
APL1100-200

UltraSpeed™ PowerLine Ethernet NetBridge™

User's Manual



Version 1.1

IMPORTANT SAFETY INSTRUCTIONS

1. Please read all instructions before installing and operating APL1100-200 and keep all instructions for later reference.
2. Please follow all warnings and instructions marked on the product.
3. **Unplug the AC coupler from the wall outlet before cleaning. Use a damp cloth for cleaning. DO NOT use liquid cleaners or aerosol cleaners.**
4. **DO NOT** operate APL1100-200 near water.
5. APL1100-200 should **never** be placed near or over a radiator, or heat register.
6. APL1100-200 relies on the building's electrical installation for short-circuit (over current) protection.
7. Ensure that a fuse or circuit breaker **no larger than 120 VAC 15A or 240 VAC 6A** is used on the phase conductors (all current-carrying conductors).
8. **DO NOT** allow anything to rest on the APL1100-200 interconnect cables. **DO NOT** locate APL1100-200 where people may walk on the cables.
9. APL1100-200 has its own power filter for protection against surges.
10. **APL1100-200 is NOT field serviceable and should not be opened under any circumstance.** Opening or removing covers may result in exposure to dangerous voltage points or other risks.
11. Unplug the AC coupler from the wall outlet and refer the product to qualified service personnel for the following conditions:
 - When the interconnect cords are damaged or frayed.
 - If liquid has been spilled into the product.
 - If the product has been exposed to rain or water.
 - If the product does not operate normally when the operating instructions are followed.
 - If the product exhibits a distinct change in performance.

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Statement of Conditions

The content described in this manual may be improved or changed at any time and it is subject to be changed without notice.

Manufacturer assumes no responsibility for errors contained herein or for direct, indirect, special, incidental or consequential damages with the furnishing, performance, or use of this manual or equipment supplied with it, even if manufacturer or its suppliers have been advised of the possibility of such damages.

Electronic Emission Notices

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.
- (2) This device will accept any interference received, including interference that may cause undesired operation.

Table of Content

1.	Introduction	5
1.1.	Features	5
1.2.	Product Kit	6
1.3.	LED.....	6
1.4.	Hardware Installation.....	7
1.5.	Application	8
1.5.1.	Connection to The Back Office Computer with the APL1100.....	8
1.5.2.	Connect the POS Terminal onto the APL1100	10
2.	Software Installation	12
2.1.	System Requirements.....	12
2.2.	Installation	12
3.	Web Configuration.....	15
3.1.	Start-up and Log in	15
3.2.	Connection Info	16
3.3.	Configuration.....	17
3.3.1.	Security Page	18
3.3.2.	Network Page	19
3.3.3.	VLAN Page	20
3.3.4.	QoS Page	21
3.4.	Change Password.....	22
3.5.	Firmware Upgrade	23
3.6.	Factory Reset	24
3.7.	Reboot	25
4.	Default Settings	25

1. Introduction

The Aboundi APL1100-200 UltraSpeed™ PowerLine Ethernet NetBridge™ allows the Plug-and-Play simplicity utilizing the existing facility AC power electrical wiring as networking connections.

The NetBridge™ allows IP Cameras, Video Servers, POS, Media Converters, Printers, Digital Signages and Network Equipments to be easily networked through multiple AC power outlets to share Internet access. With build-in Quality of Service (QOS) and 200Mbps high speed data transmission capability, APL1100-200 ensures the high-quality, consistent performance network for multimedia and entertainment distribution of IPTV, HDTV, SDTV and other digital multimedia content and data networking applications.

The APL1100-200 NetBridge™ connects to any 10/100Mbps Ethernet ports on the computer, hence make it compatible with any Mac, Windows, and Unix machines.

All APL1100-200 NetBridge™ devices are equipped with 168-bit Tri-DES encryption for enhanced security. Combined with network segmentation and device encryption, the NetBridge™ is as secure as any traditional Ethernet wiring.

1.1. Features

- Up to 200Mbps speed over the standard facility electrical power lines
- Integrated Quality of Service (QOS) allows reliable triple play applications
- Transparent to facility circuit breakers
- Multi-channel HDTV and SDTV network distribution
- Simple Plug-and-Play installation
- Supports up to sixteen APL1100-200 devices on one network domain
- 168-bit Tri-DES encryption for secure data transmission
- Network segmentation through network identifier
- Ident-and-Connect™ feature allows ease of network scan and network segmentation
- Web based configuration
- Up to 300 meters of operational distance
- Compliance with IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX , UPA

1.2. Product Kit

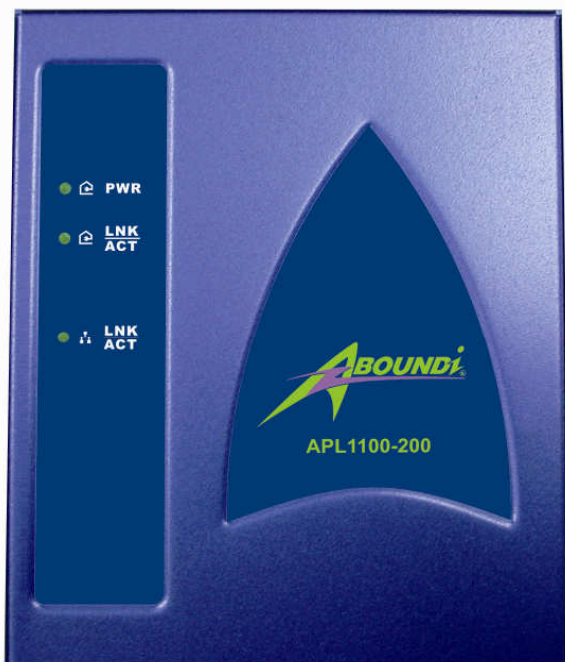
Before starting installation, please make sure the APL1100-200 package includes the following five items:

- 1) Quick Installation Guide
- 2) APL1100-200 unit
- 3) CD-ROM (containing Ultra NetBridge™ Utility for Windows and User's Manual).
- 4) Cat 5e cable
- 5) Power cord




If anything from the above items is missing, please contact your vendor.

1.3. LED

The following figure shows the APL1100-200 LED indicator.



The function for each LED is described as follow:

-  **PWR-Green:** On when the power is on.
-  **LNK/ACT-Blue:** On when PowerLine Link speed over 12Mbps,
Purple: On when PowerLine Link speed between 12Mbps and 6 Mbps,
Amber: On when PowerLine Link speed under 6Mbps,
Blinking when PowerLine activity is detected.
-  **LNK/ACT-Green:** On when Ethernet link is detected;
Blinking when Ethernet activity is detected.

1.4. Hardware Installation

- Step 1 Plug the included Ethernet network cable into the computer's Ethernet port.



- Step 2 Plug the other end of this cable into the Ethernet port of APL1100-200.



- Step 3 Plug the electrical cable into to the electrical port of APL1100-200.



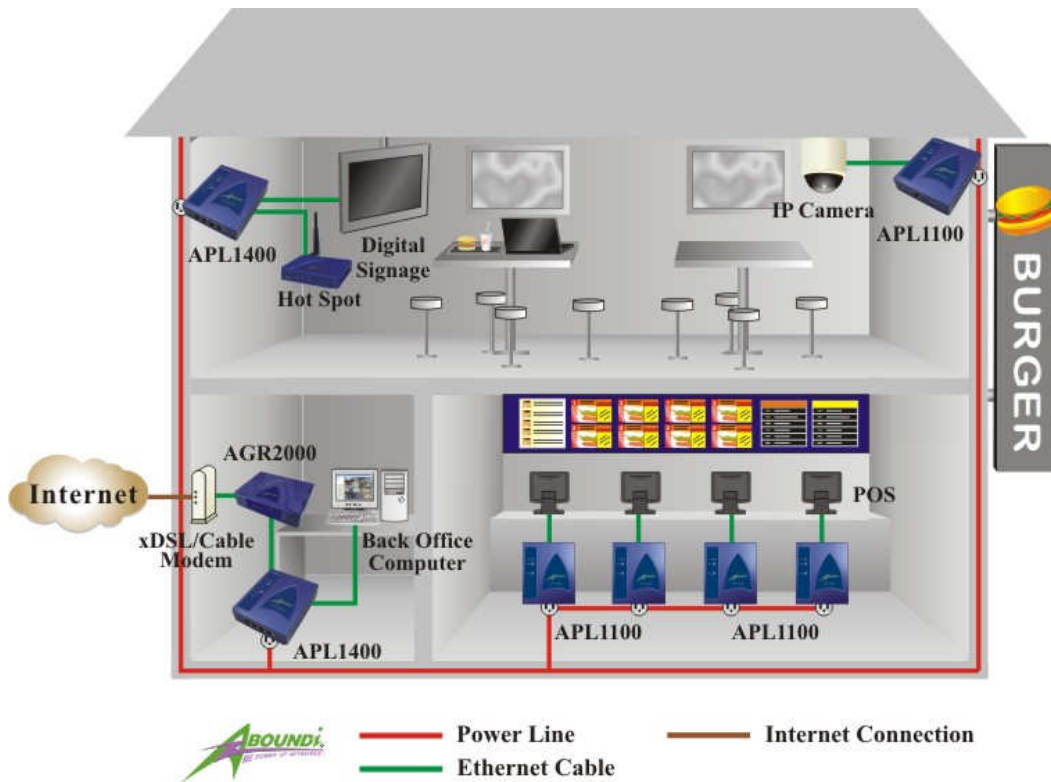
- Step 4 Plug the power plug into the AC socket on the wall.



