C3-540 CORIOmaster™
C3-510 CORIOmaster mini™
C3-503 CORIOmaster micro™
CORIOgrapher™ V2.5 and above

User Guide V2.20

Firmware version M404 and above

PDF-C3-5x0-V2.20

Jun 2017

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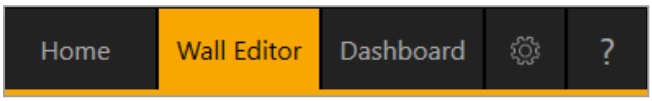
Welcome to tvONE™ Help

Welcome to tvONE Help, the place to get help with your:

- CORIOmaster™
- CORIOmaster mini™
- CORIOmaster micro™
- CORIOgrapher™
- Encoder-100

This document is also available as online help. To open the online help, select ? in CORIOgrapher™ and search, or ask a question.



Meet CORIOmaster™

Thanks for buying this CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™. CORIOmaster™ connects to a wide range of sources and displays, and works with CORIOgrapher™ software to allow you to build dynamic video walls with an easy-to-use visual interface.

- Output up to four video walls to monitors, LED screens, and projectors, including devices that support 4K
- Wide range of inputs, including DVI, SDI, HDBaseT™, 4K, and streaming media
- Audio support with CORIOmaster micro™
- Combination of different size and resolution of displays can be used
- Adjustable bezel compensation
- Edge blending of projectors
- Up-down-cross conversion
- Control your video wall with CORIOgrapher™, IP, or serial connection
- Horizontal alignment on analog PC inputs
- AMX & Crestron modules available
- CORIOmaster™: 4RU frame size
- CORIOmaster mini™: 1RU frame size
- CORIOmaster micro™: 1RU half rack size, up to two video walls

Meet CORIOgrapher™

CORIOgrapher V2.5 is packed with features to help you create and manage your video walls.

- Simple, powerful, software interface
- Save window configurations as presets and transition between presets
- Rotate outputs in 1° increments
- Manage streaming media
- Custom resolution editor with resolutions auto detected on inputs, and selectable on the outputs
- See your changes instantly with immediate mode
- Undo and redo your work
- Position your displays and windows with pixel-precision

Setting up your CORIOmaster™

This section contains everything you need to know about installing and setting up your video wall with CORIOmaster™ and CORIOgrapher™.

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Quick start

This Quick Start Guide gives you an overview of the steps involved in setting up a video wall with your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™ hardware and CORIOgrapher™ software.

1. Plan your video wall. What do you want your video wall to look like? What equipment do you need to achieve this?

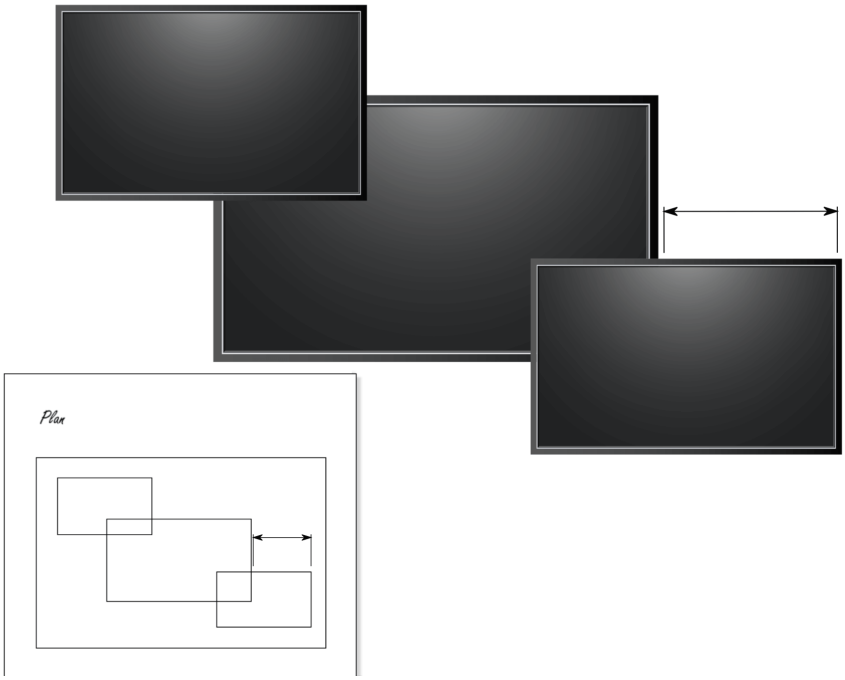
   At the back of this guide is a plan that you can fill out.

   Read more about planning a video wall on page 36.

   Video tearing
   Using a mixture of display sizes and/or resolutions can cause video tearing. For best results, make sure all your displays use the same frame rate.

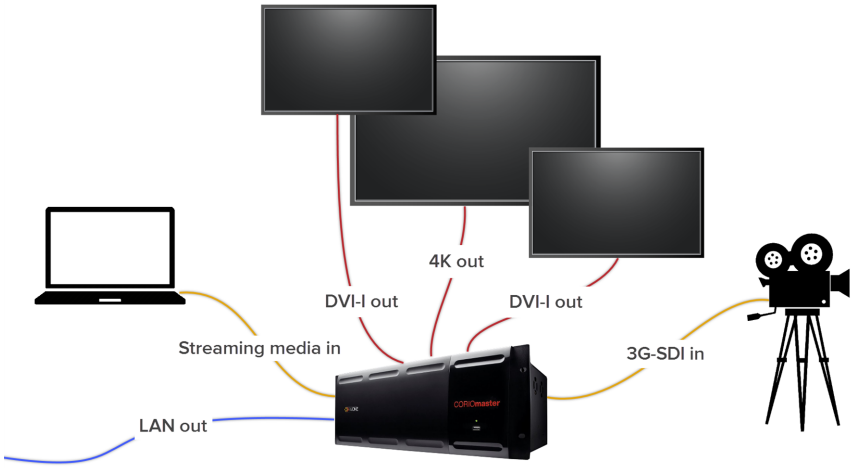
2. Install your hardware.

   a. Position your displays.

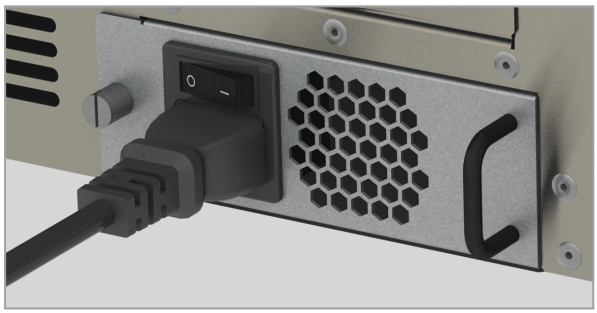


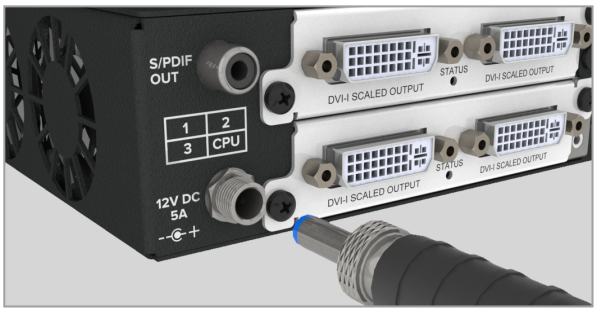
b. Connect your displays and sources to your output and input modules. Connect the LAN port of the CPU module to your network.

   OPTIONAL: If you have a CORIOmaster micro™, connect a digital audio device to the S/PDIF audio output.



c. Power on your CORIOmaster™.





Read more about installing hardware on page 37.

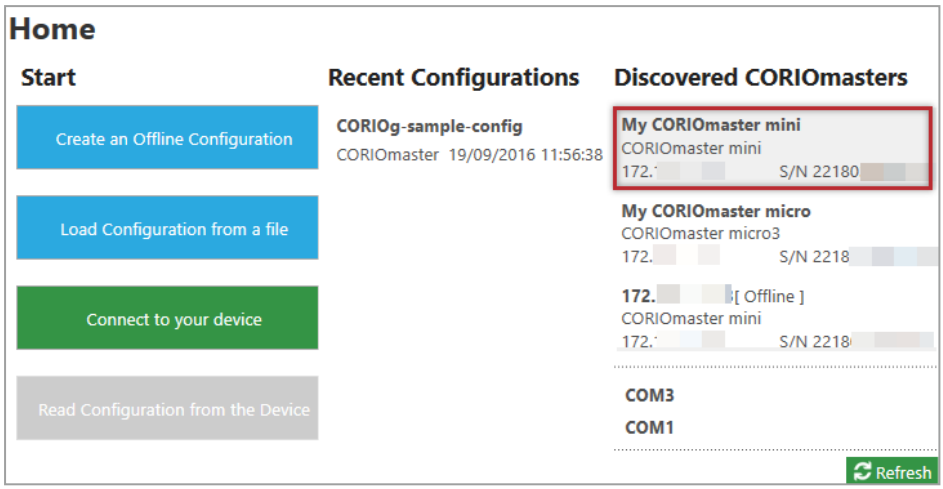
3. Install CORIOdiscover™ and CORIOgrapher™.

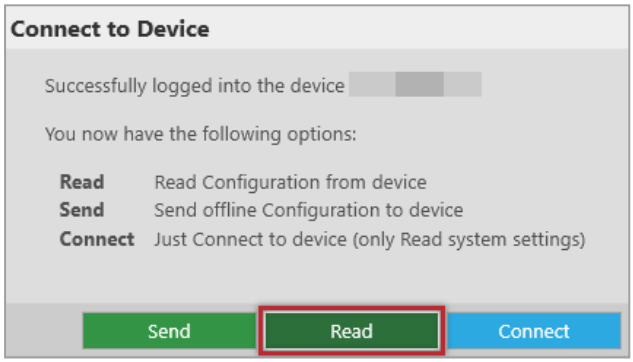
   Your CORIOmaster™ comes with a USB drive, which contains software for installing CORIOdiscover™ and CORIOgrapher™.

   Request the latest version of the CORIOgrapher™ software from the Downloads tab at tvone.com/new-coriographer-videowall-design-software.

4. Open CORIOgrapher™ and select your CORIOmaster™. Enter your username and password to log in, and select Read to load your configuration.

