TSR-310

Wireless Access Points

Configuration Guide

Crestron Electronics, Inc.

This document was written by the Technical Publications department at Crestron.

Contents

TSR-310: Wireless Access Points

Introduction

The Crestron® TSR-310 handheld touch screen remote establishes wireless communications via a connection to a wireless access point (WAP). WAP connections for the TSR-310 are configured and managed with the device's built-in setup screens.

The TSR-310 has been tested and verified to work with the following WAP brands:

- Aruba Networks® access points
- Cisco® access points
- Crestron access points
- Luxul access points
- Pakedge® access points
- Ruckus® access points
- Ubiquiti® access points

Crestron recommends configuring the WAP for optimal device performance prior to connecting the TSR-310 to the Wi-Fi® network. Use the procedures provided in this guide to configure each of the above WAP brands for use with the TSR-310 and to run wireless connection diagnostics with the device's web configuration utility.

For more information on wireless setup and management for the TSR-310, refer to the TSR-310 Supplemental Guide (Doc. 8226) at www.crestron.com/manuals.

WAP Configuration

Each of the following sections provides the optimal configuration settings for each WAP that is included in this guide.

NOTE: The TSR-310 does not support an 80Mhz channel bandwidth for the 5GHz band unless the WAP features an 80Mhz auto mode.

Ruckus Access Points

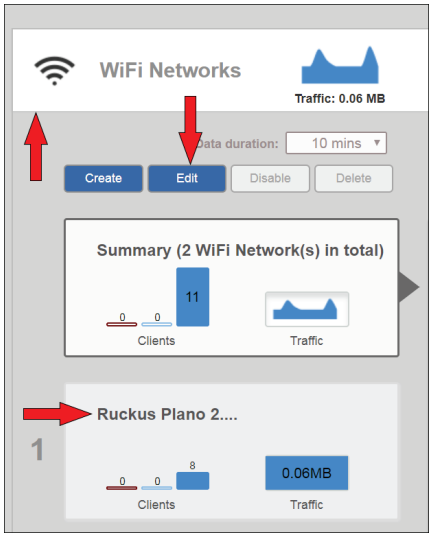
To configure a Ruckus access point with the TSR-310:

NOTE: The TSR-310 is currently optimized for performance, and not extended battery life, on Ruckus WAPs.

NOTE: The TSR-310 may take up to five minutes to reconnect to the Ruckus WAP if the remote is taken out of and then placed back into range, or if it is rebooted.

1. Install WAP firmware version 200.5.10.0.235 or later.
2. Launch the Ruckus access point configuration utility.
3. On the dashboard page, select **Wi-Fi Networks** to expand the selection.

Wi-Fi Networks Settings



4. Select the desired Wi-Fi network, and select **Edit**. The **Edit WLAN** screen displays.
5. Select the **Show advanced options** to expand the screen.
6. Select the **Others** tab.

Edit WLAN Screen - Others

7. Set the **Inactivity Timeout** duration to 1 minute.
8. Select **OK** to confirm the changes.
9. Repeat steps 4–8 for any other Wi-Fi network that may be used by the TSR-310.

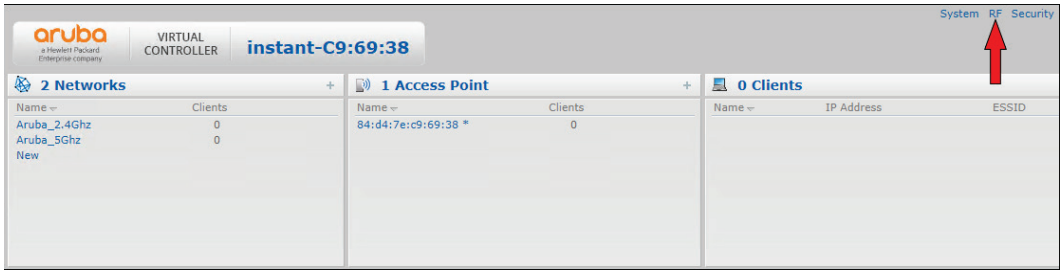
Aruba Networks Access Points

To configure an Aruba Networks access point with the TSR-310:

NOTE: Do not use an Aruba Networks WAP in the same network as a Pakedge WAP.

