WLL6240(RoHS)
H8N-WL6240
AR5BMB97 MPCI Module
User's Guide

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WARNING: Warnings call special attention to hazards that can cause system damage, data corruption, personal injury, or death.

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Introduction

The Atheros AR5BMB82 MPCI module implements an IEEE 802.11b/g/n wireless LAN (WLAN) AP with DFS Master function. MIMO operation is implemented using three transmit and three receive chains per the 802.11n standard.

This module may be installed in PC and host processor systems using approved external antennas. The module may be configured for 2.4 GHz operation using the Web Server function. Refer to Appendix A.

2

AP Network Attachment and Configuration

This section provides procedures for connecting and configuring the AP. Configuration can be performed either from a web browser accessing the built-in web server, or by entering commands using the command line interface (CLI). For detailed information on using the web server, refer to "AP Web Server" in Appendix A. For detailed information on using CLI, refer to "AP Command-Line Interface" in Appendix B. For "Factory Default Settings" refer to Appendix B.

AP Initial Configuration

Configure the AP for its Service Set Identifier (SSID) unique to the application. This configuration can be done either through a web browser with access to the built-in AP web server, or by issuing commands through the command line interface (CLI).

Web Browser

Follow these steps to configure the channel frequency and SSID using a web browser:

1. Launch a web browser (Netscape Navigator or Internet Explorer are examples of commonly used web browsers).

2. From the HPC, enter the IP address that is assigned to the AP as the URL address, for example http://192.168.1.1.

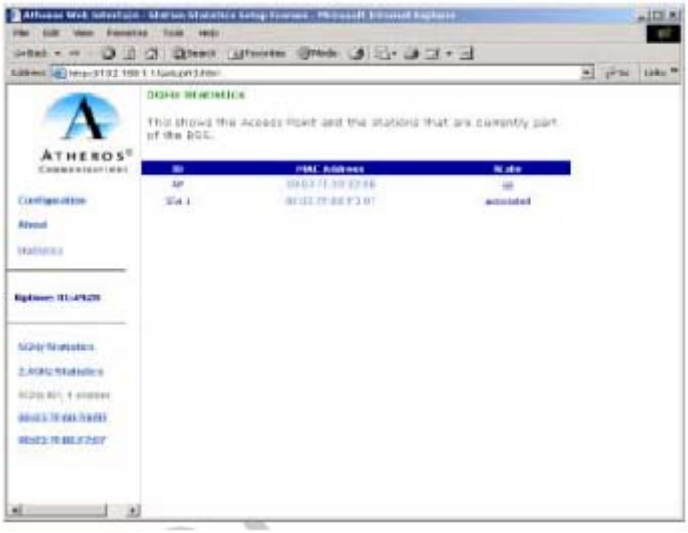
   The Access Point Web Server homepage will appear.

3. Select the Access Point Web Server hotlink.

4. A dialog box appears requesting login authorization. When prompted, enter the following information to log in:

   Log in: **Admin** (case-sensitive)
   Password: **5up**

5. Click OK to complete the login process. The 5 GHz Statistics window appears.



6. Select the Configuration hotlink from the navigation menu.
   The System Configuration window appears.

7. Enter the SSID (name or address) for the AP in the SSID field. The SSID must be 1–32 characters in length.

   To configure a single SSID to have more than one AP in a single SSID, specify a unique System Name for each AP within that single SSID. Note that range of available channels will be automatically determined by factory settings.
8. Click Update to commit the changes.

   Change other settings at this time. Refer to Appendix A for more information.

9. After all configuration changes are complete, reboot the AP to enable them. To reboot the AP, click on the REBOOT AP button that appears.

A

AP Web Server

Configure the access point (AP) either through a web browser interface to the AP web server, or using the command-line interface (CLI) through telnet. The web server resides in the AP and is accessible from any station (STA) that is connected to the AP Infrastructure network.

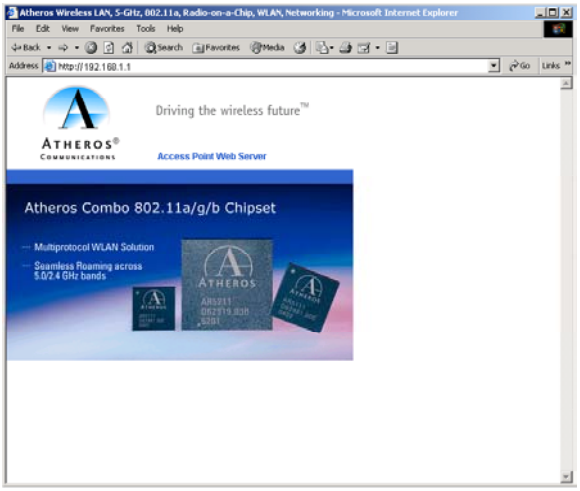
This appendix describes configuring the AP through the AP Web Server.

Accessing the AP Web Server

Follow these steps to access the AP Web Server:

1. Launch a web browser (Netscape Navigator or Internet Explorer are examples of commonly used web browsers).

2. From the HPC, enter the IP address that is assigned to the AP as the URL address. For example, enter http://192.168.1.1. The Access Point Web Server homepage appears.



Customize the appearance of the Access Point Web Server homepage by replacing any of the three .GIF files used on the page. Use FTP to store the replacement .GIF files to the AP. This table summarizes the three .GIF files to replace to customize the homepage.

Filename	Description
logo.gif	Replaces the current Atheros logo with another .GIF file.
tagline.gif	Replaces the tagline "Driving the wireless future" with a new tagline.
cover.jpe	Replaces the Atheros AR5001AP chipset photograph with a new photograph.

