

IP Streaming Setup Guide for HD-2002DM, HD-4002DM via Web GUI

Guide to Setup IP Streaming on HD-2002DM or HD-4002DM.

1. Go to IP Streaming Setup Page after logging in the GUI. You will see the webpage as below. In this page you can configure your device's IP streaming IP Address, and select your streaming method protocol and Destination IP, Port, and TTL (Time to Live) settings.



resi-linx HD Encodulator

Overview

Common Setup

RF Setup

Encoder Setup

IP Streaming
Setup

Web Management
Setup

Administration

IP Streaming

This page allows the user to setup the IP Streaming settings. Here you may save the changed values into browser's session storage. After you review all your updates for common, RF, encoders' setup, and IP Streaming, you can use the upload and reboot function to store the new parameters for the device.

Network Setup

☐ Enable DHCP

IP Address: 192.168.1.10

Subnet Mask: 255.255.255.0

Gateway: 0.0.0.0

Streaming 1

Streaming 2

Streaming 3

Streaming 4

Stream Method: RTP Unicast

Destination IP: 192.168.1.20

Destination Port: 10000

TTL: 63

Enable: ☒

Local Save

Upload and Reboot

Reset local changes

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2. User can setup one streaming destination IP for each program on each streaming tab. Streaming 1 is for Program 1, Streaming 2 is for Encoder 2, etc.
3. Destination can use one of the four stream methods:
RTP Unicast, RTP Multicast, UDP Unicast, UDP Multicast.
Each streaming can use different stream method.
4. Enter the Destination IP according to user's require.
5. Enter the Destination Port according to user's require.
6. Enter the TTL according to user's require.
7. User may Enable the stream by selecting the checkbox in each streaming tab.
8. **The HD-2002DM or HD-4002DM offers 2 or 4 SPTS output streams.** Each stream can be disabled as required. Uncheck the checkbox in each streaming tab to disable the IP output for the program.
9. Select "Local Save" once user finishes setup for each IP Streaming. The parameters will be saved into the browser's session storage. At this time the parameters have not yet been applied to the device.
10. Select "Upload and Reboot" once user finishes all the parameter settings. The device will reboot and apply the settings/changes made in the GUI.

Additional Information:

1. Streaming Protocol:
 - i. UDP: The most common low-level protocol to use multicast addressing.
 - ii. RTP: A protocol provides facilities for jitter compensation and detection of out of sequence arrival in data.
2. IP address:
 - i. IP Multicast: Multicast addresses are defined by the leading address bits of 1110 (224.0.0.0/4).
3. UDP and RTP Port:
 - i. Port number is a 16-bit unsigned integer.
Valid port number for HD-2002DM and HD-4002DM are as following:
For UDP protocol, valid port number ranging from 1 to 65535.
For RTP protocol, valid port number can be any even number ranging from 2-65534.
 - ii. Specific port numbers are often used to identify specific services.
 - iii. Of the thousands of enumerated ports, 1024 well-known port numbers are reserved by convention to identify specific service types on a host. More information can be found here: https://en.wikipedia.org/wiki/List_of_TCP_and_UDP_port_numbers

4. How to receive IP Streaming outputting from HD-2002DM or HD-4002DM

In the receiver, the Input Format will be **[protocol]://[Destination IP]:[Destination Port]**

For example:

- a. `udp://224.1.1.1:1234` (A UDP multicast stream.)
- b. `rtp://123.234.134.9:28450` (A RTP unicast stream.)

If a receiver is to receive the IP Streaming from HD-2002DM or HD-4002DM with parameters shown in the picture one page 2, the Input Streaming Setup in the receiver will be:

`rtp://192.168.1.20:10000`

5. Information on Private Address Range, IPv4

Private IPv4 addresses are addresses set aside by the IANA (Internet Assigned Numbers Authority) for use within networks that will not directly communicate or not be seen by the internet. These private addresses cannot be used on the Internet or be used to communicate with the Internet. ISP's filter out and delete packets using private IP addresses. Any organization that uses private IP addresses on devices that communicate with the internet must use a device that performs Network Address Translation.

Anyone can use private addresses and they are not required to seek permission to use them. Again, networks using private IP addresses cannot communicate directly with the internet.

There are three blocks of addresses that are set aside by IANA for use in private internets and are not publicly routable on the global internet:

- Private Class A Range: 10.0.0.0 - 10.255.255.255
- Private Class B Range: 172.16.0.0 - 172.31.255.255
- Private Class C Range: 192.168.0.0 - 192.168.255.255

It is important to note that only *some* of the 172.xx.xx.xx and the 192.xx.xx.xx address ranges are designated for private use. The remaining addresses are public and can be routable via the global Internet.

More information regarding private addresses can be found at <http://www.iana.org> and <https://www.arin.net>.