



Encoder-100 Streaming Media Encoder

User Guide V1.20

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Thanks for buying this Encoder-100 from tvONE.

The Encoder-100 streaming media encoder allows you to stream high quality video and audio from a range of sources to the Dual stream input module of your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.

Features

- Convert video and audio to high quality digital stream.
- High quality, low bandwidth encoding with H.264 compression.
- Full 1080p HD support at up to 60 frames per second.
- Single channel encoder.
- Supports streams with low latency.
- Supports unicast and multicast streaming.
- HDMI video and audio input and output.
- Analog audio input and output.
- Preview your video signal and stream separately.

Recommendations

- For best results, use Gb Ethernet cables and equipment.
- In industrial environments, use shielded Ethernet cables.
Shielded Ethernet cables are often marked F/UTP or FTP.

About your Encoder-100

The Encoder-100 streaming media encoder allows you to stream high quality video and audio from a range of sources to the Dual stream input module of your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.

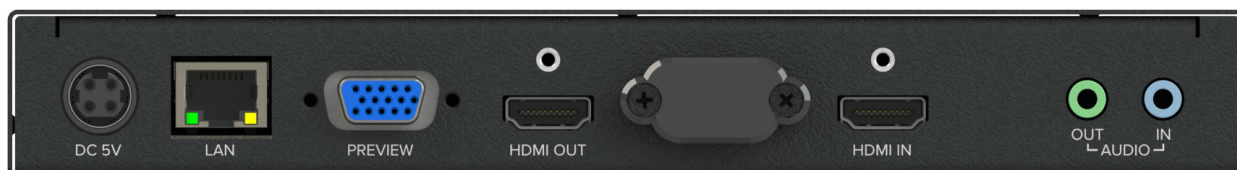
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Encoder-100 rear panel



DC 5V	Connect to an electrical outlet
LAN	Sends encoded signal to your network Connect to your network with Ethernet
PREVIEW	Allows you to preview your encoded signal Connect to a display with a VGA cable
HDMI OUT	Allows you to preview your encoded signal Connect to a display with an HDMI cable
HDMI IN	Receives video and digital audio signal from a source Connect to a source with an HDMI cable
AUDIO OUT	Allows you to preview your audio signal Connect a speaker with a 3.5 mm jack audio cable
AUDIO IN	Receives analog audio from a source Connect a 3.5 mm jack audio cable

Quick start

✔ It's easy to get started with the Encoder-100, but if you want more help with any of these steps, select ? in CORIOgrapher™ and search, or ask a question.

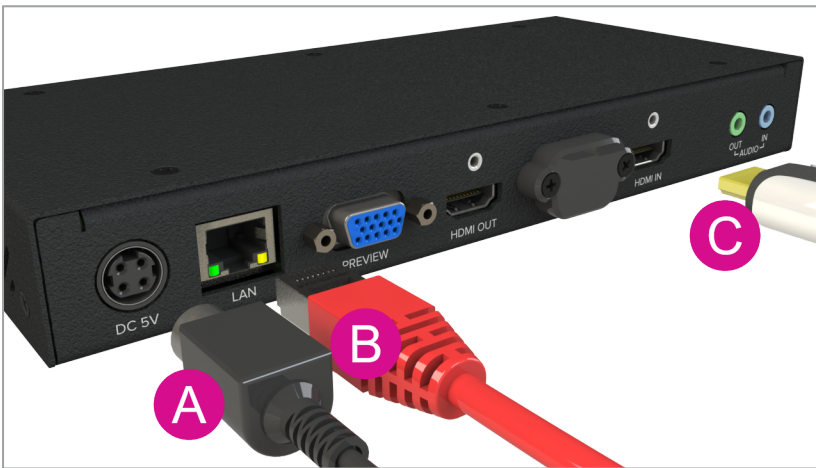
❗ The Encoder-100 cannot encode HDCP encoded sources.

