4.2.5 System Configuration Options

1. Click the **Network** tab. The **System Configuration** screen displays.

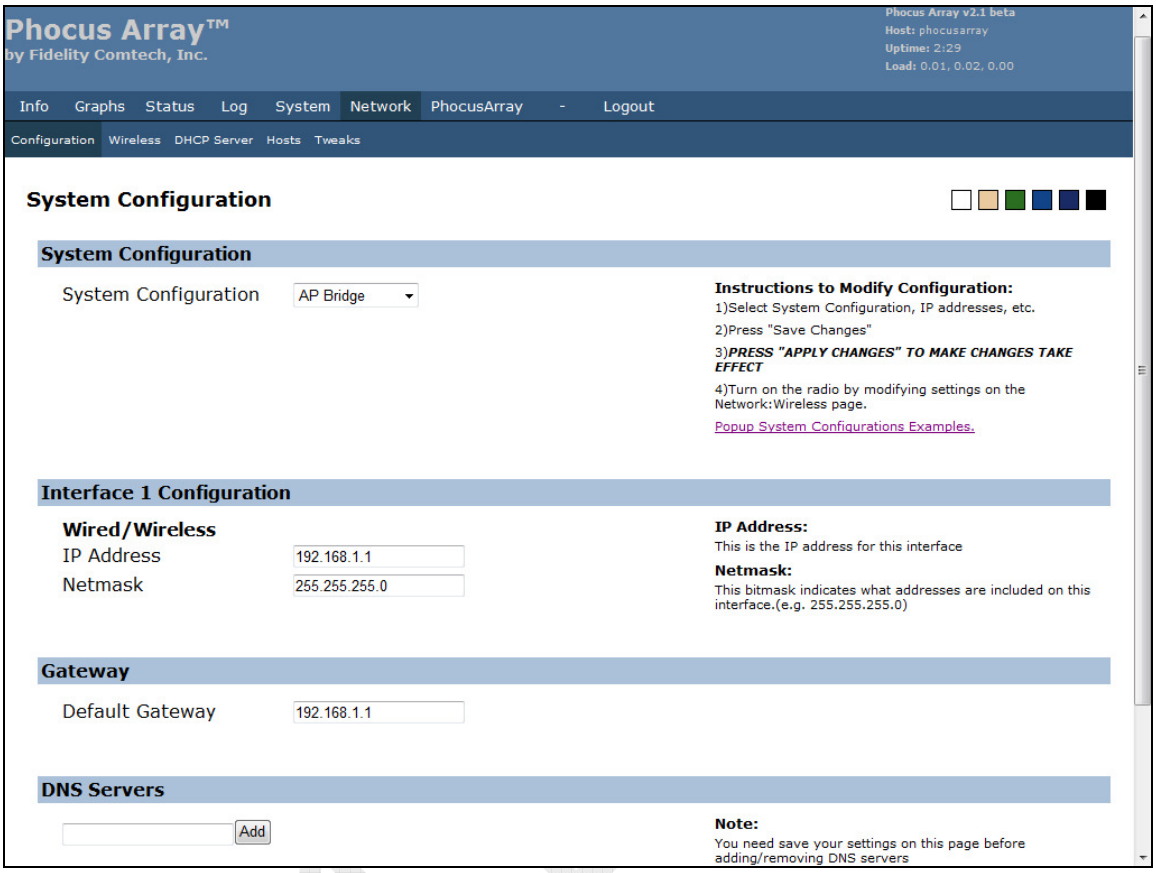

Figure 17 – System Configuration

Use the **System Configuration** drop-down list to select the basic operating mode for the system. The number of interfaces to administer (wired/wireless) and the sequence in which they are listed changes according to which system configuration you select.

Selecting **AP Bridge**, as shown above, results in only a single wired/wireless interface, whereas selecting **AP Router** results in two interfaces, one wired and one wireless.

> **Caution**: The sequence of types of interfaces displayed changes when you select a different **System Configuration**. Please re-verify that the **IP Address**, etc. is correct for each wired and wireless interface before saving and applying changes. If you apply changes to the system with incorrect IP addresses, this can render the Phocus Array system inoperable and require extensive work to recover the system.

2. Enter the correct IP Addresses in the **Wireless Interface** and **Wired Interface** fields. Click the **Popup System Configurations Examples** link under the **System Configuration** section for detailed descriptions of the configuration options.

> **Caution**: The relative positions of the **Wireless** and **Wired** interfaces change when the **System Configuration** is changed from **AP Router** or **Ad Hoc Router** to **Client Router**. Always check the IP Address and other settings.

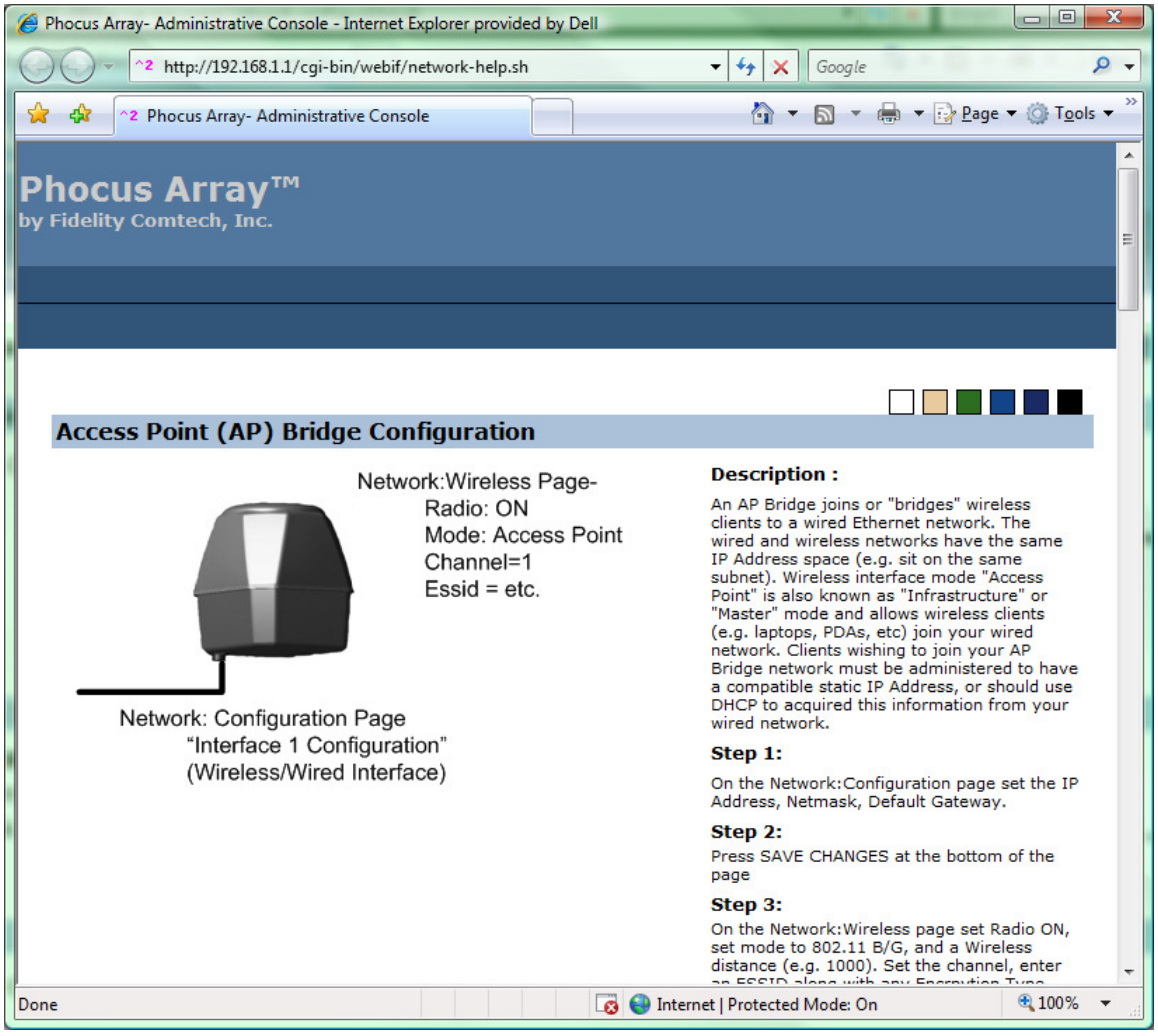

Figure 18 – System Configurations Examples

3. Select the desired configuration from the **System Configuration** drop-down list.

AP Bridge has only one interface to configure.

a. Under **Interface 1 Configuration**, you can see fields for the **IP Address** and **Netmask** of the interface. These may be configured if desired.

b. Click the **Save Changes** button.

c. Click **Apply Changes**.

Note: When these changes are applied to the wired network, the IP address of the Phocus Array System will change, requiring reconfiguration of your administration computer or network to continue communicating with the Phocus Array System.