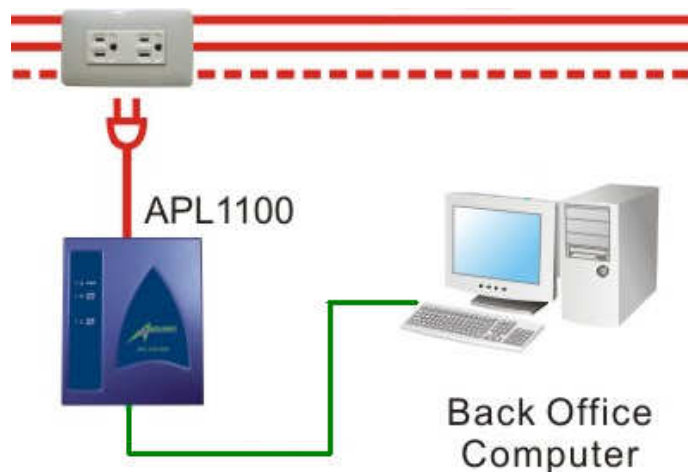
1.5. Application

Example – POS/Retail Application

Electric Connect[®] allows the Plug-and-Play simplicity utilizing the existing electrical wiring facility as the network infrastructure connections. Your data collected from the POS will send back to the computers in the back office of the stores. Below is a typical POS Application Diagram.



1.5.1. Connection to The Back Office Computer with the APL1100



- Step 1 Plug the included Ethernet network cable into the computer's Ethernet port.



- Step 2 Plug the other end of this cable into the Ethernet port of APL1100-200.



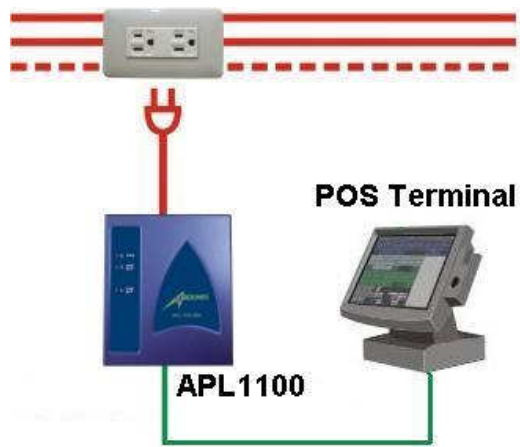
- Step 3 Plug the electrical cable into to the electrical port of APL1100-200.



- Step 4 Plug the power plug into the AC socket on the wall.



1.5.2. Connect the POS Terminal onto the APL1100



- Step 1 Plug the included Ethernet CAT5 cable into the POS terminal's Ethernet port.



- Step 2 Plug the other end of the CAT5 cable into the Ethernet port on APL1100.



- Step 3 Plug the power cable into the power port on APL1100.



- Step 4 Plug the power plug into the AC socket on the wall.



- Step 5 Check the LED indicators on the APL1100.
(Only available for UltraSpeed™ Series products)



Identifying the network connection performance by the LED color indication:

- Blue on: Connection speed over 12Mbps
- Purple on: Connection speed between 6Mbps and 12Mbps
- Amber on: Connection speed under 6Mbps
- Off: Not connected

2. Software Installation

Please follow the steps described in this section to install your Ultra NetBridge™ Utility.

2.1. System Requirements

Before installing Ultra NetBridge™ Utility, make sure the PC meets these requirements for hardware installation:

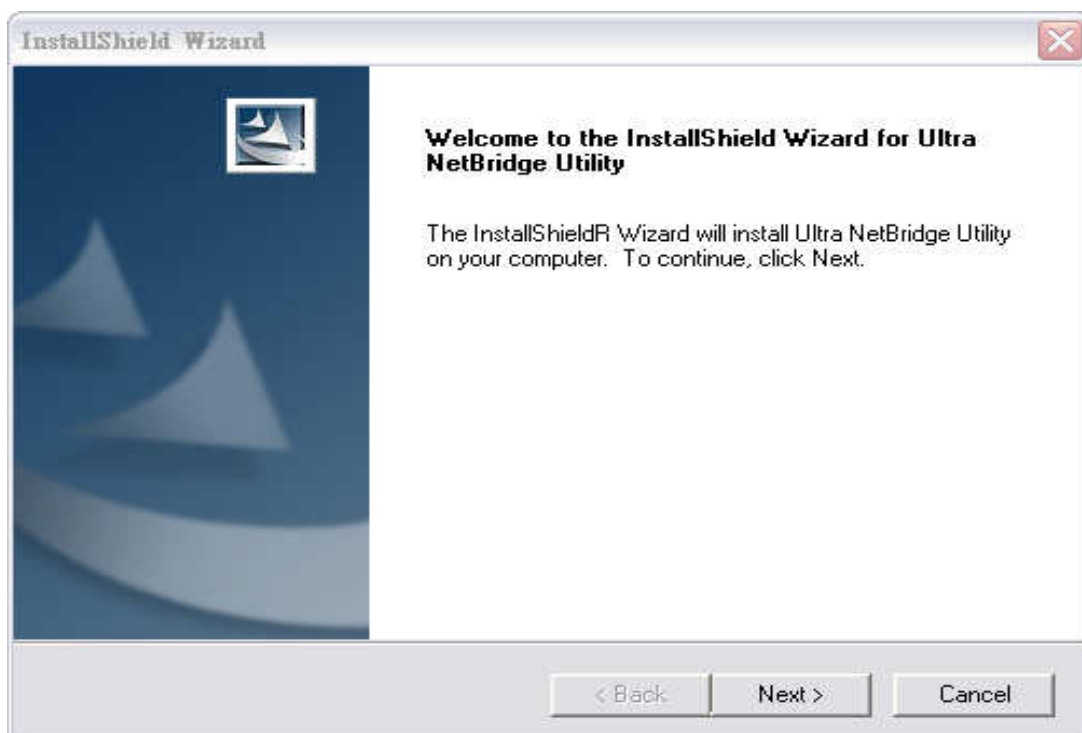
- Microsoft Windows* 98SE, ME, 2000, XP or Vista
- Pentium® 166 MHz processor, equivalent or higher
- One free Ethernet port for UltraSpeed™ Series PowerLine NetBridge™
- 30M free disk space

Only supported network components are installed:

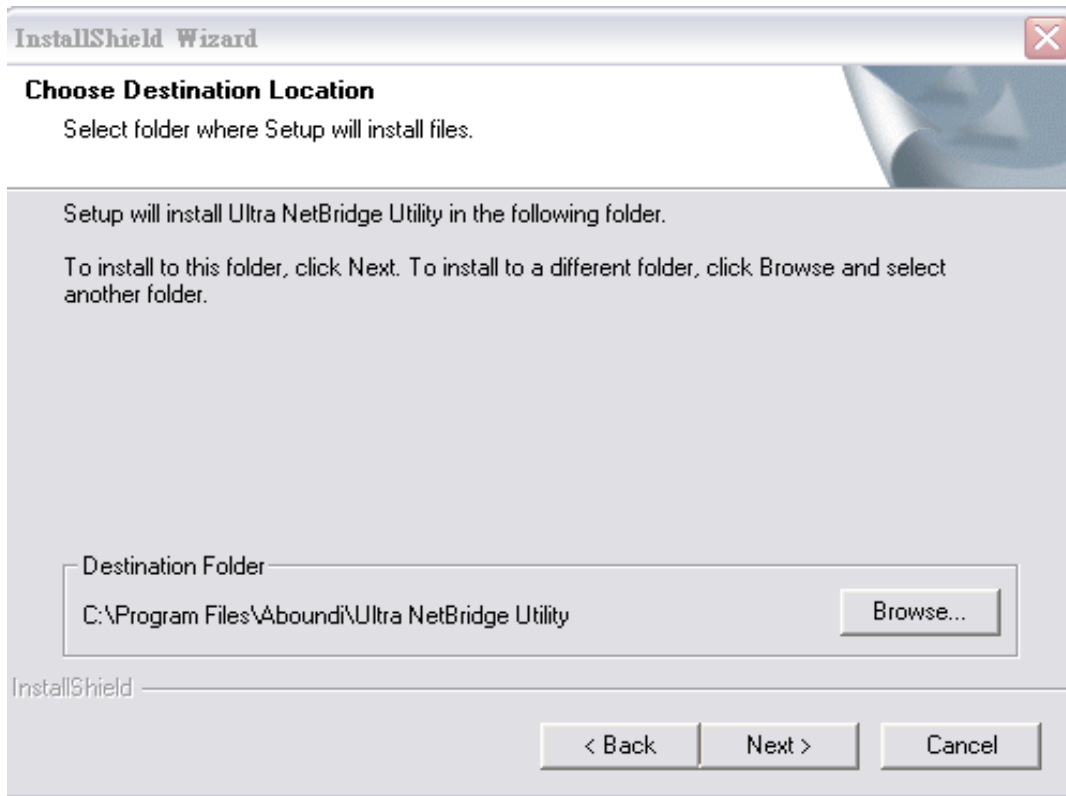
- Network Clients: Client for Microsoft Networks, Client for Netware Networks
- Network services: File and print sharing for Microsoft Networks
- Network protocols: Microsoft's TCP/IP, IPX/SPX, NetBEUI, or Net BIOS support for IPX/SPX