Before you start

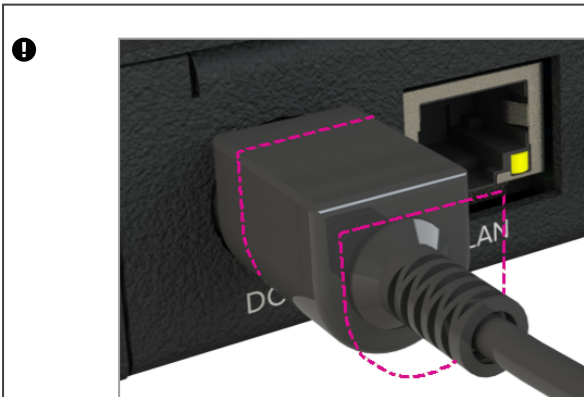
To use an Encoder-100, you must have a Dual stream input module installed in your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.

Setting up the Encoder-100

Connect your cables.



- A. Connect the power supply to an electrical outlet.
- B. Connect an Ethernet cable to a DHCP-enabled network, or, connect an Ethernet cable directly to a DHCP-enabled PC.
- C. Connect an HDMI™ cable to the video source that you wish to stream.
For example, you could connect a camera, an endoscope, or a media player.
 - OPTIONAL: if you want to stream analog audio, or preview your audio, connect a 3.5 mm jack audio cable.
 - OPTIONAL: if you want to see a preview of your stream, connect a VGA cable to PREVIEW, or an HDMI cable to HDMI OUT, and to a display.

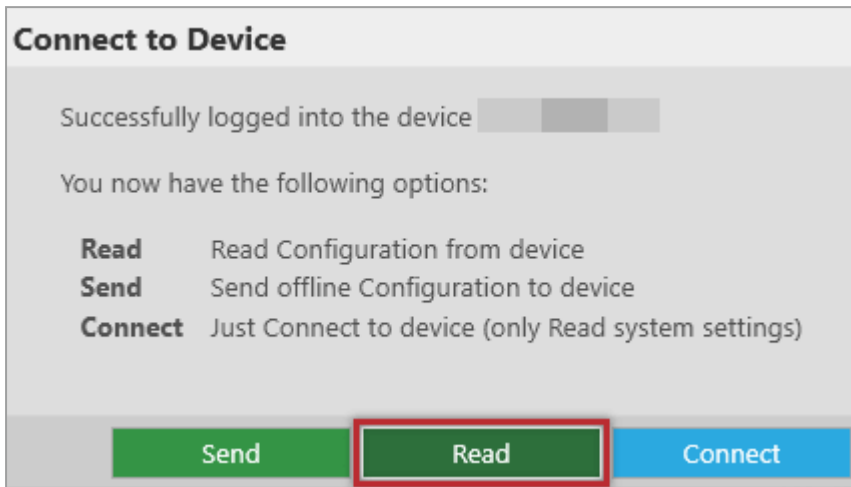


❗ The power connector is a latching power connector. To remove the power connector from your Encoder-100, slide the sleeve backward.

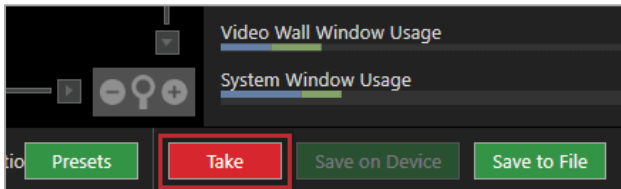
Configuring the Encoder-100 with CORIOgrapher

! The Encoder-100 uses DHCP. Before you configure your Encoder-100, make sure DHCP is enabled on your PC.

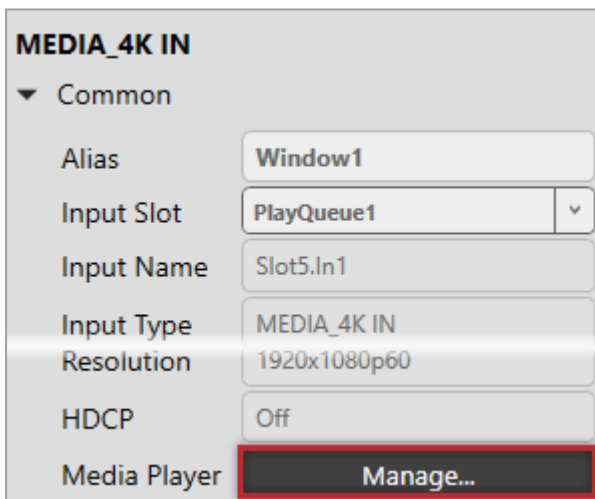
1. Open CORIOgrapher , connect to your CORIOmaster, and read the configuration from your device.



