

AirStation WLI-U2-AG108HP

High Power Dual A+G Wireless USB 2.0 Adapter



Introduction

Congratulations on your purchase! The AirStation WLI-U2-AG108HP High-Power Dual A+G Wireless USB 2.0 Adapter connects to 2.4ghz 802.11g networks, 2.4ghz 802.11b networks, and 5ghz 802.11a networks.

System Requirements

- A compatible A, B, or G band access point.
- A PC running Windows XP, 2000, ME, or 98se.

AirStation WHR-HP-AG108 Package Contents

- WLI-U2-AG108HP USB Adapter
- Stand
- 5 foot USB Cable
- Utility CD with Manual
- Quick Setup Guides
- Warranty Statement



Antenna



The WLI-U2-AG108 includes a directional antenna. For best performance, point the antenna so that the word "BUFFALO" on the front faces your access point.

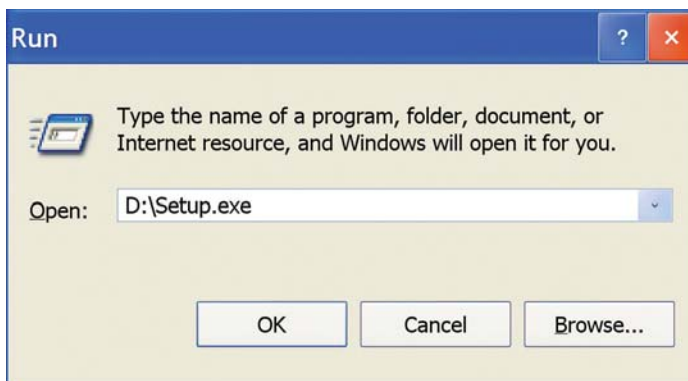
The WLI-U2-AG108 may also be removed from its stand and clipped to the top of your notebook computer. Lift the tabs gently to open the clamp, and slip the unit onto the edge of your computer screen.



Getting Started

1. Installing Drivers:

Insert the AirNavigator CD into the CD-ROM drive of the PC.



If setup.exe does not launch automatically, click *Start* and select *Run*. Enter *D:\Setup.exe* in the Open field, where D: is the letter assigned to your CD-ROM. Click the *OK* button to launch the wizard.

AirNavigator



Select *Install Wireless Adapter*. Click *OK*.

The Software License Agreement will appear. Click *Yes* to continue installation, or *No* to abort the installation process.

Installing Drivers

2. Installing the Wireless USB Adapter with Windows XP:



Power on the notebook PC and let it boot into Windows XP. Plug the Wireless USB Adapter or stand into an available USB port on your PC. The Found New Hardware Wizard will launch automatically.

If this screen doesn't appear, remove the Wireless USB Adapter and restart the notebook. Reinsert the Wireless USB Adapter once the notebook has rebooted.

Select *Install the software automatically*. Click the *Next* button.

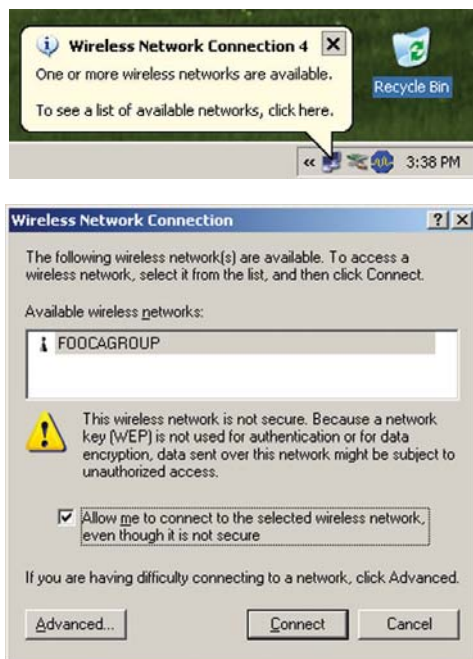
Installing Drivers



A list of drivers will appear. Choose *WLI-U2-AG108HP* from the list and click *Next*.