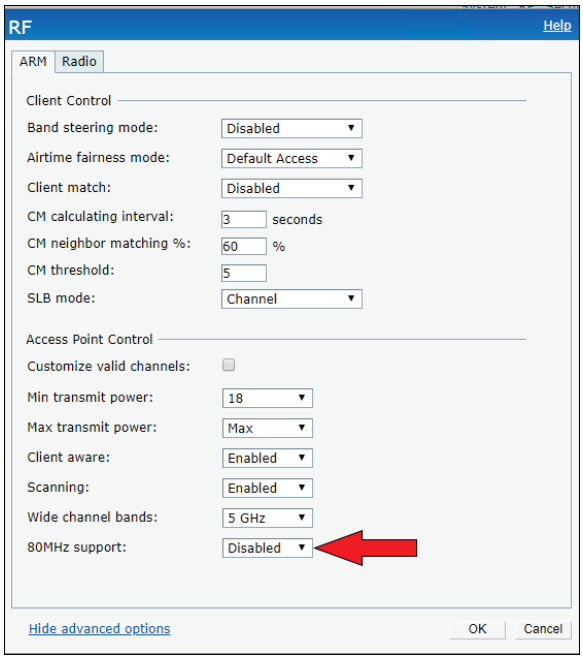
1. Install WAP firmware version 6.5.4.5_63641 or later.
2. Launch the Aruba virtual controller.
3. Select **RF** on the top right of the dashboard page to display the **RF** window.

Aruba Virtual Controller



4. Select the **ARM** tab.
5. Select **Disabled** from the **80Mhz support** drop-down menu.

RF Window - ARM Tab

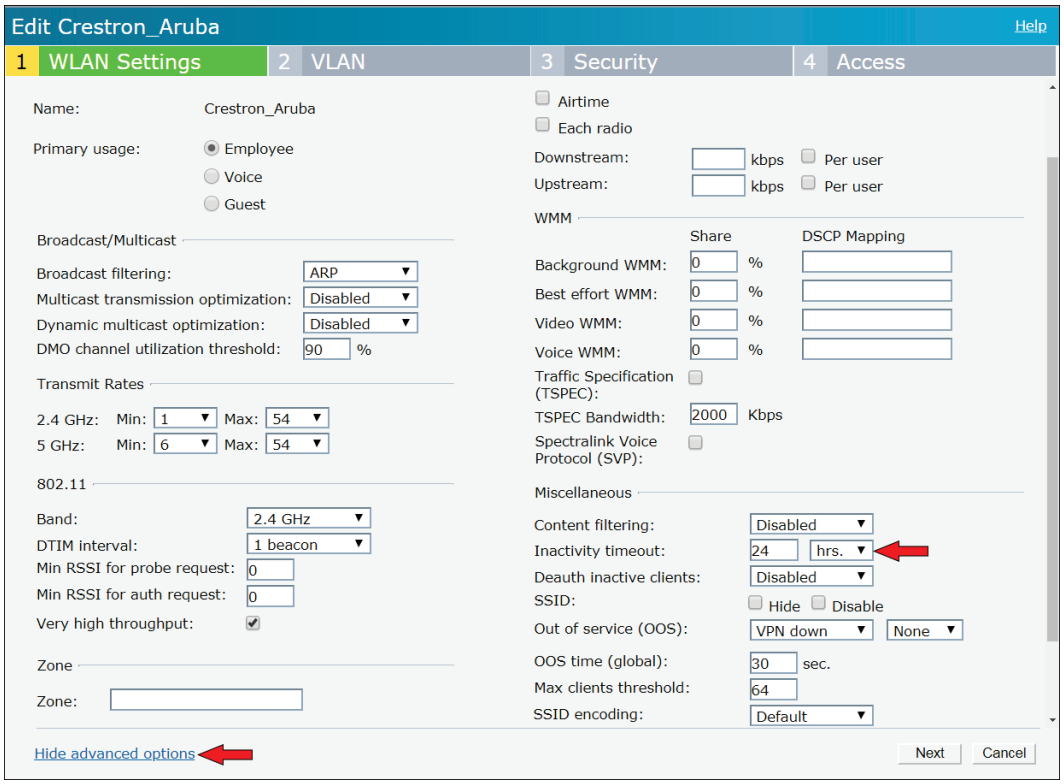


6. Click **OK**.
7. On the dashboard page, select **edit** next to the desired Wi-Fi network name. A screen for editing the network settings displays.