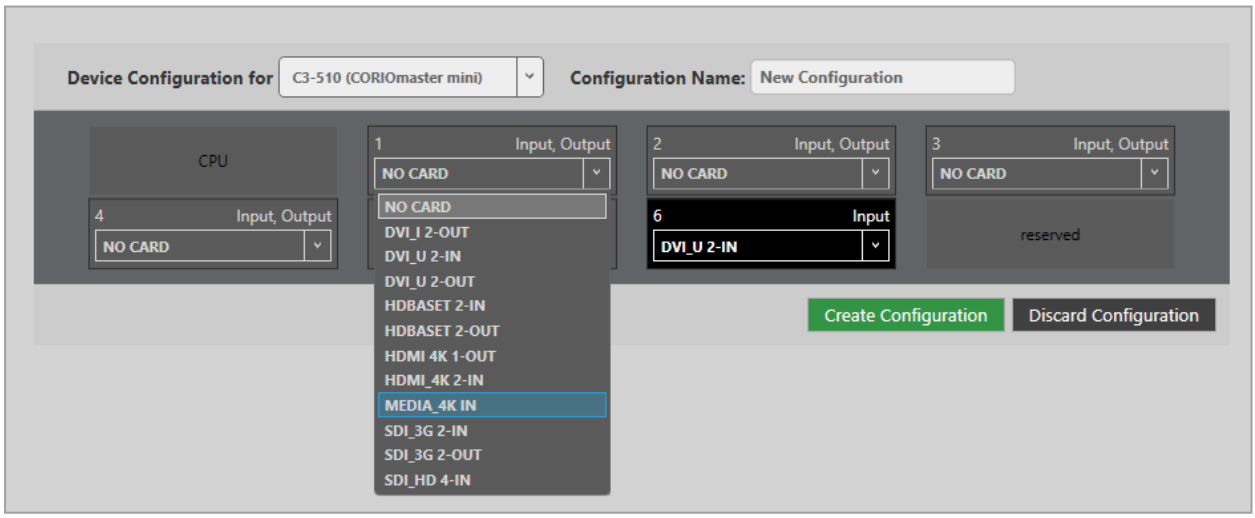
   The default username is admin, and the default password is adminpw.





Read about what to do if you can't find your CORIOmaster™ in the list on page 100.

If you aren't connected to a CORIOmaster™, you can create an offline configuration for your device.

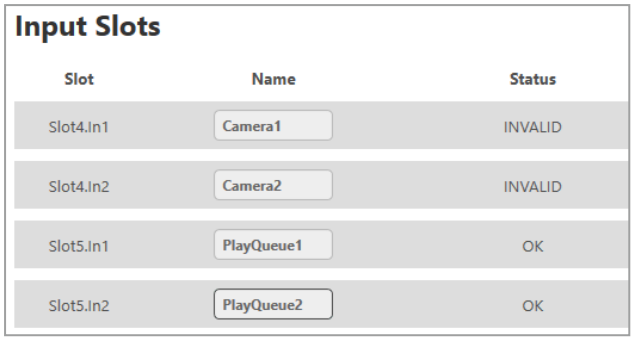


> The media player of the Streaming media and 4K playback module is not available when you work in an offline configuration.

Read more about your first steps with CORIOgrapher™ on page 41.

5. **Optional, but recommended:** name your input and output ports.

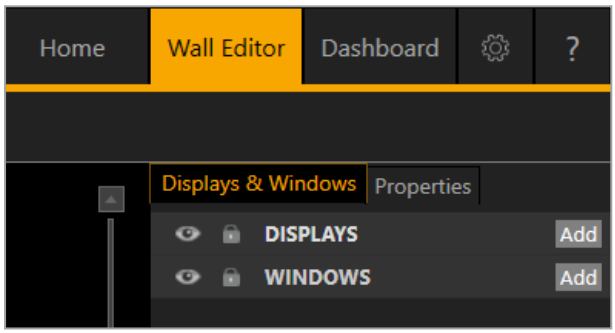
   Select ⚙ > Slot Status. Give each port a name that describes the device connected to it.



   Read more about naming input and output ports on page 43.

6. On the wall editor, add your displays, and arrange them to match your video wall.

   Select Wall Editor > (DISPLAYS) Add, and drag your displays onto the wall editor. Drag the displays into place.

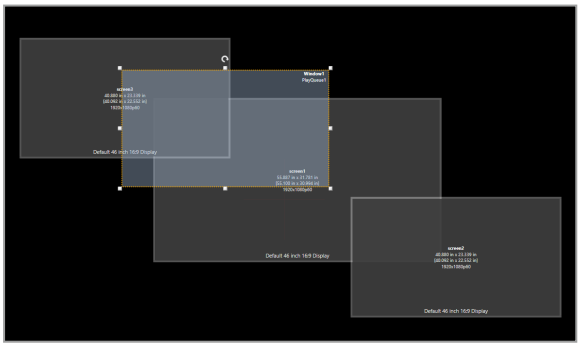


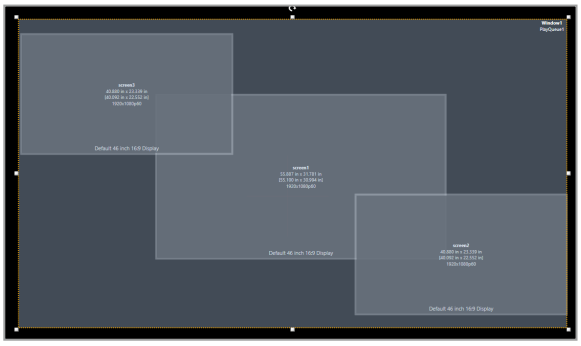
   Create a rough arrangement at this stage. When you have tested your video wall you can make your arrangement more accurate.

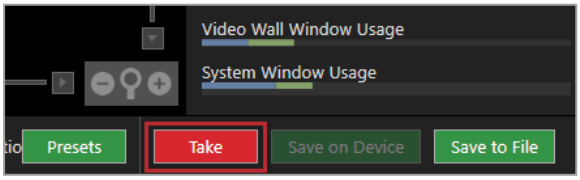
   Read more about creating a basic video wall on page 44.

7. Add a window and scale it to cover the whole video wall.

   Select Wall Editor > (WINDOWS) Add, and drag a window onto the wall editor. Drag the edges until it covers all of your displays. Select Take to send the video wall to your CORIOmaster™.

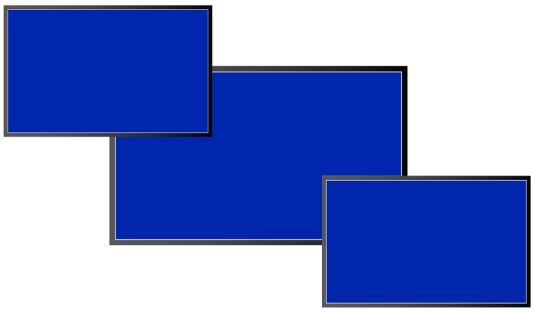






8. Check that your video wall looks correct.

   Make sure that the source for the window is playing, and check that the picture is assembled correctly.



✖ Not the source you were expecting, blue screen, display keeps dropping signal, or no image.

Possible causes:

- Source connected incorrectly
- Input ports named incorrectly
- Source not playing
- Source resolution not supported
- Display does not support HDCP
- Source does not support the required number of HDCP keys
- Poor quality or damaged cables

✔ Source correct, connected, and playing.

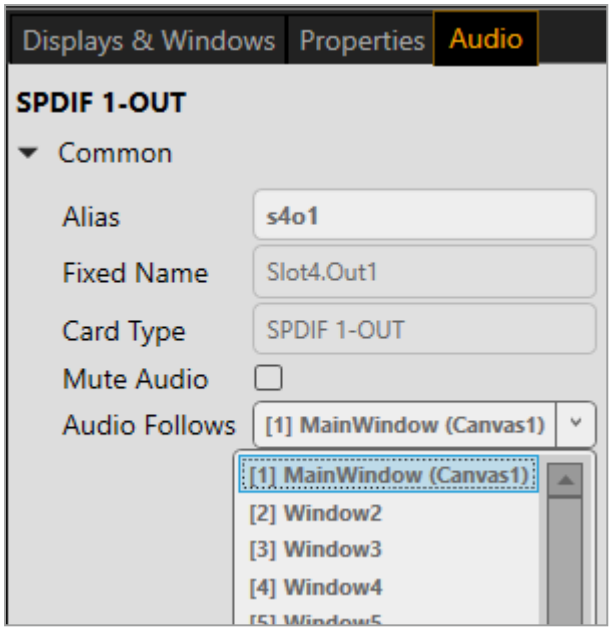
✖ Image appears in the wrong places.

Possible causes:

- Displays arranged incorrectly in CORIOgrapher™
- Output ports named incorrectly
- Displays connected incorrectly

✔ Source and displays connected and arranged correctly.

9. Repeat step **7** to add windows for all of your sources. Check that all your sources and displays work as expected.
10. **OPTIONAL:** if you have a CORIOmaster micro™, you can test the audio for each window. From the wall editor, select Audio and select each window in turn from Audio Follows.



You should hear the audio from the source playing in that window.

Read about what to do if you cant hear audio on page 105.

Read more about testing your video wall on page 45.

Read troubleshooting advice on page 99.

Next steps

Congratulations, your video wall is set up! You can now make your video wall more accurate, configure the best quality settings, and add transitions and effects.

If your CORIOmaster™ contains one or more Streaming media and 4K playback input modules, you need to set those up too.

Read about setting up Streaming media and 4K playback input modules on page 17.

Get to know your products

Learn about the features and functions of your hardware.

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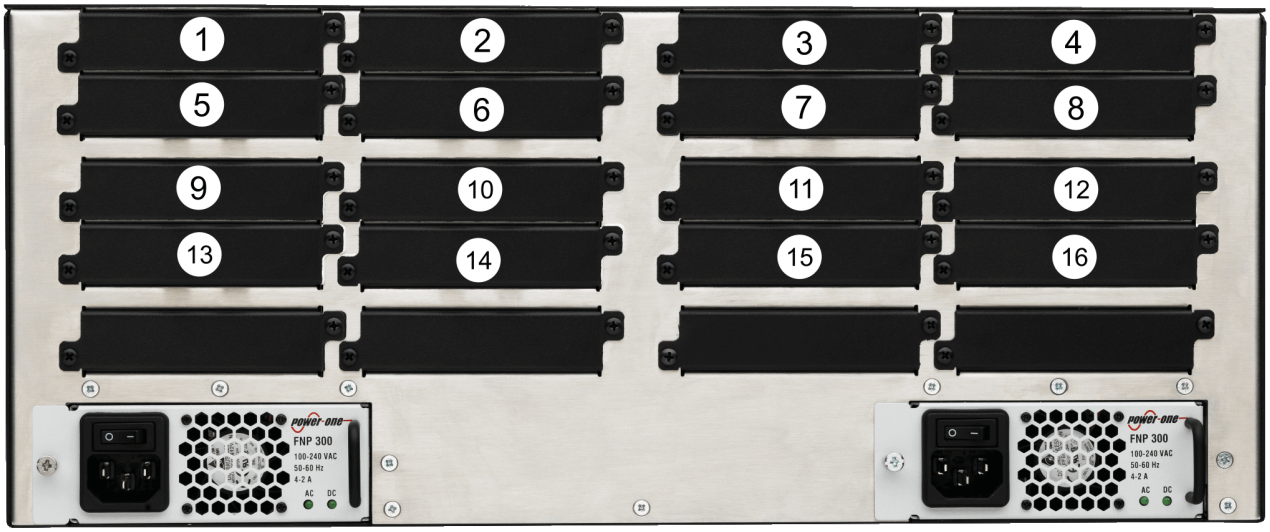
About your CORIOmaster™

CORIOmaster™ connects to a wide range of sources and displays, and works with CORIOgrapher™ software to allow you to build dynamic video walls with an easy-to-use visual interface.