If Windows warns you that this driver does not pass Windows Logo testing, click *Continue Anyway*. When installation is finished, click *Finish*. Restart your PC if prompted.

Wireless Zero Configuration



3. Using Wireless Zero Configuration:

Normally, Windows XP will scan for available wireless access points once the Wireless Notebook Adapter is installed. If Windows detects an access point, a networking icon appears on the task bar. One or more wireless networks are available appears as a caption accompanying the icon.

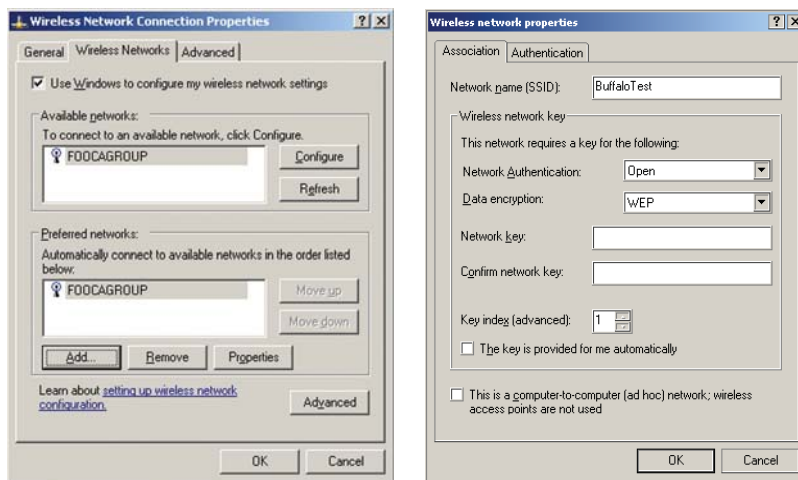
Notes: If Wireless Zero Configuration is not running, click Start>Control Panel>Administrative Tools>Services. Select *Automatic* in the Startup Type field of the Wireless Zero Configuration Service to start it.

If you don't want to use Wireless Zero Config and would rather use Buffalo's client utility, or if you have a Windows 98 or 2000 computer, turn to page 12.

Right click the networking icon in the taskbar and select *View Available Wireless Networks* to display a list of available wireless networks. Select a network and click *Connect*.

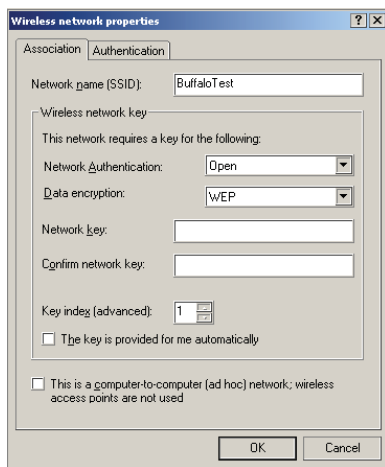
If the network that you are connecting to is unsecured, you may need to check the box allowing you to connect to an unsecured network.

Connecting



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

Connecting



To enter an encryption key, select the appropriate wireless network and click the *Configure* button.

From the pull down menu, select the appropriate type of Data encryption for the wireless network. Enter and confirm the Network Key (encryption key). Click the *OK* button when finished.

Installation with Windows 98/ME/2000

Windows 98/ME/2000

1. Installing the Wireless USB Adapter:



Power on the notebook PC and let it boot into Windows. Plug the Wireless USB Adapter into an available USB port on your PC. The Found New Hardware Wizard will launch automatically.

If this screen doesn't appear, remove the Wireless USB Adapter and restart the notebook. Reinsert the Wireless USB Adapter once the notebook has rebooted.

Select *Install the software automatically*. Click the *Next* button.