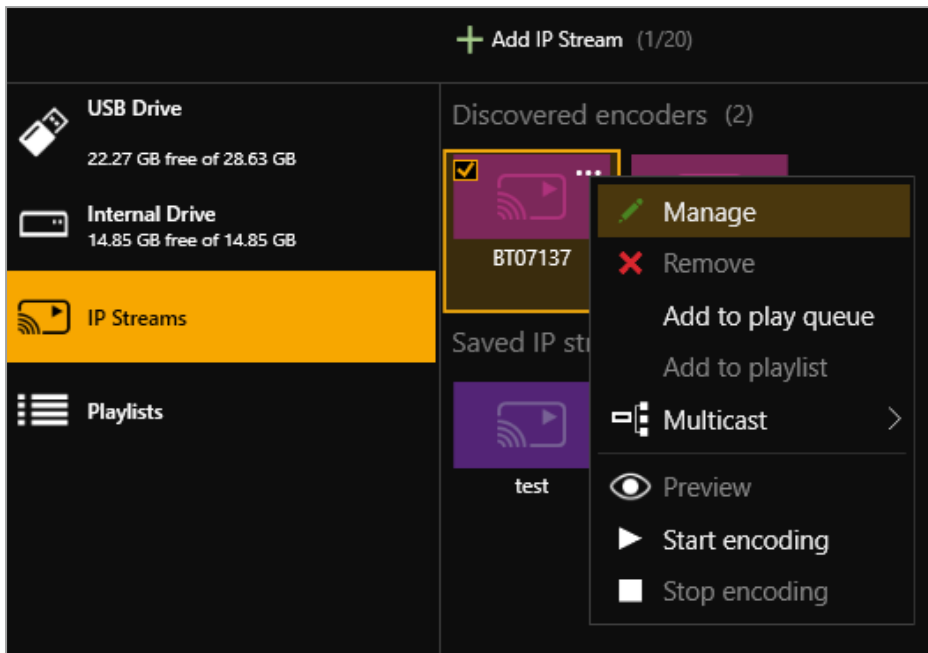
2. Set up a video wall that includes at least one window playing the Dual stream input module, and select Take.



3. Double-click the window you wish to play streaming media, and select (Media Player) Manage.



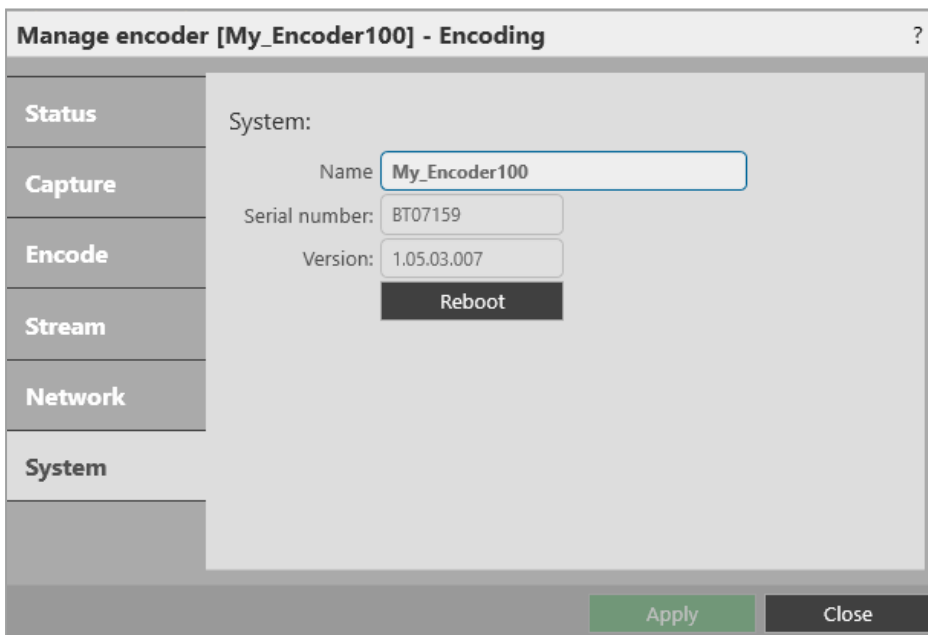
4. Select IP Streams, select your Encoder-100, and select Manage.