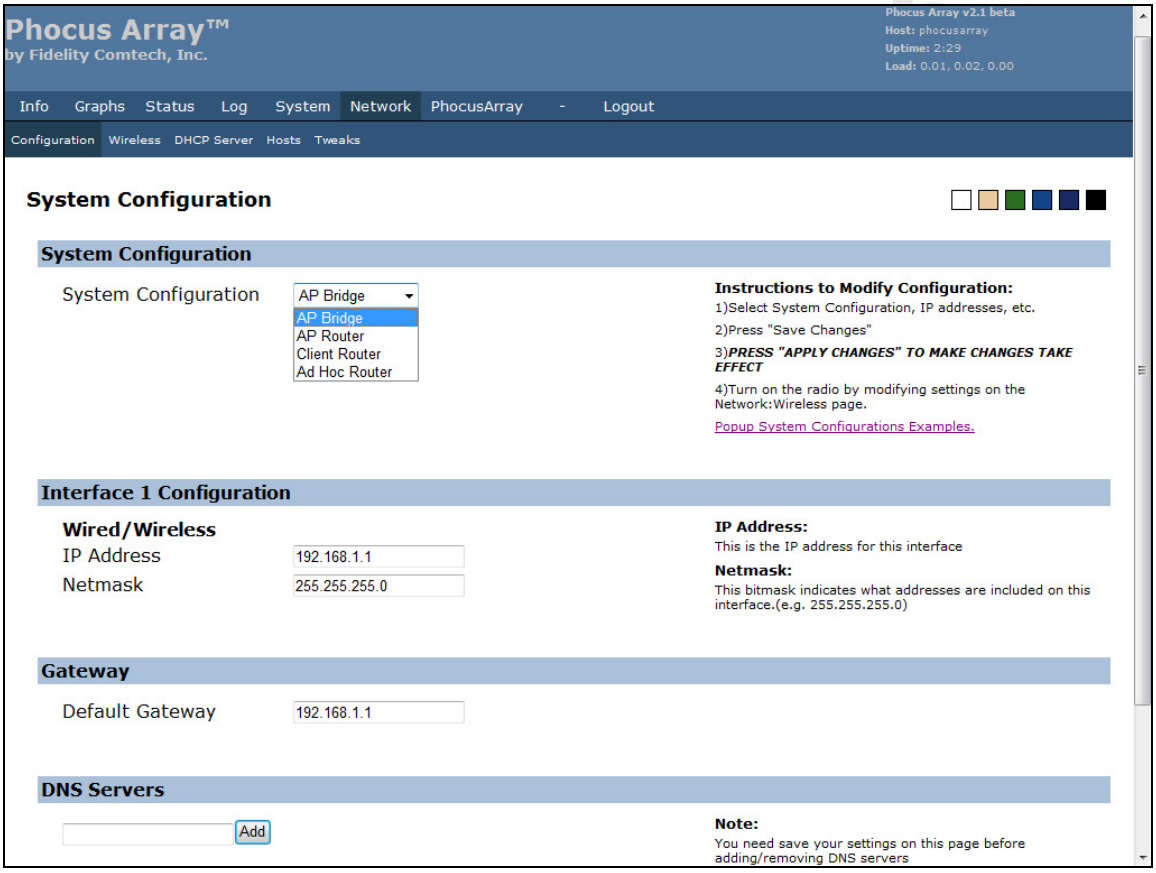

Figure 19 – System Configuration Options

Caution: Optional **DNS Servers** settings should be saved **after** saving changes for **System Configuration** and **Interfaces**. If you accidentally added DNS servers out of order, simply click the **Remove** button to eliminate DNS servers. You may then administer the interfaces, save changes, and add DNS servers.

AP Router

a. Under **Interface 1 Configuration**, enter the **IP Address** for the **Wireless Interface**.

b. Under **Interface 2 Configuration**, enter the **IP Address** for the **Wired Interface**.

c. Click the **Save Changes** button.

d. Click **Apply Changes**.

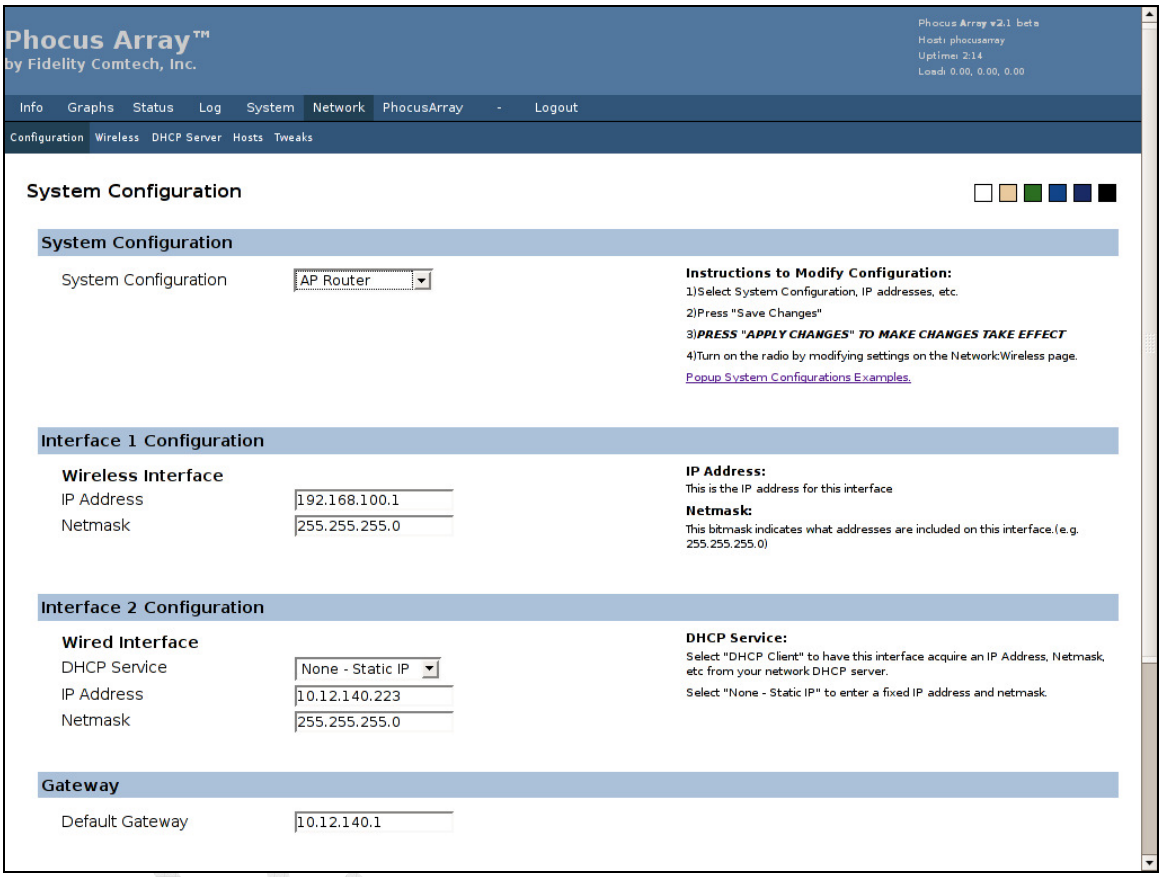

Figure 20 – AP Router Configuration

Client Router

Note: The relative positions of the **Wireless** and **Wired** interfaces change when the **System Configuration** is changed from **AP Router** or **Ad Hoc Router** to **Client Router**. Always check the **IP Address** and other settings. Enter the correct **IP Addresses** in the **Wireless Interface** and **Wired Interface** fields.

a. Under **Interface 1 Configuration**, enter the **IP Address** for the **Wired Interface**.

b. Under **Interface 2 Configuration**, enter the **IP Address** for the **Wireless Interface**.

c. Click the **Save Changes** button.

d. Click **Apply Changes**.

