BUFFALO





Wireless CardBus Client

Run		?	×
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for yo		
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.



• Select Install Wireless Drivers.

Duffalo wireless LAN driver installer	Duffalo wireless LAN driver installer	Buffalo wireless LAN driver installer
The installer is exclusively for our viewless adapter You durt need to install Buildid's viewless LAN adapter drives if the following condition is matched. Clack [Cannel] to stop installation. Use other vender's adapter Use weed LAN adapter.	Please and the lobwing learner agreement. Although the includence of the contains a divert that has not been certified SOFTWARE LICENSE AGREEMENT IMMORTINAT — READ CREFTURE by Junited this software, you agree to be leagily bound by the times of this Coltware License Agreement. Ploy do in dayne to the learner of the Agreement, pospily-close the installation program. SOFTWARE LICENSE	Please attach the product : Once the product is attached please weit 14 using an adapter other than a buffalo wineters LAN adapter. please cloit the cancel buffan.
To continue click next	Do you agree with the terms and conditions of the License Agreement? Check the appropriate response. C Agree C Disagree	
< Dack Next > Cancel	(Back Next) Cancel	Cancel

- Click *Next* to install a driver for the CardBus.
- Select *Agree* and click *Next* to continue the process after reviewing the license agreemennt.
- A window will appear prompting the insertion of the Wireless CardBus Adapter. Firmly insert the AirStation Card into a CardBus slot on your notebook.



- 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 CardBus Adapter is successfully installed, click *Finish*. Restart your computer if prompted.



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 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 Air Navigator Setup Wizard does not launch automatically, launch it manually by clicking *Start* and then *Run*. Enter *D*:\ *Setup.exe* in the dialog box that appears.

Click OK. Select Install Wireless 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 Software License Agreement. SOFTWARE LICENSE 1. GRANT OF LICENSE 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 incensed, not sold, and all intellectual property rights in the Software belong to the original	Client Manager 3 will be installed and saved to the following folder: Browse C:\Program Files\BUFFALO\Client Manager3 Browse Back
Ilicensor(s) of the Software.	

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

BUFFALO Client Manager 3 Installer X Client Manager 3 installation complete. OK Buffalo AirNavigator BUFFALO Air Station Welcome to the AirNavigator CD-ROM, Please select from an option below. Installs the PC drivers for your Install Wireless Buffalo wireless client device(s). Drivers Installs Client Manager to survey for Install Wireless available wireless routers and access **Client Manager** points. View the User Manuals of your View User Manuals product(s) for detailed configuration and setup information. Vour products may vary from the one pictured. Remove any Buffalo wireless device Remove Wireless Drivers drivers that are installed on your PC. Exit Setup

• 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.



AM Status	Q Scan E Profiles	0
1011	Current connection status.	Halp
FOOCA		
SSID:FOOCA	Con	nected 🎸
Adapter Name	WLI-CB-054HP	
Network Type	Infrastructure Mode	
Transmission Speed	64.0Mbps	
Channel	Channel 1	
Security	WDM4	
IP Address	192.168.8.161	
MAC Address	00.00.08.97.60.1C	
Duration	00.00.12	
\mathbb{T}^{m} Signal Strength		

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.





- From the Status Screen, select the *Profiles* tab.
- Initiate AOSS by clicking 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.

AirStation One Touch Secure System	AirStation One Touch Secure System	AirStation One Touch Secure System
		Air Station 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, temorarily disable all personal firewalls on your PC, such as ZoneAlarm or Microsoft Personal Firewall. These programs may be re-enabled 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

St	ation	Current connection status.	~ @
		Garrent connection status.	He
	FOOCA		
	SSID:FOOCA	Conne	cted 🎸
	Adapter Name	WLI-CB-G54HP	
	Network Type	Infrastructure Mode	
	Transmission Speed Channel	54.0Mbps Channel 1	
	Security	WEP64	
	IP Address	0/EP04 192.168.8.151	
	MAC Address	00.00.08.97.60.10	
	Duration	00:00:12	
	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.

- **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.