- When you first connect, your Encoder-100 is named with its Device ID. Find the Device ID on the bottom of your Encoder-100.
- If your Encoder-100 isn't displayed, select Find and enter the URL of your Encoder-100.
- If you can't find or connect to your Encoder-100, read troubleshooting advice on page 15.

5. Select System, and name your Encoder-100.

Names can be up to 62 characters long, and can't be blank.



6. Select Network, and choose network settings for your Encoder-100.

The screenshot shows the 'Network' configuration window for 'My_Encoder100'. The window has a sidebar with tabs: Status, Capture, Encode, Stream, Network (selected), and System. The main area is titled 'Network' and contains the following settings:

- Configuration: DHCP (dropdown)
- IP Address: 192 . 168 . 1 . 1
- Subnet Mask: 255 . 255 . 255 . 0
- Default Gateway: 192 . 168 . 1 . 254
- MAC Address: 74DAEA15DDCE

At the bottom right, there are 'Apply' and 'Close' buttons.

- If you choose DHCP, the network assigns you an IP address.
- If you choose a static IP address, enter a value for your IP address, subnet mask, and gateway.

If you need help with network settings, contact your network administrator.

! Static IP address
If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

7. Select Capture, and check that your audio source is correct.

! Risk of delayed signal
If your HDMI™ video doesn't contain embedded audio, select None or Analog from Audio.

The screenshot shows the 'Capture' configuration window for 'My_Encoder100'. The window has a sidebar with tabs: Status, Capture (selected), Encode, Stream, Network, and System. The main area is titled 'Capture' and contains the following settings:

- Video: 1920x1080p60
- Audio: Analog (dropdown)
- Sample rate: 48.0 kHz (dropdown)

At the bottom right, there are 'Apply' and 'Close' buttons.

8. Select Encode, and choose a profile.

The profile you choose depends on the bandwidth of your connection and your quality requirements. The default settings produce a high quality stream.

Manage encoder [My_Encoder100] - Encoding ?

Status	Profile
Capture	<input type="radio"/> Higher quality
Encode	<input checked="" type="radio"/> Balanced quality and bandwidth
Stream	<input type="radio"/> Lower bandwidth
Network	<input type="radio"/> Custom
System	Encoding
	Specific video size: Use input frame
	Target bitrate: 15 Mbps
	Audio bitrate: 192 kbps
	Bitrate encoding: VBR

Apply Close

9. Select Status > Start encoding.

Manage encoder [My_Encoder100] - Encoding ?

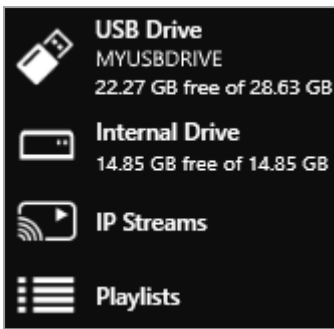
Status	Status
Capture	Status: Encoding
Encode	Stop Encoding
Stream	Address: rtsp://192.168.1.1:8554/
Network	Statistics
System	Bitrate: 23.1 Mbps Average Bitrate: 17.4 Mbps
	Framerate: 60 fps Average Framerate: 61 fps

Apply Close

Read more about configuring encoders on page 9.

Playing streaming media

Select IP Streams and drag the stream from your Encoder-100 into the play queue. Use the playback controls to play your media.