Slots

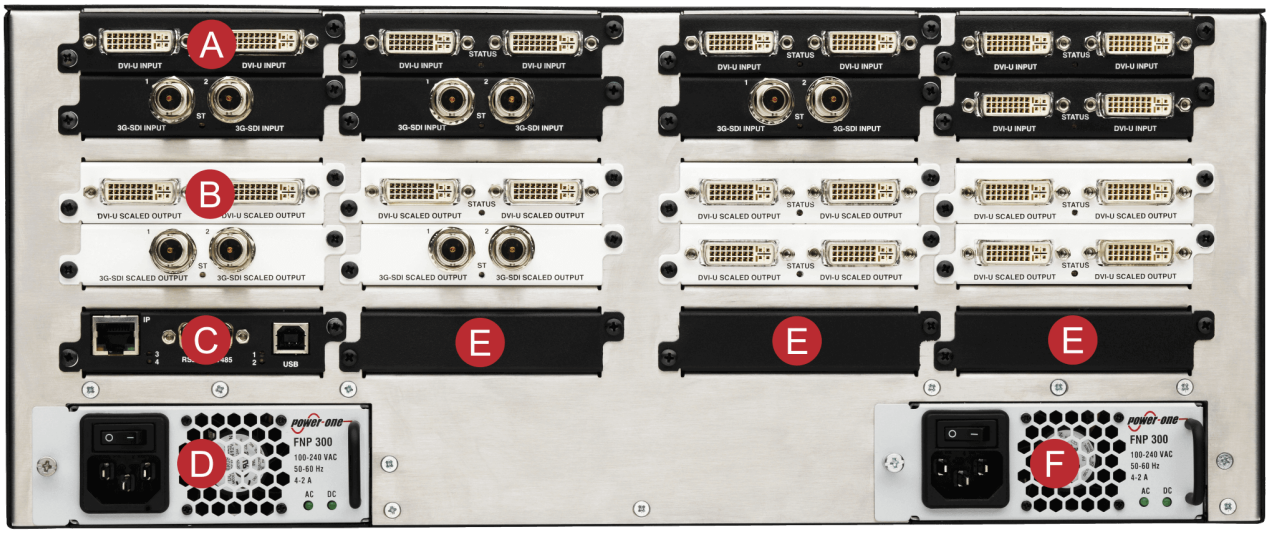


Your CORIOmaster™ has 16 slots that can contain input or output modules. You can have up to 14 input modules and up to 14 output modules. Of the 14 input modules, up to five can be Streaming media and 4K playback input modules.

In a CORIOmaster™, slots 1 and 2 can only contain input modules, and slots 15 and 16 can only contain output modules. Only slots 4, 8, 5, 1, and 3 can contain Streaming media and 4K playback input modules. Install Streaming media and 4K playback input modules in the order shown here.

We recommend that you group your input and output modules. Add input modules from slot 1 upwards, and add output modules from slot 16 downwards.

CORIOmaster™ rear panel



A	Input module (black)	Connect to sources
B	Output module (white)	Connect to displays
C	CPU module	Connect to your network with Ethernet Optional: connect to serial controller with RS-232 Optional: connect directly to a PC with Ethernet or RS-232
D	Optional second PSU, sold separately	Optional: connect to electrical outlet
E	Sealed slots	Not available for use
F	Power supply unit (PSU)	Connect to electrical outlet

About your CORIOmaster mini™

This guide uses the name CORIOmaster™ to mean CORIOmaster™, CORIOmaster mini™, and CORIOmaster micro™ systems, unless specifically stated.

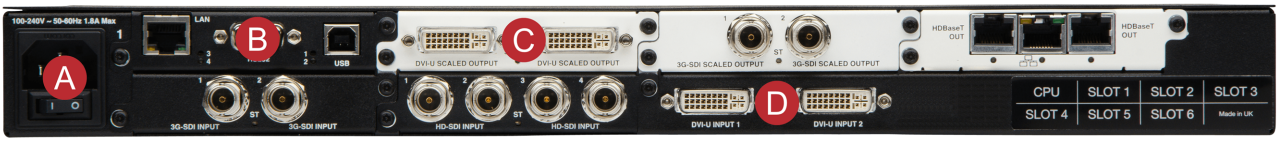
Slots

Your CORIOmaster mini™ has six slots that can contain input or output modules. You can have up to five input modules and up to five output modules. Of the five input modules, up to two can be Streaming media and 4K playback input modules.

In a CORIOmaster mini™, slot 6 can only contain an input module. Only slots 1 and 2 can contain Streaming media and 4K playback input modules.

> **Risk of poor performance**
> Avoid fitting an input module in slot 4.

CORIOmaster mini™ rear panel



A	Power supply unit (PSU)	Connect to electrical outlet
B	CPU module	Connect to your network with Ethernet Optional: connect to serial controller with RS-232 Optional: connect directly to a PC with Ethernet or RS-232
C	Output module (white)	Connect to displays
D	Input module (black)	Connect to sources **Note:** slot 6 is a fixed input slot, included with every CORIOmaster mini™.

About your CORIOmaster micro™

This guide uses the name CORIOmaster™ to mean CORIOmaster™, CORIOmaster mini™, and CORIOmaster micro™ systems, unless specifically stated.

Slots

Your CORIOmaster micro™ has three slots that can contain input or output modules. You can have up to two input modules and up to two output modules.

CORIOmaster micro™ rear panel

A	S/PDIF audio output	Connect to audio device with RCA
B	Power supply input	Connect to an electrical outlet with PSU
C	Input module (black)	Connect to sources
D	Output module (white)	Connect to displays
E	CPU module	Connect to your network with Ethernet Optional: connect to serial controller with RS-232 Optional: connect directly to a PC with Ethernet or RS-232

CORIOmaster micro™ mounting accessories

You can mount your CORIOmaster micro™ to a surface, rack, or ONErack system with our mounting accessories, sold separately. Ask your distributor about:

- RM-503-1RK-MOD ONErack mounting module for CORIOmaster micro™
- RM-503-1RU-DUAL rack mounting kit for one or two CORIOmaster micro™ units
- RM-503-SRF surface mounting kit for CORIOmaster micro™

About the buttons of your CORIOmaster micro™

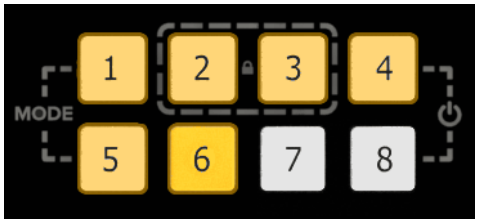
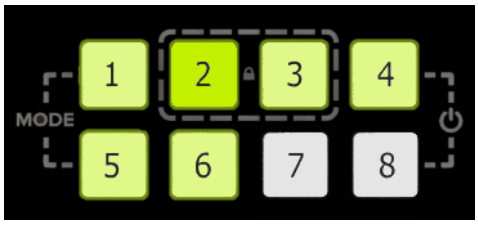
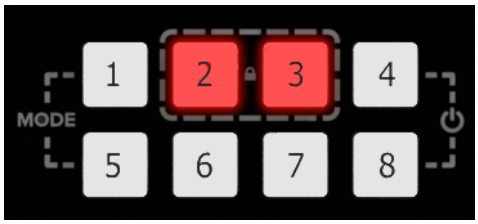
You can use the buttons of the front panel to load presets, choose which window to hear, change the source playing in a window, and lock the buttons.

By default, the buttons correspond to the first eight presets, sources, or windows in your system. You can choose which button corresponds to which preset, source, or window.

Read more about mapping the buttons of your CORIOmaster micro™ on page 54.

The buttons light up different colors depending on the mode and status of your CORIOmaster micro™.

Colors of buttons

	Buttons are lit dimly orange	The CORIOmaster micro™ is in preset selection mode.
	Button is lit more brightly	The preset corresponding to button 6 is active.
	Buttons are not lit	Buttons 7 and 8 do not have corresponding presets.
	Buttons are lit dimly green	The CORIOmaster micro™ is in source selection mode.
	Button is lit more brightly	The source corresponding to button 2 is playing in the active window. You hear the audio from the active window.
	Buttons are not lit	Buttons 7 and 8 do not have corresponding sources.
	Buttons 2 and 3 are lit red	The buttons of the CORIOmaster micro™ are locked.

Selecting the active window

You hear the active window, and you can change the source for the active window.

- To select the active window, press and hold the button corresponding to that window until it starts flashing.

Selecting a window to hear

When a window is active, you hear the audio from that window.

- To select a window to hear, press and hold the button corresponding to that window until it starts flashing.

Selecting a preset or source

- To select a preset or source, press and release the button corresponding to that preset or source.

Changing between preset and source selection mode

- Press and hold buttons 1 and 5 until they start flashing.

  The buttons change color.

About modules

CORIOmaster™, CORIOmaster mini™, and CORIOmaster micro™ support six types of input module, and five types of output module. Each module supports specific connections, but our range of adapters means you can connect almost any type of source or display to your CORIOmaster™.

Input modules

Module	Product number	Connections
4K 30/60 HDMI input module	CM-HDMI-4K-2IN	2 x HDMI up to 4096x2160 @30 or 1 x HDMI up to 4096x2160 @60 Hz HDMI and HDCP compatible
Universal DVI CORIOmaster™ input module	CM-DVIU-2IN	2 x DVI-U (HDCP compliant)
3G-SDI CORIOmaster™ input module	CM-3GSDI-2IN	2 x 3G/HD/SD-SDI using BNC For co-axial cables
HD/SD-SDI CORIOmaster™ input module	CM-HDSDI-4IN	4 x HD/SD-SDI using BNC For co-axial cables
HDBaseT™ CORIOmaster™ input module	CM-HDBT-2IN-1ETH	2 x HDBaseT For CATx cables Supports up to 2 x 4K @30Hz, or 1 x 4K @60 Hz
Streaming media and 4K playback input module Read more about the Streaming media and 4K playback input module on page 16.	CM-AVIP-IN-1USB-1ETH	1 x USB 2.0/3.0 1 x Ethernet

Output modules

Module	Product number	Connections
3G-SDI CORIOmaster™ scaled output module	CM-3GSDI-SC-2OUT	2 x 3G/HD/SD-SDI using BNC, with scaling For co-axial cables
4K30 scaling output module	CM-HDMI-4K-SC-1OUT	1 x HDMI up to 4K @30 Hz (UHD)
DVI-I CORIOmaster™ scaled output module	CM-DVI-I-SC-2OUT	2 x DVI-I (HDCP compliant)
HDBaseT™ CORIOmaster™ scaled output module	CM-HDBT-SC-2OUT-1ETH	2 x HDBaseT For CATx cables

Power supply module

Module	Product number	Connections
Redundant PSU for 4RU series units	CM-4RPS	1 x IEC power cord

Adapters

You can use our adapters to connect any of the following formats to the DVI input and output modules. Unless stated, you can use all of these adapters with both DVI-I and DVI-U modules.

