

**PEP WAVE**  
Broadband Possibilities

**Pepwave Device Connector  
User Manual**

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# PEPWAVE

Broadband Possibilities

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# 1. Getting Started

## What's in the Box

### DCS-GN

- 12V power supply
- 2.4GHz 5dBi omni antenna

### DCS-AGN

- 12V power supply
- 2x dual-band 5dBi omni antenna

### DCS-GN-IP55/DCS-AGN-IP55

- 12V power supply
- 12V Powerwave passive PoE

### DCS-GN-IP67/DCS-AGN-IP67

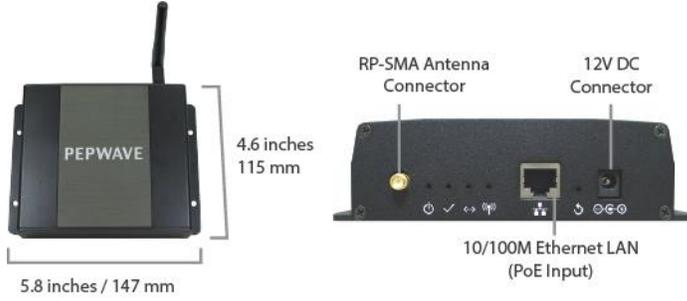
- 1x waterproof Ethernet kit

### DCS-AGN2-IP67

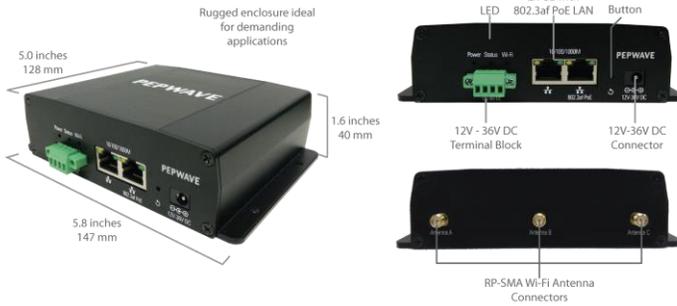
- 1x console adapter
- 1x waterproof power connector kit
- 2x waterproof Ethernet kit

# Get to Know Your Device Connector

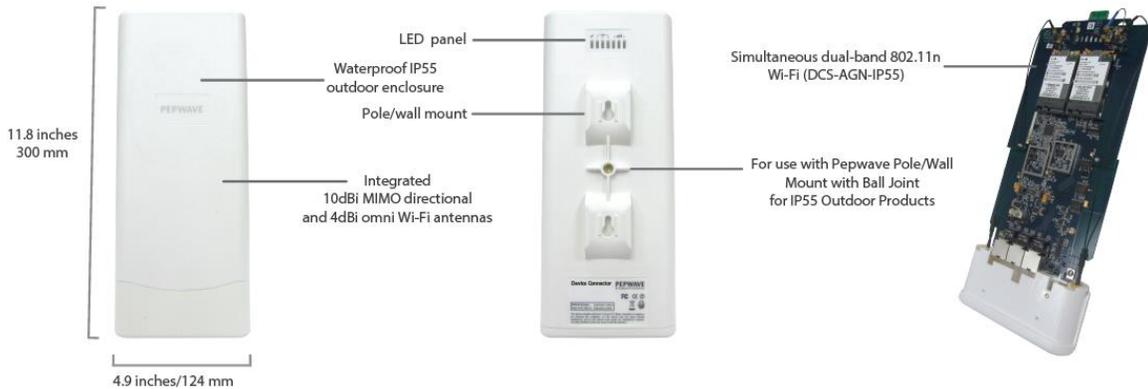
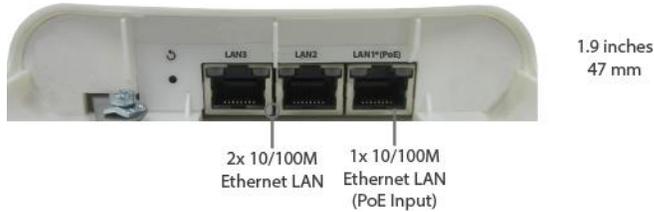
## Device Connector