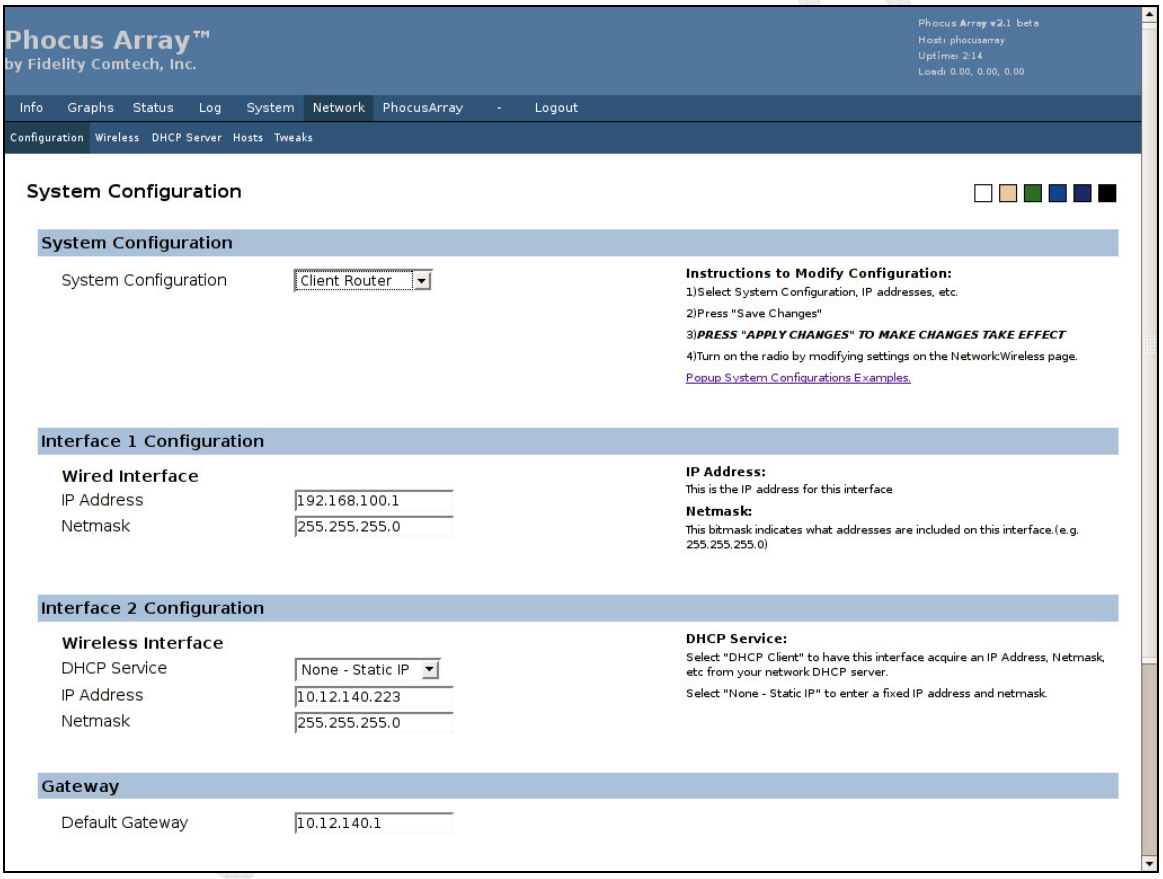

Figure 21 – Client Router Configuration

Ad Hoc Router

Note: The relative positions of the **Wireless** and **Wired** interfaces change when the **System Configuration** is changed from **Client Router** to **Ad Hoc Router** or **AP Router**. Always check the **IP Address** and other settings. Enter the correct **IP addresses** in the **Wireless Interface** and **Wired Interface** fields.

a. Under **Interface 1 Configuration**, enter the **IP Address** for the **Wireless Interface**.

b. Under **Interface 2 Configuration**, enter the **IP Address** for the **Wired Interface**.

c. Click the **Save Changes** button.

d. Click **Apply Changes**.

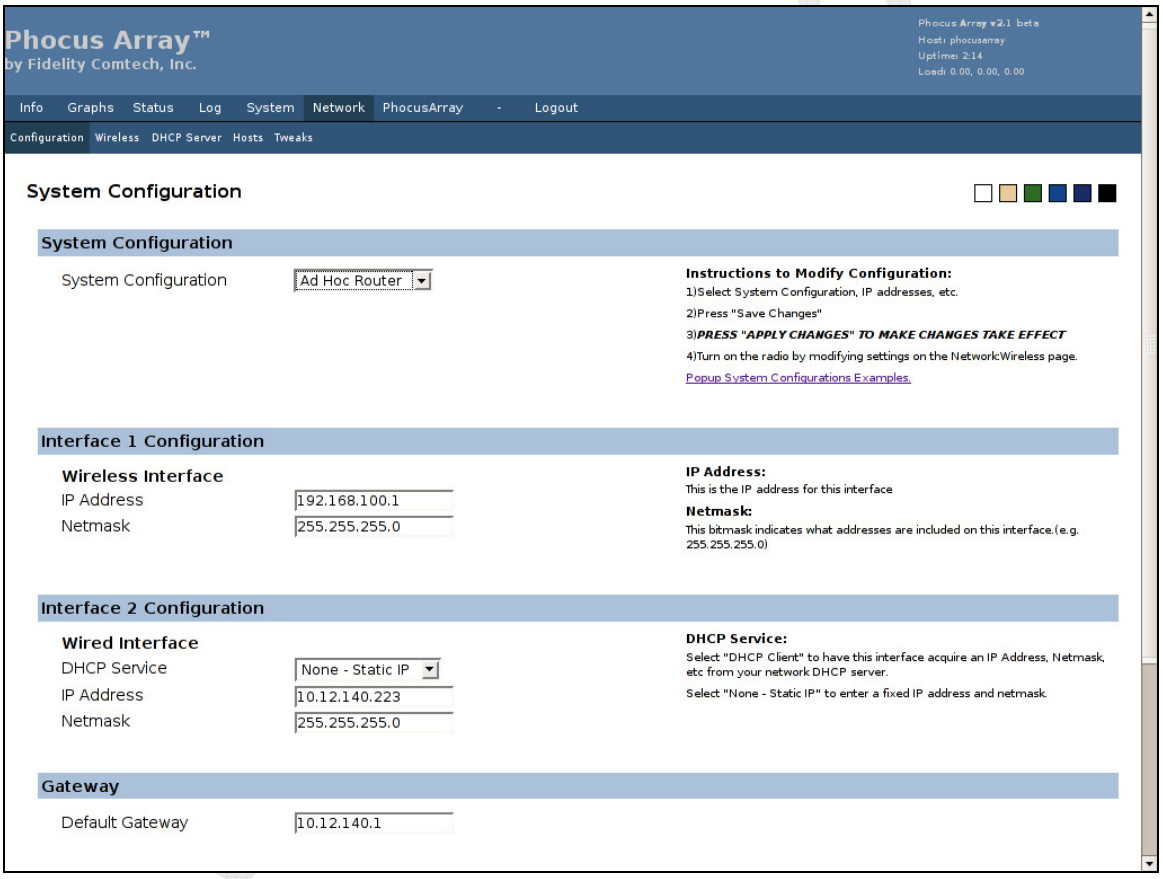

Figure 22 – Ad Hoc Router Configuration

4.2.6 Wireless Adapter Configuration

1. Click **Wireless** in the **Network** menu bar.
2. Enter the **Wireless Adapter** configuration.
3. Enter the **ESSID** configuration.
4. Select the **Encryption Type** from the drop-down list.
5. Enter the **Passphrase** (for WEP).
6. Enter the **WEP Key** or **WEP PSK** in the appropriate field.
7. Click the **Save Changes** button.
8. Click **Apply** Changes.

> **Caution**: Modification of the **Encryption Type** requires the Phocus Array System to be rebooted. After saving and applying changes, you must reboot the system for the new encryption settings to take effect.

9. Click **Reboot** in the **System** menu bar.
10. Click **Yes, really reboot now**. The system will be taken out of service for about two minutes when rebooted. It boots to the last saved/applied configuration.