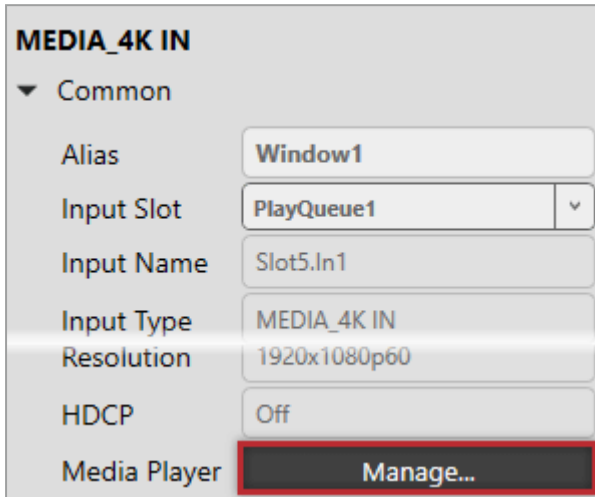
Read more about playing streaming media on page 1.

Configuring your Encoder-100

You can configure your Encoder-100 for first use, start and stop encoding, and change your settings in Encoder settings. CORIOgrapher automatically detects all Encoder-100 units on your network.

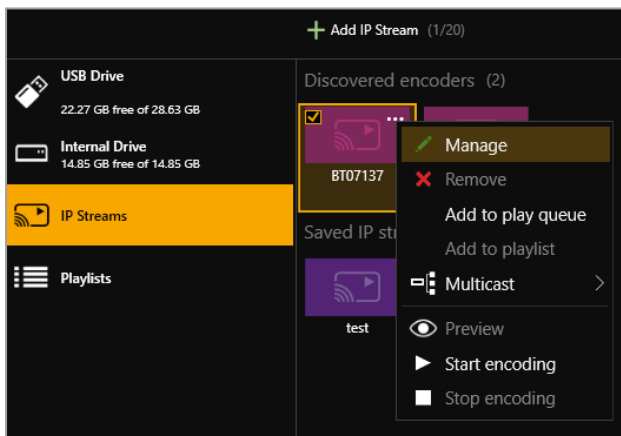
To open Encoder settings for a specific Encoder-100

1. Double-click a window playing streaming media, and select (Media Player) Manage.



2. Select IP Streams, select your Encoder-100, and select Manage.

When you first connect, your Encoder-100 is named with its Device ID. Find the Device ID on the bottom of your Encoder-100.



If you can't see your Encoder-100 in the list, select Find and enter the IP address of the encoder.

Naming your Encoder-100

Select **System**, and enter a name for your Encoder-100. Names can be up to 62 characters long, and can't be blank.

The screenshot shows a web interface window titled "Manage encoder [My_Encoder100] - Encoding". On the left, there is a vertical navigation menu with tabs for Status, Capture, Encode, Stream, Network, and System. The "System" tab is selected. The main content area is titled "System:" and contains the following fields: "Name" with the value "My_Encoder100", "Serial number:" with the value "BT07159", and "Version:" with the value "1.05.03.007". Below these fields is a "Reboot" button. At the bottom of the window are "Apply" and "Close" buttons.

Configuring network settings

Select **Network**, and choose network settings for your Encoder-100.

The screenshot shows the same web interface window, but with the "Network" tab selected. The main content area is titled "Network" and contains the following fields: "Configuration:" with a dropdown menu set to "DHCP", "IP Address:" with four input boxes containing "192", "168", "1", and "1", "Subnet Mask:" with four input boxes containing "255", "255", "255", and "0", "Default Gateway:" with four input boxes containing "192", "168", "1", and "254", and "MAC Address:" with an input box containing "74DAEA15DDCE". At the bottom of the window are "Apply" and "Close" buttons.

- If you choose DHCP, the network assigns you an IP address.
- If you choose a static IP address, enter a value for your IP address, subnet mask, and gateway.

If you need help with network settings, contact your network administrator.