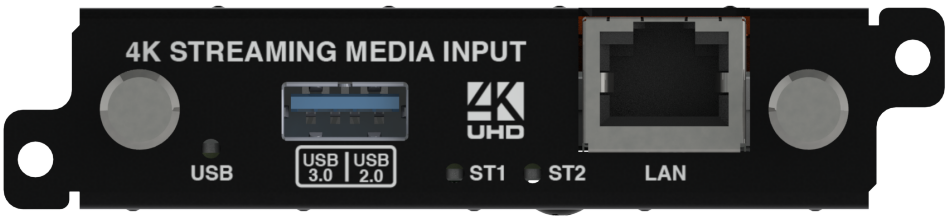
Adapter	Product number	Male connector	Female connector
HDMI adapter	CMD1941	DVI	HDMI
Analog PC adapter	ZDH2040	DVI	VGA
Analog RGBHV adapter	ZDB-2038	DVI	Analog RGBHV
YPbPr/YUV adapter	ZDR2042	DVI	YPbPr/YUV
YPbPr/YUV adapter cable	ZDB2044	DVI	YPbPr/YUV
YC (S-Video) adapter	ZDB2048	DVI-U only	2 x composite video
YC (S-Video) adapter	ZDS2046	DVI-U only	4-pin mini-DIN
Composite video adapter	ZDC2050	DVI	BNC

About your Streaming media and 4K playback input module

The Streaming media and 4K playback input module allows you to decode and play media and images from a USB drive or internal storage, and video streams from IP sources. Sources include streaming server, and from any device when used with an IP encoder, such as the Magenta™ Encoder-100.

Features

- Play two simultaneous channels of media, including IP streams
- Play video clips from USB drive up to 4K @30 Hz
- Play single IP streams up to 100 Mb/s
- Play dual IP streams up to 40 Mb/s
- Play still images up to 8K
- Play media from streaming server
- Create and save up to 20 playlists
- Primary channel supports up to 4K @30 Hz
- Secondary channel supports 1080p @60 Hz
- IP streams up to 1080p @60 Hz
- Full resolution and frame rate scaling
- Start playing media when your CORIOmaster™ starts
- Supports USB 2.0 and USB 3.0
- 16 or 128 GB internal storage



USB (LED)	Indicates the status of the USB drive. Green means that the USB drive is working correctly. Red means that the USB drive is over current.
USB 3.0 USB 2.0	Connect a USB drive to play media directly. For best results, we recommend using quality USB drives compatible with USB 3.0.
ST1 (LED)	Indicates the status of the card. Green means that the card is working correctly. Red means that the card is starting, or that there is a problem.
ST2 (LED)	Indicates the status of the module. Green means that the module is working correctly. Red means that the module is starting, or that there is a problem.
LAN	Connect an Ethernet cable to play media over IP.

If any status indicator stays red, restart your CORIOmaster™. If that doesn't work, contact tvONE support. Contact details are at the back of this guide.

Streaming media and 4K playback input module - quick start guide

In this article

- Setting up the Streaming media and 4K playback input module on page 17.
- Connecting to CORIOgrapher™ and choosing network settings on page 19.
- Playing media and streams on page 20.

Setting up the Streaming media and 4K playback input module

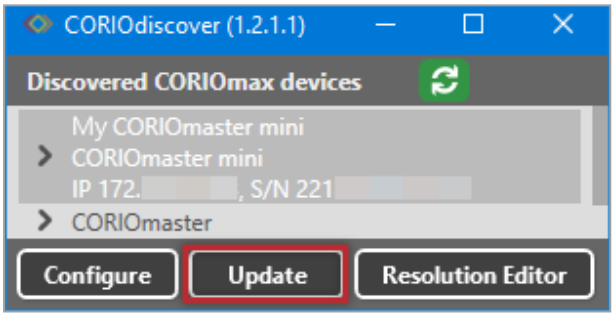
1. Connect your cables and power on your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.

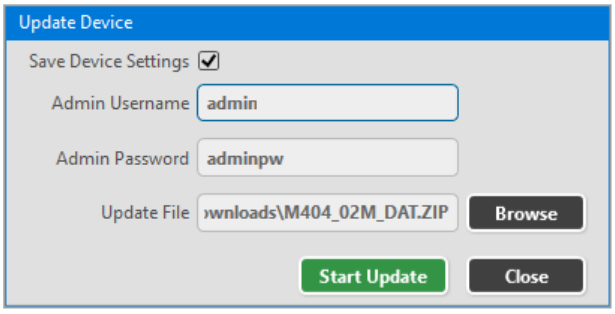
To stream media, connect an Ethernet cable to the Streaming media and 4K playback input module, or connect a USB drive to play media directly.

For 4K media, use a good quality, high-speed 3.0 USB drive.

Make sure your CORIOmaster™ is connected to your display devices and to an AC power outlet.

2. Download the latest firmware for your CORIOmaster™ from tvone.com/firmware-updates.
3. Use CORIOdiscover™ to update your firmware.





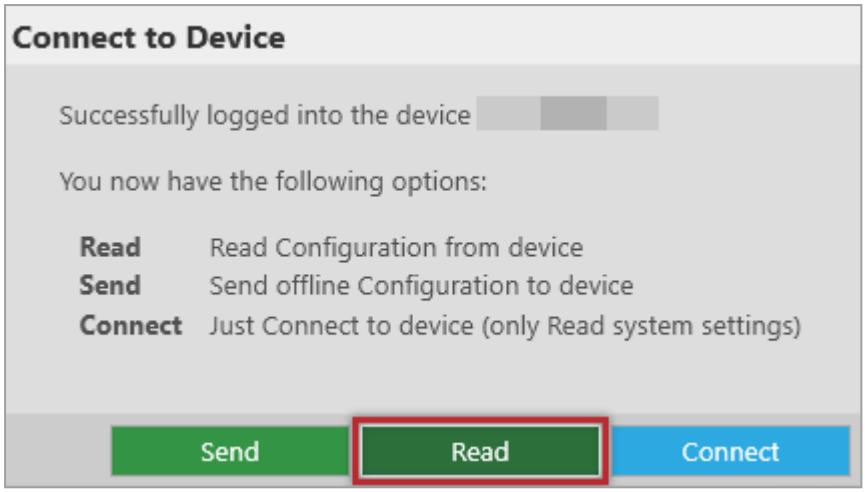
Read more about updating firmware on page 99.

4. Request the latest version of the CORIOgrapher™ software from the Downloads tab at tvone.com/new-coriographer-videowall-design-software.
5. Install the latest software.

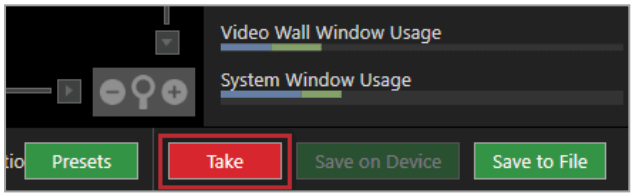
The latest version of CORIOgrapher™ includes help files. If you need help with any of the following steps, select ? in CORIOgrapher™ and search, or ask a question.

Connecting to CORIOgrapher™ and choosing network settings

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



Make sure you have a video wall set up that includes at least one window that uses a source from the Streaming media and 4K playback input module, and select Take.

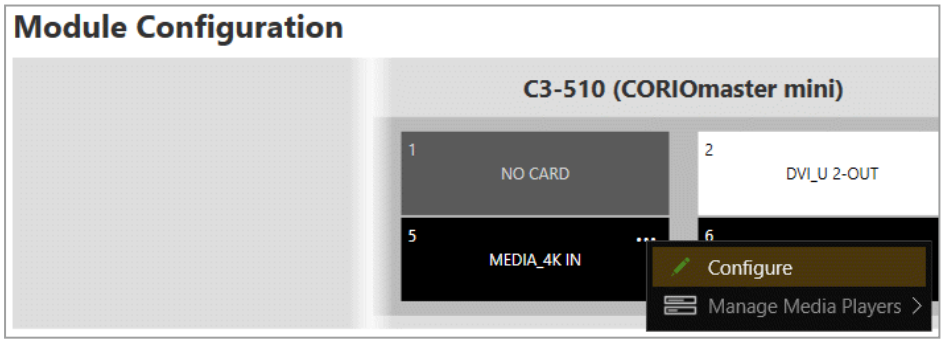


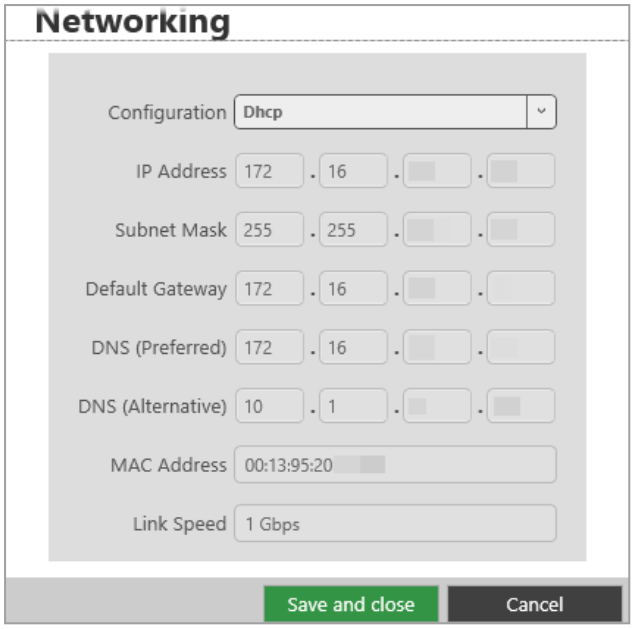
2. **OPTIONAL:** if you only want to play media from a USB drive, you don't need to do this step.

   If you want to stream media over IP, choose network settings for your Streaming media and 4K playback input module.

   Select ⚙ > Module Configuration.

   Find the Streaming media and 4K playback module that you want to set up, and select ••• > Configure.





If you choose DHCP, the network assigns you an IP address.

If you choose a static IP address:

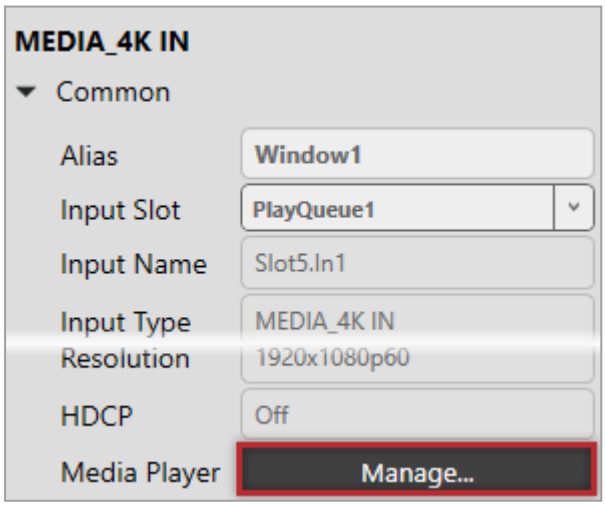
- Enter a value for your IP address and subnet mask.
- If you want to stream from the internet, enter a value for your gateway.
- If you want to refer to a source by name, enter a value for DNS.

> **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.

