



Article ID: 5011

How to Configure Wireless Distribution System (WDS) on the RV130W

Objective

A Wireless Distribution System (WDS) is a system that enables the wireless interconnection of access points (APs) in a network. WDS allows a wireless network to be expanded using multiple access points without the need for a wired backbone to link them. To establish a WDS link, the device and other remote WDS peers must be configured in the same wireless network mode, wireless channel, wireless band selection, and encryption types (None or WEP). For more information, refer to [Configuring Basic Wireless Settings on the RV130W](#).

In a typical small business environment, you can configure WDS in Bridge mode or Repeater mode. Bridge mode is useful if you want the other APs to extend the network signal for your device, which acts as the common link. Repeater mode is useful if you want your device to act as a network signal repeater for other APs by using a wireless connection.

The objective of this document is to show you how to configure a Wireless Distribution System on the RV130W.

Applicable Devices

- RV130W

Software Version

- v1.0.1.3

Wireless Distribution System Configuration

Configuration of WDS in Bridge Mode

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

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☐

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

Show Available Networks

MAC

Save Cancel

Step 2. To enable WDS, check the check box in the *WDS* field.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

Show Available Networks

MAC

Save Cancel

Step 3. In the *Mode* field, click the **WDS Bridge** radio button. When the router's WDS is configured to Bridge mode, the WDS designates the configured access point as the common link between multiple access points.

The screenshot shows the 'WDS' configuration window. At the top, it displays 'WDS MAC Address: 3C:CE:73:8E:04:1E'. Below this, the 'WDS' checkbox is checked. The 'Mode' section has two radio buttons: 'WDS Bridge' (which is selected and circled in red) and 'WDS Repeater'. Under the 'WDS Bridge' mode, there is a section for 'Remote Wireless Bridge's MAC Address' with four input fields labeled 'MAC 1', 'MAC 2', 'MAC 3', and 'MAC 4'. A hint '(Hint: 00:11:22:33:44:55 or 001122334455)' is provided next to the 'MAC 1' field. Under the 'WDS Repeater' mode, there is a section for 'Remote Access Point's MAC Address' with a similar set of four input fields. A hint '(Hint: 00:11:22:33:44:55 or 001122334455)' is also provided. Below the input fields, there is a 'Show Available Networks' button. At the bottom of the window, there are 'Save' and 'Cancel' buttons.

Step 4. In the *Remote Wireless Bridge's MAC Address* section, enter the MAC address of an access point to use as a bridge in the *MAC 1* field. You can also configure additional access points to use as bridges in the *MAC 2*, *MAC 3*, and *MAC 4* fields.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☒ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☐ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

MAC

Step 5. Click **Save** to save the changes.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☒ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☐ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

MAC

Configuration of WDS in Wireless Repeater Mode

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

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☐

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

MAC

Save Cancel

Step 2. To enable WDS, check the check box in the *WDS* field.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

MAC

Step 3. In the *Mode* field, click the **WDS Repeater** radio button. When the router's WDS is configured to Repeater mode, the WDS designates the configured access point to connect to multiple access points without a wired connection to the LAN by repeating signals using wireless connection.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

MAC

Save Cancel

Step 4. Choose the desired option for the WDS Repeater mode. The available options are defined as follows:

- Allow wireless signal to be repeated by a repeater — Designated Access Points are used to repeat the device's wireless signal.
- Repeat wireless signal of a remote access point — The device is used to repeat the wireless signal of another wireless access point. If you select this option, skip to Step 6.

Step 5. If you choose **Allow wireless signal to be repeated by a repeater** in Step 4, enter the MAC address of an access point to use as a repeater in the *MAC 1* field. You can configure additional access points to use as repeaters in the *MAC 2*, *MAC 3*, and *MAC 4* fields. Skip to Step 9.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☒ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☐ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

Show Available Networks

MAC

Save Cancel

Step 6. If you choose **Repeat wireless signal of a remote access point** in Step 4, click **Show Available Networks** to find available wireless access points to connect to.

WDS

WDS MAC Address: 3C:CE:73:8E:04:1E

WDS ☒

Mode ☐ WDS Bridge

Remote Wireless Bridge's MAC Address

MAC 1 (Hint: 00:11:22:33:44:55 or 001122334455)

MAC 2

MAC 3

MAC 4

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1


MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):


 **Show Available Networks**

MAC

The *Available Networks Table* appears:

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

 **Hide Available Networks**


Available Networks Table					
	Network Name (SSID)	Channel	Security	Signal	MAC Address
<input type="checkbox"/>	cisco-3C9B	6	WPA2-Personal	12%	00:01:36:11:3C:9D
<input type="checkbox"/>	ciscosb1	6	Disabled	45%	B8:62:1F:50:07:33
<input type="checkbox"/>	ciscosb1-KK	6	WPA2-Personal	43%	3C:CE:73:8E:00:2C
<input type="checkbox"/>	linksys99	8	WPA2-Personal	48%	00:11:22:22:33:35
<input type="checkbox"/>	1234567890	11	WPA2-Personal	42%	00:01:36:11:3C:9D
<input type="checkbox"/>	SQA-1	10	WPA2-Personal	45%	00:90:A9:F0:23:D3
<input type="checkbox"/>	52237	6	WPA-Personal	16%	00:0F:66:D9:00:7C

MAC

Step 7. Check the desired check box of the network name to designate which available wireless access point you want the device to repeat the signal for.