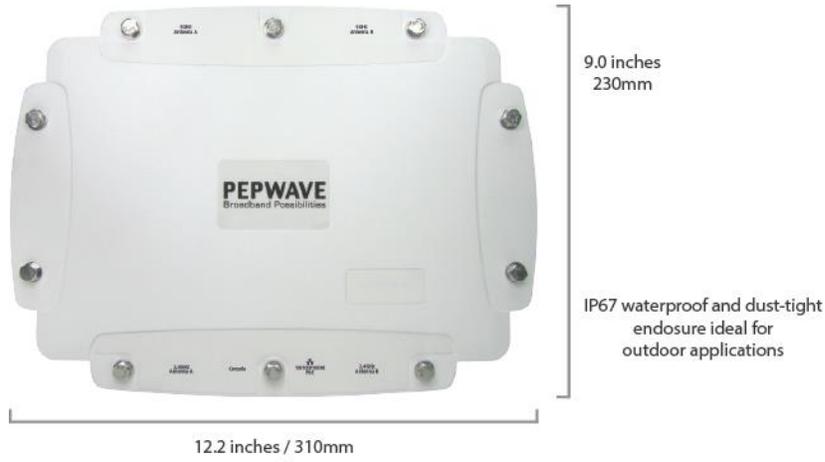
## Device Connector Rugged



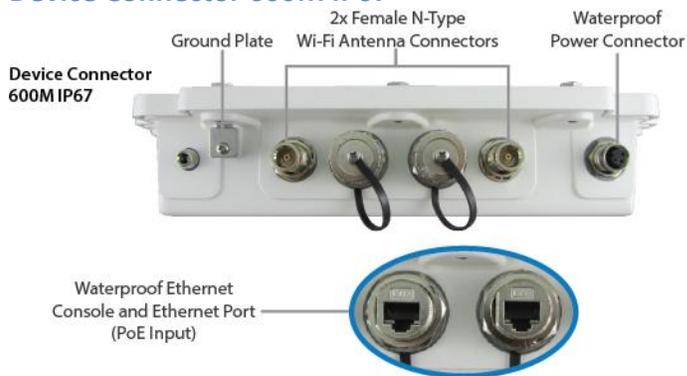
## Device Connector IP55/600M IP55



## Device Connector IP67/300M IP67



## Device Connector 600M IP67



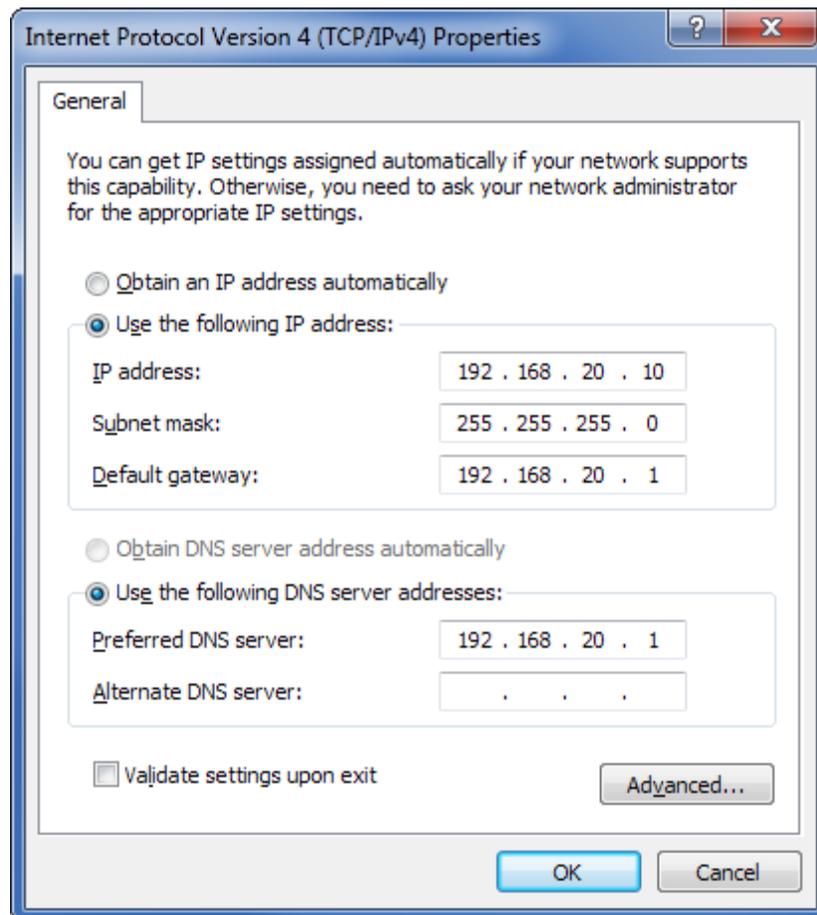
## Access the Web Admin Interface

There are two ways to access the **Web Admin** page.

### Connect by Ethernet

To access the Web Admin page by Ethernet, your PC must be in the same subnet as the Device Connector (*i.e.* 192.168.20.X).

Your PC should be set up as follow on the **Internet Protocol (TCP/IP) Properties** or **Network** screen:



### Connect by Wi-Fi

Connect to the SSID: PEPWAVE\_XXX where XXXX represents the last four digits of your device's serial number (e.g. 7D6E). Passphrase is the last 8 hexadecimal digits of your device's LAN MAC address (e.g. DDC3CCC0)

Now you are ready to start the first time configuration of the Pepwave Device Connector. On your PC, start a web browser, go to this URL:

***http://192.168.20.1/***

## Choose Your Connection Mode

The Device Connector supports both Wi-Fi and wired connection modes.

### Wi-Fi Mode

Use Wi-Fi mode to communicate with vending machines, thermostats, surveillance cameras, and other Ethernet-only devices using TruePower Wi-Fi. For information on configuring Wi-Fi mode, see [Basic Setup](#).

### Wired Mode

To use the Device Connector as a Layer 2 wired bridge, ideal for situations where Wi-Fi access is unnecessary or a security risk, choose wired mode. For information on configuring wired mode, see [Basic Setup](#).

To change settings in Wi-Fi or wired mode, make sure the appropriate mode is selected on the **Dashboard** page under **Switch WAN Mode**, and then click the **Settings** button on the right side of the page.



## 2. Basic Setup

## Basic Setup

The **Basic Settings** page offers a variety of common settings to help you get your Device Connector up and running quickly. To access the **Basic Settings** page, click the **Settings** button on the **Dashboard** (or the **Settings** link found at the top of all pages besides the **Dashboard**), and then make sure the **Basic Settings** button on the right side of the next page is selected.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

**PEPWAVE**  
Broadband Possibilities

**Basic Settings**

AP Settings

Profile Settings

PepVPN

Web Administration

<b>WAN Mode</b> [?]	<input checked="" type="radio"/> Wireless	
	<input type="radio"/> Wired	
<b>WAN IP Settings</b> [?]	<input type="radio"/> Configure Manually	
	<input checked="" type="radio"/> Obtain an IP Address using DHCP	
	<input type="radio"/> Obtain an IP Address using PPPOE	
	<input type="radio"/> None (Note: Web administration via WAN from LAN IP Address)	
<b>WiFi WAN Settings</b> [?]	Profile Select	Profile 01 <span>☆</span> <span>+</span>
	Wireless Network Name (SSID)	MySSID (MySSID) <a href="#">Refresh</a>
	Authentication	Open (Open)
	Encryption Key	None
	Auto Login (Portal)	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Management VID	0 (0)
	MAC Clone	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Connect to Any Open Mode AP	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Custom MAC	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Custom MAC Address	: : : : : 0
	Loop Protection	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Preferred AP	MAC <input type="text"/> (e.g. 00116E1014A0) Min Signal Strength <input type="text"/> dBm (e.g. -75)
	<b>LAN Interface</b> [?]	IP Address
Subnet Mask		255.255.255.0

<b>Radio Settings</b> [?]	Radio Mode	802.11ng
	Channel Width	Auto (20/40 MHz) ▾
	Country	United States ▾
	Channel Scanning Mode	Full ▾
	Bit Rate	Auto ▾ (Auto)
<b>Roaming Settings</b> [?]	<input type="radio"/> Enable <input checked="" type="radio"/> Disable	
<b>AP Settings</b> [?]	<input checked="" type="radio"/> Configure Manually	
	AP SSID	PEPWAVE_1B45 (PEPWAVE_1B45)
	Authentication	Open ▾ (Open)
	Encryption Key	None
	<input type="radio"/> Configure Automatically	Repeater AP SSID: MySSID
	<input type="radio"/> Disable	
	Keep AP	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	AP Transmit Power Adjustment	Max ▾ (Max)
	Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Client Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Multicast Enhancement	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Multicast Rate	MCS0/6M ▾
	VLAN ID	0 (0)
<input type="button" value="Save"/>		

### WAN Mode

To begin setting up the Device Connector in Wi-Fi mode, first make sure that the **Wireless** radio button, found under **WAN Mode**, is selected. To set up the Device Connector in wired mode, first make sure that the **Wired** radio button, found under **WAN Mode**, is selected.

<b>WAN Mode</b> [?]	<input checked="" type="radio"/> Wireless
	<input type="radio"/> Wired

## WAN IP Settings

Select one of the available options here to choose the method the Device Connector will use to connect to the WAN.

<b>WAN IP Settings</b> [?]	<input type="radio"/>	Configure Manually
	<input checked="" type="radio"/>	Obtain an IP Address using DHCP
	<input type="radio"/>	Obtain an IP Address using PPPOE
	<input type="radio"/>	None (Note: Web administration via WAN from LAN IP Address)

### Configure Manually

Choose this option when assigning a static IP address to the Device Connector. In addition to specifying a static IP address and subnet mask, enter the IP address of your default gateway and preferred and alternate DNS server (if available).

<input checked="" type="radio"/>	Configure Manually
IP Address	<input type="text" value="0.0.0.0"/>
Subnet Mask	<input type="text" value="0.0.0.0"/>
Default Gateway	<input type="text" value="0.0.0.0"/>
Preferred DNS Server	<input type="text" value="0.0.0.0"/>
Alternate DNS Server	<input type="text" value="0.0.0.0"/>

### Obtain an IP Address Using DHCP

To allow your network's DHCP server to assign an IP address to the Device Connector, select this option.

### Obtain an IP Address Using PPPOE

Select this option to connect the Device Connector to the network using PPPOE authentication. In addition to entering a user name and password used to access the service, specify a preferred and alternate DNS server (if available).

<input checked="" type="radio"/>	Configure Manually	
	IP Address	<input type="text" value="0.0.0.0"/>
	Subnet Mask	<input type="text" value="0.0.0.0"/>
	Default Gateway	<input type="text" value="0.0.0.0"/>
	Preferred DNS Server	<input type="text" value="0.0.0.0"/>
	Alternate DNS Server	<input type="text" value="0.0.0.0"/>

***None***

To administer the Device Connector over the WAN using a LAN IP address, select **None**.