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

Playing media and streams

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

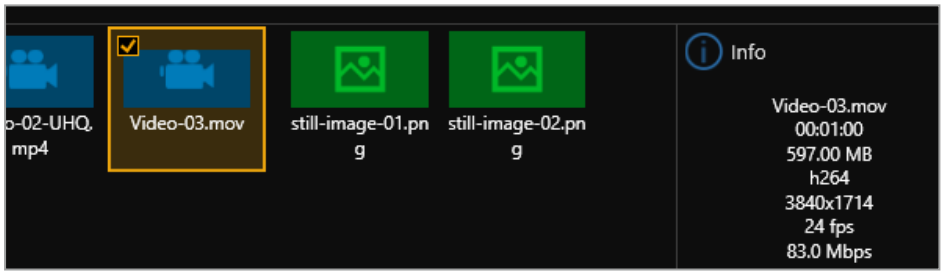


2. Select your media source.

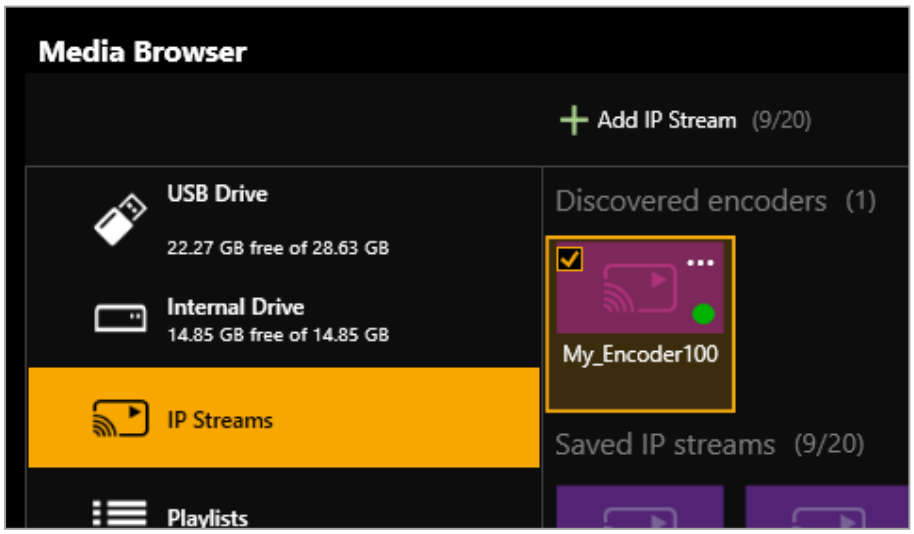
Your media items appear as icons.

	Still image		Saved stream
	Video clip		Found encoder
	Playlist		Found encoder, streaming

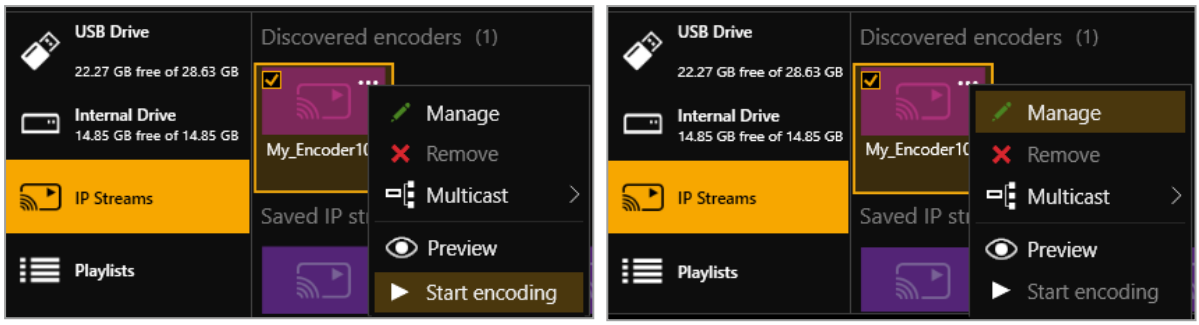
Information about the media item appears on the right.



3. **OPTIONAL:** if you want to stream media, add your streams.
   - If you want to stream from an Encoder-100, check that it is encoding. Look for the green spot.

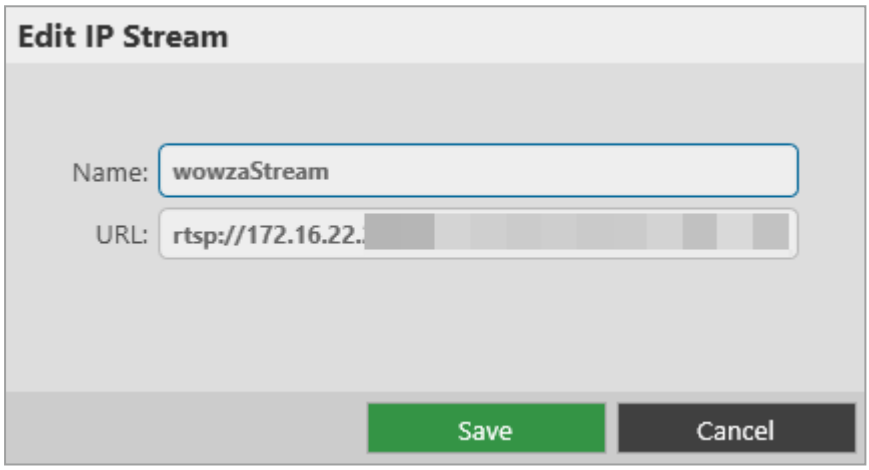


If the encoder is not encoding, you might need to start or configure it.

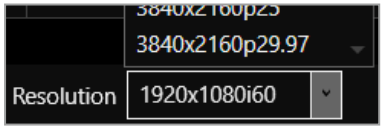


Read more about starting and configuring the Encoder-100 on page 30.

- If you want to stream from the internet, or from an encoder that does not appear in Discovered encoders, add the stream. Select IP Streams > Add IP Stream and enter a useful name and the URL of the media stream.

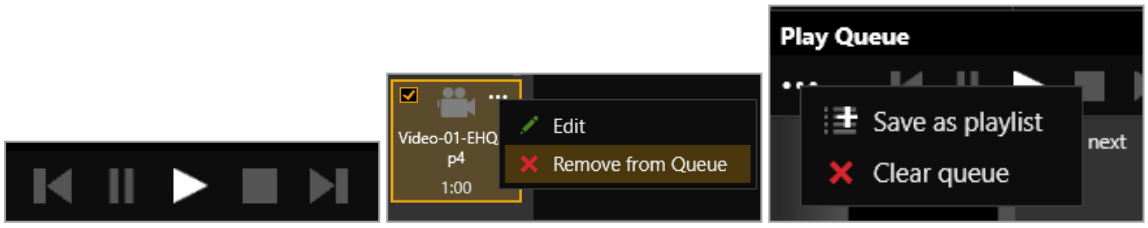


4. Choose a resolution for your media stream.



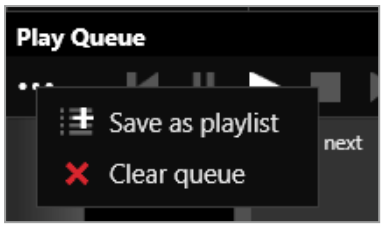
Read tips and recommendations for choosing the best resolution on page 94.

5. Drag media items and streams into the play queue and use the playback controls to play your media. Check that the media is playing on your video wall.
6. Use the playback controls start, stop, pause, skip to the next item, and return to the previous item. You can select and delete media items, or clear the entire play queue.



To loop the play queue, first stop playback.

7. **OPTIONAL:** you can save your play queue as a playlist.



You can also create playlists in the playlist editor.

Read about creating and managing playlists on page 85.

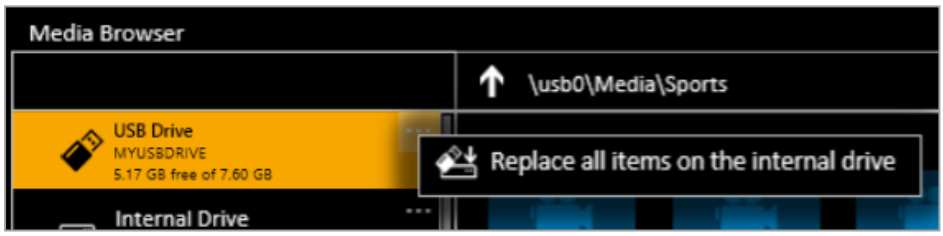
Setting up the internal drive

You can save media items from your USB drive to the internal drive.

When you first set up your internal drive, it is useful to copy the entire contents of your USB drive to the internal drive. All your media items and folders are copied exactly to the internal drive, for pathways up to 480 characters, or fewer, depending on the language you use.

> Unsupported items are also copied to the internal drive. You can't see these items but they still take up space. Check that your USB drive contains only supported items before you start.
> See a list of supported items on page 16.

- Select (USB Drive) ••• > Replace all items on the internal drive.



Read about creating and managing playlists on page 91.

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 Streaming media and 4K playback 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.
- 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.

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 **Note:** audio is supported by CORIOmaster micro™ only

Encoder-100 - quick start guide

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.

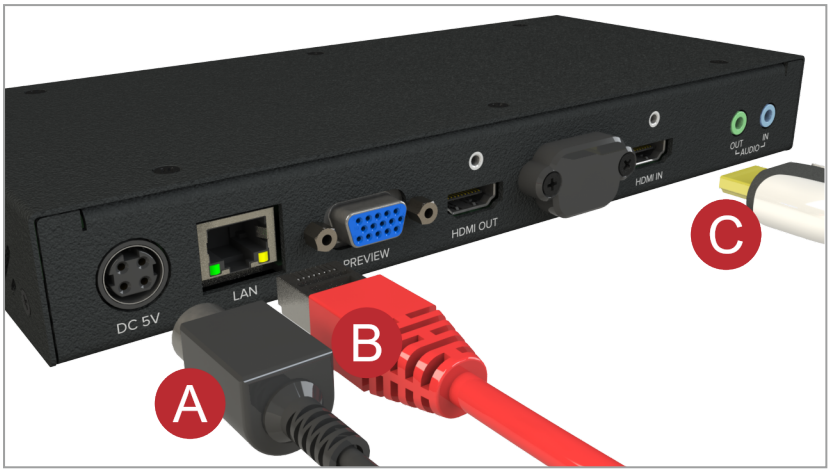
The Encoder-100 cannot encode HDCP encoded sources.

Before you start

To use an Encoder-100, you must have a Streaming media and 4K playback input module installed in your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.

Setting up the Encoder-100

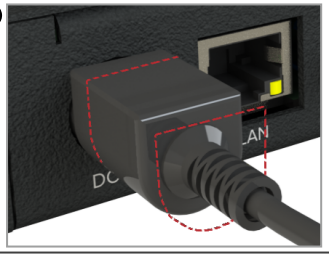
Connect your cables.



A. Connect the power supply to an electrical outlet.
B. Connect an Ethernet cable to your network.
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.