2.2. Installation

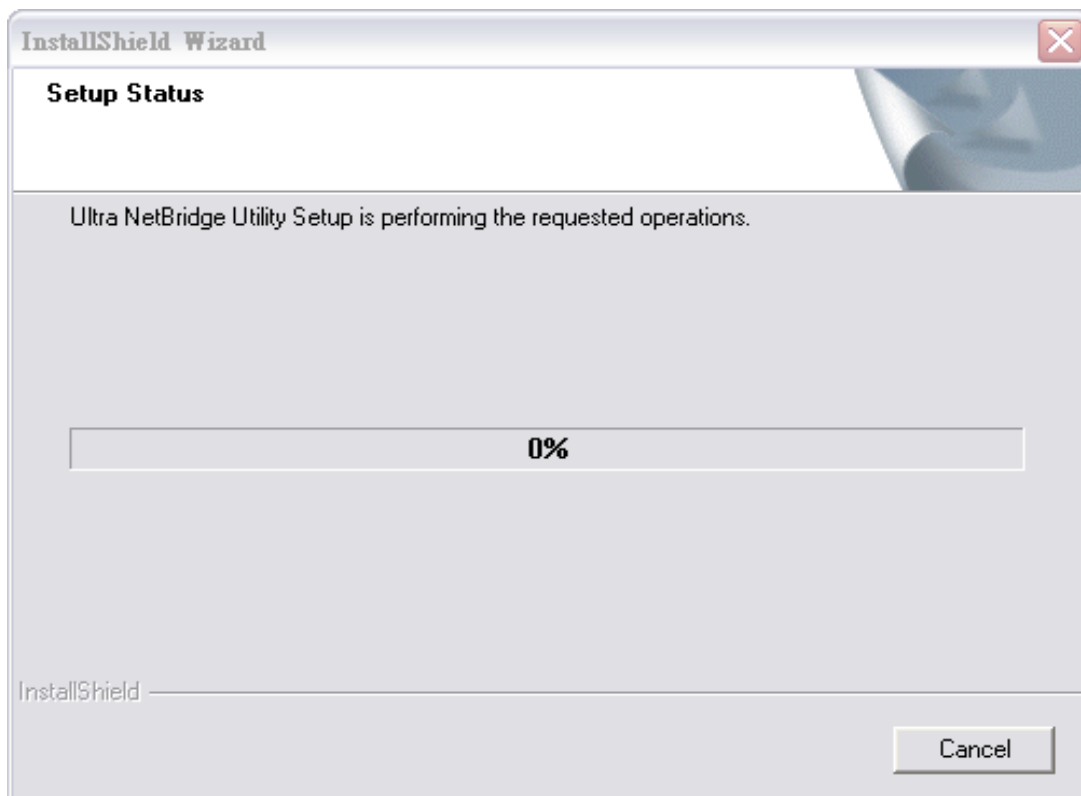
Before the installation, please close the application (if an older version is running) and uninstall it. To install the application just run the setup executable program **Setup.exe** in the Product CD-ROM, and follow the steps of the installation wizard. To start the Ultra NetBridge™ Utility installation, press “**Next>**”:



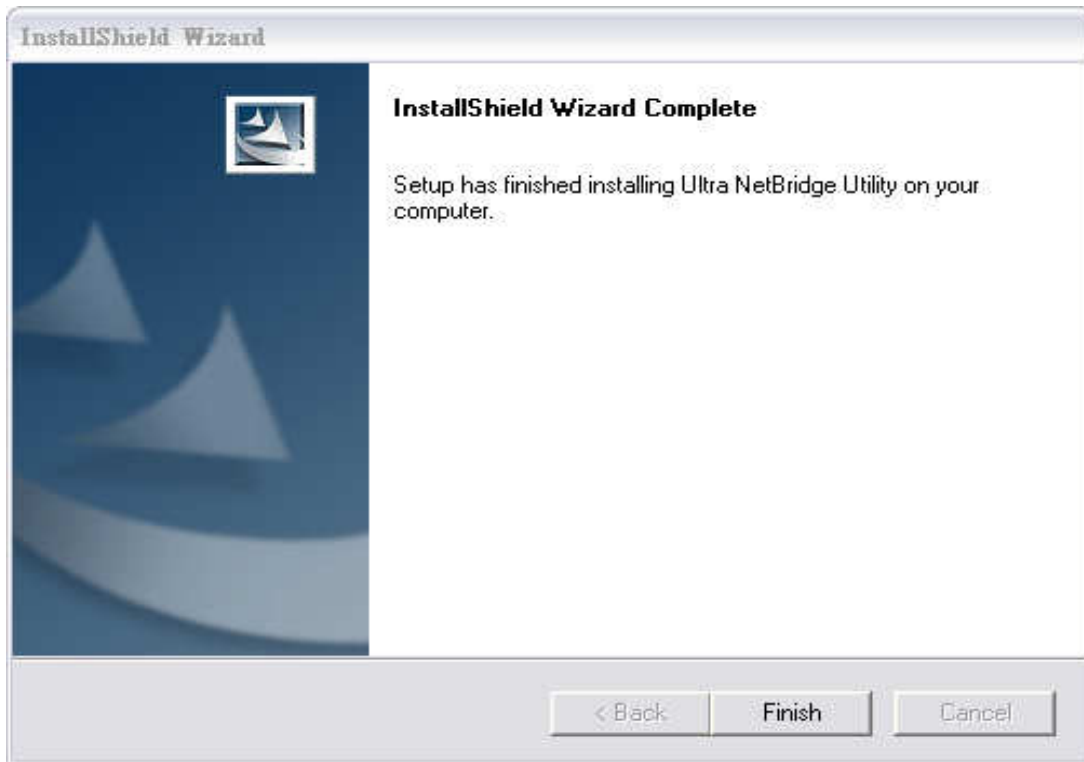
Next screen allows you to select the installation folder for the application. Click “**Next>**” to start the installation:




Please wait for Installation progress bar finish. Press “**Cancel**” button to abort the installation process.



Utility has been installed. Press **“Finish”** to start the application:



Run the Utility

After installed the utility, please run the utility from Start / Programs or double-click the Ultra NetBridge™ Utility icon  as shown in Figure 2.2. There is utility user guide which has installed at same place. Please use adobe reader to open and read it for detail of the software.

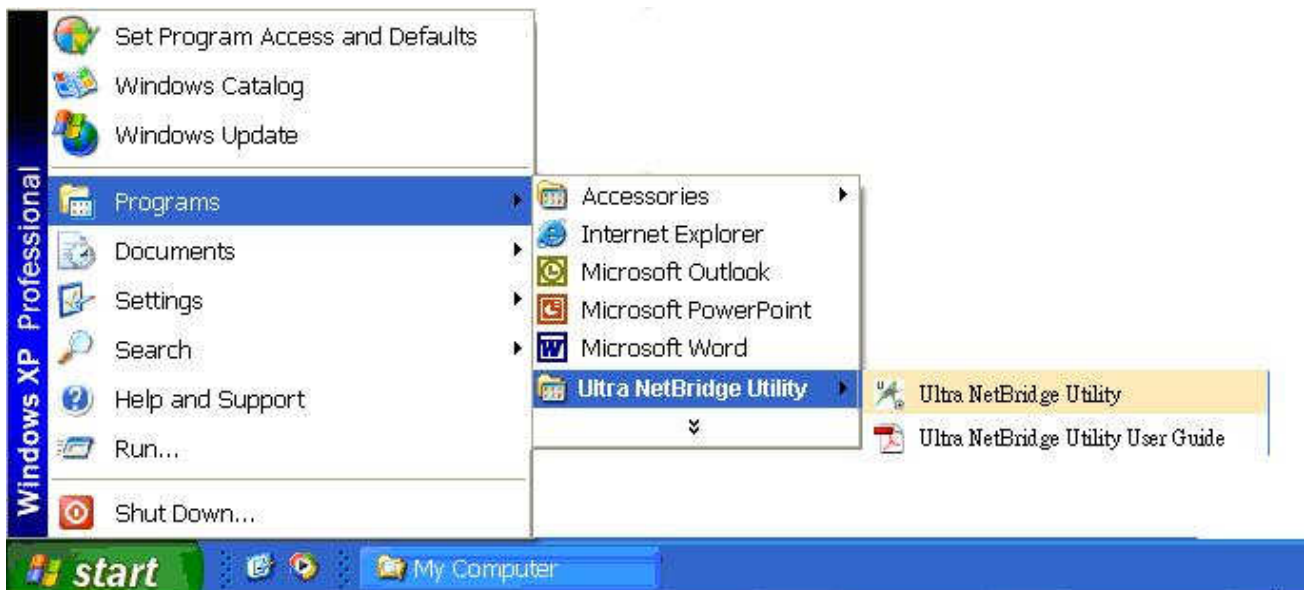


Figure 2.2 Ultra NetBridge™ Utility

3. Web Configuration

The APL1100-200 UltraSpeed™ NetBridge™ provides Web based configuration by your PC Web browser, such as Microsoft Internet Explorer. This approach can be adopted in any MS Windows, Mac or UNIX based platforms. You can configure the NetBridge™'s IP address using the Ultra Netbridge™ Utility before they use the Web Configuration.