**Wi-Fi WAN Settings (Wi-Fi Mode Only)**

Use the controls in this section to specify the settings the Device Connector will use to connect to the Wi-Fi network.

WiFi WAN Settings[?]	Profile Select	Profile 01  
	Wireless Network Name (SSID)	MySSID (MySSID) <a href="#">Refresh</a>
	Authentication	Open (Open)
	Encryption Key	None
	Auto Login (Portal)	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Management VID	0 (0)
	MAC Clone	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Connect to Any Open Mode AP	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Custom MAC	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Custom MAC Address	: : : : : 0
	Loop Protection	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Preferred AP	MAC <input type="text"/> (e.g. 00116E1014A0) Min Signal Strength <input type="text"/> dBm (e.g. -75)

### Profile Select

Once you've set up one or more Wi-Fi WAN connection profiles via the **Profile Settings** page, use this drop-down menu to select the profile the Device Connector will use to connect with other devices on the network. To add a connection profile, click the  button. To mark a profile as a favorite, click the  button.

### Wireless Network Name (SSID)

Enter the SSID of the network to which you want to connect the Device Connector. To see a list of available networks, click inside this field. If the network you're looking for doesn't appear, click the **Refresh** link to update the list with the latest network changes. To connect to a displayed network, select it from this list.



### *Authentication*

Choose the type of authentication used by the wireless network the Device Connector will login to. Available values include **Open**, **Static with WEP Key**, **802.1x with Dynamic WEP Key**, **WPA/WPA2-Enterprise**, and **WPA/WPA2-Personal**. If an SSID has been selected in the **Wireless Network Name (SSID)** field, the appropriate encryption type will be selected automatically.

### *Encryption Key*

If the network the Device Connector will connect to uses encryption, enter the encryption key here. To toggle key visibility, click the **Hide / Show Encryption Key** link.

### *Auto Login (Portal)*

Use this control to enable or disable automatic network login. If you choose to enable this setting, enter the username and password to be used for automatic logins. To toggle password visibility, click the **Hide / Show Password** link.

Auto Login (Portal)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Username: <input type="text"/>
	Password: <input type="text"/>
	<a href="#">Hide / Show Password</a>

### **Management VID**

To restrict VLAN management to a particular VLAN ID, change the default **Management VID** from **0** to the appropriate value. To allow management sessions without VLAN ID restrictions, leave **Management VID** set to the default value. Note that a **Management VID** value of **0** disables session tagging rather than tagging management sessions with **0**.

### **MAC Clone**

If your WAN allows only a single active Internet connection, enable MAC address cloning using this control. When **MAC Clone** is enabled, the Device Connector will be assigned the same MAC address used to connect to the Internet, regardless of the Device Connector's actual MAC address.

### **Connect to Any Open Mode AP**

When this option is enabled, the Device Connector will scan for unencrypted networks and automatically connect to the one with the strongest signal.

### **Custom MAC**

Enable this option to assign a custom MAC address to the Device Connector using the **Custom MAC Address** field. Because enabling this option can cause the Device Connector to lose connectivity, it is recommended for advanced users only.

### **Custom MAC Address**

If you have enabled **Custom MAC**, enter the desired MAC address here.

### **Loop Protection**

Enable loop protection to prevent the Device Connector from connecting to an AP SSID, which could cause a signal loop and disrupt Internet access.

### **Preferred AP**

To connect the Device Connector to a preferred access point automatically, enter the AP's MAC address here or click a link appearing below **APs with matching SSID** to fill the field. To specify a minimum signal strength to attempt a connection, set the desired strength using the **Min. Signal Strength** field.

### **LAN Interface**

These settings are used to manage the connection between the Device Connector (public) and the LAN (private, protected) sides of the network.

<b>LAN Interface</b> [?]	IP Address	<input type="text" value="192.168.20.1"/>
	Subnet Mask	<input type="text" value="255.255.255.0"/>

### *IP Address*

Here, you can set the the internal, or private, ID used to manage the Device Connector. Leaving this field set to the default value is recommended.

### *Subnet Mask*

Use the subnet mask to specify how many computers the device will support. Leaving this field set to the default value is recommended.

### *Radio Settings*

Use the settings in this section to manage the Device Connector’s Wi-Fi radio settings. If you are connecting to a wired or cellular WAN, configure these settings according to your preferred Wi-Fi LAN settings. If you are connecting to a Wi-Fi WAN, choose settings that provide the maximum number of usable networks.

<b>Radio Settings</b> [?]	Radio Mode	802.11ng
	Channel Width	<input type="text" value="Auto (20/40 MHz)"/>
	Country	<input type="text" value="United States"/>
	Channel Scanning Mode	<input type="text" value="Full"/>
	Bit Rate	<input type="text" value="Auto"/> (Auto)

### *Radio Mode*

Radio mode is set to 802.11ng, which is compatible with 802.11n networks and backward-compatible with 802.11bg networks.

### *Channel Width*

Use the options here to set channel width for 802.11n bonding. Choosing **Auto (20/40 Mhz)** allows simultaneous use of both channel widths. If you require standard width channels only, choose **20 Mhz**.

### *Country*

Choose your country from the drop-down menu to match frequencies and output power to values allowed in your area.

### *AP Channel (Wired Mode Only)*

If you are operating the Device Connector in wired mode, select an AP channel from 1 to 11 using this drop-down menu.

### Channel Scanning Mode (Wi-Fi Mode Only)

Choose the channel scanning mode used by the Device Connector's radio. To scan all channels, select **Full**. Otherwise, restrict the range of channels to be scanned using: **Selective**

Channel Scanning Mode	Selective ▾	
Channels Select	<input checked="" type="checkbox"/> 2.412GHz <input checked="" type="checkbox"/> 2.422GHz <input checked="" type="checkbox"/> 2.432GHz <input checked="" type="checkbox"/> 2.442GHz <input checked="" type="checkbox"/> 2.452GHz <input checked="" type="checkbox"/> 2.462GHz	<input checked="" type="checkbox"/> 2.417GHz <input checked="" type="checkbox"/> 2.427GHz <input checked="" type="checkbox"/> 2.437GHz <input checked="" type="checkbox"/> 2.447GHz <input checked="" type="checkbox"/> 2.457GHz

### Single

Channel Scanning Mode	Single ▾
Scanned Channel	1 ▾

or **Ch. 1, 6, & 11**

Channel Scanning Mode	Ch. 1, 6 & 11 ▾
-----------------------	-----------------

### Bit Rate

Here, you can specify the bit rate used when sending packets. Unless you have a need to specify a particular rate, allowing the Device Connector to automatically negotiate the rate by selecting **Auto** from this drop-down menu is highly recommended.

### Roaming Settings (Wi-Fi Mode Only)

The settings in this section determine the way roaming is handled when using the Wi-Fi WAN setting. When roaming is enabled, the Device Connector will periodically scan for a connection with a stronger signal but without disrupting the current connection. This behavior is particularly useful when the Device Connector can choose from multiple APs, as in many hotspots and other large area networks. Most home and home office networks, however, would not benefit from enabling roaming.

Roaming Settings[?]	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
---------------------	---

### AP Settings

Use the options in this section to manage the local area Wi-Fi network that appliances connected to the Device Connector will connect to.