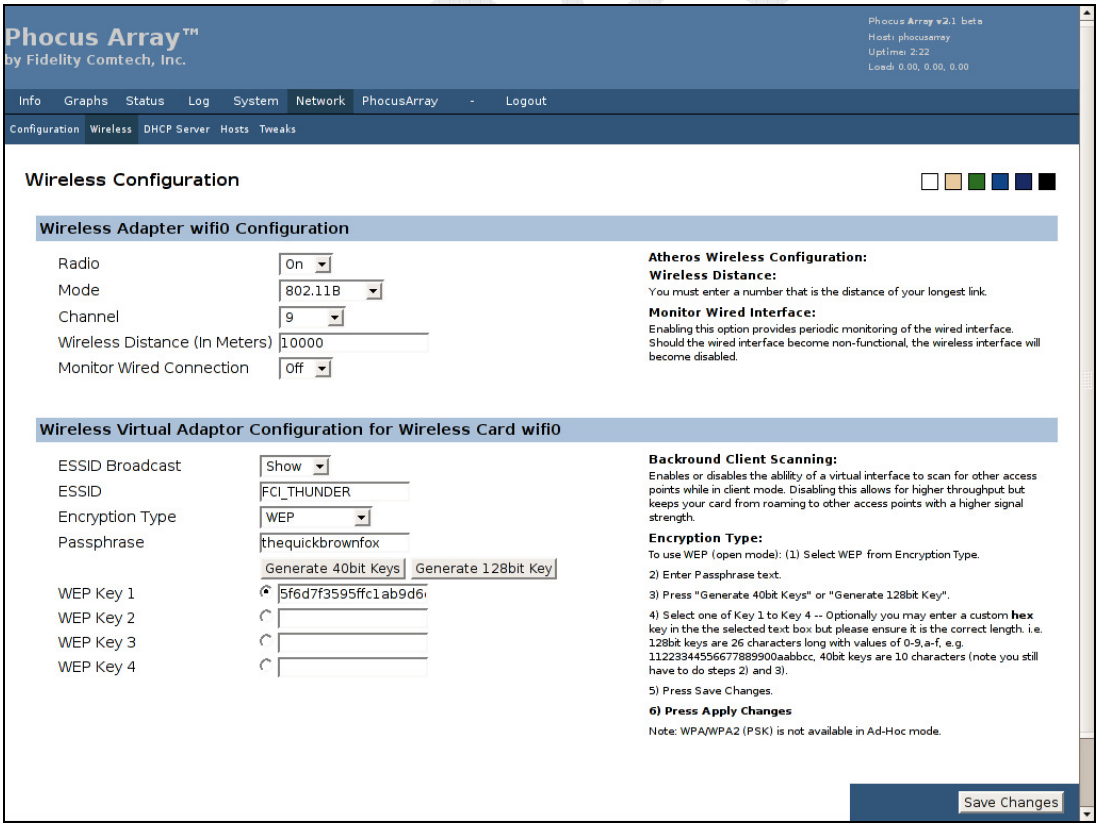

Figure 23 – Wireless Configuration – WEP

4.2.7 DHCP Server Configuration (optional)

The system can be configured to serve DHCP information (e.g. IP address) to the LAN by enabling the DHCP server. The LAN in this case would be the **Wireless Interface** for a system configuration of **AP Router** of **Ad Hoc Router**, or **Wired Interface** for a system configuration of **Client Router**. DHCP server is not available for the **AP Bridge** configuration.

1. Click **DHCP Server** in the **Network** menu bar.
2. Select **Enabled** from the **DHCP Service** drop-down list.
3. Enter the **DHCP Server** configuration.
4. Click the **Save Changes** button.
5. Click **Apply Changes**.

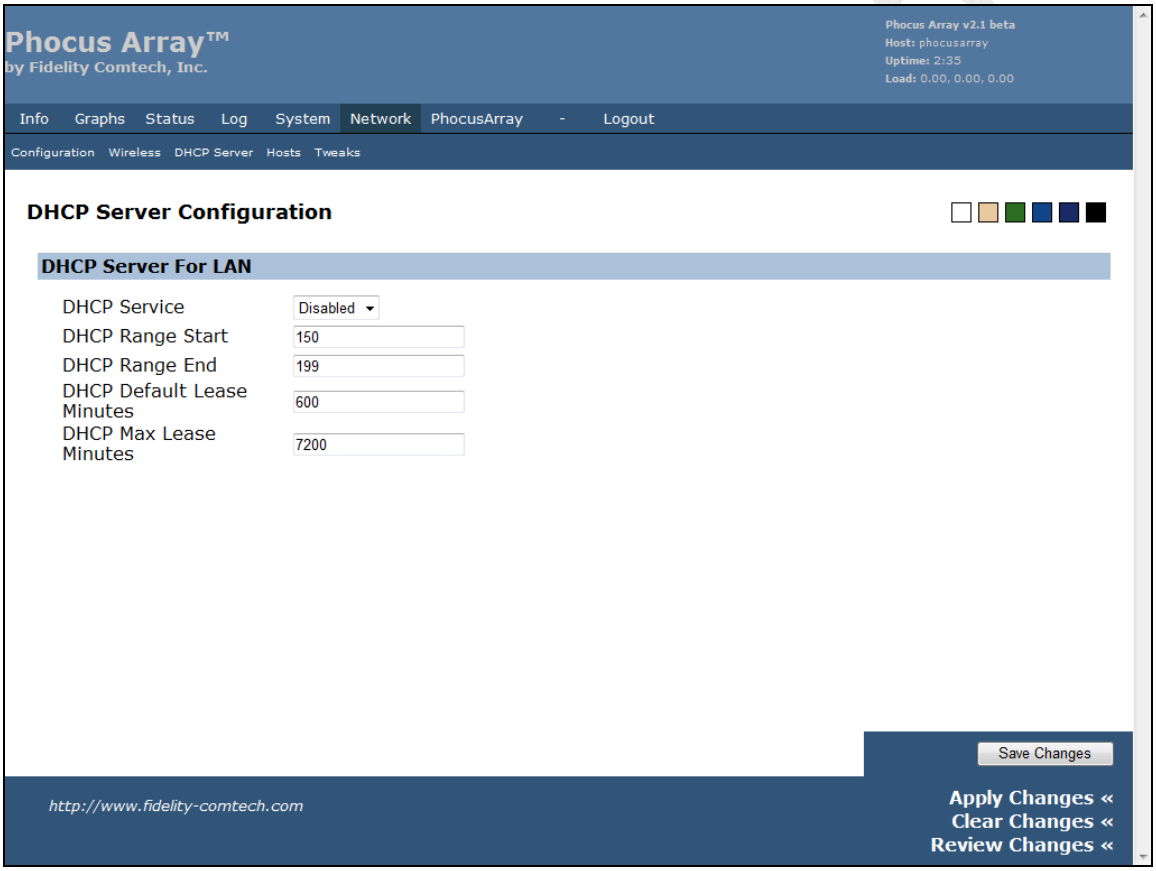

Figure 24 – DHCP Server Configuration

4.2.8 Adding Hosts (optional)

1. Click **Hosts** in the **Network** menu bar.
2. To add a device to the network, enter the **IP Address** and the **Host Name**.
3. Click the **Add** button.
4. Click the **Save Changes** button.
5. Click Apply Changes.
6. To add **Static IP Addresses (for DHCP)**, enter the device's **MAC Address** and **IP Address**.
7. Click the **Add** button.
8. Click the **Save Changes** button.
9. Click **Apply Changes**.

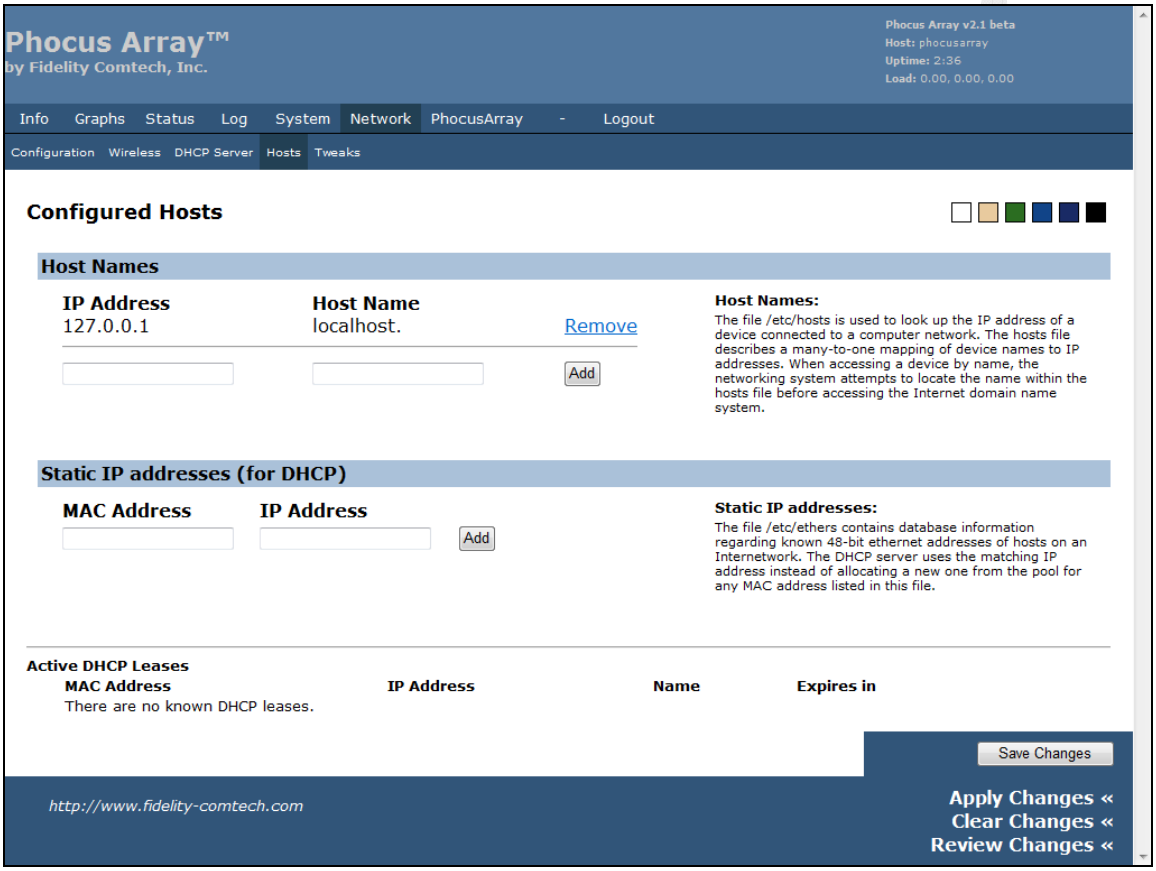

Figure 25 – Adding Hosts

4.2.9 Antenna Configuration

1. Use the **PhocusArray** screens to configure the behavior of the antenna and to monitor the stations associated with the unit.
2. Click the **PhocusArray** tab. The **Configure Antenna** screen displays.
3. Select the desired **Antenna Mode** from the drop-down list.
4. Set the **Sweep Interval**, if desired.
5. Click the **Save Changes** button.
6. Click **Apply Changes**.

