (Local Area Network) or other communications system.

**Twisted Pair:** Cable that comprises 2 or more pair of insulated wires twisted together.

**UDP (User Datagram Protocol):** A communication method (protocol) that offers a limited amount of service when messages are exchanged between computers in a network. UDP is used as an alternative to TCP/IP.

**Uplink:** Link to the next level up in a communication hierarchy.

**UTP (Unshielded Twisted Pair) cable:** Two or more unshielded wires twisted together to form a cable.

**WAN (Wide Area Network):** A networking system covering a wide geographical area.

**WEP (Wired Equivalent Privacy):** An encryption method based on 64 or 128-bit algorithm.

**Web Browser:** A software program that allows viewing of web pages.

**Wi-Fi (Wireless Fidelity):** An organization that tests and assures interoperability among WLAN devices.



**Wire Speed:** The maximum speed at which a given packet can be transferred using Ethernet and Fast Ethernet standard specifications.

**WLAN (Wireless LAN):** A LAN topology using wireless devices.

**VPN (Virtual Private Network):** A security method to connect remote LAN users to a corporate LAN system.

## Federal Communication Commission Interference Statement

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 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 the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this 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.

#### **IMPORTANT NOTE:**

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instruction as documented in this manual. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

SAR compliance has been established in typical laptop computer(s) with USB slot, and product could be used in typical laptop computer with USB slot. Other application like handheld PC or similar device has not been verified and may not compliance with related RF exposure rule and such use shall be prohibited.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended deestination. The firmware setting is not accessible by the end user.

## FCC / CE / R&TTE

#### Europe – EU Declaration of Conformity:

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

• EN 60950-1: 2001 A11: 2004

Safety of Information Technology Equipment

• EN50392 : (2004-01)

- Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz - 300 GHz)

• EN 300 328 V1.7.1 (2006)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

• EN 301 489-1 V1.6.1: (2005-09)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

• EN 301 489-17 V1.2.1 (2002-08)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

# **C € 0560** ①

Cesky [Czech]	[ <i>Jméno výrobce</i> ] tímto prohlašuje, že tento [ <i>typ zařízení</i> ] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
daDansk [Danish]	Undertegnede <i>[fabrikantens navn]</i> erklærer herved, at følgende udstyr [udstyrets typebetegnelse] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
delDeutsch [German]	Hiermit erklärt <i>[Name des Herstellers]</i> , dass sich das Gerät <i>[Gerätetyp]</i> in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
∎tEesti [Estonian]	Käesolevaga kinnitab <i>[tootja nimi = name of manufacturer]</i> seadme <i>[seadme tüüp = type of equipment]</i> vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjako- hastele sätetele.
English	Hereby, <i>[name of manufacturer]</i> , declares that this <i>[type of equipment]</i> is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente <i>[nombre del fabricante]</i> declara que el <i>[clase de equipo]</i> cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

# FCC / CE / R&TTE

<b>α.</b> [Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [name of manufacturer] ΔΗΛΩΝΕΙ ΟΤΙ [type of equipment] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
<sup>i</sup> r Français [French]	Par la présente [nom du fabricant] déclare que l'appareil [type d'appareil] est conforme aux exigences essentielles et aux autres dis- positions pertinentes de la directive 1999/5/CE.
it Italiano [Italian]	Con la presente <i>[nome del costruttore]</i> dichiara che questo <i>[tipo di ap-parecchio]</i> è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [name of manufacturer / izgatavotāja nosaukums] deklarē, ka [type of equipment / iekārtas tips] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
It Lietuvių [Lithuanian]	Šiuo <i>[manufacturer name]</i> deklaruoja, kad šis <i>[equipment type]</i> atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl.Nederlands [Dutch]	Hierbij verklaart [naam van de fabrikant] dat het toestel [type van toestel] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
nt Malti [Maltese]	Hawnhekk, <i>[isem tal-manifattur]</i> , jiddikjara li dan <i>[il-mudel tal-prodott]</i> jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rel- evanti li hemm fid-Dirrettiva 1999/5/EC.

# FCC / CE / R&TTE

Magyar [Hungarian]	Alulírott, <i>[gyártó neve]</i> nyilatkozom, hogy a <i>[ típus]</i> megfelel a vonat- kozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym <i>[nazwa producenta]</i> oświadcza, że <i>[nazwa wyrobu]</i> jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi post- anowieniami Dyrektywy 1999/5/EC.
₽tPortuguês [Portuguese]	<i>[Nome do fabricante]</i> declara que este <i>[tipo de equipamento]</i> está con- forme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	<i>[Ime proizvajalca]</i> izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
sk [Slovak]	<i>[Meno výrobcu]</i> týmto vyhlasuje, že <i>[typ zariadenia]</i> spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
ti Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar <i>[företag]</i> att denna <i>[utrustningstyp]</i> står I överens- stämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

# Warranty Information

Buffalo wireless products come with a 2-year limited warranty from the date of purchase. Buffalo Technology warrants products in good operating condition for the warranty period. This warranty does not include non-Buffalo Technology installed components. If the Buffalo product malfunctions during the warranty period, Buffalo Technology will, at its discretion, repair or replace the product at no charge, provided the product has not been subjected to misuse, abuse or non-Buffalo Technology authorized alterations, modifications, or repairs. When returning a product, include your original proof of purchase. Return requests cannot be processed without proof of purchase. Shipment of returned product to Buffalo Technology is the responsibility of the purchaser. All expressed and implied warranties for the Buffalo product line including, but not limited to, the warranties of merchantability and fitness for a particular purpose, are limited in duration to the above period.

Under no circumstances shall Buffalo Technology be liable in any way to the user for damages, including any lost profits, lost savings or other incidental or consequential damages arising out of the use of, or inability to use, the Buffalo products.

Buffalo Technology reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.

Please have your proof of purchase receipt to get warranty support. All defective products shall be returned with a copy of proof of purchase.

In no event shall Buffalo Technology's liability exceed the price paid for the product from direct, indirect, special, incidental, or consequential damages resulting from the use of the product, its accompanying software, or its documentation. Buffalo Technology does not offer refunds for any product.

## North America (USA / Canada)

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## **TECHNICAL SUPPORT**

North American Technical Support by phone is available 24 hours a day, 7 days a week. (USA and Canada). **Toll-free:** (866) 752-6210 **Email:** *info@buffalotech.com* 

## Europe

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## **GENERAL INQUIRIES**

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## **TECHNICAL SUPPORT**

Phone (UK only): 08712 50 12 60\* Phone: +353 61 70 80 50 Email: *helpdesk@buffalo-technology.ie* \*Calls cost 8.5p per minute

Technical Support Operating Hours Monday - Friday (GMT) 9:00 AM - 6:00 PM Monday-Thursday 9:00 AM - 4:30 PM Friday

# **Contact Information**

At Buffalo Technology, we constantly update our software and firmware. For the most recent software, firmware, driver, and technical whitepaper releases available, please visit the Buffalo Technology website: **www.buffalotech.com**.