<b>AP Settings[?]</b>	<input checked="" type="radio"/>	Configure Manually	
		AP SSID	PEPWAVE_1B45 (PEPWAVE_1B45)
		Authentication	Open (Open)
		Encryption Key	None
	<input type="radio"/>	Configure Automatically	Repeater AP SSID: MySSID
	<input type="radio"/>	Disable	
		Keep AP	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
		AP Transmit Power Adjustment	Max (Max)
		Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
		Client Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
		Multicast Enhancement	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
		Multicast Rate	MCS0/6M
		VLAN ID	0 (0)

### **Configure Manually**

Select this option to manually specify AP SSID, authentication method, and encryption key. To clone these values so that the Wi-Fi WAN acts as a repeater, select **Configure Automatically**.

### **AP SSID**

Enter the SSID of the Wi-Fi network to which connected appliances will connect.

### **Authentication**

Choose the type of authentication used by local area Wi-Fi network. Available values include **Open**, **Static with WEP Key**, **802.1x with Dynamic WEP Key**, **WPA/WPA2-Enterprise**, and **WPA/WPA2-Personal**.

### **Encryption Key**

If the local area Wi-Fi network uses encryption, enter the encryption key here. To toggle key visibility, click the **Hide / Show Encryption Key** link.

### **Configure Automatically (Wi-Fi Mode Only)**

To clone the settings of the Wi-Fi WAN, select **Configure Automatically**.

### **Disable**

To disable connections to the local area Wi-Fi network, select this option.

### *Keep AP (Wi-Fi Mode Only)*

Select **Enable** to broadcast a Wi-Fi SSID even when no active connection is available. Because disabling this setting will result in having to configure the device via wired Ethernet, enabling this feature is highly recommended.

### *AP Transmit Power Adjustment*

Select from **Low**, **Medium**, **High**, and **Max** to control the Wi-Fi AP's transmit power. Note that changing this setting does not affect the power of the connection to a Wi-Fi WAN.

### *Broadcast SSID*

When this setting is disabled, clients must be manually configured to connect to the network. Enabling this setting is recommended.

### *Client Isolation*

Enabling this feature prevents devices connected to the same AP SSID from communicating directly with one another. Enabling **Client Isolation** improves security, especially when allowing untrusted users to connect to the network.

### *Multicast Enhancement*

When this setting is enabled, multicast packages are converted to unicast packages, improving multicast traffic performance in most cases.

### *Multicast Rate*

If you have disabled **Multicast Enhancement**, the setting here will determine a fixed rate for multicast traffic. Changing this setting is recommended only for advanced users.

### *VLAN ID (Wi-Fi Mode Only)*

If you are using virtual LANs, assign a VLAN ID here.

Once the above settings are correct, click **Save** to make them active.

## 3. Advanced Settings

## Advanced AP Settings

The **Advanced AP Settings** page gives you fine-grained control over primary, secondary, and tertiary AP configuration. To access this page, click the **AP Settings** link found on the left side of the **Settings** page.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

**PEPWAVE**  
Broadband Possibilities

- Basic Settings
- AP Settings
- Profile Settings
- PepVPN
- Web Administration

<b>Keep AP Mode</b>	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
<b>AP Transmit Power Adjustment</b>	Max (Max)	
<b>Primary AP Settings</b>	<input checked="" type="radio"/> Configure Manually	
	AP SSID	PEPWAVE_1B45 (PEPWAVE_1B45)
	Authentication	Open (open)
	Encryption Key	None
	<input type="radio"/> Configure Automatically	
	<input type="radio"/> Disable	
	Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Client Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Multicast Enhancement	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Multicast Rate	MCS0/6M
VLAN ID	0 (0)	
<b>Secondary AP Settings</b>	<input type="radio"/> Configure Manually	
	<input type="radio"/> Configure Automatically	
	<input checked="" type="radio"/> Disable	
	Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Client Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Multicast Enhancement	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Multicast Rate	MCS0/6M
VLAN ID	0 (0)	
<b>Tertiary AP Settings</b>	<input type="radio"/> Configure Manually	
	<input type="radio"/> Configure Automatically	
	<input checked="" type="radio"/> Disable	
	Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Client Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
	Multicast Enhancement	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Multicast Rate	MCS0/6M
VLAN ID	0 (0)	

### Keep AP Mode (Wi-Fi Mode Only)

Select **Enable** to broadcast a Wi-Fi SSID even when no active connection is available. Because disabling this setting will result in having to configure the device via wired Ethernet, enabling this feature is highly recommended.

### AP Transmit Power Adjustment

Select from **Low**, **Medium**, **High**, and **Max** to control the Wi-Fi AP's transmit power. Note that changing this setting does not affect the power of the connection to a Wi-Fi WAN.

### Primary/Secondary/Tertiary AP Settings

Use the options in this section to manage the primary, secondary, and tertiary local area Wi-Fi networks that appliances connected to the Device Connector will connect to.

<b>Primary AP Settings</b>	<input checked="" type="radio"/>	Configure Manually	
		AP SSID	PEPWAVE_1B45 (PEPWAVE_1B45)
		Authentication	Open (open)
		Encryption Key	None
	<input type="radio"/>	Configure Automatically	
	<input type="radio"/>	Disable	
		Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
		Client Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
		Multicast Enhancement	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
		Multicast Rate	MCS0/6M
		VLAN ID	0 (0)

#### Configure Manually

Select this option to manually specify AP SSID, authentication method, and encryption key. To clone these values so that the Wi-Fi WAN acts as a repeater, select **Configure Automatically**.

#### AP SSID

Enter the SSID of the Wi-Fi network to which connected appliances will connect.

#### Authentication

Choose the type of authentication used by local area Wi-Fi network. Available values include **Open**, **Static with WEP Key**, **802.1x with Dynamic WEP Key**, **WPA/WPA2-Enterprise**, and **WPA/WPA2-Personal**.

#### Encryption Key

If the local area Wi-Fi network uses encryption, enter the encryption key here. To toggle key visibility, click the **Hide / Show Encryption Key** link.

#### Configure Automatically (Wi-Fi Only)

To clone the settings of the Wi-Fi WAN, select **Configure Automatically**.

#### Disable

To disable connections to the local area Wi-Fi network, select this option.

### Broadcast SSID

When this setting is disabled, clients must be manually configured to connect to the network. Enabling this setting is recommended.

### Client Isolation

Enabling this feature prevents devices connected to the same AP SSID from communicating directly with one another. Enabling **Client Isolation** improves security, especially when allowing untrusted users to connect to the network.

### Multicast Enhancement

When this setting is enabled, multicast packages are converted to unicast packages, improving multicast traffic performance in most cases.