2. Installing the Wireless USB Adapter Drivers:

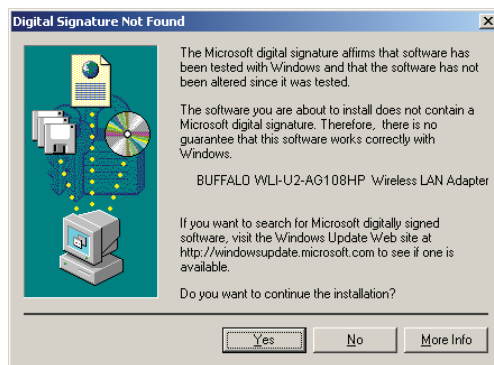


Insert the AirNavigator CD. Click *Next* at the Welcome to the Found New Hardware Wizard. Select *Search for a suitable driver for my device*. Click *Next* to continue.

Check only the CD-ROM drives checkbox, and clear any other checkboxes that are selected. Click *Next* to continue.

Installation / Setup

Windows will display a driver you can use with the Wireless USB Adapter.
Click *Next*.

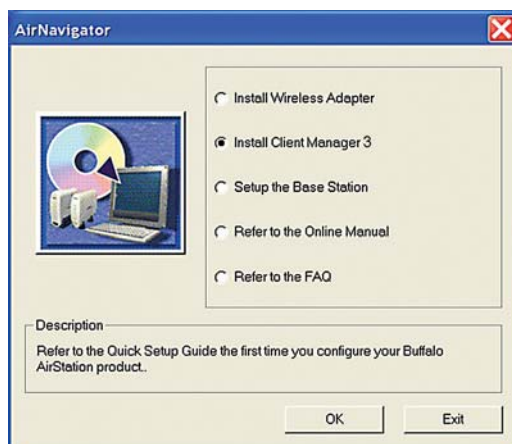


In Windows 2000, if the *Digital Signature Not Found* page opens as shown, click *Yes* to continue the installation process. When the Wireless USB Adapter is successfully installed, click *Finish*. Restart your computer if prompted. See the next page to install the Client Manager.

Client Manager

Use Client Manager to configure your wireless network, survey and connect to available access points, enable and use WEP encryption, and create connection profiles.

Note: Client Manager does not function properly if the Windows XP Wireless Zero Configuration Service is enabled.

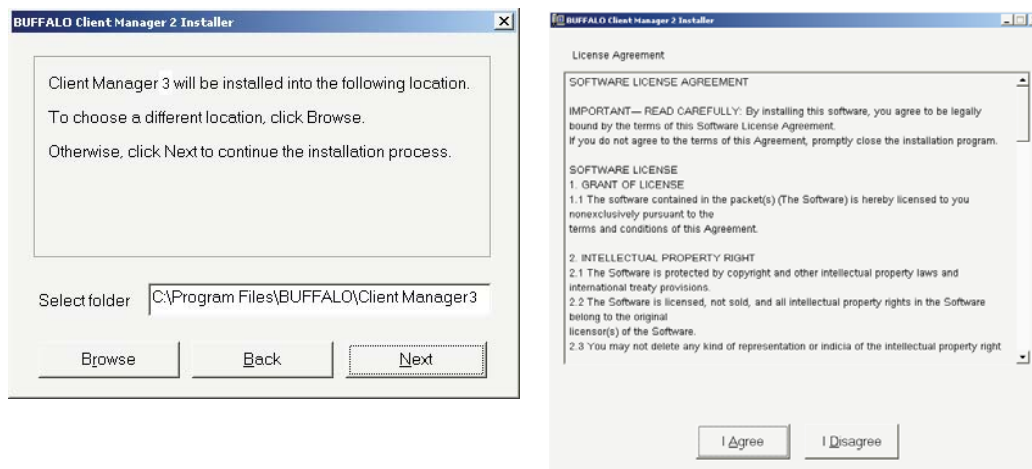


Installing Client Manager

Insert the AirNavigator CD. The AirNavigator dialog box will open automatically. If the AirNavigator dialog box does not open automatically, select Start>Run and enter D:\Setup.exe in the Open field to open the dialog box manually. D: represents the letter assigned to the CD-ROM drive. If another letter is assigned to the CD-ROM drive, your command should reflect that difference. Click the *OK* button. Select *Install Client Manager* to launch the InstallShield Wizard.