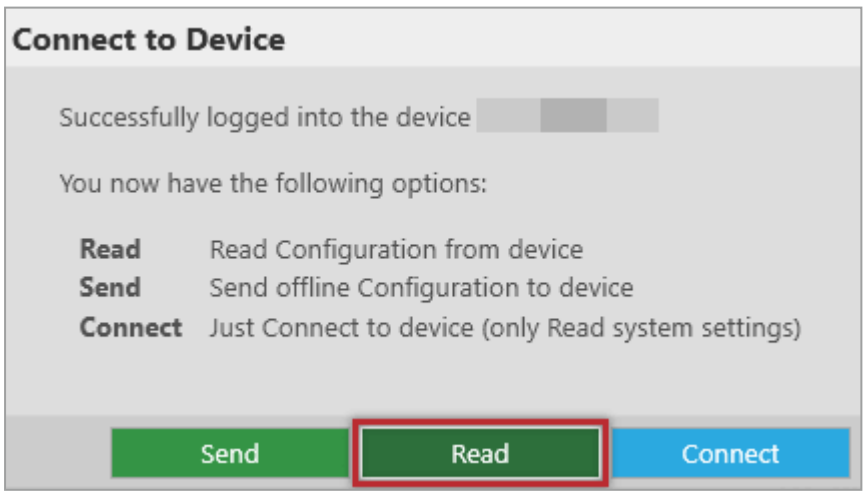
- OPTIONAL: if you want to stream analog audio, or preview your audio, connect a 3.5 mm jack audio cable.
- OPTIONAL: if you want to see a preview of your stream, connect a VGA cable to PREVIEW, or an HDMI cable to HDMI OUT, and to a display.



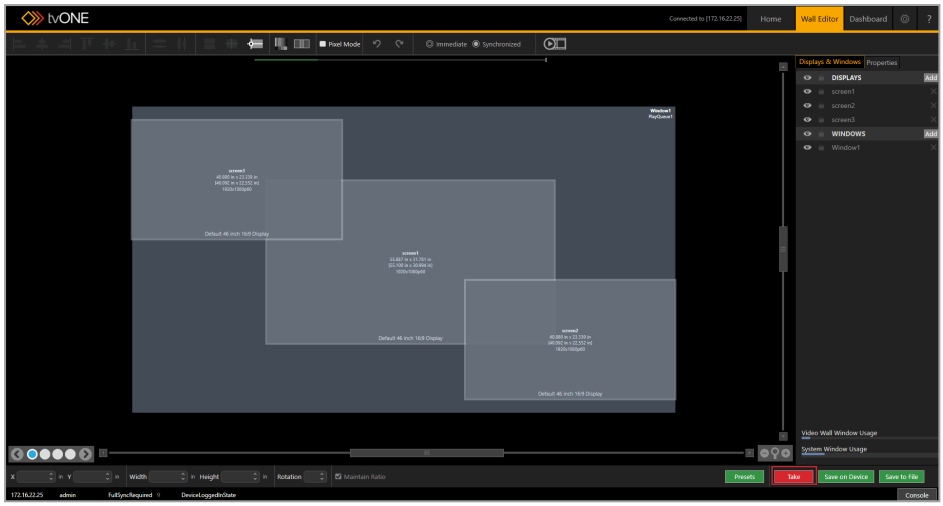
The power connector is a latching power connector. To remove the power connector from your Encoder-100, slide the sleeve backward.

Configuring the Encoder-100 with CORIOgrapher™

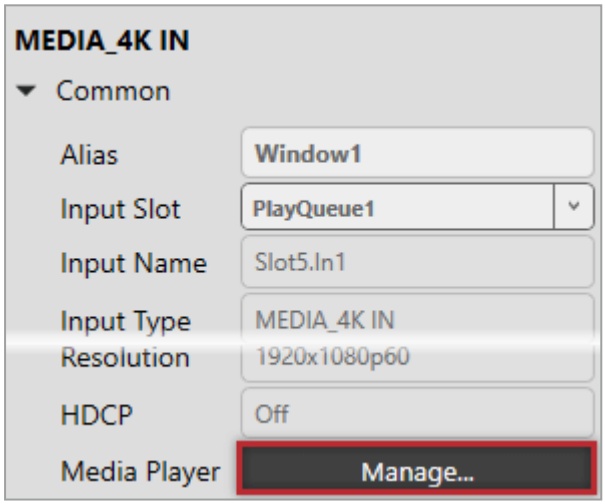
1. Open CORIOgrapher™, connect to your CORIOmaster™, and read the configuration from your device.



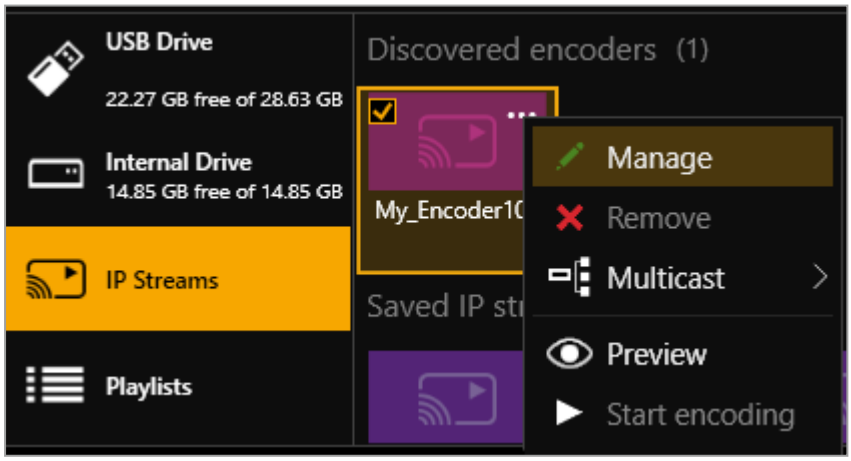
2. Set up a video wall that includes at least one window playing the Streaming media and 4K playback input module, and select Take.



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.

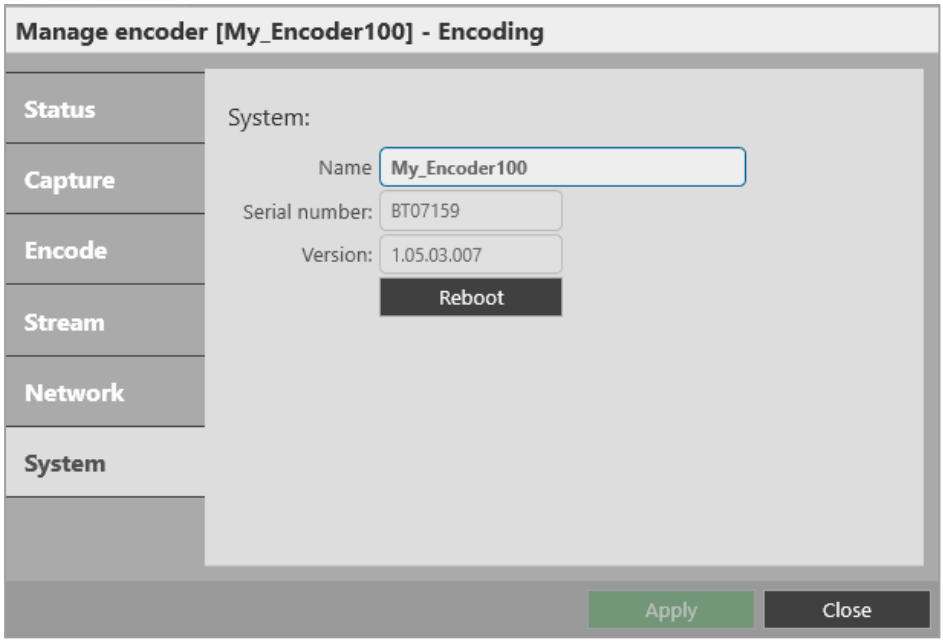


When you first connect, your Encoder-100 is named with its Device ID. Find the Device ID on the bottom of your Encoder-100.

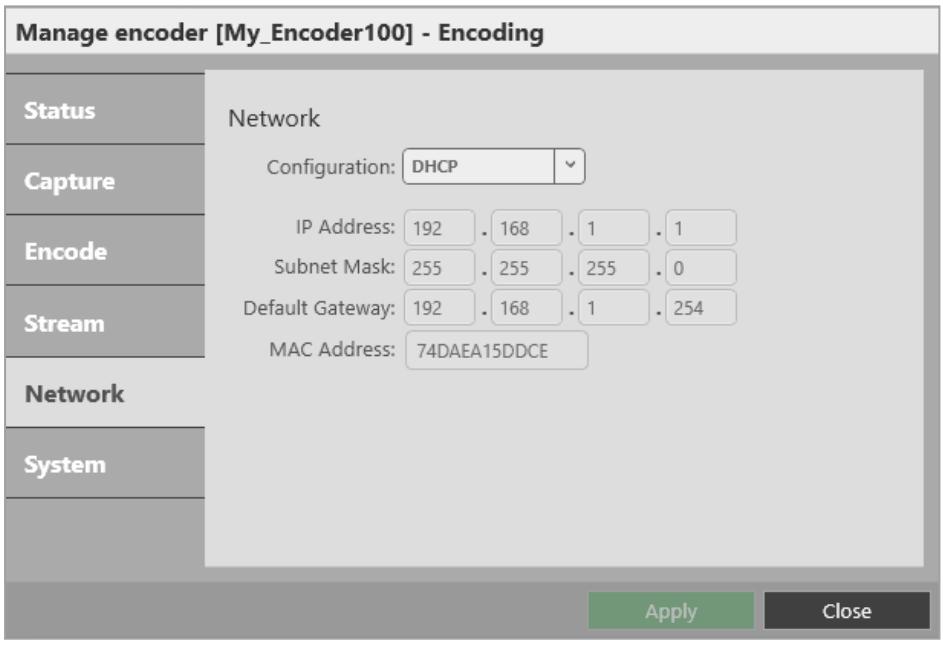
If your Encoder-100 isn't displayed, select Find and enter the URL of your Encoder-100.

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.

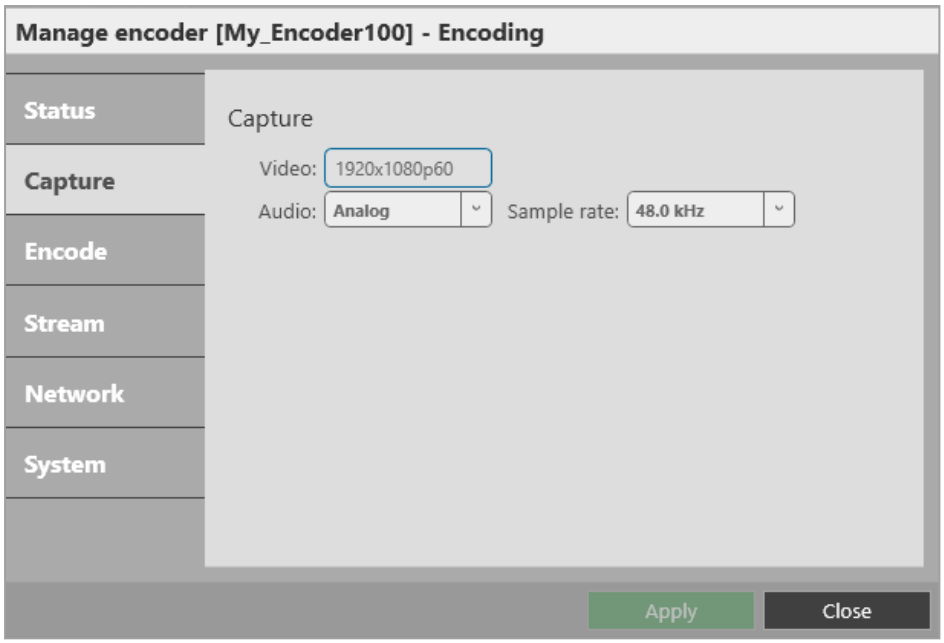


   - If you choose DHCP, the network assigns you an IP address.
   - If you choose a static IP address, enter a value for your IP address, subnet mask, and gateway.