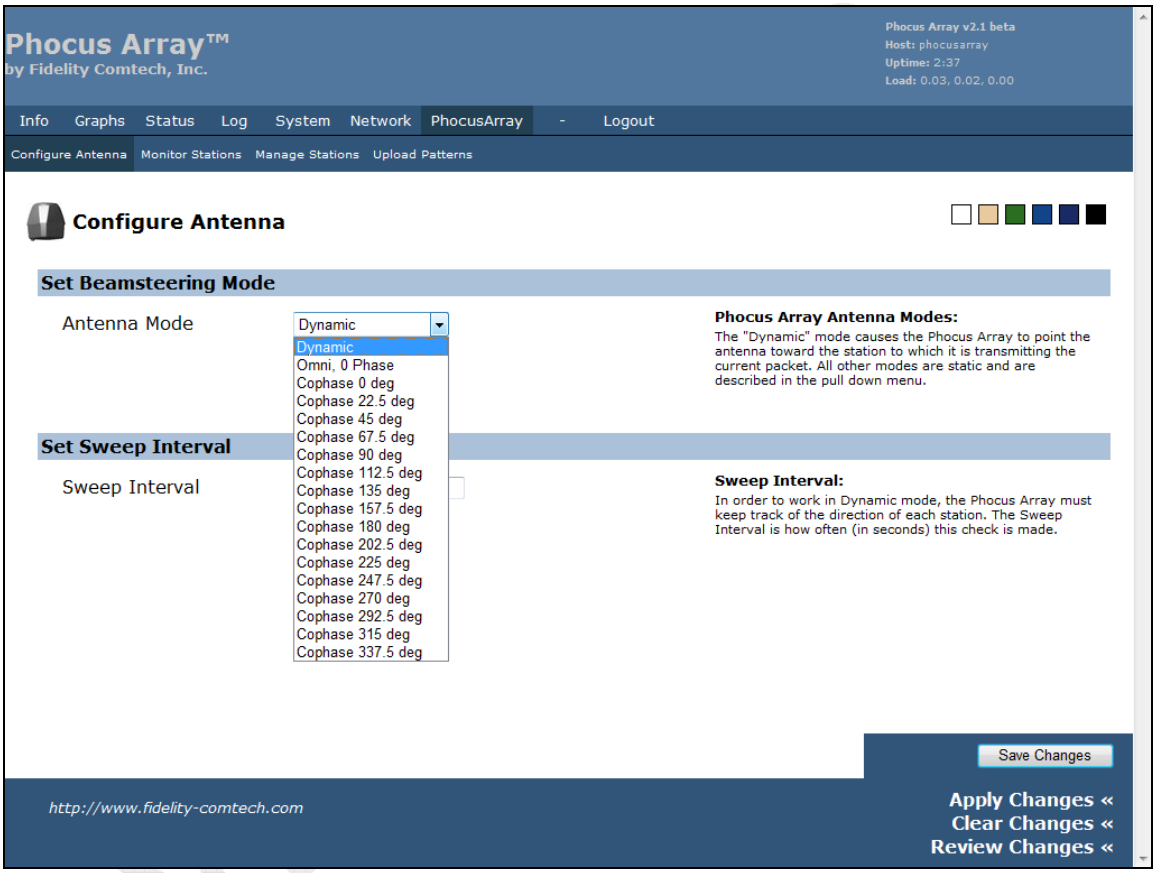

Figure 26 – Configure Antenna

Once the above steps have been completed, a wireless client should be able to find and associate the Phocus Array System in AP mode.

4.2.10 Manage Stations (optional)

To help monitor associations with Phocus Array System, associated stations can be named using the Manage Station page. While a client is associated with the system, it can be assigned a name that will be displayed on the Monitor Stations page. If the station disassociates the name will be retained internally in the system and will automatically reappear if the same wireless MAC Address again associates with the system

This is a useful security feature because new, possibly unauthorized, stations will appear as a MAC Address (without a name). A system administrator would easily recognize “unnamed” associated stations as potential security risk.

1. Click **Manage Stations** in the **PhocusArray** menu.
2. Enter the **MAC** address and a **Nickname** for each Phocus Array station.
3. Click the **Save Changes** button.
4. Click **Apply Changes**.

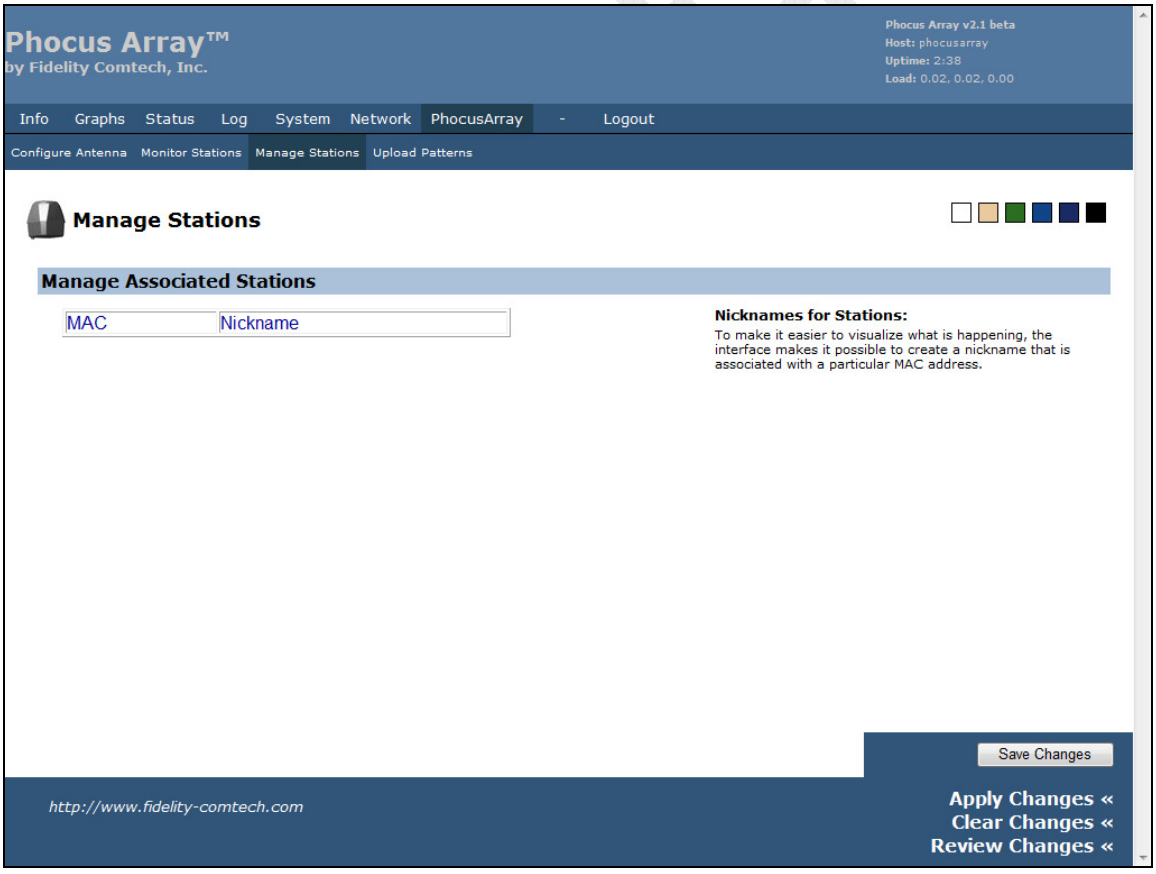

Figure 27 – Manage Stations

5 Using the Administrative Console

This section discusses the Administrative Console for the Phocus Array System. For a quick start guide to simply getting a Phocus Array System up and running on a network, refer to Section 4, *Configuration and Software Setup*.

Most common tasks can be performed using the Administrative Console for the Phocus Array System, making it the preferred method to access the system. Common tasks include:

- Installation and setup of the wireless and network parameters
- Monitoring client associations

5.1 Using the Administrative Console

To access the console, perform steps 1 through 4 in Section 4.2 (pages 30 through 27).

There are seven different categories of settings, each accessible from a tab at the top of the page. Most categories have several menu options, accessible from the menu bar just below the tabs. These options are discussed in the following sections.