Once the InstallShield Wizard launches, click the *Next* button to begin the software installation.

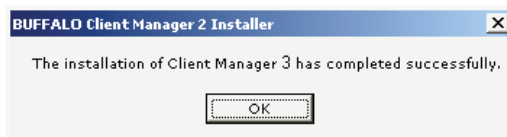
Client Manager



Once the Installer Wizard launches, click the *Next* button to begin the software installation.

Press *I Agree* to accept the license agreement and continue the installation process.

Client Manager

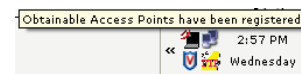


Press the *OK* button to finish and close the installation program.



Press the *Exit* button to exit the AirNavigator installation utility.

The Buffalo Client Manager is now installed and running; right clicking on its icon (the black notebook icon) will allow you to begin using it.



Client Manager Configuration

Use Client Manager to configure your wireless network. To assist in configuring 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 available to meet specialized configuration needs. 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.



Status Page

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 wireless hardware that is being used.

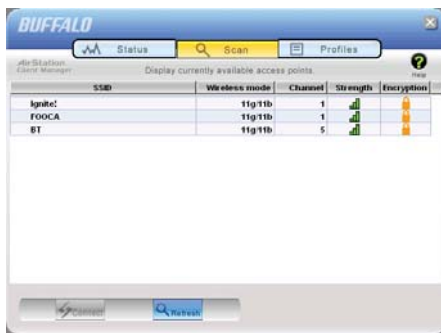
Client Manager Configuration

- **Network Type** – Displays what mode the network device is in. Ad-Hoc or Infrastructure are the available modes.
- **Rate** – The speed that the two wireless clients are communicating at. If the Client Manager is not connected to a remote wireless device (access point or another client) then no rate will be displayed.
- **Channel** – The channel that the two wireless clients are communicating at. If the Client Manager is not connected to a remote wireless device (access point of another client) then no channel will be displayed. The available channels for use are 1-11.
- **Security**– The type of encryption that the two wireless clients are communicating with. If the Client Manager is not connected to a remote wireless device (access point of another client), 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 remote wireless device (access point of another client) or 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 strength of the signal. Signal Strength is based on 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 type that the computer has available.

Client Manager Configuration

Click the *Survey* 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:



- **Wireless SSID** – Displays the SSID associated with each available access point. The SSID is the unique network name that functions as an identifier for your wireless devices. All wireless devices on a network must use identical SSIDs to successfully communicate.
- **Wireless Mode** – Displays the mode/rate set that the remote wireless device is offering.
- **Strength** – Displays the relative strength of the wireless networks.
- **Encryption** – Displays whether the wireless network is using any sort of encryption.

Press the *Connect* button to connect to a listed SSID, or press the *Refresh* button to perform another survey and update the survey list.

Client Manager Configuration

Once the *Connect* button is pressed, you will be prompted to enter any encryption related information.



The *Encryption* drop down list allows you to select the type of encryption for the network. The correct encryption type should already be selected automatically.