Aruba Virtual Controller

8. Select **Show advanced options** to display advanced configuration settings.
9. Set the **Inactivity timeout** duration to **24 hrs.** Refer to the image on the next page.
10. Select **Next** to proceed through the remaining settings screens.
11. Repeat steps 7–10 for any other Wi-Fi network that may be used by the TSR-310.

Edit Crestron_Aruba Screen - WLAN Settings

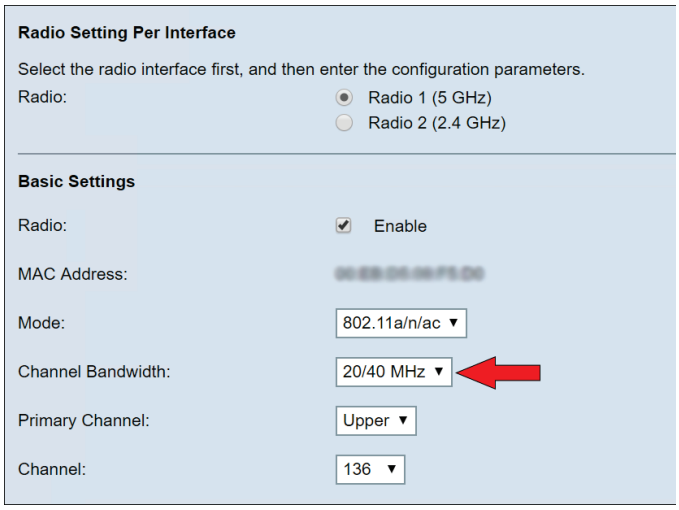


Cisco Access Points

To configure a Cisco access point with the TSR-310:

1. Install WAP firmware version 1.3.0.6 or later.
2. Launch the Cisco WAP configuration utility.
3. Navigate to **Wireless** > **Radio**.
4. Select **Radio 1 (5 GHz)** in the **Radio Setting Per Interface** section.
5. Use the **Channel Bandwidth** dropdown menu to select any option except **80 Mhz**.

Radio Screen



Crestron Access Points

To configure a Crestron access point with the TSR-310, install WAP firmware version 4.000.0002 or later. No other configuration changes are required.

Luxul Access Points

To configure a Luxul access point with the TSR-310, install WAP firmware version 5.0.5.2 or later. No other configuration changes are required.

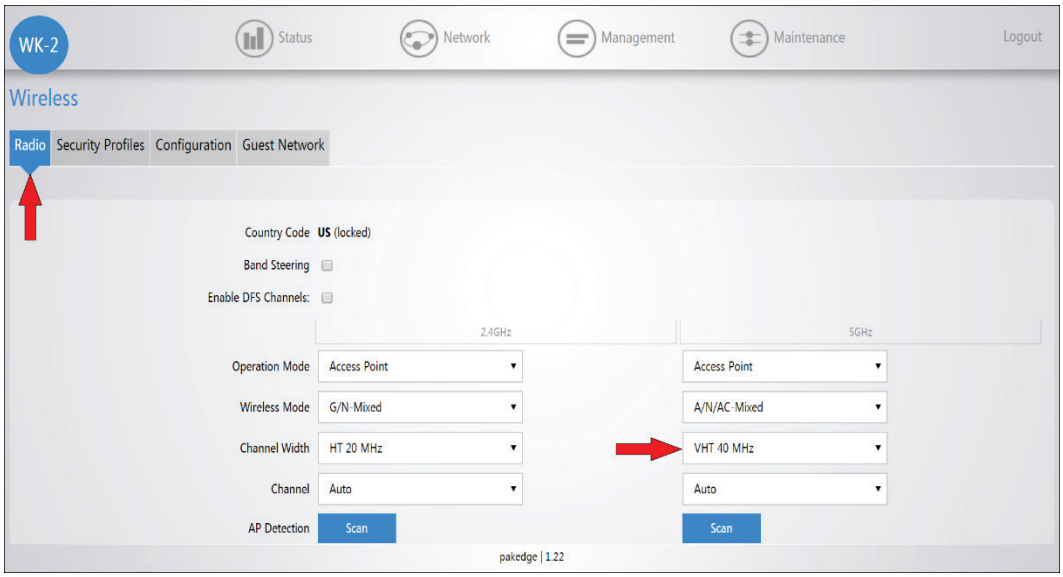
Pakedge Access Points

To configure a Pakedge access point with the TSR-310:

NOTE: Do not use a Pakedge WAP in the same network as an Aruba Networks WAP.

1. Install WAP firmware version 1.22 or later.
2. Launch the Pakedge WAP configuration utility.
3. Select **Wireless**, and then select the **Radio** tab.
4. Select any option except for **80 Mhz** from the **Channel Width** dropdown menu under **5Ghz**.

Wireless Screen - Radio Tab



Ubiquiti Access Points

To configure an Ubiquiti access point with the TSR-310, install WAP firmware version 3.9.19.8123 or later. No other configuration changes are required.

CAUTION: If using a Ubiquiti access point with a CEN-SWPOE-16 managed PoE switch, be sure to disable VLANs on the CEN-SWPOE-16. Enabling VLANs may cause a multicast storm that could bring down the network. For more information, refer to the CEN-SWPOE-16 Supplemental Guide (Doc. 7408) at www.crestron.com/manuals.

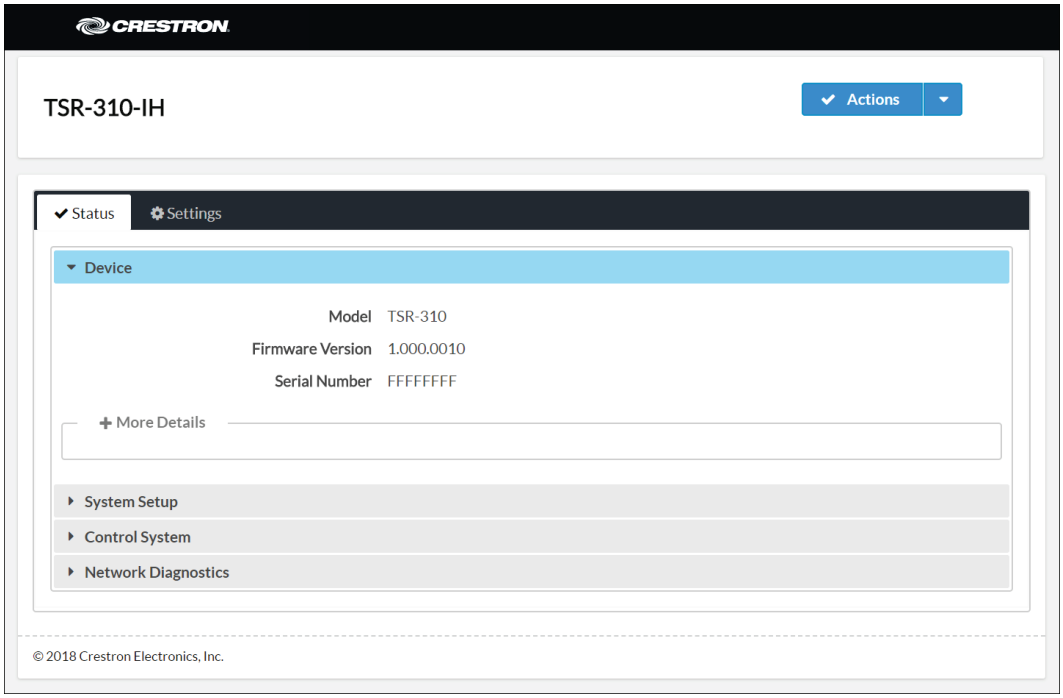
Network Diagnostics

The TSR-310 web configuration utility provides a **Network Diagnostics** section to view the status of the wireless connection and to run network diagnostic tests. Use the **Network Diagnostics** section to evaluate the performance of the WAP connection(s).