### Multicast Rate

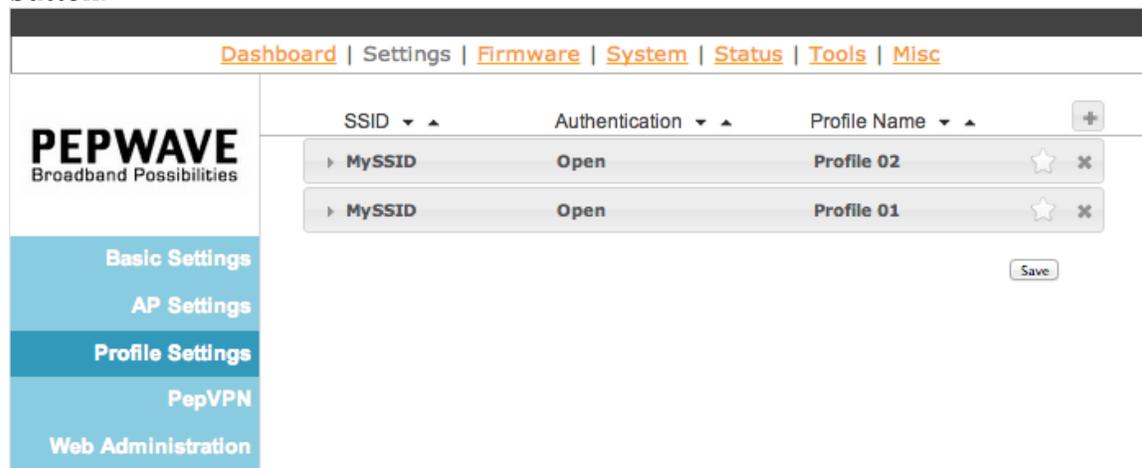
If you have disabled **Multicast Enhancement**, the setting here will determine a fixed rate for multicast traffic. Changing this setting is recommended only for advanced users.

### VLAN ID (Wi-Fi Mode Only)

If you are using virtual LANs, assign a VLAN ID here.

## Profile Settings (Wi-Fi Mode Only)

On the **Profile Settings** page, you can create separate AP profiles for easy management of various usage scenarios. To get started, click the **Profile Settings** link found on the left side of the **Settings** page. To add a new profile, click the  button.



SSID	Authentication	Profile Name	
MySSID	Open	Profile 02	☆ ✕
MySSID	Open	Profile 01	☆ ✕

Save

Once you've created a new, basic profile, click the down arrow next to the profile's name to begin customizing it.

SSID	Authentication	Profile Name	
MySSID	Open	Profile 02	☆ ✕
SSID	<input type="text" value="MySSID"/>	Authentication	<input type="text" value="Open"/> (open)
Encryption Key	None		
Profile Name	<input type="text" value="Profile 02"/>		
Auto Login (Portal)	<input type="radio"/> Enable <input checked="" type="radio"/> Disable		
MySSID	Open	Profile 01	☆ ✕

### SSID

Enter the SSID of the Wi-Fi network to which connected appliances will connect.

### Authentication

Choose the type of authentication used by the wireless network the Device Connector will login to. Available values include **Open**, **Static with WEP Key**, **802.1x with Dynamic WEP Key**, **WPA/WPA2-Enterprise**, and **WPA/WPA2-Personal**.

### Profile Name

Enter a new name for the profile or accept the default name.

### Auto Login (Portal)

Use this control to enable or disable automatic network login. If you choose to enable this setting, enter the username and password to be used for automatic logins. To toggle password visibility, click the **Hide / Show Password** link.

Auto Login (Portal)  Enable  Disable

Username:

Password:

[Hide / Show Password](#)

Once you've correctly set up your AP profile, click **Save** to store the profile. To delete a profile, click the ✕ button. To make a profile a favorite, click ☆. If you'd like to sort the profile list by SSID, authentication type, or profile name, click the up or down arrows next to the appropriate column heading.

## PepVPN Settings

PepVPN allows you to easily establish a secure VPN tunnel over any WAN link. To set up PepVPN for use with the Device Connector, first click the **PepVPN** button found on the left side of the **Settings** page. To enable PepVPN, select **PepVPN** from the **Mode** drop-down menu found at the top of the PepVPN page.

The screenshot shows the PEPWAVE web interface for configuring PepVPN. The navigation bar at the top includes links for Dashboard, Settings, Firmware, System, Status, Tools, and Misc. The left sidebar contains menu items for Basic Settings, AP Settings, Profile Settings, PepVPN (which is highlighted), and Web Administration. The main content area is a form with the following fields and options:

- Mode:** A dropdown menu set to "PepVPN". A note next to it states: "(Note: PepVPN is activated in router mode only)".
- Local ID:** A text input field containing "PEPVPN\_1793".
- Name:** An empty text input field.
- Encryption:** Radio buttons for "256-bit AES" (selected) and "Off".
- Remote ID:** An empty text input field.
- Authentication:** Radio buttons for "By Remote ID only" and "Preshared Key" (selected).
- Pre-shared Key:** A text input field with a "Hide / Show Password" link to its right.
- Remote IP Address / Host Name:** An empty text input field.
- Data Port:** Radio buttons for "Default" (selected) and "Custom" with an adjacent empty text input field.
- Layer 2 Bridging:** Radio buttons for "Yes" (selected) and "No".
- Tunnel IP Address:** A dropdown menu set to "Manually".
- IP Address:** An empty text input field.
- Subnet Mask:** An empty text input field.

A "Save" button is located at the bottom right of the form.

Note that PepVPN can be used only when the Device Connector is in router mode. To set up router mode, see [Changing the Device Connector's Operating Mode](#).

### Local ID

To allow a peer to identify the Device Connector over PepVPN, enter a **Local ID** for this connection.

### Name

Enter a name for the PepVPN connection in this field.

### Encryption

Choose either **256-bit AES** encryption for all VPN traffic or set encryption to **Off**. Encrypting VPN traffic is highly recommended.

### RemoteID

To allow the Device Connector to identify a PepVPN peer, enter a **Remote ID** here.

### Authentication

Select a method for authenticating VPN clients. Available values are **By Remote Id Only** and **Preshared Key**.

### Remote IP Address / Host Name

When connecting to remote PepVPN peers using a serial number, enter that number here.

### Data Port

Enter a custom outgoing UDP data port from 1 to 65535 or select **Default** to use port 4500. When port 4500 is unavailable or the remote peer's firmware version is 5.3 or lower, the outgoing UDP data port defaults to 32015.

### Layer 2 Bridging

To enable Layer 2 bridging, select **Yes**, and then select **None**, **Manually**, or **DHCP** from the **Tunnel IP Address** drop-down menu. If you're configuring a manual tunnel IP address, enter the details in the **IP Address** and **Subnet Mask** fields.

Once you've correctly set up PepVPN, click **Save** to store your configuration.

## Web Administration Settings

On the **Web Administration** page, you can specify how administrators can access Device Connector settings remotely, as well as configure remote access security. To view or change these settings, click the **Web Administration** link found on the left side of the **Settings** page.

Dashboard   Settings   Firmware   System   Status   Tools   Misc		
<b>PEPWAVE</b> Broadband Possibilities	<b>Web Access Settings</b> [?]	Web Access Protocol: <input type="radio"/> HTTP <input checked="" type="radio"/> HTTPS
		Management Port: <input type="text" value="8000"/>
		HTTP to HTTPS Redirection: <input checked="" type="radio"/> Enable <input type="radio"/> Disable
<b>Web Administration</b>	<b>Web Access Protection</b> [?]	Mode: <input type="text" value="WAN Only"/>
		Password: <input type="password" value="*****"/> (admin) <small>(Note: login name is "admin") <a href="#">Hide / Show Password</a></small>
		<input type="button" value="Save"/>

## Web Access Settings

### *Web Access Protocol*

Select standard **HTTP** or secure **HTTPS** as the protocol used when accessing the Device Connector. Unless using HTTP is required by your network configuration, HTTPS is recommended.

### *Management Port*

Enter the port to use for remote management.

### *HTTP to HTTPS Redirection*

To automatically redirect HTTP remote management session requests to HTTPS, select **Enable**.

## Web Access Protection

### *Mode*

Choose **WAN Only** to allow remote management via WAN but not via LAN. Choose WAN and LAN to allow remote management from any location. To disable Web access protection, select **None** (not recommended).