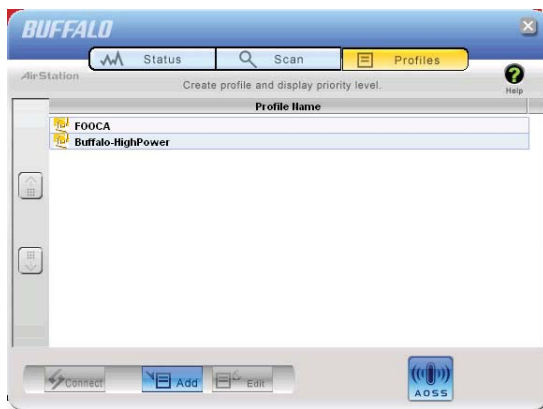
The *Encryption Key* is where the actual key required by the wireless network must be inputted. Please consult your wireless access point or router's documentation for proper input of the encryption keys. Some wireless networks may allow you to enter multiple keys; four separate fields are available for this. If your network only uses one encryption key, then please use field 1 to enter your key.

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

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

Client Manager Configuration

Profiles Page



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 a profile 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



- **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 unique network name that functions as an identifier for your wireless devices. 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.
- **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.

Client Manager Configuration

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.

Wireless Zero Configuration

Wireless Zero Configuration Service (Windows XP)

Windows XP offers the Wireless Zero Configuration Service to support 802.11a, 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 points.

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

Enabling the Wireless Zero Configuration Service

Select Start»Control Panel»Administrative Tools»Services to open the Services window. Select Automatic in the Startup Type field of Wireless Zero Configuration Service to enable the Wireless Zero Configuration Service.

Note: Windows XP's default setting for Wireless Zero Configuration Service is Automatic (on).

Disabling the Wireless Zero Configuration Service

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

Specifications

Wireless LAN Interface

Standards Compliance	IEEE802.11g, IEEE802.11b, IEEE802.11a
Communication Protocol	Direct Sequence Spread Spectrum (DS-SS), Half Duplex
Frequency Range	2.412-2.472Ghz; 5.18-5.32GHz
Transmission Rate	802.11a: 1, 2, 5.5, 11, 18, 24, 36, 48, 54Mbps 802.11g: 1, 2, 5.5, 11, 18, 24, 36, 48, 54Mbps
Access Mode	Infrastructure mode, Ad-Hoc mode
Security	128/64 Bit WEP, WPA, 802.1x, WPA-PSK, TKIP, AES

Others

Interface	USB 2.0 (Compatible USB 1.1)
Power Consumption	460mA (max)
Environmental Operation	0-55°C, 20-80% (non-condensing)

Troubleshooting / FAQ

Use this section to locate answers to frequently asked questions.

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 functionality, as some versions of Client Manager will not work properly with the Wireless USB Adapter. Before updating Client Manager, you must uninstall all previous versions of Client Manager. To update your Client Manager, load the Air Navigator CD and select Install Client Manager.

Why won't all my network clients work?

Some operating systems support only a limited number of network clients.

Windows 98/Me: These operating systems support only four network clients. If you install more than four network clients, only the first four clients you install will work.

Will Client Manager support all operating systems?

Client Manager and the AirStation Wireless USB Adapter currently support only Windows 98/ME/2000/XP. They do not currently support Windows NT, Mac OS, or Linux.

Why won't Client Manager function properly?

In Windows XP, the Wireless Zero Configuration Service conflicts with Client Manager. You must disable the Select Wireless Zero Configuration Service before using Client Manager. Start»Control Panel»Administrative Tools»Services to open the Services window. Select Disabled in the Startup Type field of Wireless Zero Configuration Service to disable the Wireless Zero Configuration Service.

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

No. You receive the same Air Navigator CD with each Buffalo Technology access point and wireless adapter. The CDs are identical and you only need one copy.

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 connects 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.

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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.

DTE (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): Non-permanent 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.

54/108* Disclaimer

* 54 Mbps is the maximum wireless signal rate derived from IEEE Standard 802.11a and 802.11g specifications. 108 Mbps is the maximum wireless signal rate derived from using channel bonding technology when used with supported devices. Actual data throughput will vary depending upon network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead.

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: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). 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 RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

R&TTE Compliance Statement

This equipment complies with all the requirements of the DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE). The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this manual and of

FCC / CE Information

the computer manufacturer must therefore be allowed at all times to ensure the safe use of the equipment.