3.1. Start-up and Log in

Activate your browser, enter the IP address of NetBridge™ in the **Location** (for Netscape) or **Address** (for IE) field and press ENTER. For example: **http://192.168.1.176**.

After the connection is established, you will see the web user interface of NetBridge™. At the **Password** field, enter the password (the factory default value is **admin**) and then click **Log in**

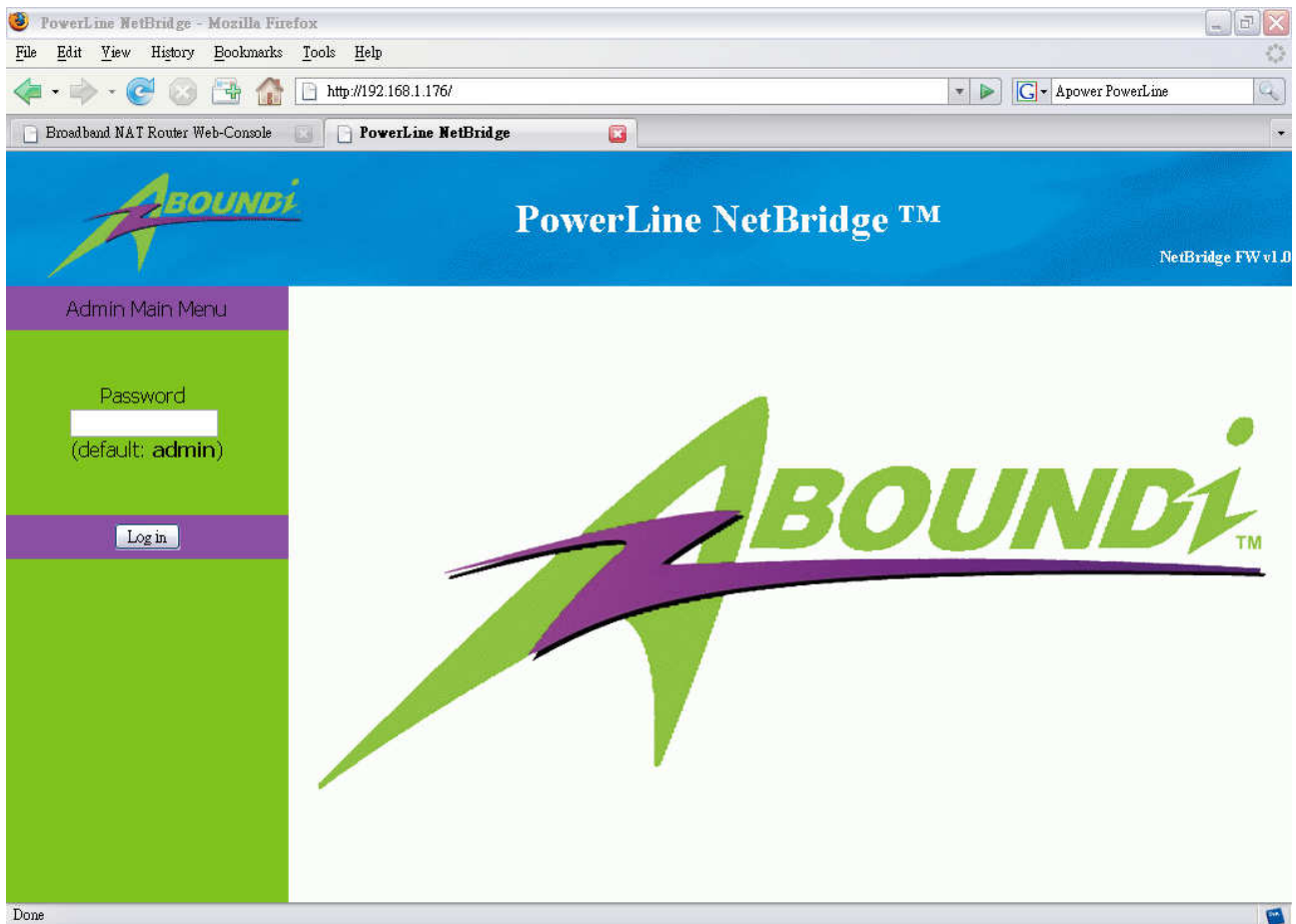


Figure 3.1.1 User Main Menu

If the password is correct, the web appearance will be changed as shown in Figure 3.1.2. As listed in its **Connection Info** page, there are several options for system administration.

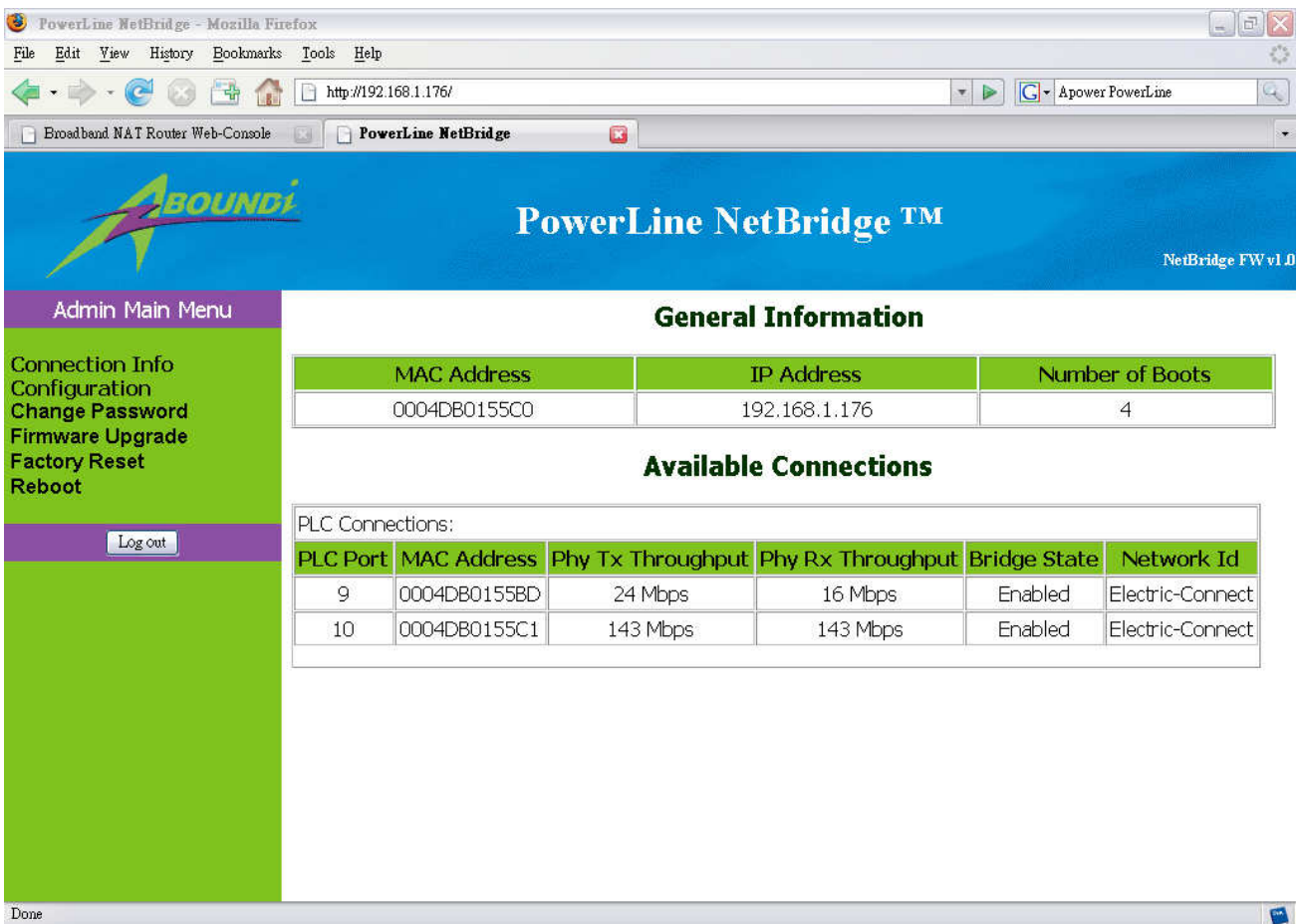


Figure 3.1.2 Connection Info Page

3.2. Connection Info

The Connection Info page displays basic Information about the NetBridge™

1. **General Information:** MAC and IP addresses and the number of boots.
2. **Available Connections:** Display the list of all NetBridge™ devices discovered on the current logical power line or coax networks and the connectivity status.