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

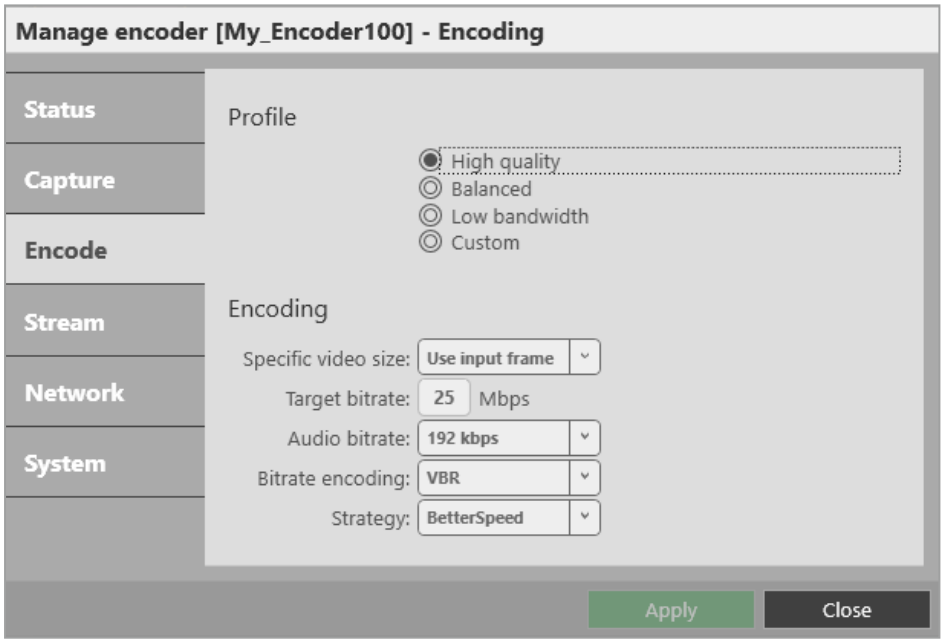
> **Static IP address**
> If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

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

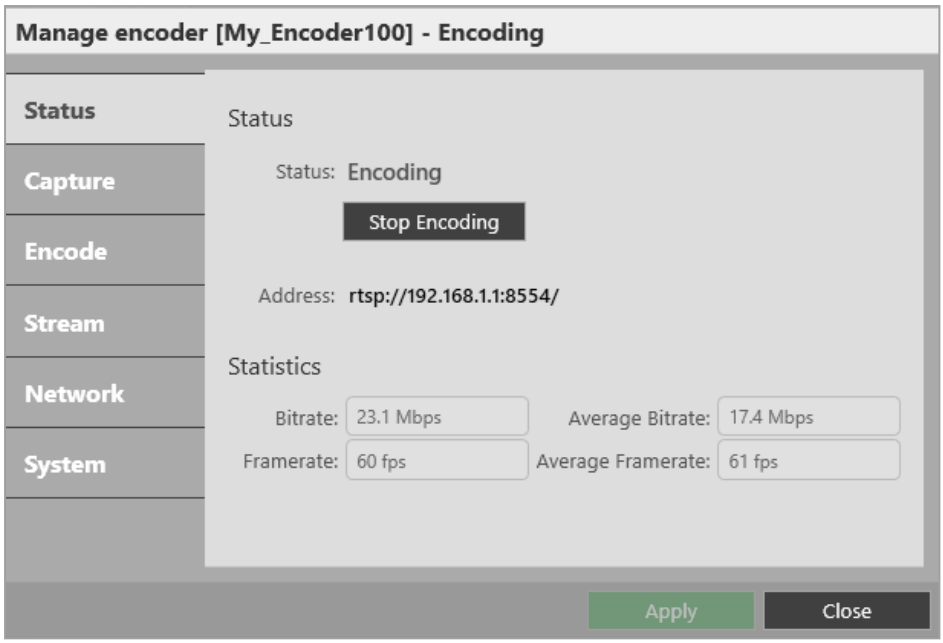


8. Select Encode, and choose a profile.

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



9. Select Status > Start encoding.



Read more about configuring encoders on page 30.

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.

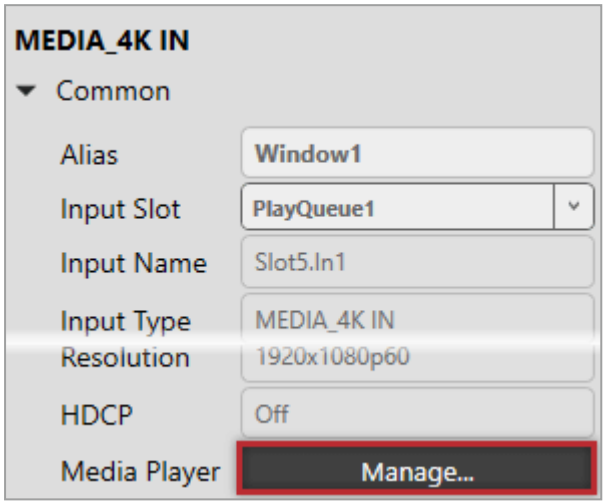
Read more about playing streaming media on page 76.

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.

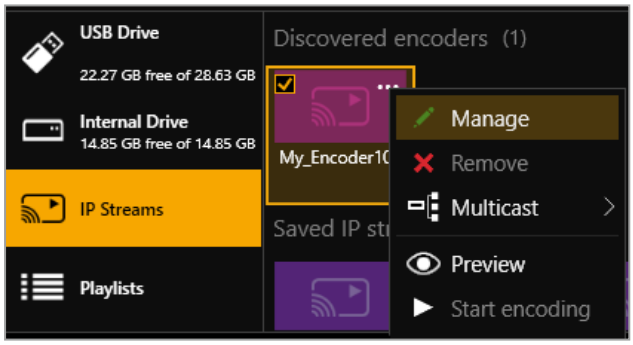
To open Encoder settings for a specific Encoder-100

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



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

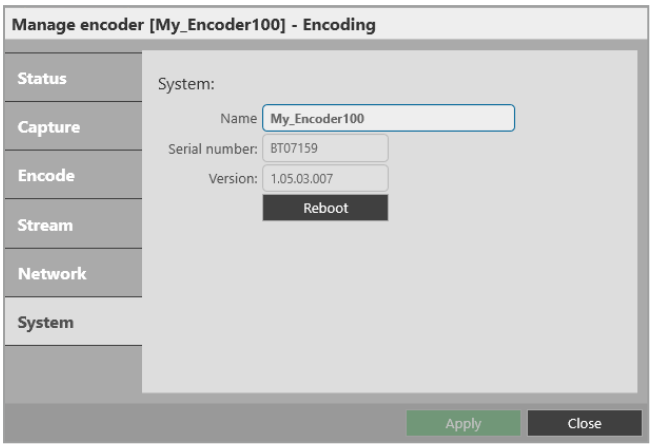
   When you first connect, your Encoder-100 is named with its Device ID. Find the Device ID on the bottom of your Encoder-100.



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

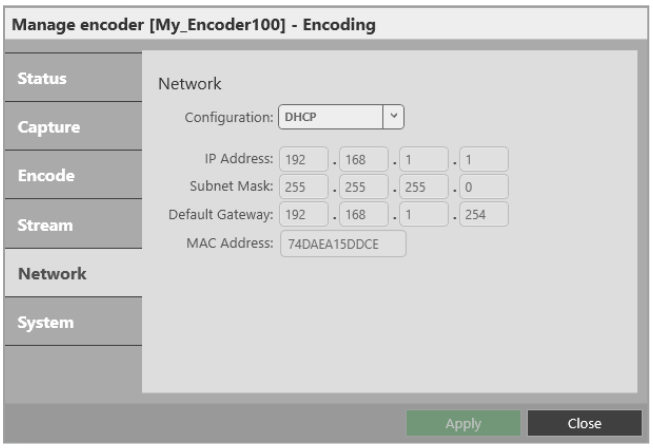
Naming your Encoder-100

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



Configuring network settings

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



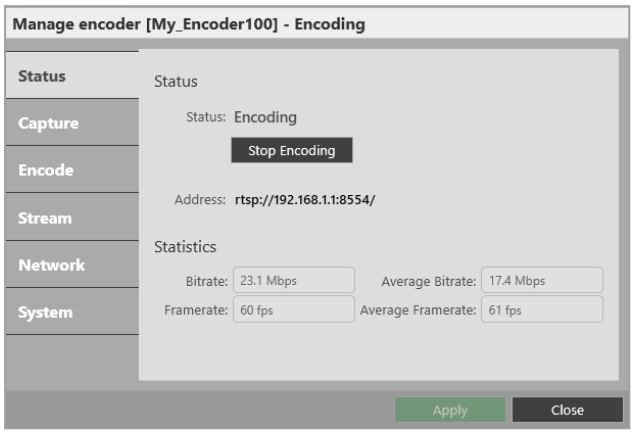
- If you choose DHCP, the network assigns you an IP address.
- If you choose a static IP address, enter a value for your IP address, subnet mask, and gateway.

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

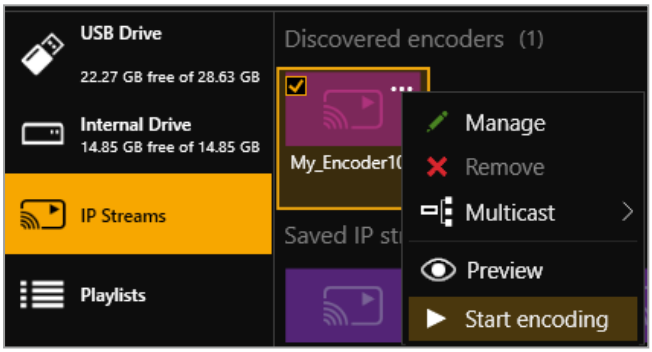
> **Static IP address**
> If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

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.



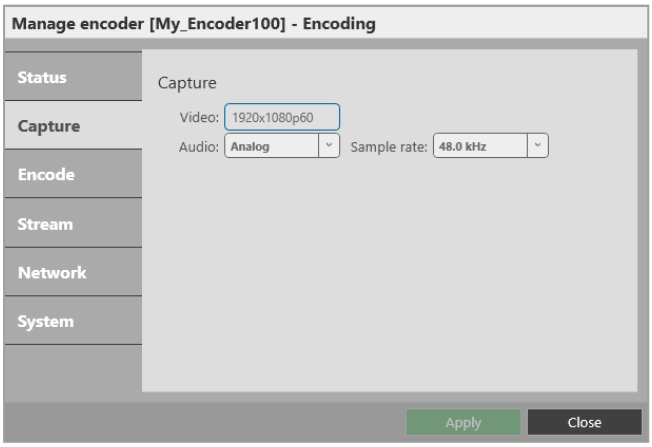
Configuring audio

This task is optional.

Audio is only supported by CORIOmaster micro™.

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.