EU Countries intended for use

The ETSI version of this device is intended for home and office use in Austria, Belgium, Denmark, Finland, France (with Frequency channel restrictions), Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, The Netherlands, Portugal, Spain, Sweden, Switzerland and United Kingdom.

The ETSI version of this device is also authorized for use in EFTA member states Iceland, Liechtenstein, Norway and Switzerland.

EU Countries Not intended for use

None.

Potential restrictive use

France: Only channels 10,11,12, and 13.



Federal Communication Commission Declaration of Conformity (DoC) Statement

Model No: WHR-HP-AG108

AirStation High Power Dual A+G SmartRouter

Buffalo Inc.

15, Shibata Hondori 4-chrome

Minami-ku, Nagoya 457-8520

Japan

01181-52-241-7980

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 or more 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.

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.

Caution:

Any changes or modifications not expressly approved by the party responsible for product compliance could void the user's authority to operate the equipment.

Within the 5.15-to-5.25-GHz band, UNII devices are restricted to indoor operations to reduce any potential for harmful interference to co-channel Mobile Satellite Systems (MSS) operations

Caution:

Exposure to radio frequency radiation (below is for mobile device)

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.



Caution Exposure to radio frequency radiation (below is for portable device)

To comply with FCC RF exposure compliance requirements, this device must not be colocated or operating in conjunction with any other antenna or transmitter.

b. Industry Canada Portion

Canada Regulatory Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

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

For Customers in Canada

This device complies with RSS 210 of Industry Canada (IC).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of this device.

L' utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

- (1) il ne doit pas produire de brouillage et
- (2) l' utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Caution: Within the 5.15-to-5.25-GHz band, UNII devices are restricted to indoor operations to reduce any potential for harmful interference to co-channel Mobile Satellite Systems (MSS) operations
Exposure to radio frequency radiation (below statement applied to mobile or portable device)
The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population;
consult Safety Code 6, obtainable from Health Canada's website at www.hc-sc.gc.ca/rpb.

c. EU Portion

European Community Declaration of Conformity with Regard to the R&TTE Directive
1999/5/EC

The following standards were applied: (Omni)

- Radio: EN 300-328 v1.6.1 (2.4-GHz operation)
- EN 301-893 v1.2.3 (5-GHz operation)
- EMC: EN 301.489-1 v1.4.1, EN 301.489-17 v1.2.1
- Safety: IEC 60950 (1999 3rd Edition with Amend. 1,2,3,4) & EN 60950 (2000)

The following CE mark is affixed to the device:





Note: This equipment is intended to be used in all EU and EFTA countries. Outdoor use may be restricted to certain frequencies and/or may require a license for operation. For more details, contact your customer service representative.

To comply with RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Member States shall ensure that the manufacturer or the person responsible for placing the apparatus on the market provides information for the user on the intended use of the apparatus, together with the declaration of conformity to the essential requirements. Where it concerns radio equipment, such information shall be sufficient to identify on the packaging and the instructions for use of the apparatus the Member States or the geographical area within a Member State where the equipment is intended to be used and shall alert the user by the marking on the apparatus referred to in Annex VII, paragraph 5, to potential restrictions or requirements for authorization of use of the radio equipment in certain Member States.



