

# Basic Radio Settings on the WAP371

## Objective

The radio is the physical component of the WAP that creates a wireless network. The radio settings on the WAP control the behavior of the radio and determine what kind of wireless signals the WAP sends out. This configuration is useful if the WAP is in close proximity to other wireless sources and when the frequency needs to be changed to prevent interference with other sources.

The objective of this article is to explain the basic radio settings on the WAP371.

## Applicable Devices

- WAP371

## Software Version

- v1.2.0.2

## Radio Settings Configuration

Step 1. Log in to the web configuration utility and choose **Wireless > Radio**. The *Radio* page opens:

## Radio

### Global Settings

TSPEC Violation Interval:  Sec (Range: 0 - 900, 0 = Disable, Default: 300)

---

### Radio Setting Per Interface

Select the radio interface first, and then enter the configuration parameters.

Radio: ☒ Radio 1 (5 GHz) ☐ Radio 2 (2.4 GHz)

---

### Basic Settings

Radio: ☐ Enable

MAC Address:

Mode:

Channel Bandwidth:

Primary Channel:

Channel:

---

### Advanced Settings

DFS Support:

Short Guard Interval Supported:

Protection:

Beacon Interval:  Milliseconds (Range: 20 - 2000, Default: 100)

DTIM Period:  (Range: 1 - 255, Default: 2)

## Configuration of Global Radio Settings

Step 1. In the *TSPEC Violation Interval* field, enter the time interval (in seconds) that the WAP waits before it reports the associated clients that do not adhere to mandatory admission control procedures. These reports are sent through the system log and Simple Network Management Protocol (SNMP), a protocol for managing devices on IP networks.

### Global Settings

TSPEC Violation Interval:  Sec (Range: 0 - 900, 0 = Disable, Default: 300)

## Configuration of Basic Radio Settings

Step 1. In the *Radio Setting Per Interface* area, click the radio button of the Radio frequency settings you would like to configure. The basic and advanced settings you configure are applied to this radio.

### Radio Setting Per Interface

Select the radio interface first, and then enter the configuration parameters.

Radio:

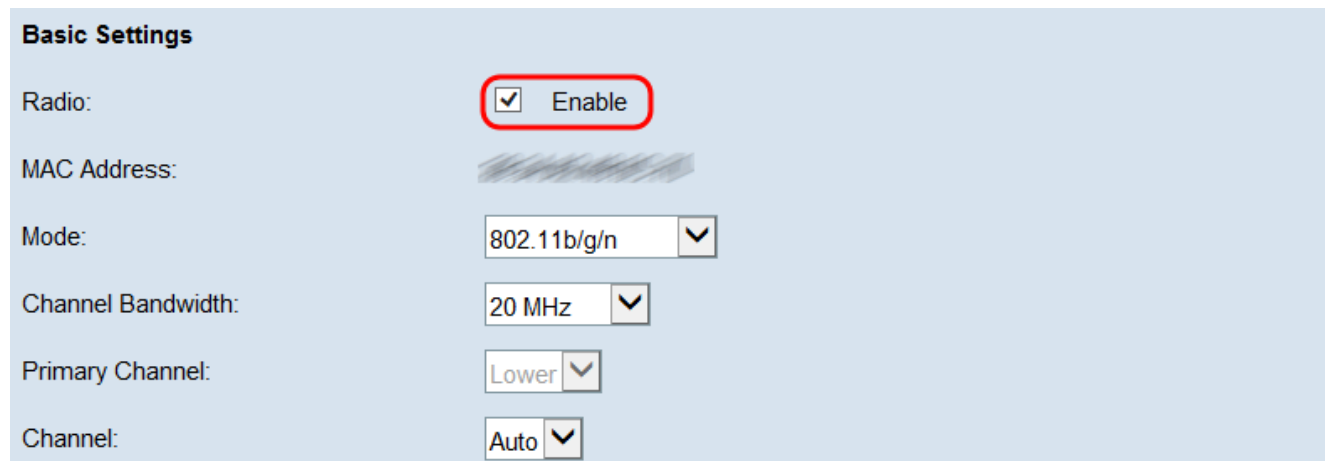
- ☐ Radio 1 (5 GHz)  
☒ Radio 2 (2.4 GHz)

