

Advanced Wireless Configuration on the CVR100W VPN Router

Objective

The advanced wireless configuration allows the user more control than the basic wireless configuration. See the [Basic Wireless Settings on the CVR100W VPN Router](#) article for more information on basic wireless settings. The *Advanced Settings* page is used to customize data transmission to increase the network performance. This performance is based on the throughput of the device, which means the average successful rate of packet delivery over a network. The advanced wireless configuration also allows the user to customize the rate at which the data is transmitted for better functionality. This article explains how to configure advanced wireless settings on the CVR100W VPN Router.

Note: The Radio option in Basic Wireless Settings needs to be enabled for the Advanced settings page to have any available radio buttons or drop-down lists.

Applicable Device

- CVR100W

Software Version

- 1.0.1.19

Advanced Wireless Configuration

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

Advanced Configuration

Frame Burst: Enable

WMM No Acknowledgement: Enable

Basic Rate: All ▾

Transmission Rate: 5.5 Mbps ▾

N Transmission Rate: Auto ▾

CTS Protection Mode: Disabled Auto

Beacon Interval: 300 Milliseconds (Default : 100, Range : 40 - 3500)

DTIM Interval: 5 (Default : 1, Range : 1 - 255)

Fragmentation Threshold: 1497 (Default : 2346, Range : 256 - 2346)

RTS Threshold: 1290 (Default : 2347, Range : 0 - 2347)

Step 2. Check the **Enable** check box in the Frame Burst field to enable frame burst. Frame burst enhances the ability of a client to upload data at a higher throughput.

Note: The frame burst only supports 1 to 3 clients. If there are more than 3 clients, frame burst reduces the throughput of the network.

Step 3. Check the **Enable** check box in the WMM No Acknowledgement field to enable the Quality of Service (QoS) function for multimedia applications such as VoIP and video. This allows the network packets of the multimedia application to have priority over regular data network packets, which makes multimedia applications run smoother. This feature results in more efficient throughput but with higher error rates.

Advanced Configuration

Frame Burst: Enable

WMM No Acknowledgement: Enable

Basic Rate: All ▾

Transmission Rate: Auto ▾

N Transmission Rate: 6.5 Mbps ▾

CTS Protection Mode: Disabled Auto

Step 4. Choose the rate at which the device can transmit information from the Basic Rate drop-down list. The available options are:

- 1-2 Mbps — This option works best with older wireless technology.
- Default — This option transmits at all standard wireless rates.
- All — This option transmits at all wireless rates.

Step 5. (Optional) Choose the desired data transmission rate from the Transmission Rate drop-down list. This option is available if the Wireless Network Mode is not N-only. If N-only is chosen skip to the next step.

Step 6. Choose the desired data transmission rate from the N Transmission Rate drop-down list. The data transmission rate is set based on the speed of the Wireless-N network.

Step 7. Click the desired CTS Protection Mode radio button. The Clear-To-Send (CTS) Protection option enables the protection mechanism, which is used to minimize collisions among stations in a mixed 802.11b and 802.11g environment. The available options are:

- Disabled — The CTS Protection mode is disabled.
- Auto — The CTS Protection checks only when necessary.

Beacon Interval:	<input type="text" value="300"/>	Milliseconds (Default : 100, Range : 40 - 3500)
DTIM Interval:	<input type="text" value="5"/>	(Default : 1, Range : 1 - 255)
Fragmentation Threshold:	<input type="text" value="1497"/>	(Default : 2346, Range : 256 - 2346)
RTS Threshold:	<input type="text" value="1290"/>	(Default : 2347, Range : 0 - 2347)

Step 8. Enter the time (in milliseconds) in the Beacon Interval field that a beacon packet is sent out. A beacon is a packet broadcast by the device to synchronize the wireless network.

Step 9. Enter the desired time interval in the DTIM Interval field. It provides the time interval at which the Delivery Traffic Indication Message (DTIM) should be sent. When the CVR100W has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. When the clients receive the ping, they are alerted and able to receive the broadcast and multicast messages.

Step 10. Enter the threshold value in the Fragmentation Threshold field. This feature provides the maximum size for a packet before data is fragmented into multiple packets.

Note: When there is a greater rate of packet errors, the fragment threshold can be increased to reduce the error rate.

Step 11. Enter the threshold value in the RTS Threshold field. This feature provides the time interval at which the Request-To-Send (RTS) frames are sent to the receiver where the performance can be increased or decreased. This is done by the increase or decrease of time for the internal handshake allowing a quicker or slower exchange of information. If the RTS Threshold is increased, information packets will be delivered faster and the overall performance will increase in speed.

Step 12. Click **Save** to save the changes.