### *Password*

If remote management access requires a password, enter it here. To toggle password visibility, click the **Hide / Show Password** link. Note that the username used for all remote management sessions is **admin**.

Once you've correctly configured remote management access, click **Save** to store your settings.

## **4. Troubleshooting and Maintenance**

## Checking Device Status

To see the status of WAN connections, PepVPN sessions, Ethernet connections, and more, click the **Status** link at the top of any page.

### Scanned AP (Wi-Fi Mode Only)

Click the **Scanned AP** button found on the left side of the page for details on all APs scanned by the Device Connector.



- Scanned AP
- WAN Connection
- PepVPN
- Ethernet
- Client

<b>Firmware Version:</b>	1.0.22 (build:1183)
<b>Hardware Version:</b>	1.0
<b>Model:</b>	Device Connector (Bridge)
<b>Serial Number:</b>	2830-7AC2-1793
<b>LAN MAC Address:</b>	00:1A:DD:B8:1B:40
<b>WAN MAC Address:</b>	00:1A:DD:B8:1B:44
<b>Supported Modes:</b>	802.11b/g/n
<b>Connection Uptime:</b>	0
<b>System Time:</b>	Fri, 09 Aug 2013 10:12:37 GMT

Scanned APs:  Show [MySSID] only  Show all access points



Display  APs

Search:

ESSID	BSSID	Ch.	Signal Level	Encryption	Radio Mode
	10:56:ca:08:ab:02	5	-71	WPA-Enterprise	802.11ng
	00:1a:1e:f3:0e:41	6	-70	Open	802.11g
	00:1a:dd:c5:46:05	8	-51	Open	802.11ng
ICAP_CAP_CAP	00:1a:dd:b6:a3:21	11	-65	WPA-Personal	802.11ng
ICAP_CAP_CAP_88	00:1a:dd:b6:a3:22	11	-65	WPA-Personal	802.11ng
IT4B118	10:56:ca:08:ab:01	5	-72	WPA-Personal	802.11ng
IT4SOHO_BLACK	00:1a:dd:c4:cc:c6	5	-56	Open	802.11ng
IT4SOHO_WHITE	00:1a:dd:c4:cc:c7	5	-58	Open	802.11ng
01CE	00:1a:dd:bb:29:e9	1	-62	WPA-Personal	802.11ng
-)	00:1a:dd:c2:31:e5	1	-64	WPA-Personal	802.11ng
BM_OPEN	00:1a:dd:b9:75:a4	1	-44	Open	802.11ng
BM_TEST	00:1a:dd:b9:75:a1	1	-43	WEP	802.11g
BM_WEP	00:1a:dd:b9:75:a2	1	-43	WEP	802.11g
BM_WPA	00:1a:dd:b9:75:a5	1	-43	WPA-Personal	802.11ng
BM_WPAENT	00:1a:dd:b9:75:a3	1	-45	WPA-Enterprise	802.11ng
BR1-167	00:1a:dd:c5:0d:44	1	-55	Open	802.11ng
cantona_2g	00:1a:dd:cb:08:41	1	-72	Open	802.11ng
DE1F	00:1a:dd:bd:1e:47	1	-92	Open	802.11ng
G203_test	28:c6:8e:1e:c7:a0	11	-51	WPA-Personal	802.11ng
G505_test	00:1a:dd:c2:08:61	1	-76	WPA-Personal	802.11ng
G505_test2	00:1a:dd:c2:08:62	1	-75	WPA-Personal	802.11ng
HW-BLONE-2.4g	10:56:ca:09:0b:b8	4	-67	WPA-Personal	802.11ng
marco_ap1_000000000000000000000001	00:1a:dd:bd:73:e2	1	-87	WPA-Personal	802.11ng
marco_ap1_1	00:1a:dd:bd:73:e1	1	-87	WPA-Personal	802.11g
marco_single_1	00:1a:dd:bb:09:c1	6	-57	WPA-Personal	802.11ng

Showing 1 to 25 of 84 scanned APs

## WAN Connection

Click the **WAN Connection** button found on the left side of the page for details on device addresses, packet transmission, and more.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

Scanned AP

**WAN Connection**

PepVPN

Ethernet

Client

<b>Firmware Version:</b>	1.0.22 (build:1183)	
<b>Hardware Version:</b>	1.0	
<b>Model:</b>	Device Connector (Bridge)	
<b>Serial Number:</b>	2830-7AC2-1793	
<b>LAN MAC Address:</b>	00:1A:DD:B8:1B:40	
<b>WAN MAC Address:</b>	00:1A:DD:B8:1B:44	
<b>Supported Modes:</b>	802.11b/g/n	
<b>Connection Uptime:</b>	0	
<b>System Time:</b>	Fri, 09 Aug 2013 10:14:06 GMT	

**WAN Connection Info:**

<b>Signal Level:</b>	-96 dBm	<b>IP Address:</b>	N/A
<b>Bit Rate:</b>	auto	<b>Subnet Mask:</b>	N/A
<b>Missed Beacon:</b>	0	<b>Gateway:</b>	N/A
<b>ESSID:</b>	MySSID	<b>DNS Servers:</b>	N/A
<b>Mode:</b>	802.11ng (HT20)	<b>DHCP Server IP Addr:</b>	N/A
<b>Frequency:</b>	2.412GHz	<b>DHCP Server HW Addr:</b>	N/A
<b>Channel:</b>	1	<b>DHCP Lease Time:</b>	N/A
<b>AP BSSID:</b>	Not-Associated	<b>DHCP Renewal Time:</b>	N/A
<b>Encryption Key:</b>	N/A	<b>Rx Packets:</b>	0
<b>Rx Invalid Crypt:</b>	0	<b>Tx Packets:</b>	0
<b>Rx Invalid Frag:</b>	0		
<b>Tx Excessive Retries:</b>	0		
<b>Invalid Misc:</b>	0		

## PepVPN

To review PepVPN uptime, tunnel status, and more, click the **PepVPN** button found on the left side of the page.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

Scanned AP

WAN Connection

**PepVPN**

Ethernet

Client

<b>Firmware Version:</b>	1.0.22 (build:1183)	
<b>Hardware Version:</b>	1.0	
<b>Model:</b>	Device Connector (Bridge)	
<b>Serial Number:</b>	2830-7AC2-1793	
<b>LAN MAC Address:</b>	00:1A:DD:B8:1B:40	
<b>WAN MAC Address:</b>	00:1A:DD:B8:1B:44	
<b>Supported Modes:</b>	802.11b/g/n	
<b>Connection Uptime:</b>	0	
<b>System Time:</b>	Fri, 09 Aug 2013 10:14:48 GMT	

**Tunnel Status:**

<b>Mode:</b>	Disabled
--------------	----------

## Ethernet

On the **Ethernet** page, you can find important details about Ethernet connections, including information on errors and dropped packets.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

**PEPWAVE**  
Broadband Possibilities

Scanned AP

WAN Connection

PepVPN

**Ethernet**

Client

<b>Firmware Version:</b>	1.0.22 (build:1183)
<b>Hardware Version:</b>	1.0
<b>Model:</b>	Device Connector (Bridge)
<b>Serial Number:</b>	2830-7AC2-1793
<b>LAN MAC Address:</b>	00:1A:DD:B8:1B:40
<b>WAN MAC Address:</b>	00:1A:DD:B8:1B:44
<b>Supported Modes:</b>	802.11b/g/n
<b>Connection Uptime:</b>	0
<b>System Time:</b>	Fri, 09 Aug 2013 10:15:36 GMT