The options are described as follows:

- Radio 1 — Has a radio frequency of 5 GHz and supports the following radio modes: 802.11a, 802.11a/n/ac, and 802.11n/ac. Refer to the [Configuration of 5 GHz Basic Radio Settings](#) section.
- Radio 2 — Has a radio frequency of 2.4 GHz and supports the following radio modes: 802.11b/g, 802.11b/g/n, and 802.11n. Refer to the [Configuration of 2.4 GHz Basic Radio Settings](#) section.

## Configuration of 5 GHz Basic Radio Settings

Step 1. Check the **Enable** check box in the *Radio* field to enable the radio interface.



**Basic Settings**

Radio: ☒ Enable

MAC Address: [blurred]

Mode: 802.11b/g/n

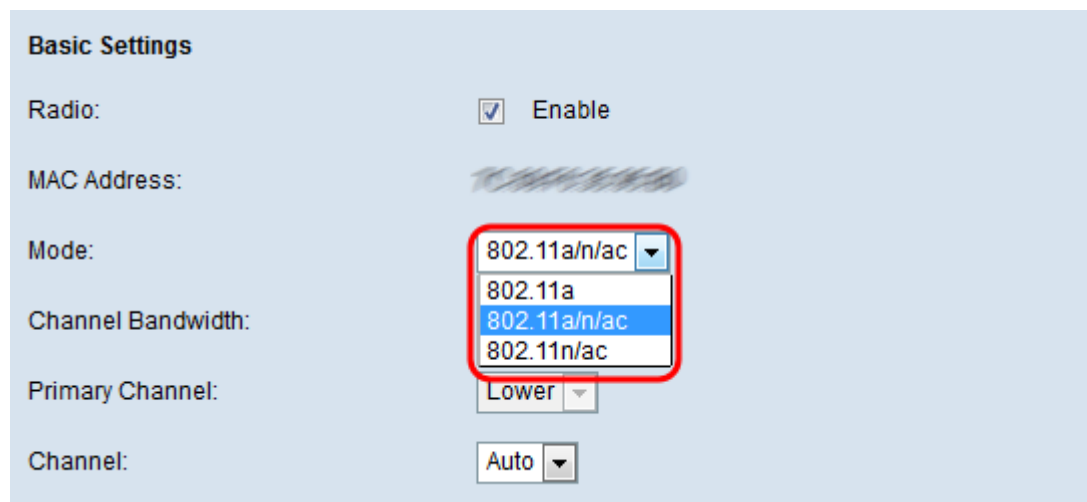
Channel Bandwidth: 20 MHz

Primary Channel: Lower

Channel: Auto

**Note:** The *MAC Address* field shows the MAC address of the radio interface.

Step 2. Choose the desired radio mode from the *Mode* drop-down list.



**Basic Settings**

Radio: ☒ Enable

MAC Address: [blurred]