3.3. Configuration

The Configuration page displays the current settings of the NetBridge™ including Security, Network, VLAN, QoS, System Information.

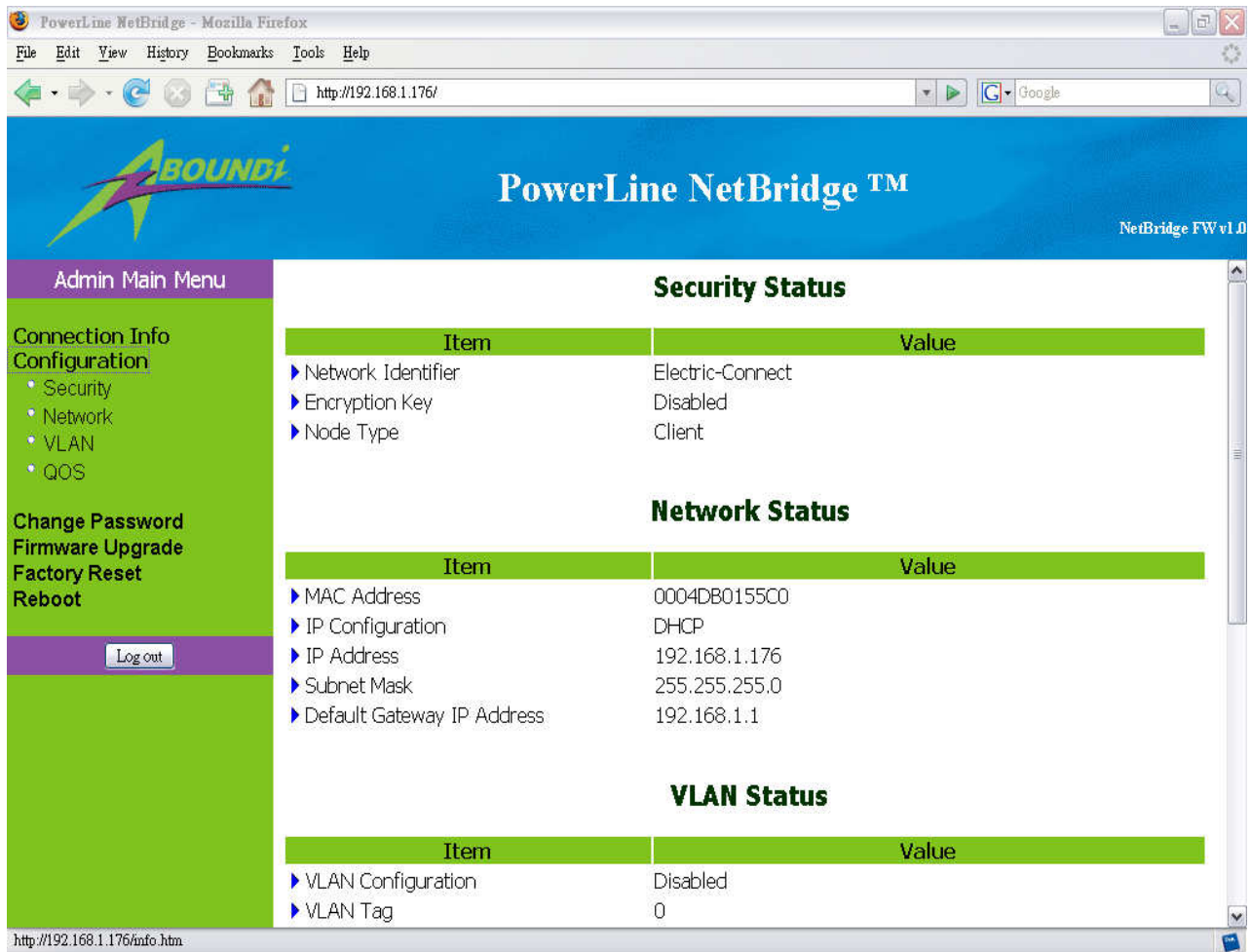


Figure 3.3 Connection Info Page

3.3.1. Security Page

The Security page enables you to modify the Network Identifier, Encryption Key and the Mac mode. displays the current settings of the NetBridge™ including Security, Network, VLAN, QoS and System Information.

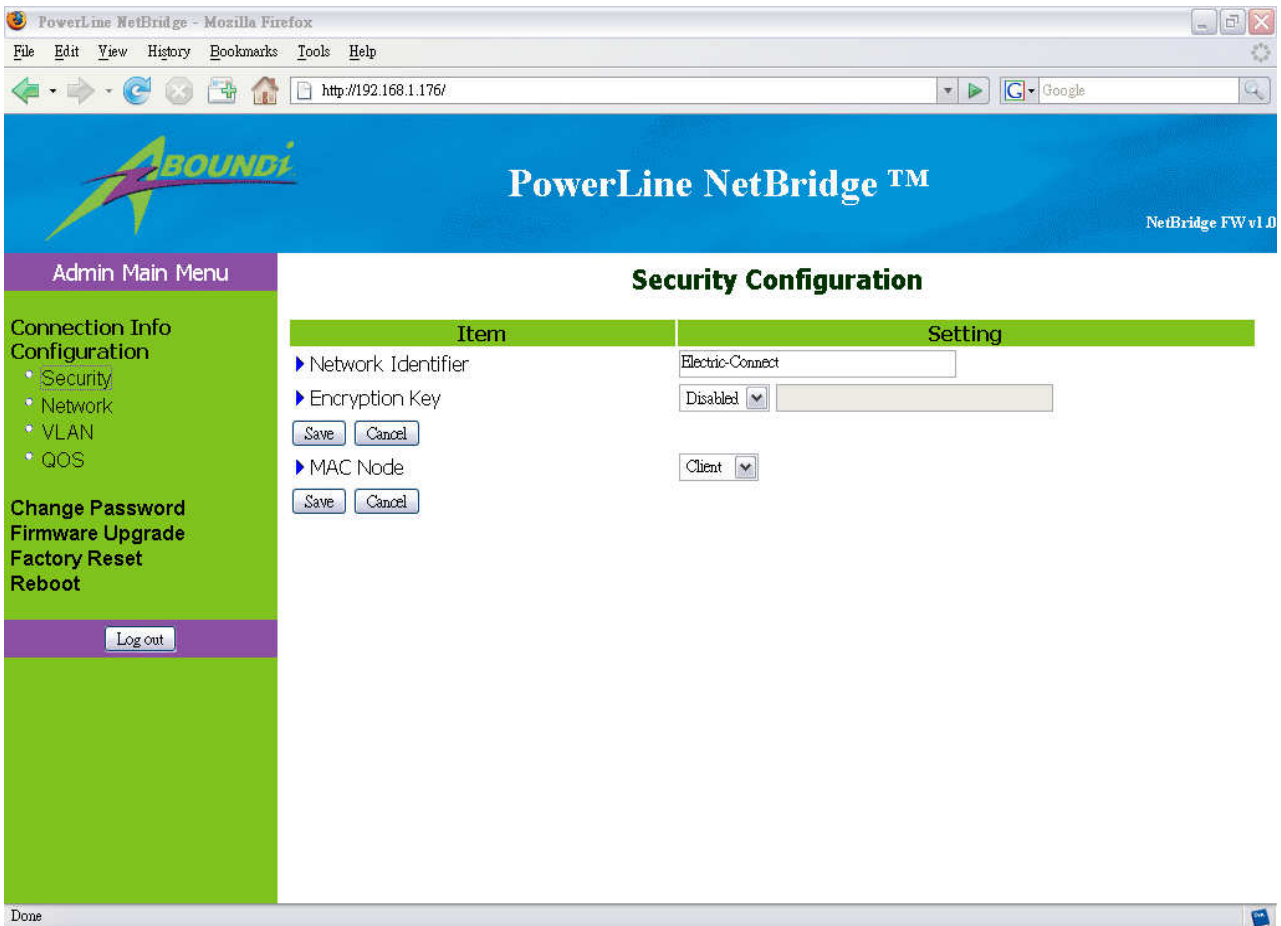


Figure 3.3.1 Security Page

3.3.2. Network Page

The Network page enables you to modify the network settings of the NetBridge™.