**Ethernet Info:**

	Received	Transmitted
<b>Packets</b>	13749	11085
<b>Bytes</b>	1907190	4259886
<b>Errors</b>	0	0
<b>Dropped</b>	0	0

## Client

To see a list of connected network clients, click the **Client** button found on the left side of the page.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

**PEPWAVE**  
Broadband Possibilities

Scanned AP

WAN Connection

PepVPN

Ethernet

**Client**

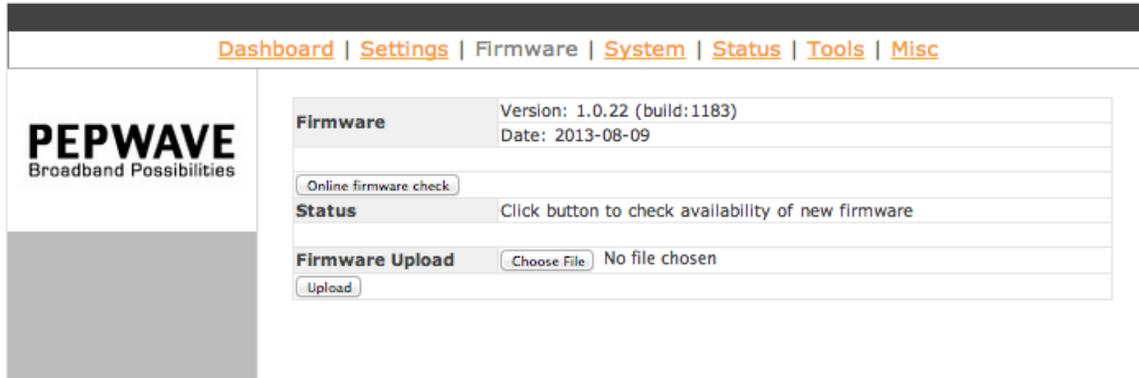
<b>Firmware Version:</b>	1.0.22 (build:1183)
<b>Hardware Version:</b>	1.0
<b>Model:</b>	Device Connector (Bridge)
<b>Serial Number:</b>	2830-7AC2-1793
<b>LAN MAC Address:</b>	00:1A:DD:B8:1B:40
<b>WAN MAC Address:</b>	00:1A:DD:B8:1B:44
<b>Supported Modes:</b>	802.11b/g/n
<b>Connection Uptime:</b>	0
<b>System Time:</b>	Fri, 09 Aug 2013 10:16:51 GMT

**Client List:**

IP Address	MAC Address	Signal
------------	-------------	--------

## Checking and Updating the Firmware Version

Click the **Firmware** link found at the top of any page for details on the current firmware version, as well as tools that allow you to check for and upload updated firmware.



The screenshot shows the PEPWAVE web interface. At the top, there is a navigation bar with links: [Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#). On the left side, the PEPWAVE logo is displayed with the tagline "Broadband Possibilities". The main content area is titled "Firmware" and displays the following information:

<b>Firmware</b>	Version: 1.0.22 (build:1183)
	Date: 2013-08-09
<input type="button" value="Online firmware check"/>	
<b>Status</b>	Click button to check availability of new firmware
<b>Firmware Upload</b> <input type="button" value="Choose File"/> No file chosen	
<input type="button" value="Upload"/>	

### Checking for Firmware Updates Online

To check for updated firmware, click the **Online firmware check** button. If updated firmware is available, you'll find details in the **Status** bar located under the **Online firmware check** button.

### Manually Uploading Firmware Updates

To manually upload a firmware update, select the file by clicking the **Choose File** button, and then highlighting the file stored on your system. To upload the selected file, click the **Upload** button.

## Enabling SNMP

The Simple Network Management Protocol (SNMP) can be a helpful tool to monitor your Device Connector's operation and detect conditions that need to be addressed by a network administrator. To begin setting up SNMP for use with your Device Connector, first click the **System** link found at the top of any page, and then click the **SNMP** button found on the left side of the **System** page. Note that enabling SNMP increases system overhead, so it's best to use this feature only when troubleshooting.

[Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#)

**PEPWAVE**  
Broadband Possibilities

SNMP

Event Log

	v1	<input checked="" type="checkbox"/> Enable
	v2	<input checked="" type="checkbox"/> Enable
	Read only community name: <input type="text"/>	
	Read and write community name: <input type="text" value="MSurf000"/>	
	v3	<input checked="" type="checkbox"/> Enable
<b>SNMP Settings</b>	Read only user:	
	User name: <input type="text"/>	
	Authentication protocol: <input checked="" type="radio"/> MD5 <input type="radio"/> SHA	
	Password: <input type="text"/> <a href="#">Hide / Show Password</a>	
	Privacy protocol: <input type="radio"/> none <input checked="" type="radio"/> DES	
	Password: <input type="text"/> <a href="#">Hide / Show Password</a>	
	Read and write user:	
	User name: <input type="text" value="admin"/>	
	Authentication protocol: <input checked="" type="radio"/> MD5 <input type="radio"/> SHA	
	Password: <input type="text" value="*****"/> <a href="#">Hide / Show Password</a>	
Privacy protocol: <input type="radio"/> none <input checked="" type="radio"/> DES		
Password: <input type="text" value="*****"/> <a href="#">Hide / Show Password</a>		

## SNMP Settings

### v1, v2, v3

To enable SNMP v1, v2, and/or v3, which offer various levels of network management functionality, check the appropriate box(es).

### Read only community name (v2 only)

To restrict SNMP read permission to a particular group of SNMP devices, enter a case-sensitive name, which acts as a shared password, in the **Read only community name** field. You can also leave this field blank, which sets a default value of **Public**.

### Read and write community name (v2 only)

To assign read and write permissions to a particular group of SNMP devices only, enter a case-sensitive name, which acts as a shared password, in the **Read and write community name** field. You can also leave this field blank, which sets a default value of **Public**.