Mode: 802.11a/n/ac

Channel Bandwidth: 20 MHz

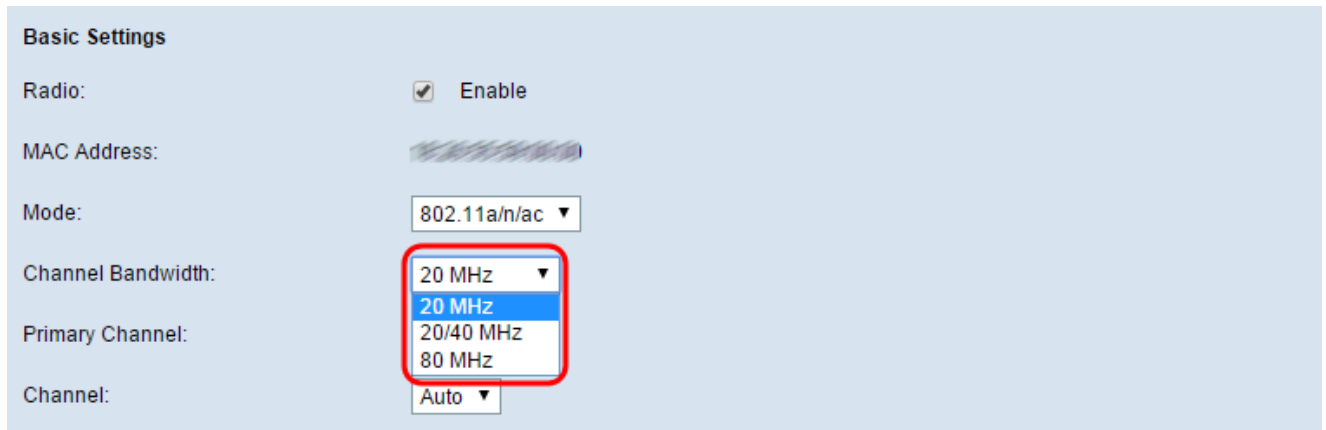
Primary Channel: Lower

Channel: Auto

The available options are described as follows:

- 802.11a — Only 802.11a clients can connect to the WAP device. The clients can get a maximum of 54 Mbps bandwidth when this mode is selected.
- 802.11a/n/ac — 802.11a, 802.11n and 802.11ac clients that operate in the 5 GHz frequency can connect to the WAP device. 802.11n clients can get a maximum of 150 Mbps bandwidth and 802.11ac clients can get up to 1 Gbps.
- 5 GHz 802.11n/ac — Only 802.11n and 802.11ac clients that operate in the 5 GHz frequency can connect to the WAP device.

Step 3. Choose the channel bandwidth for the radio from the *Channel Bandwidth* drop-down list.



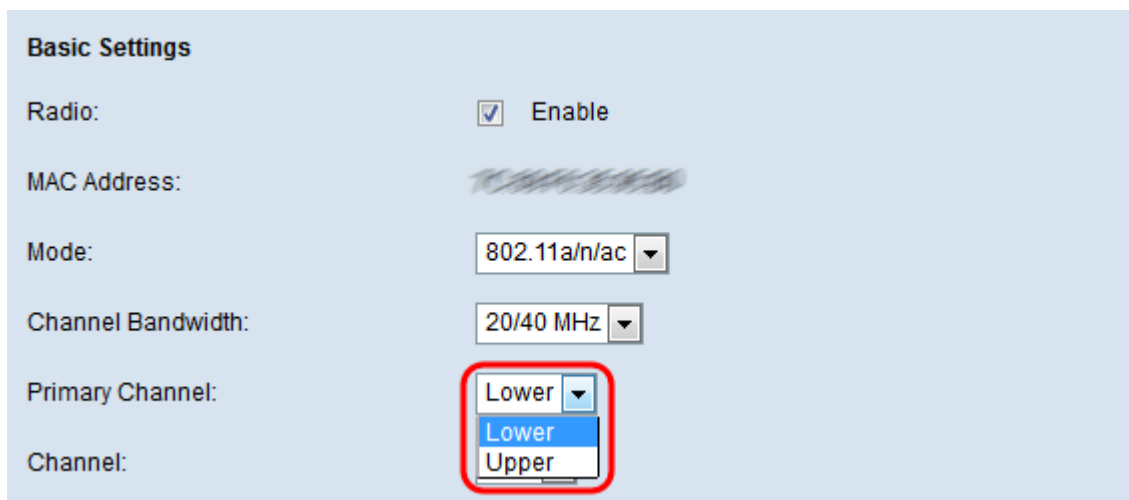
The screenshot shows the 'Basic Settings' configuration page. The 'Radio' checkbox is checked and labeled 'Enable'. The 'MAC Address' field is masked with a grey box. The 'Mode' dropdown is set to '802.11a/n/ac'. The 'Channel Bandwidth' dropdown menu is open, showing four options: '20 MHz', '20 MHz', '20/40 MHz', and '80 MHz'. The first '20 MHz' option is highlighted in blue. A red rectangle is drawn around the dropdown menu. The 'Primary Channel' and 'Channel' fields are visible below but not yet configured.