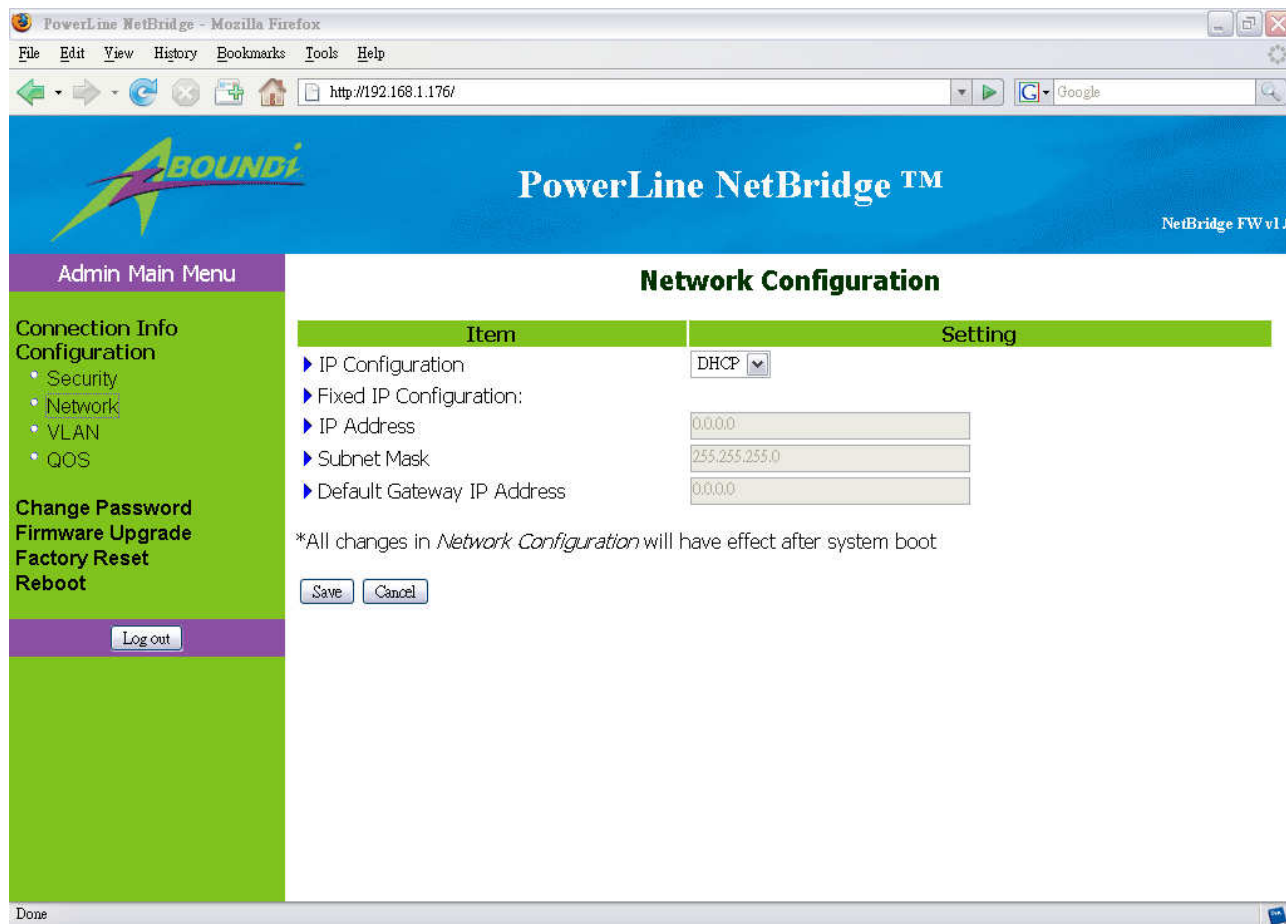


Figure 3.3.2 Network Page

3.3.3. VLAN Page

The VLAN page enables you to modify the VLAN configuration of the NetBridge™.

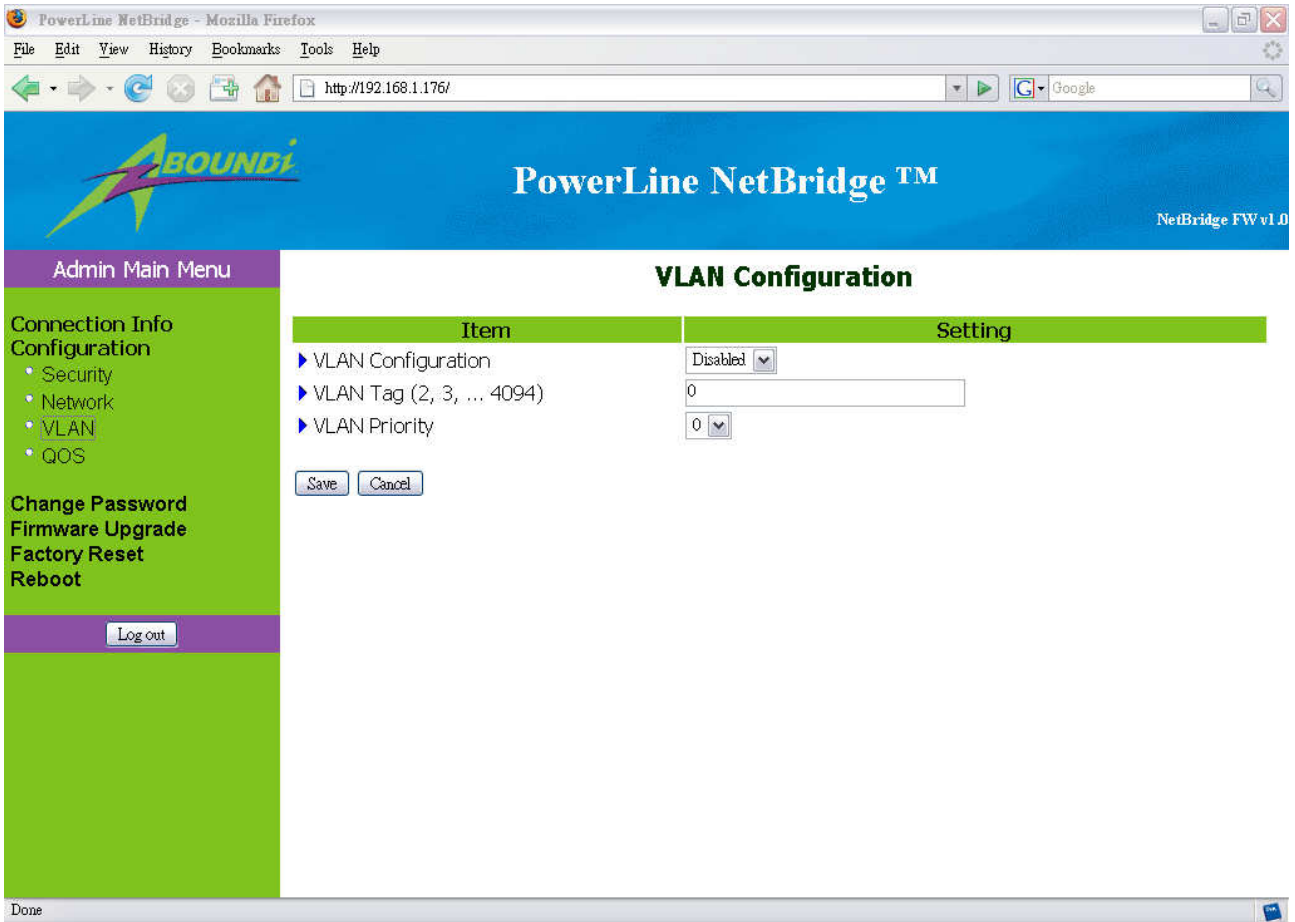


Figure 3.3.3 VLAN Page

3.3.4. QoS Page

The QoS page enables you to modify the QoS configuration of the NetBridge™.