To access the **Network Diagnostics** page:

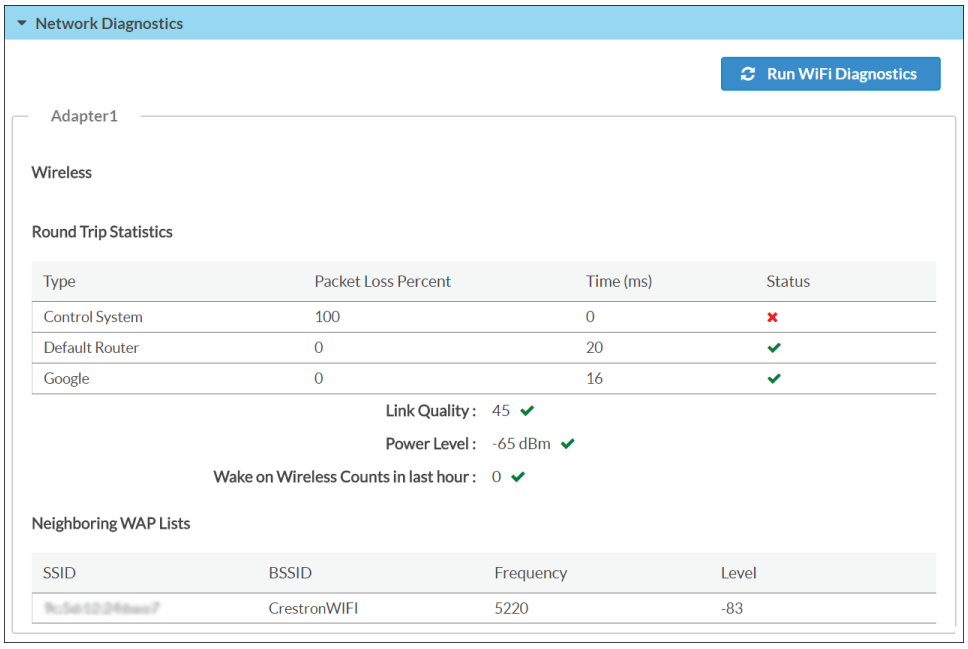
1. Open a web browser.
2. Enter the TSR-310's IP address into the browser URL field. The TSR-310 configuration interface displays.

TSR-310 Configuration Interface



3. Navigate to **Status** > **Network Diagnostics**. The **Network Diagnostics** section expands. Refer to the image on the following page.

Status - Network Diagnostics



Click **Run Wi-Fi Diagnostics** at the top of the page to run a diagnostic test for the Wi-Fi connection. Once the diagnostic test has completed, the configuration utility refreshes to display the current values for the connection data.

The following **Network Diagnostics** > **Adapter** > **Wireless** information is displayed:

- **Round Trip Statistics:** The round trip connection statistics for each of the listed wireless connections
  - **Type:** The wireless connection type
  - **Packet Loss Percent:** The percentage of data packets that are lost during the round trip data transmission (0 to 100%)
  - **Time (ms)**: The duration it takes for the wireless signal to be sent and received in milliseconds
  - **Status**: The quality of the round trip connection (A green check icon (✔) indicates that the connection is optimal, while a red x icon (✖) indicates that the connection is suboptimal or not active.)
- **Link Quality:** The qualitative value of the signal strength and signal interference (A green check icon (✔) indicates that the link quality is optimal, while a red x icon (✖) indicates that the link quality is suboptimal.)
- **Power Level:** The power level of the wireless connection (A green check icon (✔) indicates that the power level is optimal, while a red x icon (✖) indicates that the power level is suboptimal.)
- **Wake on Wireless Counts in last hour:** The number of occurrences where the TSR-310 was woken by the wireless LAN over the last hour (A green check icon (✔) indicates that the number of occurrences is optimal, while a red x icon (✖) indicates that the number of occurrences is suboptimal.)

The following Network Diagnostics > Adapter > Neighboring WAP Lists information is displayed for each neighboring WAP:

- SSID: The wireless access point hostname
- BSSID: The wireless access point MAC address
- Frequency: The frequency of the wireless access point
- Level: The power level of the wireless access point

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