Declaration of Conformity with Regard to the R&TTE Directive 1999/5/EC

Česky

[Czech]

Buffalo Technology Inc. tímto prohlašuje, že tento AirStation WHR-HP-AG108 je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Dansk

[Danish]

Undertegnede Buffalo Technology Inc. erklærer herved, at følgende udstyr AirStation WHR-HP-AG108 overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Deutsch

[German]

Hiermit erklärt Buffalo Technology Inc. dass sich das Gerät AirStation WHR-HP-AG108 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Eesti

[Estonian]

Käesolevaga kinnitab Buffalo Technology Inc. seadme AirStation WHR-HP-AG108 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English Hereby, Buffalo Technology Inc. declares that this AirStation WHR-HP-AG108 is in compliance



with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Español

[Spanish]

Por medio de la presente Buffalo Technology Inc. declara que el AirStation WHR-HP-AG108 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική

[Greek]

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Buffalo Technology Inc. ΔΗΛΩΝΕΙ ΟΤΙ AirStation WHR-HP-AG108 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français

[French]

Par la présente Buffalo Technology Inc. déclare que l'appareil AirStation WHR-HP-AG108 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Italiano

[Italian]

Con la presente Buffalo Technology Inc. dichiara che questo AirStation WHR-HP-AG108 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.



with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Español

[Spanish]

Por medio de la presente Buffalo Technology Inc. declara que el AirStation WHR-HP-AG108 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική

[Greek]

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Buffalo Technology Inc. ΔΗΛΩΝΕΙ ΟΤΙ AirStation WHR-HP-AG108 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français

[French]

Par la présente Buffalo Technology Inc. déclare que l'appareil AirStation WHR-HP-AG108 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Italiano

[Italian]

Con la presente Buffalo Technology Inc. dichiara che questo AirStation WHR-HP-AG108 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.



Latviski

[Latvian]

Ar šo Buffalo Technology Inc. deklarē, ka AirStation WHR-HP-AG108 atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių

[Lithuanian]

Šiuo Buffalo Technology Inc. deklaruoja, kad šis AirStation WHR-HP-AG108 atitinka esminius reikalavimus ir kitas

1999/5/EB Direktyvos nuostatas.

Nederlands

[Dutch]

Hierbij verklaart Buffalo Technology Inc. dat het toestel AirStation WHR-HP-AG108 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti

[Maltese]

Hawnhekk, Buffalo Technology Inc. , jiddikjara li dan AirStation WHR-HP-AG108 jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.

Magyar

[Hungarian]

Alulírott, Buffalo Technology Inc. nyilatkozom, hogy a AirStation WHR-HP-AG108 megfelel a vonatkozó



alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski

[Polish]

Niniejszym, Buffalo Technology Inc. , deklaruję, że AirStation WHR-HP-AG108 spełnia wymagania zasadnicze oraz stosowne postanowienia zawarte Dyrektywie 1999/5/EC.

Português

[Portuguese]

Buffalo Technology Inc. declara que este AirStation WHR-HP-AG108 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko

[Slovenian]

Buffalo Technology Inc. izjavlja, da je ta AirStation WHR-HP-AG108 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky

[Slovak]

Buffalo Technology Inc. týmto vyhlasuje, že AirStation WHR-HP-AG108 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi

[Finnish]

Buffalo Technology Inc. vakuuttaa täten että AirStation WHR-HP-AG108 tyyppinen laite on direktiivin



1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Svenska

[Swedish]

Härmed intygar Buffalo Technology Inc. att denna AirStation WHR-HP-AG108 står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

**이 기기는 가정용으로 전자파적합등록을 한 기기로서
주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.**



Taiwan Regulatory Compliance Statement

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 兆赫頻帶內操作之無線資訊傳輸設備,限於室內使用。

Contact Information (North America)

ADDRESS

Buffalo Technology (USA), Inc.
4030 West Braker Lane, Suite 120
Austin, TX 78759-5319

GENERAL INQUIRIES

Email: *sales@buffalotech.com*

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

Contact Information (Europe)

ADDRESS

Buffalo Technology (Europe), Inc.
176 Buckingham Avenue,
Slough, Berkshire, SL1 4RD
United Kingdom

GENERAL INQUIRIES

Email: sales@buffalo-technology.com

TECHNICAL SUPPORT

Technical Support in Europe 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:

E-mail: helpdesk@buffalo-technology.ie | Web: www.buffalo-technology.com