The options are described as follows:

- 20 MHz — Restricts the use of channel bandwidth to a 20 MHz channel.
- 20/40 MHz — Consists of two 20 MHz channels that are contiguous in the frequency domain.
- 80 MHz — Restricts the use of channel bandwidth to an 80 MHz channel.

**Note:** If 20 or 80 MHz are selected, the options to configure the Primary Channel and Channel fields are not available. Skip to [Step 6](#).

Step 4. From the *Primary Channel* drop-down list, choose a channel to set as primary. The primary channel is used for devices that only support 20/40 MHz channels.



The screenshot shows the 'Basic Settings' configuration page. The 'Radio' checkbox is checked and labeled 'Enable'. The 'MAC Address' field is masked with a grey box. The 'Mode' dropdown is set to '802.11a/n/ac'. The 'Channel Bandwidth' dropdown is set to '20/40 MHz'. The 'Primary Channel' dropdown menu is open, showing three options: 'Lower', 'Lower', and 'Upper'. The first 'Lower' option is highlighted in blue. A red rectangle is drawn around the dropdown menu. The 'Channel' field is visible below but not yet configured.

The available options are described as follows:

- Upper — Sets the upper 20 MHz channel as the primary channel.
- Lower — Sets the lower 20 MHz channel as the primary channel.

**Note:** The web UI disables the *Primary Channel* drop-down if the *Channel* field is left as Auto.

Step 5. Choose the portion of the radio spectrum that the radio uses to transmit and receive from the *Channel* drop-down list.

**Basic Settings**

Radio: ☒ Enable

MAC Address:

Mode:

Channel Bandwidth:

Primary Channel:

Channel:

**Advanced Settings**

DFS Support: ☐

Short Guard Interval Supported: ☐

Protection: ☐

Beacon Interval:  Milliseconds (Range: 20 - 2000, Default: 100)

DTIM Period:  (Range: 1-255, Default: 2)

Fragmentation Threshold:  Even Numbers (Range: 256 - 2346, Default: 2346)

**Note:** If auto is chosen, the WAP scans the available channels and chooses a channel where the least traffic is detected.

Step 6. Click **Save** to save the settings.

Fragmentation Threshold:	<input type="text" value="2346"/>	Even Numbers (Range: 256 - 2346, Default: 2346)																																							
RTS Threshold:	<input type="text" value="65535"/>	(Range: 0-65535, Default: 65535)																																							
Maximum Associated Clients:	<input type="text" value="200"/>	(Range: 0-200, Default: 200)																																							
Transmit Power:	<input type="button" value="Full - 100%"/>																																								
Frame-burst Support:	<input type="button" value="Off"/>	[Boosts Downstream Throughput]																																							
Fixed Multicast Rate:	<input type="button" value="Auto"/>	Mbps																																							
Legacy Rate Sets:	<table border="1"> <thead> <tr> <th>Rate (Mbps)</th> <th>54</th> <th>48</th> <th>36</th> <th>24</th> <th>18</th> <th>12</th> <th>11</th> <th>9</th> <th>6</th> <th>5.5</th> <th>2</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>Supported</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Basic</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table>		Rate (Mbps)	54	48	36	24	18	12	11	9	6	5.5	2	1	Supported	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Basic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rate (Mbps)	54	48	36	24	18	12	11	9	6	5.5	2	1																													
Supported	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																													
Basic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																													
<input type="checkbox"/> Broadcast/Multicast Rate Limiting	Rate Limit <input type="text" value="50"/> Rate Limit Burst <input type="text" value="75"/>	Packets Per Second (Range: 1 - 50, Default: 50) Packets Per Second (Range: 1 - 75, Default: 75)																																							
TSPEC Mode:	<input type="button" value="Off"/>																																								
TSPEC Voice ACM Mode:	<input type="button" value="Off"/>																																								
TSPEC Voice ACM Limit:	<input type="text" value="20"/>	Percent (Range: 0 - 70, Default: 20)																																							
TSPEC Video ACM Mode:	<input type="button" value="Off"/>																																								
TSPEC Video ACM Limit:	<input type="text" value="15"/>	Percent (Range: 0 - 70, Default: 15)																																							
TSPEC AP Inactivity Timeout:	<input type="text" value="30"/>	Sec (Range: 0 - 120, 0 = Disable, Default: 30)																																							
TSPEC Station Inactivity Timeout:	<input type="text" value="30"/>	Sec (Range: 0 - 120, 0 = Disable, Default: 30)																																							
TSPEC Legacy WMM Queue Map Mode:	<input type="button" value="Off"/>																																								
VHT Features:	<input type="checkbox"/>																																								