- **Info –** System, About
- **Graphs –** CPU, Traffic IO, Traffic eth0, Traffic eth1, Traffic br-lan, Traffic wifi0
- **Status –** System, Processes, Interfaces, DCHP Clients, Netstat, Iptables
- **Log –** Syslog Settings, Syslog, Kernel
- **System –** Settings, Password, Backup and Restore, Upgrade, Reboot
- **Network –** Configuration, Wireless, DHCP Server, Hosts, Tweaks
- **PhocusArray –** Configure Antenna, Monitor Stations, Manage Stations, Upload Patterns
- **Logout**

5.2 Info Tab

The **Info** menu contains the following tabs:

- **System** – system information
- **About** – information about Release 2.1

5.2.1 System

The screen displays complete system information on hardware and software.

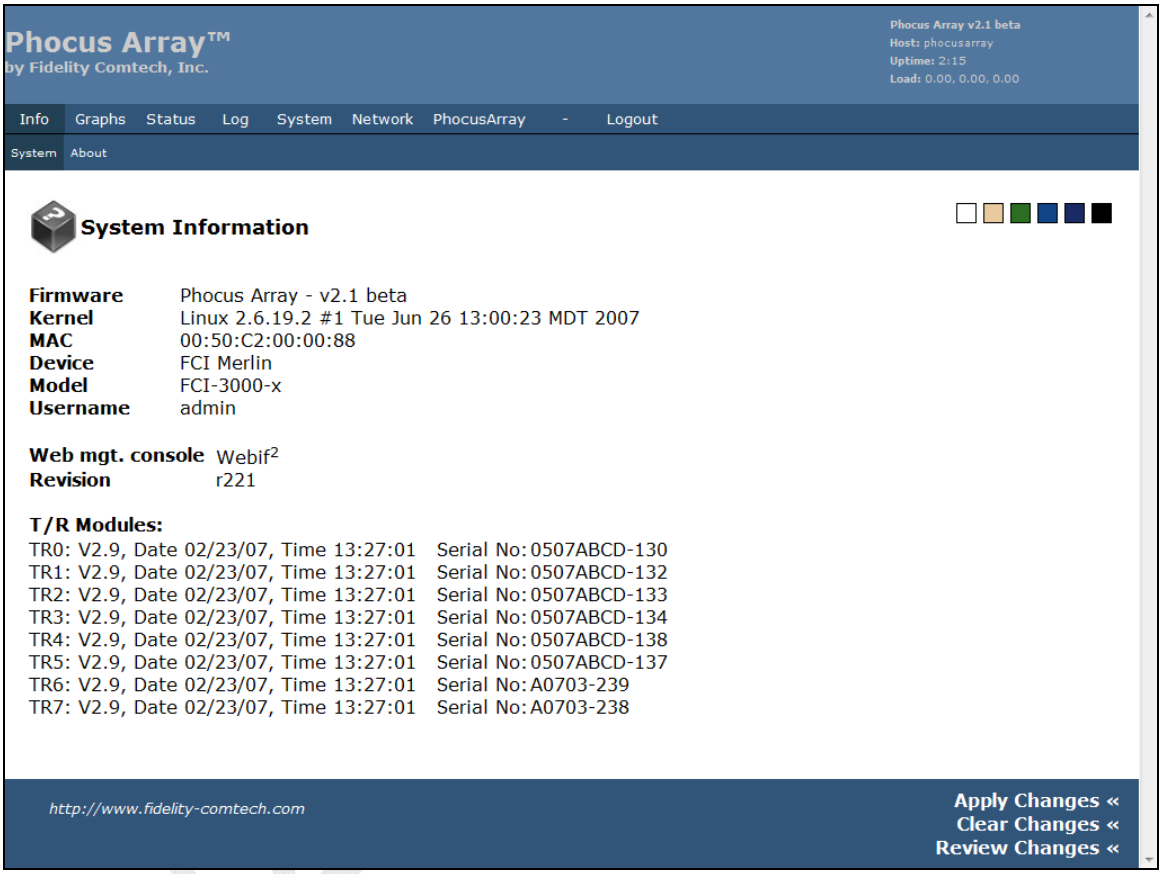

Figure 28 – Info > System: System Information

5.2.2 About

The screen displays a continuous scrolling list of information about Release 2.1, including **Contact** information and **Webif2 Credits**.

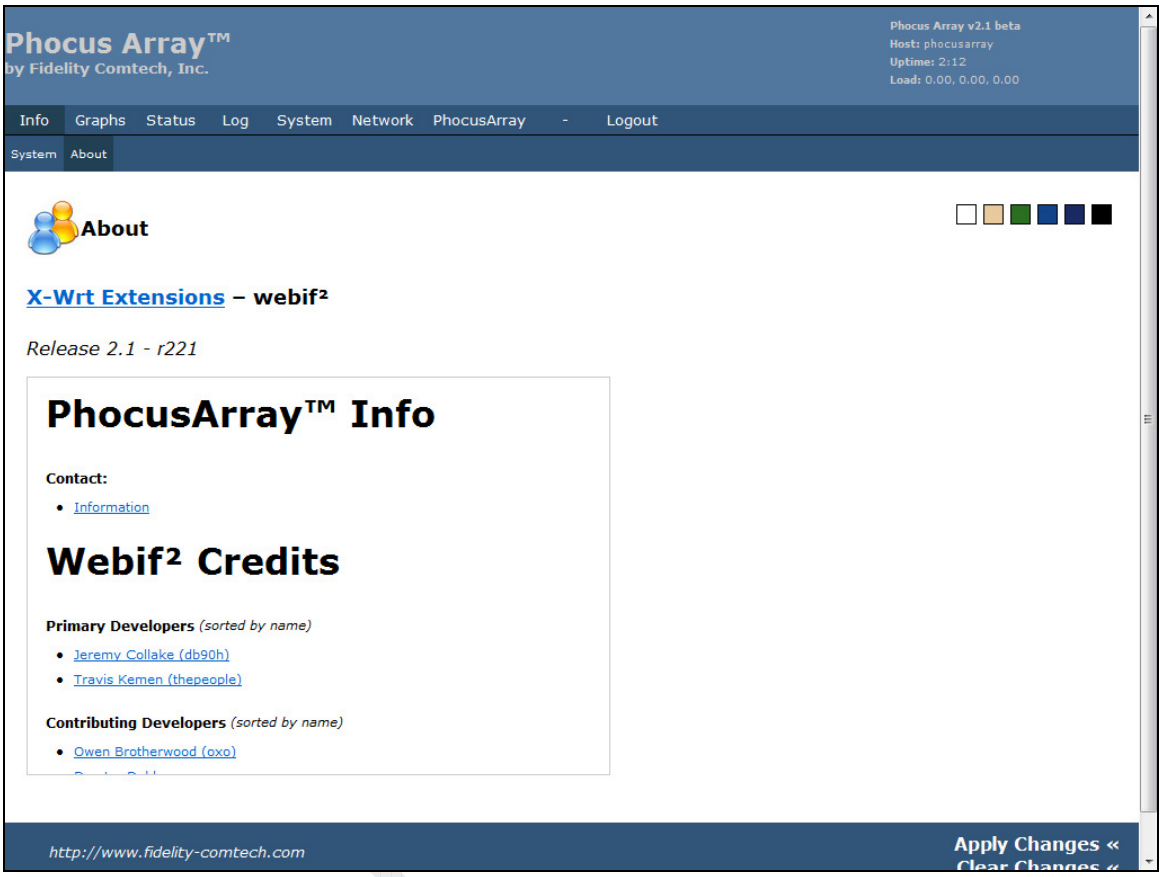

Figure 29 – Info > About

5.3 Graphs Tab

The **Graphs** menu contains the following tabs:

- **CPU** –shows CPU utilization
- **Traffic lo** – shows traffic on the local loopback interface and can be ignored.
- **Traffic eth0** – shows traffic on the wired interface.
- **Traffic eth1** – should be ignored.
- **Traffic br-lan** – if configured as an AP bridge, shows traffic passing through the bridge..
- **Traffic wifi0** – shows wireless interface traffic.
- **Traffic ath0** – shows same graph as **wifi0**.

Note: These graphs require SVG capability from your browser. To display the graphs you must use a browser that supports SVG, such as Mozilla Firefox 2.0.