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

 **Hide Available Networks**


Available Networks Table					
	Network Name (SSID)	Channel	Security	Signal	MAC Address
<input checked="" type="checkbox"/>	cisco-3C9B	6	WPA2-Personal	12%	00:01:36:11:3C:9D
<input type="checkbox"/>	ciscosb1	6	Disabled	45%	B8:62:1F:50:07:33
<input type="checkbox"/>	ciscosb1-KK	6	WPA2-Personal	43%	3C:CE:73:8E:00:2C
<input type="checkbox"/>	linksys99	8	WPA2-Personal	48%	00:11:22:22:33:35
<input type="checkbox"/>	1234567890	11	WPA2-Personal	42%	00:01:36:11:3C:9D
<input type="checkbox"/>	SQA-1	10	WPA2-Personal	45%	00:90:A9:F0:23:D3
<input type="checkbox"/>	52237	6	WPA-Personal	16%	00:0F:66:D9:00:7C

MAC

Step 8. Click the **Connect** button to add the MAC address of the selected access point to the *MAC* field.

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

 **Hide Available Networks**

Available Networks Table					
	Network Name (SSID)	Channel	Security	Signal	MAC Address
<input checked="" type="checkbox"/>	cisco-3C9B	6	WPA2-Personal	12%	00:01:36:11:3C:9D
<input type="checkbox"/>	ciscosb1	6	Disabled	45%	B8:62:1F:50:07:33
<input type="checkbox"/>	ciscosb1-KK	6	WPA2-Personal	43%	3C:CE:73:8E:00:2C
<input type="checkbox"/>	linksys99	8	WPA2-Personal	48%	00:11:22:22:33:35
<input type="checkbox"/>	1234567890	11	WPA2-Personal	42%	00:01:36:11:3C:9D
<input type="checkbox"/>	SQA-1	10	WPA2-Personal	45%	00:90:A9:F0:23:D3
<input type="checkbox"/>	52237	6	WPA-Personal	16%	00:0F:66:D9:00:7C

MAC

The *MAC* field will be updated with the MAC Address of the selected network.

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

Available Networks Table					
	Network Name (SSID)	Channel	Security	Signal	MAC Address
<input checked="" type="checkbox"/>	cisco-3C9B	6	WPA2-Personal	12%	00:01:36:11:3C:9D
<input type="checkbox"/>	ciscosb1	6	Disabled	45%	B8:62:1F:50:07:33
<input type="checkbox"/>	ciscosb1-KK	6	WPA2-Personal	43%	3C:CE:73:8E:00:2C
<input type="checkbox"/>	linksys99	8	WPA2-Personal	48%	00:11:22:22:33:35
<input type="checkbox"/>	1234567890	11	WPA2-Personal	42%	00:01:36:11:3C:9D
<input type="checkbox"/>	SQA-1	10	WPA2-Personal	45%	00:90:A9:F0:23:D3
<input type="checkbox"/>	52237	6	WPA-Personal	16%	00:0F:66:D9:00:7C

MAC

Step 9. Click **Save** to save your settings.

☒ WDS Repeater

☐ Allow wireless signal to be repeated by a repeater

MAC 1

MAC 2

MAC 3

MAC 4

☒ Repeat wireless signal of a remote access point

Remote Access Point's MAC Address (Select one from the site survey list or define your own):

Available Networks Table					
	Network Name (SSID)	Channel	Security	Signal	MAC Address
<input checked="" type="checkbox"/>	cisco-3C9B	6	WPA2-Personal	12%	00:01:36:11:3C:9D
<input type="checkbox"/>	ciscosb1	6	Disabled	45%	B8:62:1F:50:07:33
<input type="checkbox"/>	ciscosb1-KK	6	WPA2-Personal	43%	3C:CE:73:8E:00:2C
<input type="checkbox"/>	linksys99	8	WPA2-Personal	48%	00:11:22:22:33:35
<input type="checkbox"/>	1234567890	11	WPA2-Personal	42%	00:01:36:11:3C:9D
<input type="checkbox"/>	SQA-1	10	WPA2-Personal	45%	00:90:A9:F0:23:D3
<input type="checkbox"/>	52237	6	WPA-Personal	16%	00:0F:66:D9:00:7C

MAC