## Configuration of 2.4 GHz Basic Radio Settings

Step 1. Check the **Enable** check box in the *Radio* field to enable the radio interface.

**Basic Settings**

Radio: ☒ **Enable**

MAC Address:

Mode:

Channel Bandwidth:

Primary Channel:

Channel:

**Note:** The *MAC Address* field shows the MAC address of the radio interface.

Step 2. Choose the desired radio mode from the *Mode* drop-down list.

**Basic Settings**

Radio: ☒ Enable

MAC Address:

Mode: 802.11b/g  
802.11b/g/n  
2.4 GHz 802.11n

Channel Bandwidth: 20 MHz

Primary Channel: Lower

Channel: Auto

The available options are described as follows:

- 802.11b/g — 802.11b and 802.11g clients can connect to the WAP device. 802.11b clients can get a maximum of 11 Mbps bandwidth while an 802.11g client can support a maximum of 54 Mbps.
- 802.11b/g/n — 802.11b, 802.11g, and 802.11n clients which operate in the 2.4 GHz frequency can connect to the WAP.
- 2.4 GHz 802.11n — Only 802.11n clients that operate in the 2.4-GHz frequency can connect to this radio settings.

**Note:** 802.11n is the only specification that allows a 40 MHz-wide channel. Steps 3 and 4 are only applicable if you chose a radio mode that supports 802.11n in Step 2.

Step 3. Choose the channel bandwidth for the radio from the *Channel Bandwidth* drop-down list.

**Basic Settings**

Radio: ☒ Enable

MAC Address:

Mode: 802.11b/g/n

Channel Bandwidth: 20 MHz  
20 MHz  
20/40 MHz

Primary Channel:

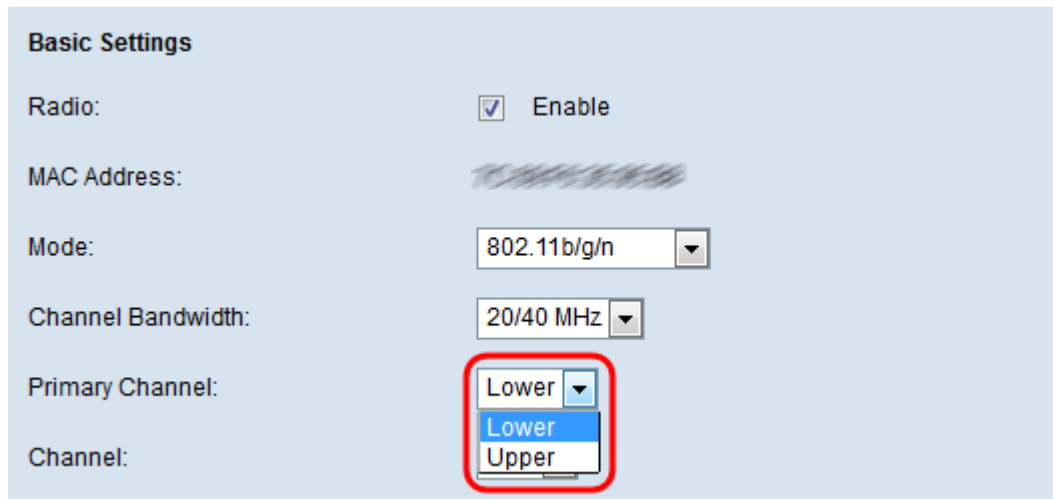
Channel: Auto

The options are described as follows:

- 20 MHz — Restricts the use of channel bandwidth to a 20 MHz channel.
- 20/40 MHz — Consists of two 20 MHz channels that are contiguous in the frequency domain.