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:

britation 550 Ukreiers mode Channel Strength (corrently scalable access points 550 Wkreiers mode Channel Strength (corrystion Nonet Tigstb) 4 d FOOCA Tigstb) 4 d BT 11991b 5 d	<u>^^</u>	Status	Q Scan	E P	rofiles	0
Ignite: 11g/11b 1 d FOOCA 11g/11b 1 d	lieve blarcager	Displa	y currently available acces	is points.		Halp
FOOCA 11g11b 1 📶 🧯	\$\$	0	Wireless mode	Channel	Strength	Encryption
	Ignite:		11g/11b	1	d	
BT 1169110 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	Help 🝞
Encryption Method	FOOCA
Encryption Key	
C 2 C 3	
C 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.

Profiles Page

BUFFALO				×
A.	Status	Q Scan	Profiles	-
AirStation	Create	e profile and display prior	rity level.	Help
		Profile Name		
POOCA	Power			
Connect	Add	Edit		

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.

New Profile Dialog Box

Basic	Network	Browser	Printers	neip 🚱
Display		e Weiser	C West	
Profile Na		Buffalo-HighPor		_
Network 1	lype	Infrastructure M		
SSID		Buffalo-HighPor	Her .	
Channel		Auto-Channel		w.
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.



-	le wireless <u>n</u> etworks		
1	This wireless netw	ork is not secure. Bea	cause a netwo
\mathbf{V}	key (WEP) is not u	used for authentication ent over this network	n or for data
	unauthorized acce		niigrit be sobje
V		ect to the selected win	eless network,
	even though it is n	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 CardBus 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.

Use Windows to configure my wireless netwo	ork settings	Network name (SSID):	NEWGROUP	
vailable getworks:		- Wireless network key		
o connect to an available network, click Con		This network requires a key	for the following:	
P FOOCAGROUP		Network Authentication:	Open	-
	Refresh	Data encryption:	Disabled	*
referred networks: wtomatically connect to available networks in	the order lated	Network Key:		
elow:		Confirm network key:		
<pre> FOOCAGROUP </pre>	Move gp Move gown	Key inde <u>y</u> (advanced).		
Add <u>R</u> emove Propertie	:	The key is provided for	me automatically	
earn about setting up wireless network		This is a computer lo-com	puter (ad hoc) network; v	aireless

• 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*.

reless network properties	•
Association Authentication	
Network name (SSID):	FOOCAGROUP
Wireless network key	
This network requires a key	for the following:
Network Authentication:	WPA-PSK 💌
Data encryption:	TKIP
Network key:	•••••
Confirm network key:	••••••
Key inde <u>s</u> (advanced)	
The key is provided for	me automatically
This is a computer-to-com access points are not use	puter (ad hoc) network; wireless
	OK Canc

- 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.



The WLI2-CB-G300N has three internal diversity antennas. External antennas cannot be attached to the WLI2-CB-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)
(OFDM)	Orthogonal Frequency Division Multiplexing
Frequency Range	2.412 - 2.462 Mhz
Transmission Rate	Draft-N: Up to 270 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	CardBus
Environmental Operation	0 - 130° Fahrenheit 0 - 55° Celsius

Relative Humidity 20 - 80 % (non-condensing)

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 Navagator 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 (Unshielded twisted pair) cable and a star topology. 10 is 10 Mbps and 100 is 100 Mbps.

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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.

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

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/Cross-

over): 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 cardbus slot, and product could be used in typical laptop computer with cardbus 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

FCC / CE / R&TTE

• EN50392 : (2004)

- 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 (2006-10)

- 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

• EN50361: (2001-07)

- Basic standard for the measurement of specific absorption rate related to human exposure to electromagnetic fields from mobile phones (300 MHz-3 GHz).

• 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.

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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

αll 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.
ⁱ 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.

- The equipment that you have purchased has required the extraction and use of natural resources for its production.
- The equipment may contain hazardous substances that could impact health and the environment.
- In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems.
- The take-back systems will reuse or recycle most of the materials of your end life equipment in a sound way.
- The crossed-out wheeled bin symbol invites you to use those systems.



• If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration.

Buffalo 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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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*

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TECHNICAL SUPPORT

European Technical Support is available between the hours of 9am-6pm (GMT) Monday to Thursday and 9am-4:30pm (GMT) Friday for this product. Customers in Europe can obtain Technical Support using the following information:

- Telephone UK only: 08712 50 12 60 Elsewhere: +353 61 708 050
- Email: helpdesk@buffalo-technology.ie
- Web www.buffalo-technology.com
- **Online Help** Available on the enclosed AirNavigator CD.

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**.