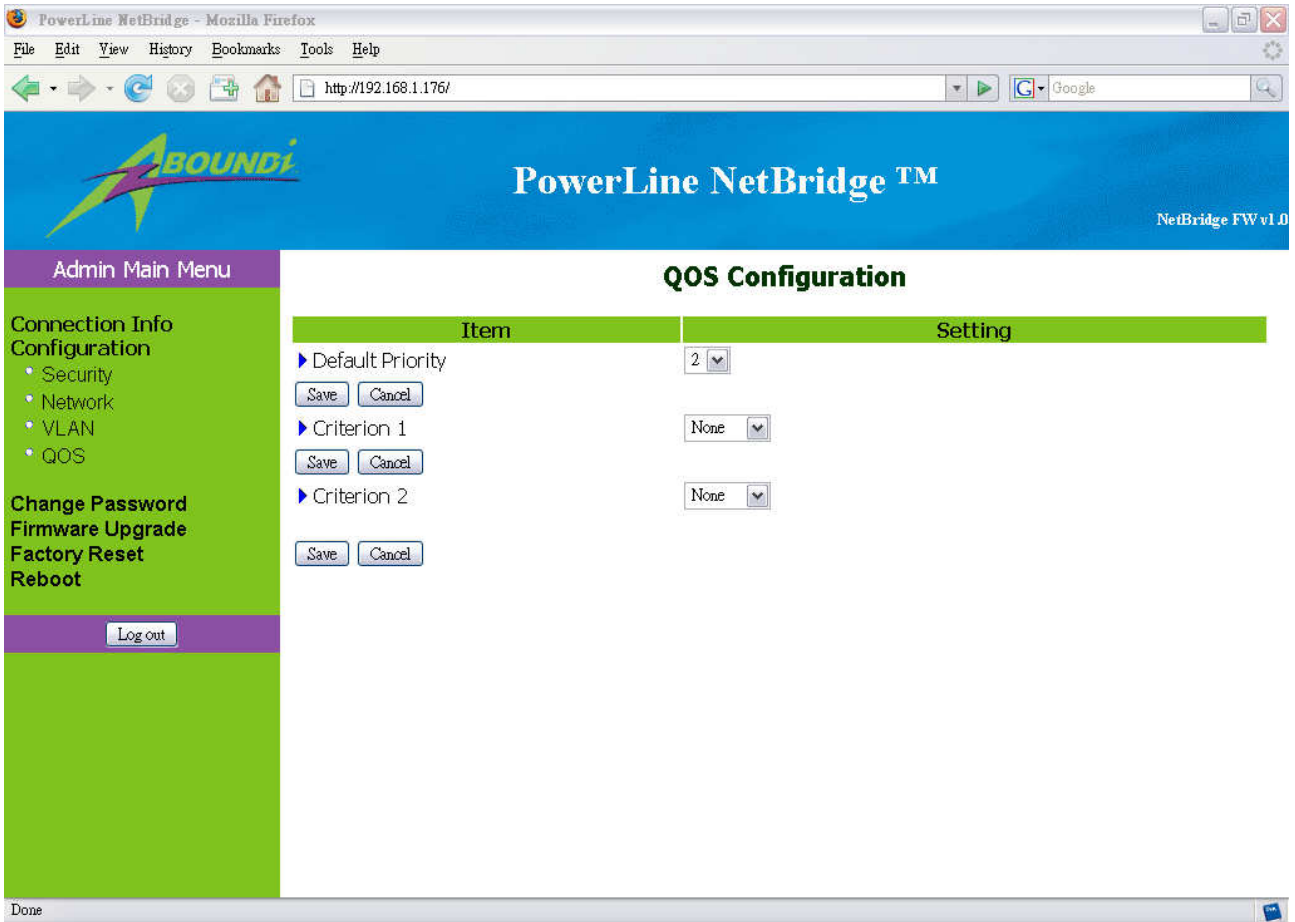


Figure 3.3.4 QoS Page

3.4. Change Password

You can change the administration password for the NetBridge™ in the Change Password page.

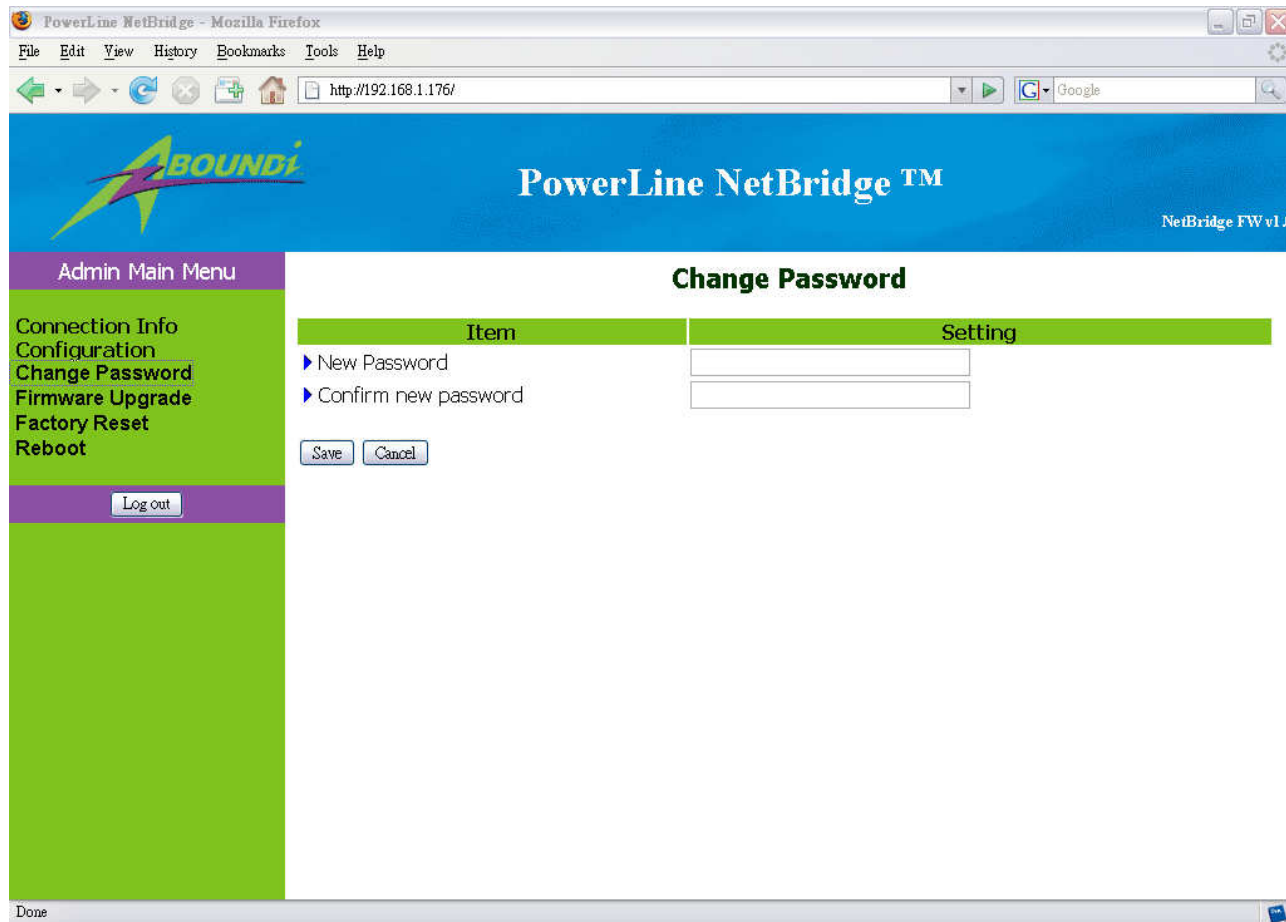


Figure 3.4 Change Password Page

3.5. Firmware Upgrade

You can upgrade the firmware for the NetBridge™ in the Firmware Upgrade page.

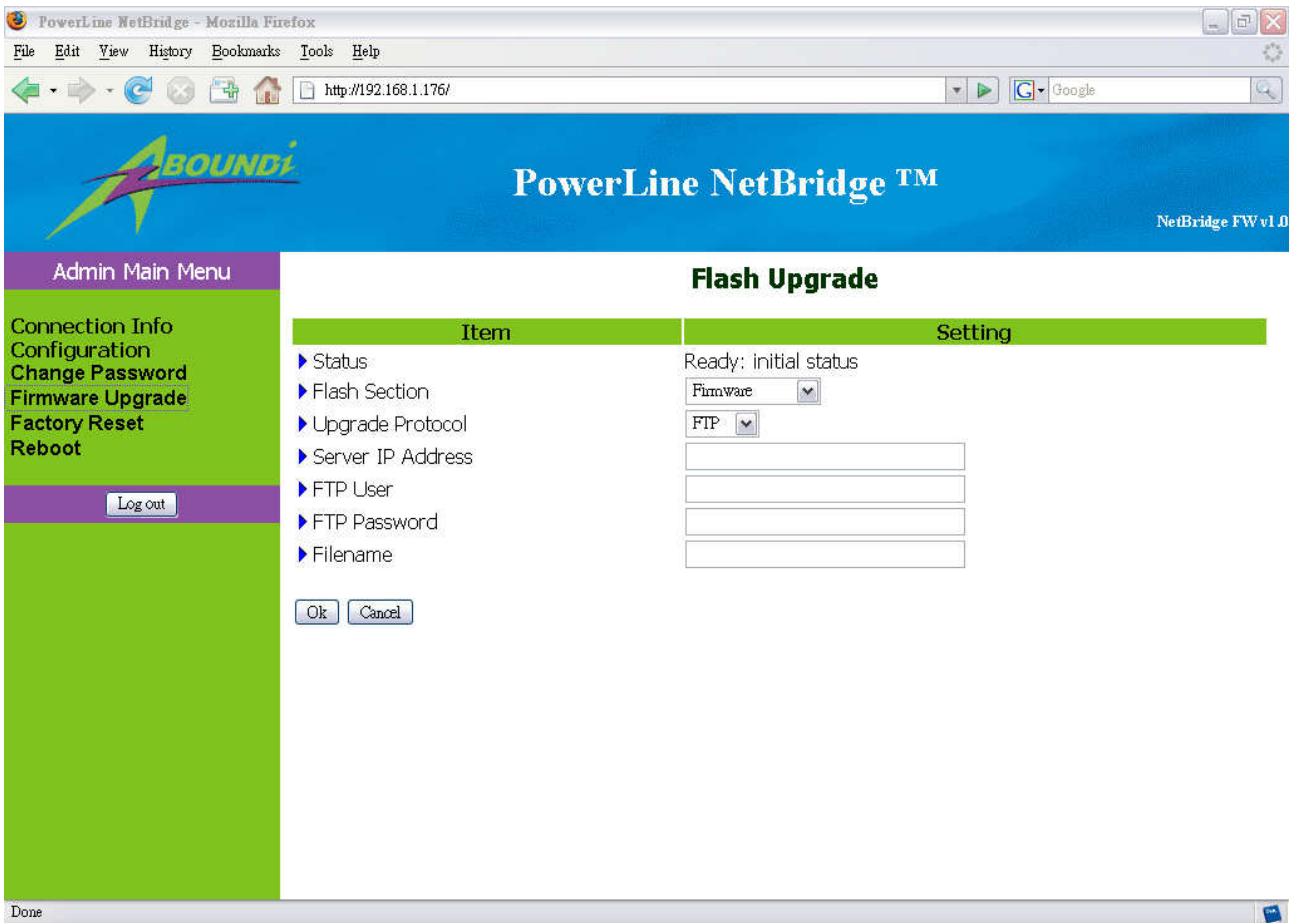


Figure 3.5 Firmware Upgrade Page

3.6. Factory Reset

You can reset the NetBridge™ to the factory default settings from the Factory Reset page.