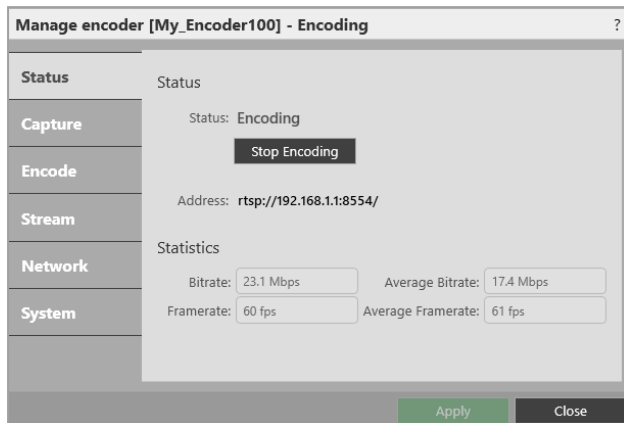


Static IP address

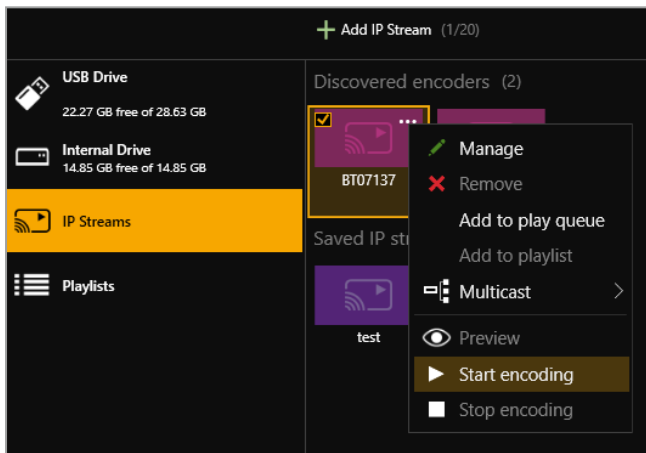
If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

Starting and stopping encoding

- To start encoding, select Status > Start encoding.
- To stop encoding, select Status > Stop encoding.



You can also start and stop encoding from Media Browser.



Configuring audio

This task is optional.

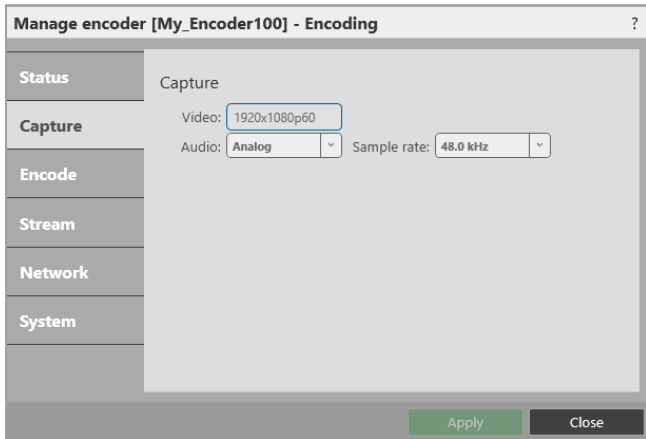
The Encoder-100 can receive digital audio by HDMI and analog audio by 3.5 mm jack. You can choose which source to include in your stream in Capture. The default audio source is HDMI.



Risk of delayed signal

If your HDMI™ video doesn't contain embedded audio, select None or Analog from Audio.

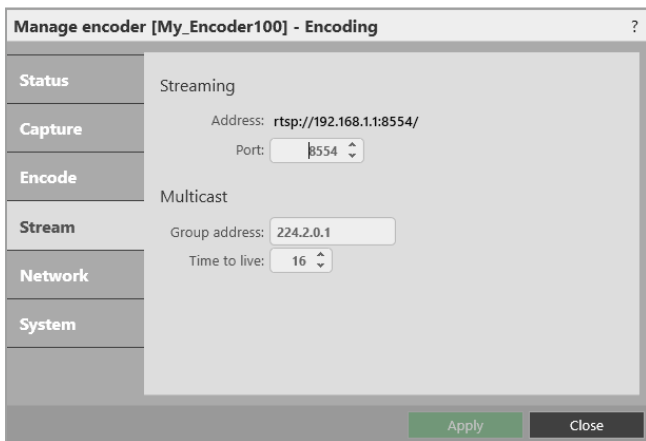
If you choose to include analog audio, choose an appropriate sample rate. The default sample rate is 48.0 kHz.