### Read only user (v3 only)

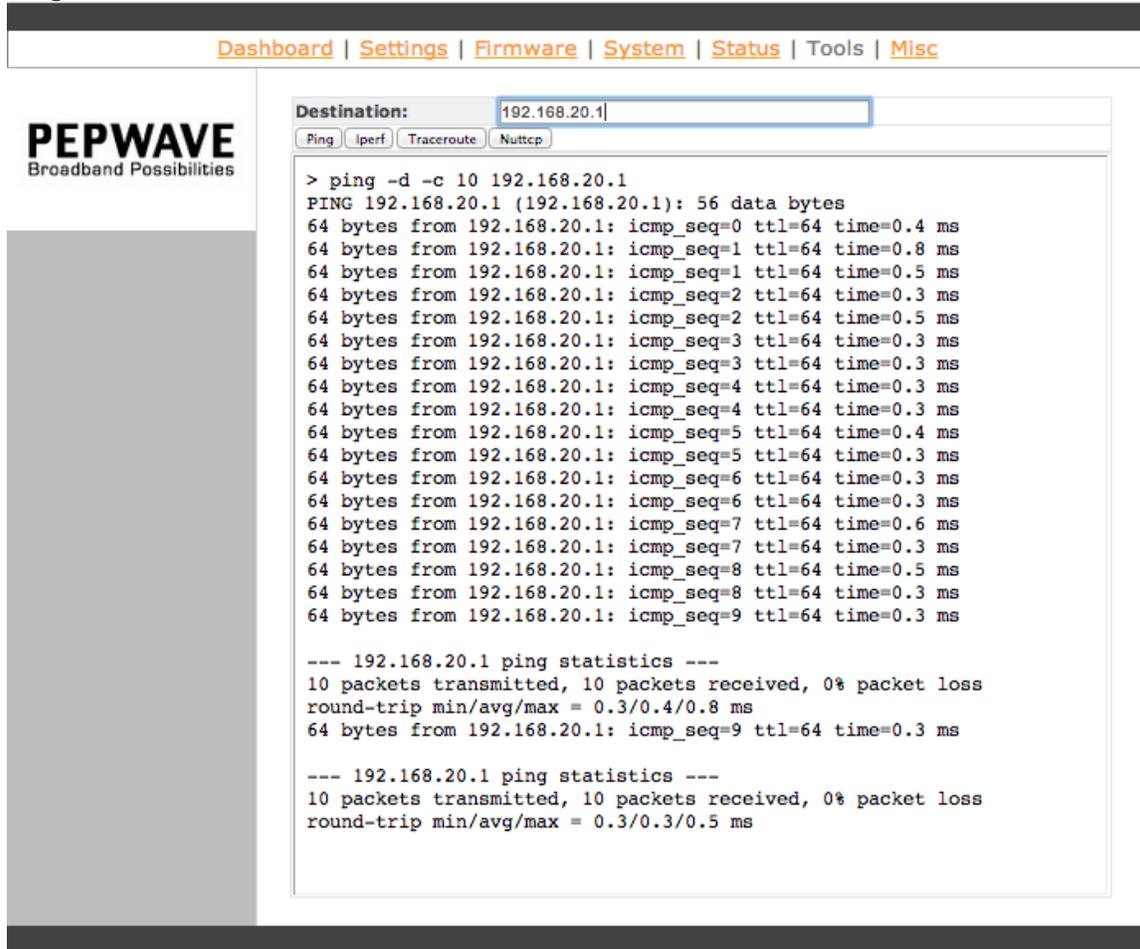
To configure read permission for SNMP v3, enter the appropriate user name and passwords for the security protocols in use on your network.

### Read and write user (v3 only)

To configure read permission for SNMP v3, enter the appropriate user name and passwords for the security protocols in use on your network.

## Using the Included Diagnostic Tools

To quickly display network settings and help diagnose network problems, you can access a number of common diagnostic tools without leaving the Device Connector Web Admin Interface. To access these tools, click the **Tools** link found at the top of any page. Next, enter the appropriate network address in the **Destination** field, and then click either the **Ping**, **Iperf**, **Traceroute**, or **Nuttcp** button to run the selected diagnostic.



The screenshot displays the PEPWAVE Web Admin Interface. At the top, there is a navigation bar with links: [Dashboard](#) | [Settings](#) | [Firmware](#) | [System](#) | [Status](#) | [Tools](#) | [Misc](#). On the left side, the PEPWAVE logo is visible with the tagline "Broadband Possibilities". The main content area shows a diagnostic tool interface. The "Destination" field is populated with "192.168.20.1". Below this, there are four buttons: "Ping", "Iperf", "Traceroute", and "Nuttcp". The "Ping" button is selected, and the terminal output shows the following results:

```
> ping -d -c 10 192.168.20.1
PING 192.168.20.1 (192.168.20.1): 56 data bytes
64 bytes from 192.168.20.1: icmp_seq=0 ttl=64 time=0.4 ms
64 bytes from 192.168.20.1: icmp_seq=1 ttl=64 time=0.8 ms
64 bytes from 192.168.20.1: icmp_seq=1 ttl=64 time=0.5 ms
64 bytes from 192.168.20.1: icmp_seq=2 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=2 ttl=64 time=0.5 ms
64 bytes from 192.168.20.1: icmp_seq=3 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=3 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=4 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=4 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=5 ttl=64 time=0.4 ms
64 bytes from 192.168.20.1: icmp_seq=5 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=6 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=6 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=7 ttl=64 time=0.6 ms
64 bytes from 192.168.20.1: icmp_seq=7 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=8 ttl=64 time=0.5 ms
64 bytes from 192.168.20.1: icmp_seq=8 ttl=64 time=0.3 ms
64 bytes from 192.168.20.1: icmp_seq=9 ttl=64 time=0.3 ms

--- 192.168.20.1 ping statistics ---
10 packets transmitted, 10 packets received, 0% packet loss
round-trip min/avg/max = 0.3/0.4/0.8 ms
64 bytes from 192.168.20.1: icmp_seq=9 ttl=64 time=0.3 ms

--- 192.168.20.1 ping statistics ---
10 packets transmitted, 10 packets received, 0% packet loss
round-trip min/avg/max = 0.3/0.3/0.5 ms
```

## Enabling Remote Event Logs

To set up remote event logging, first click the **System** link found at the top of any page, and then click the **Event Log** button found on the left side of the **System** page. Note that enabling logging increases system overhead, so it's best to use this feature only when troubleshooting.

Dashboard | Settings | Firmware | System | Status | Tools | Misc

**PEPWAVE**  
Broadband Possibilities

SNMP  
Event Log

Remote Syslog Settings	Remote Syslog	<input checked="" type="checkbox"/> Enable
	Remote Syslog Host	<input type="text"/>
	Remote Syslog Port	514 <input type="text"/>

Save

## Remote Syslog Settings

### Remote Syslog

To turn on remote event logging and begin sending device event logs to a particular remote host, check **Enable**.

### Remote Syslog Host

Enter the IP address of the remote system to which event logs should be sent.

### Remote Syslog Port

Enter the desired port number to be used by the remote system to receive event logs.

Once you've correctly configured remote syslog settings, click **Save** to store them.

## Turning on Remote Assistance

To allow a remote troubleshooter to help set up and manage the Device Connector, enable remote assistance by clicking the **Misc** link found at the top of any page and then clicking **Turn On** next to **Remote Assistance**.

Dashboard | Settings | Firmware | System | Status | Tools | Misc

**PEPWAVE**  
Broadband Possibilities

Remote Assistance	<input type="button" value="Turn On"/>
Operating Mode	<input type="button" value="Switch to Router Mode"/>
Restore Factory Settings	<input type="button" value="Restore &amp; Reboot"/>
Reboot Device	<input type="button" value="Reboot"/>
Configuration File	<input type="button" value="Download"/>
Debug Information	<input type="button" value="Download"/>

## Changing the Device Connector's Operating Mode

To toggle between router and bridge mode, click the **Misc** link found at the top of any page, and then click **Switch to Bridge Mode** or **Switch to Router Mode**.

## Restoring Factory Settings

To restore the Device Connector to factory settings, click the **Misc** link found at the top of any page, and then click **Restore and Reboot**.

### Rebooting the Device Connector

To reboot the Device Connector and clear its memory contents, click the **Misc** link found at the top of any page, and then click **Reboot**.

### Downloading Configuration and Debug Information

To help with troubleshooting, you can download the Device Connector's configuration files, as well as a debug log. To download these files to your system, click the **Misc** link found at the top of any page, and then click **Download** next to **Configuration File** and/or **Debug Information**.

## 5. Appendix

### **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:

- 1) Reorient or relocate the receiving antenna.
- 2) Increase the separation between the equipment and receiver.
- 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4) 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.

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.

### **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.

### **Taiwan NCC Statement**

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

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,應改善至無干擾時方得繼續使用。前項合法通信,指依電信法規定作業之無線電通信。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。

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