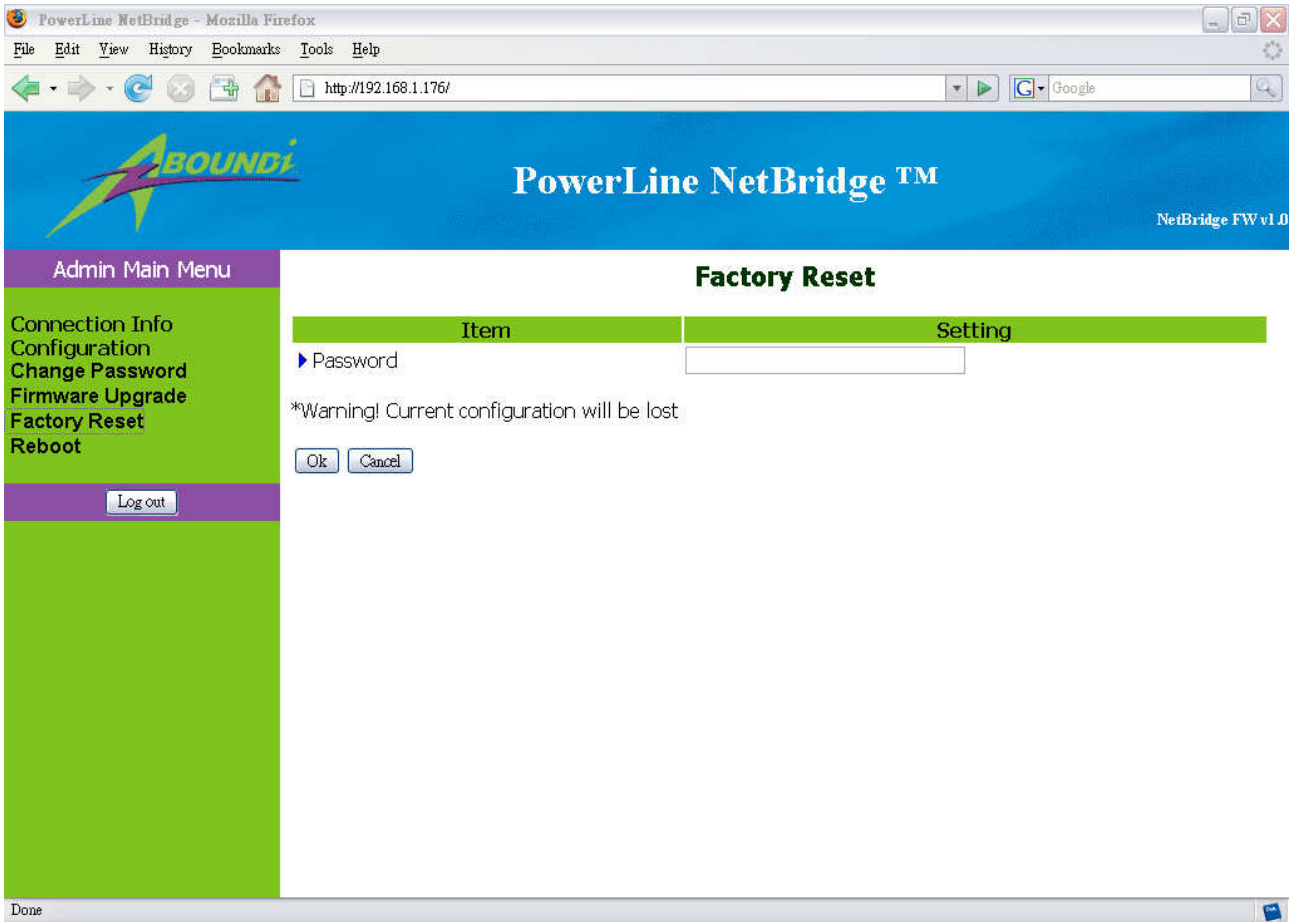


Figure 3.6 Factory Reset Page

3.7. Reboot

You can reboot the NetBridge™ remotely from the Reboot page.

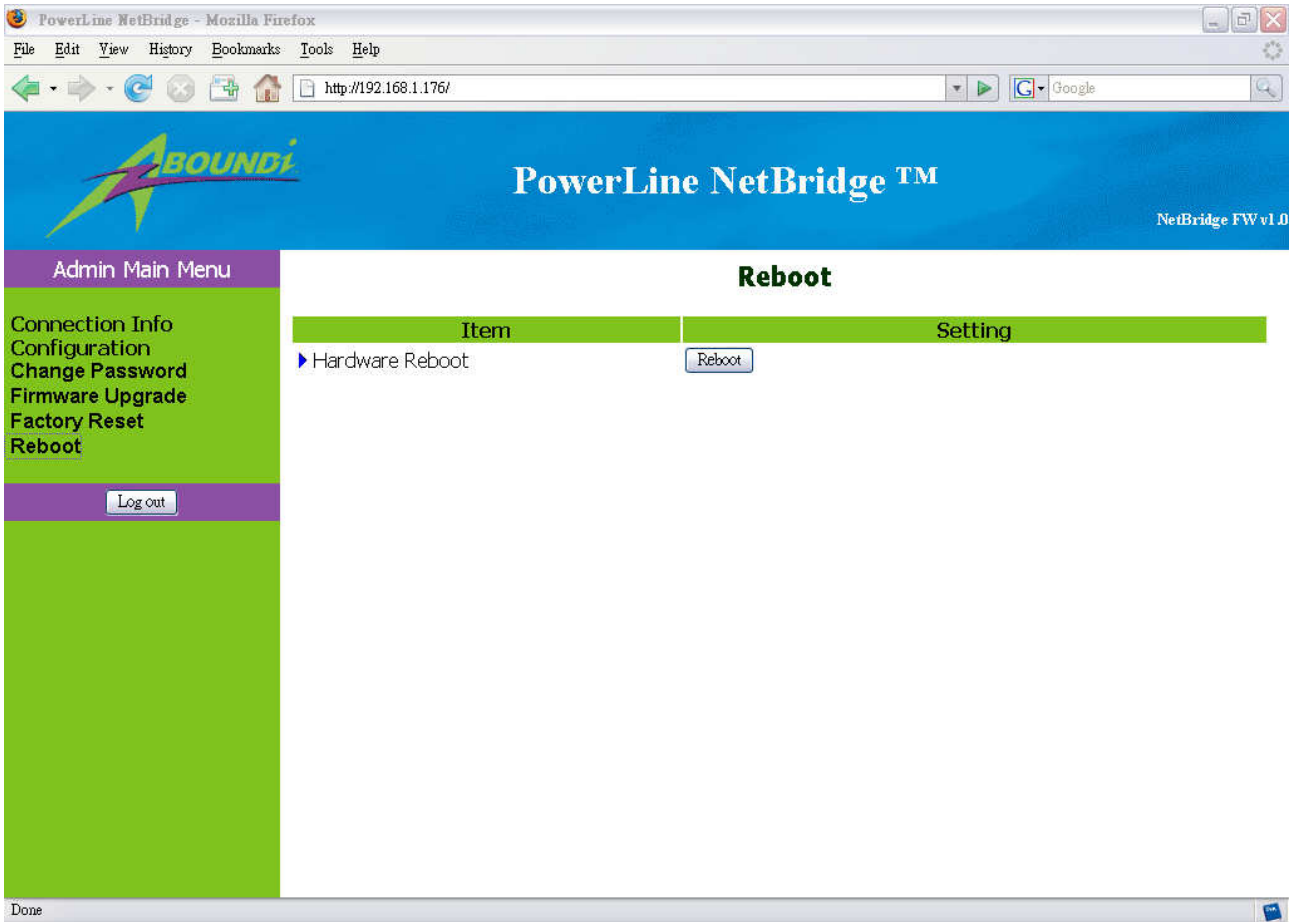


Figure 3.7 Reboot Page

4. Default Settings

Administration Password: **admin**

IP Address: **0.0.0.0**

Network Identifier: **Electric-Connect**

Mac Node: **Client**