Changing the port number

This task is optional.

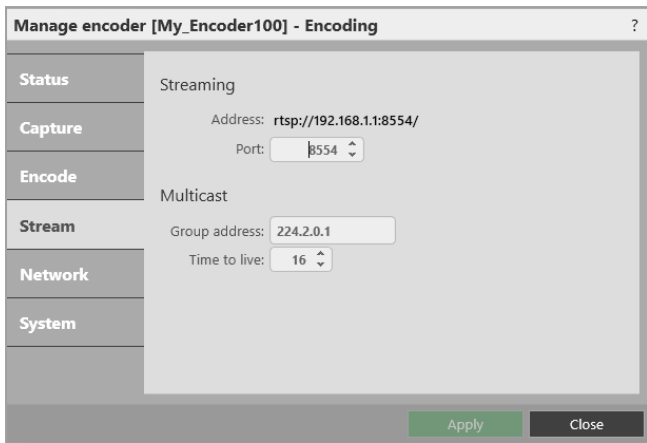
You can change the port number of your Encoder-100 in Stream.



Multicasting

This task is optional.

You can configure multicasting in Stream.



Group address

Enter the address of the group of devices to receive the stream.

We recommend you use addresses in the range 224.2.0.1 to 224.2.255.255.

Time to live

Enter a value between 1 and 255.

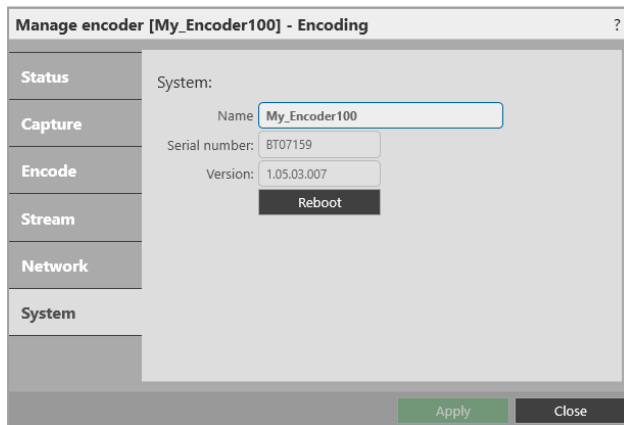
Contact your network administrator for recommended time to live values.

! Time to live is an advanced setting, for experienced users only. Contact your network administrator for help.

Restarting your Encoder-100

If you're having problems, you can restart your Encoder-100. You don't need to restart your Encoder-100 when you change your settings.

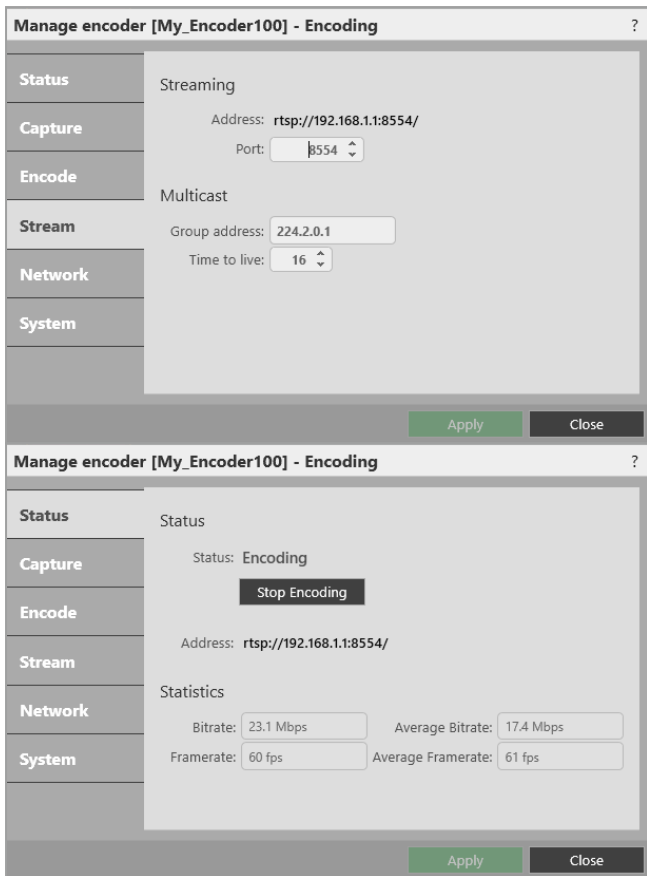
- Select System > Reboot.