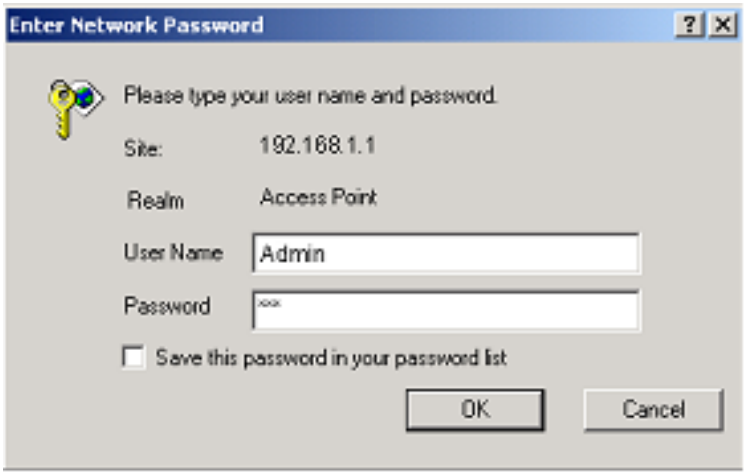
For example, the .GIF file containing the full path filename for a company logo can be replaced with another .GIF file.

3. Select the Atheros Access Point Web Server hotlink.

4. A dialog box appears requesting login authorization. When prompted, enter the following information to log in:

   Log in: **Admin** (case sensitive)

   Password: **5up**



5. Click OK to complete the login process.

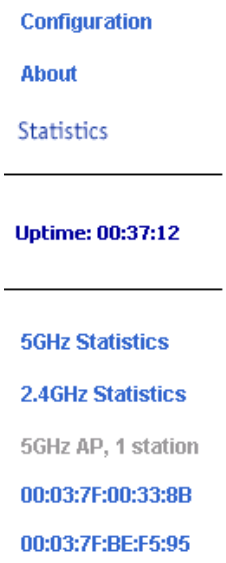
NOTE: The web browser must support frames and Java script must be enabled.

Configuration Windows

The Web Server Configuration windows allow viewing and editing of configuration information for the AP. The Web Server provides configuration windows for:

- System configuration parameters
- 2.4 GHz radio configuration parameters
- 2.4 GHz statistics
- Security
- Configuration scripts
- Firmware updates

To access any of these AP configuration screens, click on the desired hotlink from the navigation bar on any configuration screen:



Working with Configuration Windows

The Web Server Configuration windows provide a user-friendly interface to aid in quick configuration of the AP. After making any additions or changes to any configuration window, update the configuration file to save the changes. The new configuration is not in effect until the AP is rebooted.

Follow these steps to update configuration files:

1. Enter the configuration updates or changes in the appropriate configuration fields.

2. Click
   Update.

3. Click Reboot AP to make the changes

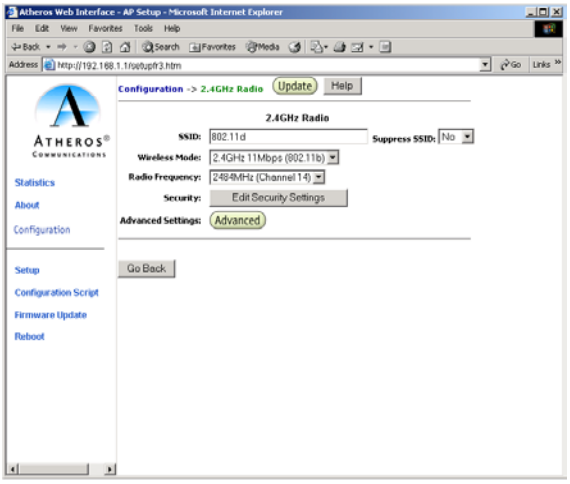
   effective.

   The web server loses connectivity with the Web Server as the AP reboots.

   To reestablish the connection with the Web Server, wait until the AP has completed rebooting and navigate to the Web Server to resume communication.

2.4 GHz Radio Configuration Window

The 2.4 GHz Radio Configuration window allows the setting of generic 2.4 GHz radio operating information for the AP. The Device's firmware may limit the allowable settings depending on Regulatory Domain (country) of operation. From the AP System Configuration window, click on Edit 2.4 GHz Radio Settings to access the 2.4 GHz Radio Configuration window.



This table summarizes the data fields on the 2.4 GHz Radio Configuration window.

General Configuration Field	Description
SSID	Identification of the AP. Enter a number or address between 1 and 32 characters in length that the STAs are associating with in Infrastructure mode. More than one AP in an SSID can be specified here. Use the System Name field to uniquely identify each AP.
Suppress SSID	Use the checkbox to prevent broadcast of the AP's SSID in beacons. When enabled, the SSID in beacons are not transmitted and only those STAs with prior knowledge of an AP's SSID can associate with that AP.
Wireless Mode	The wireless LAN mode specifies both frequency range and data rates. Firmware loaded on your version of the Access Point at the factory limits the available channel settings.
Security: Edit Security Settings	Click here to edit the security configuration for 2.4 GHz radio operation.
Advanced Settings	Click here to enter advanced configuration for 2.4 GHz radio operation.

B

U.S. Regulatory Wireless Notice

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U.S. Regulatory Wireless Notice

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. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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

This device is intended only for OEM integrators under the following conditions:

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains FCC ID: H8N-WLL6240”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.