5.3.1 CPU Usage

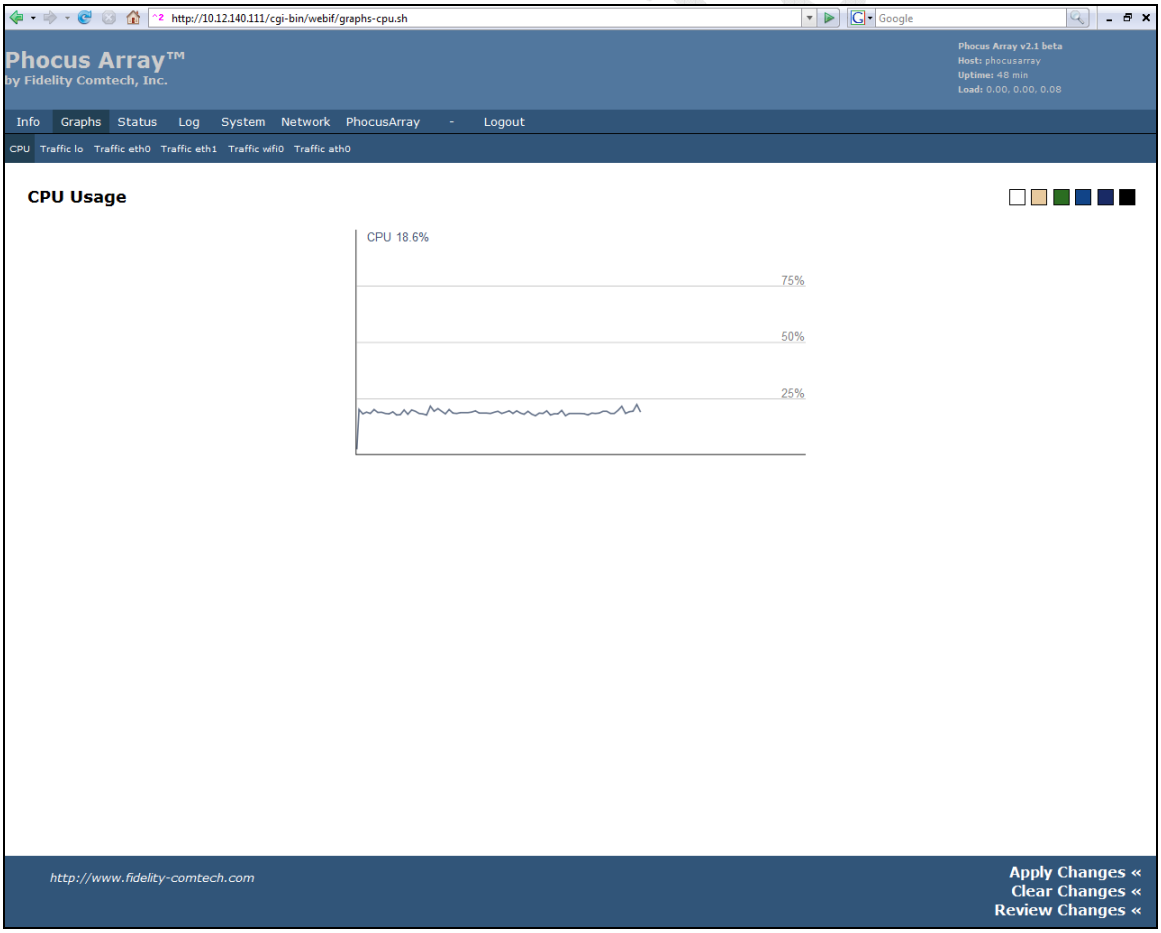

Figure 30 – Graphs > CPU

5.3.2 Traffic wifi0

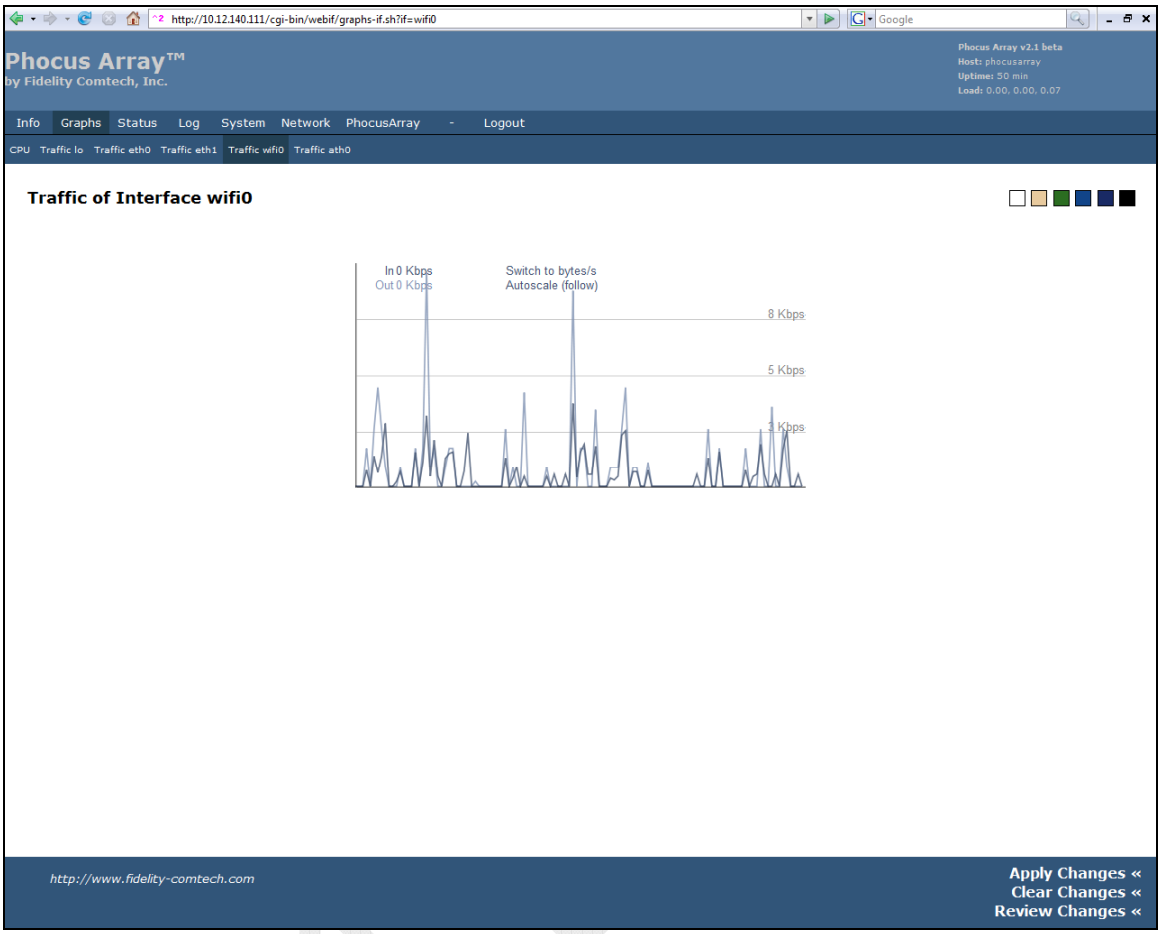

Figure 31 – Traffic wifi0

5.4 Status Tab

The **Status** menu contains the following tabs:

- **System** – device status: RAM usage, tracked connections, mount usage
- **Processes** – all running processes
- **Interfaces** – LAN and WLAN interface data
- **DHCP Clients** – DHCP leases and related information
- **Netstat** – Ethernet/wireless physical connections, routing table, router listening ports, connections to the router
- **Iptables** – Iptables status for IP packet handling rules tables

5.4.1 System

The screen displays **RAM Usage**, **Tracked Connections**, and **Mount Usage**.