Finding the address of your stream

If you want to save your encoder as a saved stream, or your encoder doesn't appear in Discovered encoders, you need to know the address of your stream.

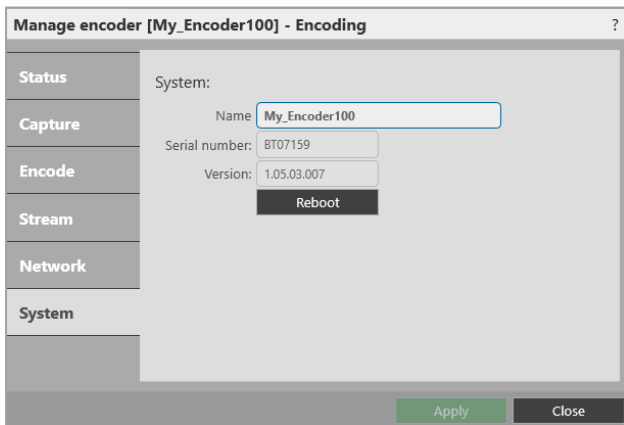
Find the address of your stream in Stream or Status.



Read more about saving streams on page 1.

Finding the serial number and firmware version of your Encoder-100

- Find the serial number and firmware version of your Encoder-100 in System .



You can also manage your encoders in Settings > IP Streams.

Read more on page 1.

CORIOgrapher™ can't find or connect to my Encoder-100

What's the problem?

1. I tried to find my Encoder-100 in Media Browser > IP Streams, but it wasn't in the list. I tried to add it manually with an IP address, but that didn't work either.
2. I can see my Encoder-100, but can't connect to it, or stream media.

Why does this happen?

- Your Encoder-100 might not be on the same network as the PC running CORIOgrapher. For example, the Encoder-100 is set to use DHCP and the PC has a static address in a different IP range, or they are on separate physical networks.
- Your Encoder-100 is behind a router that does not allow UPnP (Universal Plug and Play) or API commands to pass through.

What to do

First try this

1. Restore the factory default settings of the Encoder-100.
Read about restoring factory default settings on page 15.
2. Change the network settings of the PC running CORIOgrapher so that it uses DHCP.
3. Check that the PC running CORIOgrapher and your Encoder-100 are on the same physical network.

Then try this

If the PC running CORIOgrapher and your Encoder-100 are on different physical networks deliberately, for example, if you have a dedicated video network, then follow these steps:

1. Put the Encoder-100 and the PC running CORIOgrapher on the same network temporarily, and configure the Encoder-100.
Configure the Encoder-100 with a static IP address.
Read about configuring your Encoder-100 on page 9.
2. Write down the IP address of the stream.
3. Return the Encoder-100 and the PC running CORIOgrapher to their original networks.
4. Manually add an IP stream with the IP address you wrote down in step 2.
Read about manually adding streams on page 1.

If that doesn't work

Check that your network settings are correct.

For more help, contact your network administrator.

If the advice here doesn't work, first contact your distributor. If your distributor can't help, contact tvONE support at tech.usa@tvone.com, tech.europe@tvone.com or tech.asia@tvone.com.

Restoring factory default settings on your Encoder-100

To restore factory default settings, use a paperclip or other slim object to press and hold the reset button on the front of the Encoder-100 until the LED light turns orange.



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