**Note:** If 20 MHz is selected, the options to configure the *Primary Channel* and *Channel* fields are not available. Skip to [Step 6](#).

Step 4. From the *Primary Channel* drop-down list, choose a channel to set as primary. The primary channel is used for devices that only support 20/40 MHz channels.



The screenshot shows a web interface titled "Basic Settings". It contains several configuration fields: "Radio:" with a checked "Enable" checkbox; "MAC Address:" with a blurred text field; "Mode:" with a dropdown menu showing "802.11b/g/n"; "Channel Bandwidth:" with a dropdown menu showing "20/40 MHz"; "Primary Channel:" with a dropdown menu that is open, showing "Lower" and "Upper" options; and "Channel:" with a text field. A red rectangle highlights the "Primary Channel:" dropdown menu.

The available options are described as follows:

- Upper — Sets the upper 20 MHz channel as the primary channel.
- Lower — Sets the lower 20 MHz channel as the primary channel.


**Note:** The web UI disables the *Primary Channel* drop-down if the *Channel Bandwidth* field is left as 20 Mhz or if the *Channel* field is left as Auto.

Step 5. Choose the portion of the radio spectrum that the radio uses to transmit and receive from the *Channel* drop-down list.



**Basic Settings**

Radio: ☒ Enable

MAC Address: 

Mode: 802.11b/g/n ▼

Channel Bandwidth: 20 MHz ▼

Primary Channel: Lower ▼

Channel: Auto ▼

---

**Advanced Settings**

Short Guard Interval Supported: 4

Protection: 6

Beacon Interval: 100 milliseconds (Range: 20 - 2000, Default: 100)

DTIM Period: 2 (Range: 1-255, Default: 2)

Fragmentation Threshold: 2346 Even Numbers (Range: 256 - 2346, Default: 2346)

RTS Threshold: 65535 (Range: 0-65535, Default: 65535)

Maximum Associated Clients: 200 (Range: 0-200, Default: 200)

**Note:** If auto is chosen, the WAP scans the available channels and chooses a channel where the least traffic is detected.

Step 6. Click **Save** to save the settings.

Fragmentation Threshold:  Even Numbers (Range: 256 - 2346, Default: 2346)

RTS Threshold:  (Range: 0-65535, Default: 65535)

Maximum Associated Clients:  (Range: 0-200, Default: 200)

Transmit Power:

Frame-burst Support:  [Boosts Downstream Throughput]

Fixed Multicast Rate:  Mbps

Legacy Rate Sets:

Rate (Mbps)	54	48	36	24	18	12	11	9	6	5.5	2	1
Supported	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Basic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

☐ Broadcast/Multicast Rate Limiting

Rate Limit  Packets Per Second (Range: 1 - 50, Default: 50)

Rate Limit Burst  Packets Per Second (Range: 1 - 75, Default: 75)

TSPEC Mode:

TSPEC Voice ACM Mode:

TSPEC Voice ACM Limit:  Percent (Range: 0 - 70, Default: 20)

TSPEC Video ACM Mode:

TSPEC Video ACM Limit:  Percent (Range: 0 - 70, Default: 15)

TSPEC AP Inactivity Timeout:  Sec (Range: 0 - 120, 0 = Disable, Default: 30)

TSPEC Station Inactivity Timeout:  Sec (Range: 0 - 120, 0 = Disable, Default: 30)

TSPEC Legacy WMM Queue Map Mode:

VHT Features: ☐

Save