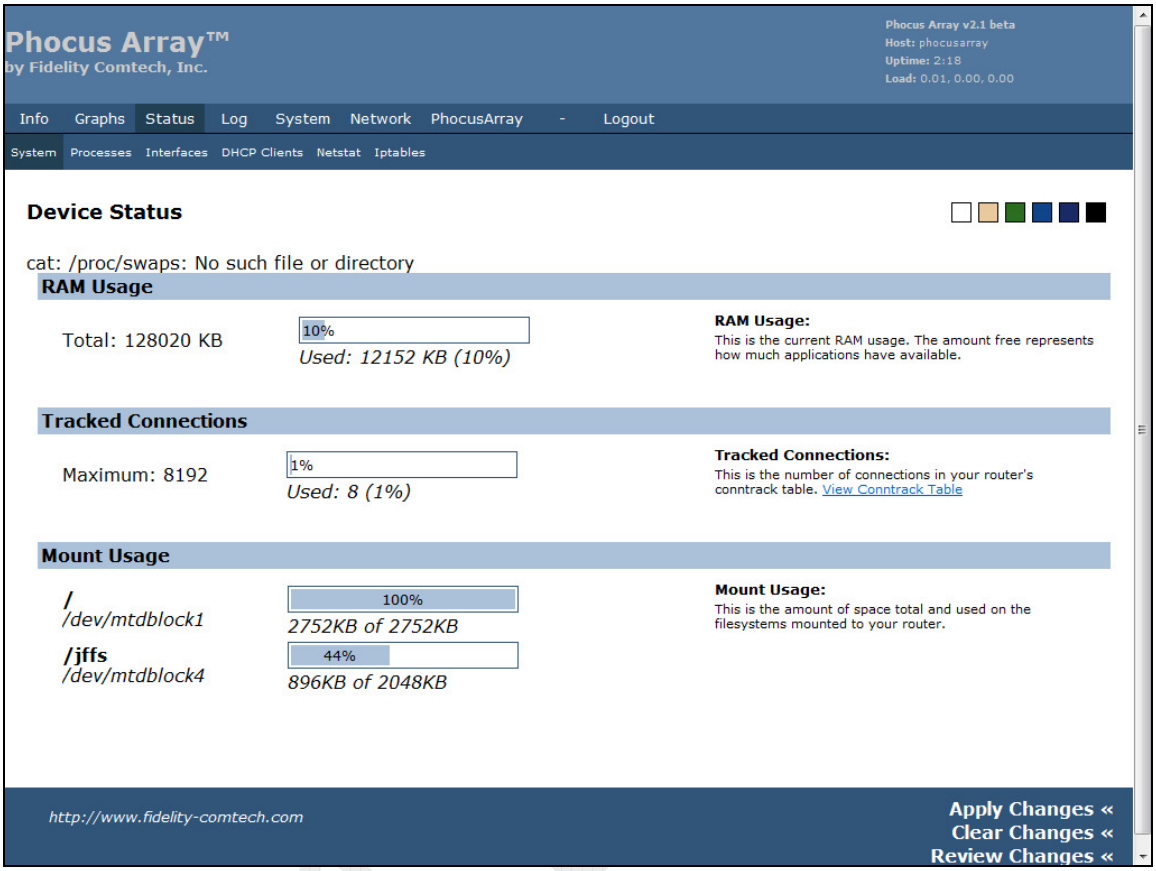

Figure 32 – Device Status

You can click the **View Conntrack Table** link to show the connections being utilized on your system. It allows you to roughly follow the packets UDP/TCP transactions over time.

Note: At this time this page is untested and may not work.

5.4.2 Processes

The screen displays all processes that are running.

Click the **see the legend** link for more information about the fields.

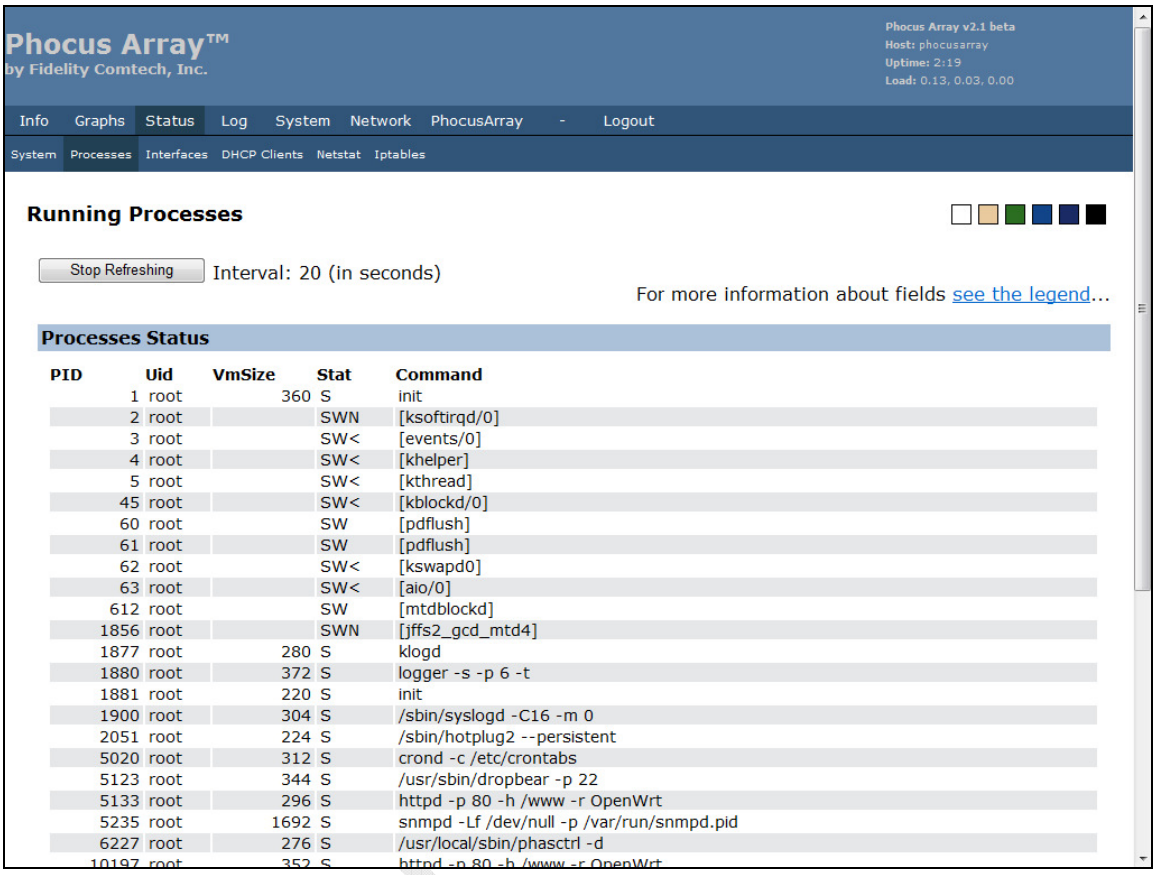

Figure 33 – Running Processes

5.4.3 Interfaces

The screen displays **LAN** and **WLAN** interface data. Click the **Show raw statistics** button to view the low-level interface status and configuration, which can be helpful when calling Technical Support

Note: The **WAN** and **LAN** designations change according to the **System Configuration.**

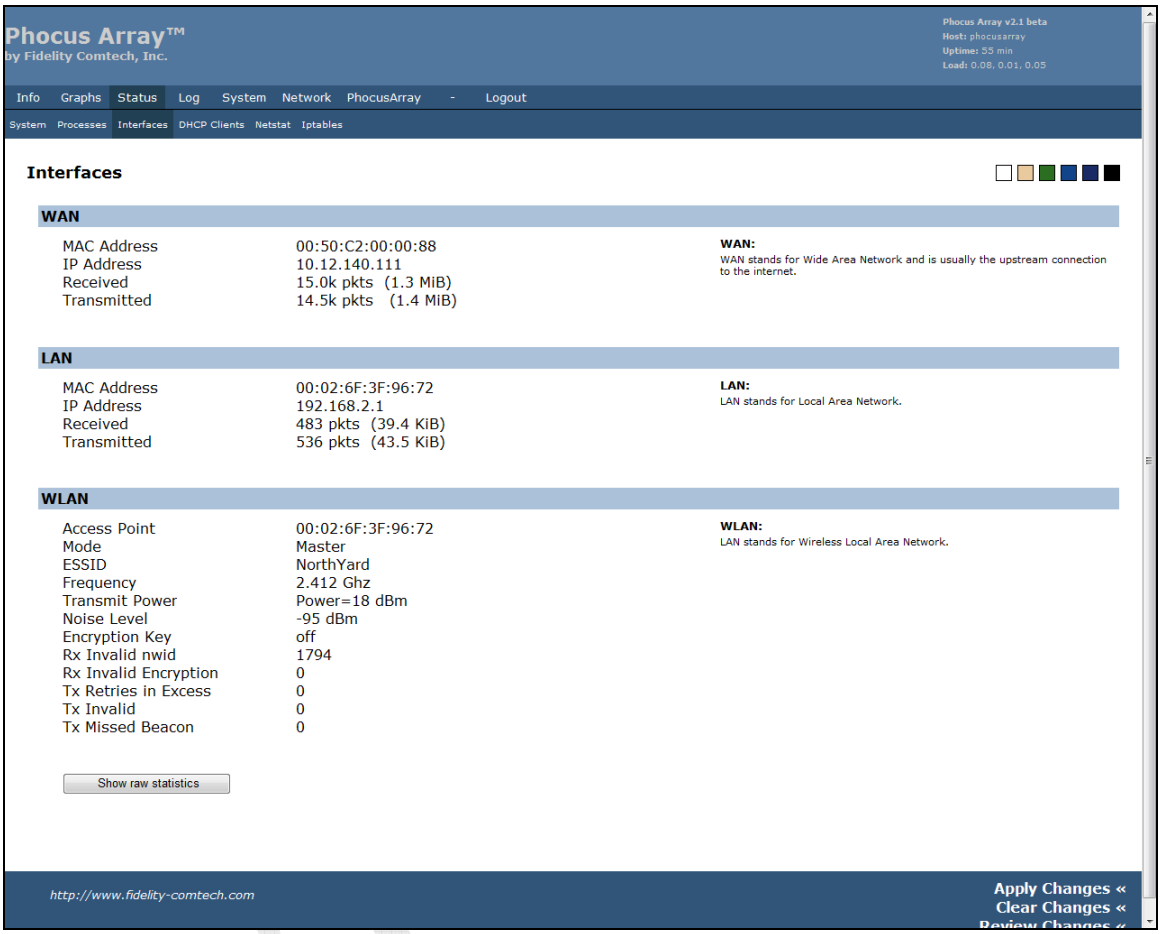

Figure 34 – Interfaces