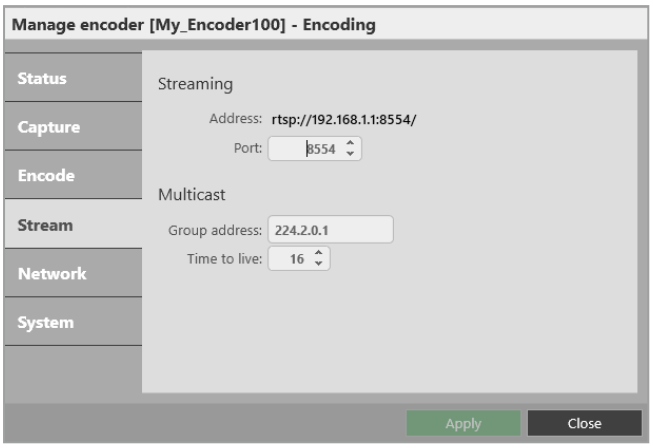
If you choose to include analog audio, choose an appropriate sample rate. The default sample rate is 48.0 kHz.



Changing the port number

This task is optional.

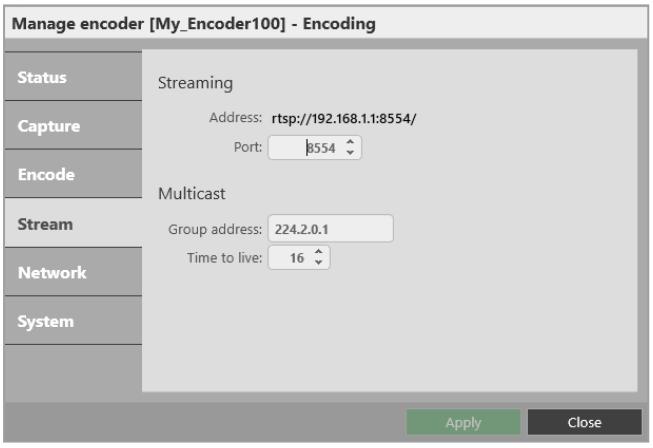
You can change the port number of your Encoder-100 in Stream.



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.

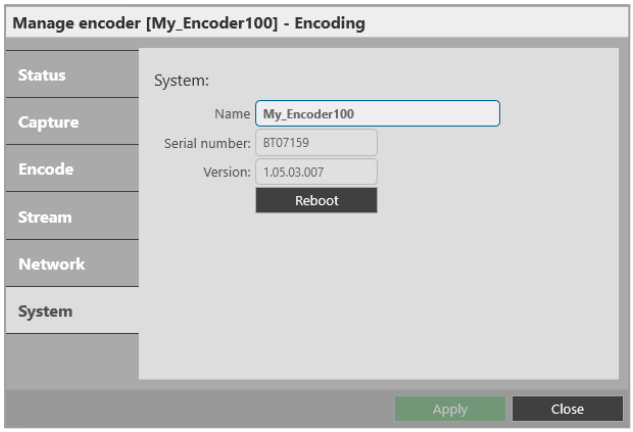
Contact your network administrator for recommended time to live values.

> 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.

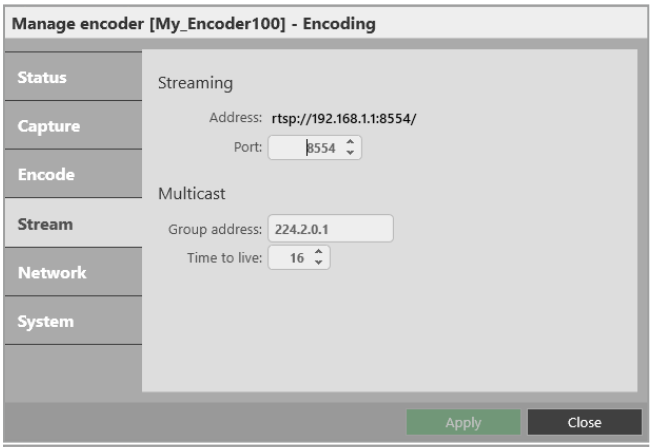
- Select System > Reboot.

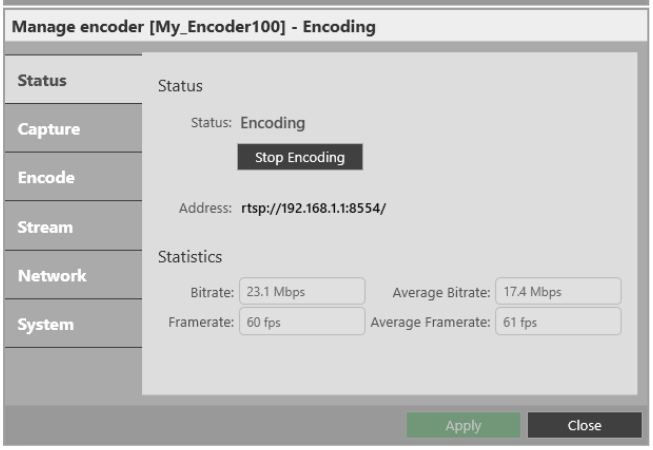


Finding the address of your stream

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.

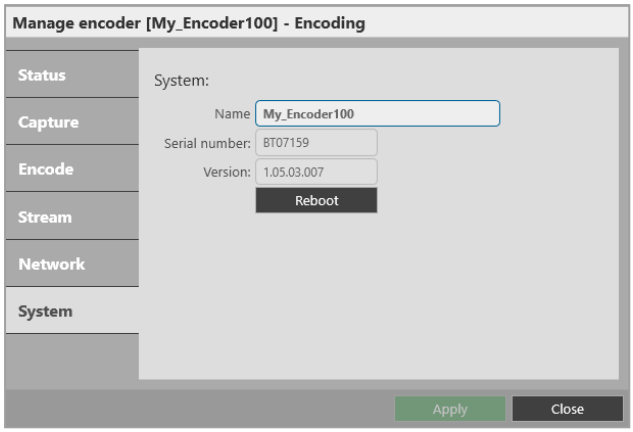




Read more about saving streams on page 76.

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 62.

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.

Hardware recommendations

At tvONE™, we design our products to the highest quality standards. To get the best results from our products, we recommend that you use the best quality connectors, cables, and adapters. Consider the points below when you choose accessories and position equipment.

- For best results with HDMI/DVI, use cables under 15 m long, or shorter if you use connection adapters. If you need to place your products more than 15 m apart, use a signal extender.

  See our range of signal extenders at tvone.com/signal-extension-systems.
- For best results with HDMI, use High Speed or Premium High Speed HDMI cables.
- In industrial environments, use shielded Ethernet cables.

  Shielded Ethernet cables are often marked F/UTP or FTP.
- Use good quality USB drives compatible with USB 3.0.

Planning and installing video walls

The first step towards creating a video wall with your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™, is planning and setting up your hardware.

In this section

Planning a video wall 36
Installing video wall hardware 37

Planning a video wall

It's really helpful to write a plan before you start installing. A plan saves you time and effort later, and helps you make sure you have all the equipment you need.

There's a printable plan at the back of this guide.

If you can't print and fill out the plan, think about the following questions:

Overall effect

- What do you want your video wall to look like?
- How large is your video wall?
- What do you want to accomplish?

Displays

Video tearing
Using a mixture of display sizes and/or resolutions can cause video tearing. For best results, make sure all your displays use the same frame rate.

- How many displays do you need?
- What sizes are the displays?
- What are the bezel sizes of the displays?
- What is the native resolution of each display?
- Do you need displays that support HDCP (High-bandwidth Digital Content Protection)?
- How many projectors do you need?
  - Do you need to blend the edges of displays?
  - How much overlap do you need?

Sources or inputs

- What types of source do you need?
- What is the native resolution of each source?
- What is the frame rate of each source?
- Will the sources be available at all times that the video wall is operating?
- Is there any switching or processing before the source reaches your CORIOmaster™?

Windows

- How many windows do you need to create the effect you want?

  Include all windows, even those that are not active all the time.
- What level of quality do you need for each window?

In most cases, you can't have the highest quality for all your windows. Which windows can be lower quality?

> What is a window?
>
> A window is a container for a source input. You can have multiple windows playing the same source. You can resize, move, and rotate windows in the video wall editor.

Presets

- Do you want to use presets in your video wall?
- What type of control system will you use to operate the video wall and change between presets?

> What is a preset?
>
> A preset stores information about windows, including positions, transitions, and effects such as borders or rotation. You can save presets and recall them later from the dashboard, or using the buttons of your CORIOmaster micro™.

Installing video wall hardware

Once you have planned and collected your hardware, you can set it up. First, install your displays and place your sources. Then connect your displays to your output modules and your sources to your input modules.

Who can do this?

Anyone can do this task, but we recommend that you consult a qualified AV installer.

Placing your CORIOmaster™ and video wall

When you decide where to place your hardware, consider these points:

- Availability of electrical outlets
- Distance from CORIOmaster™ to sources and video wall

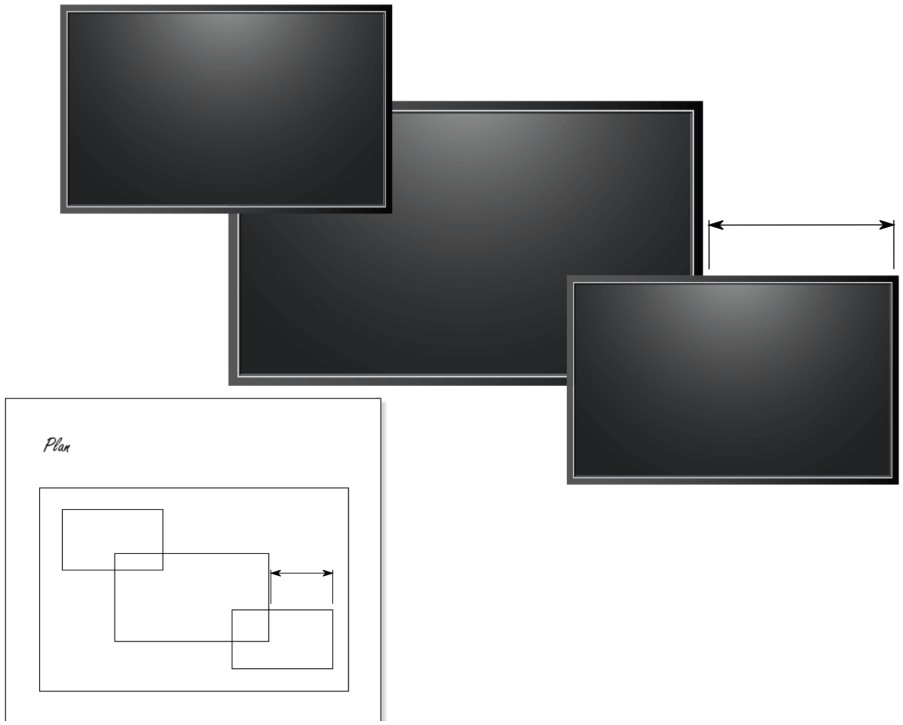
  For best results, use cables under 15 m long, or shorter if you use connection adapters. If you need to place your CORIOmaster™ more than 15 m away from your video wall or sources, use a signal extender.

  Read about our adapters on page 16.

  See our range of signal extenders at tvone.com.
- Installation environment

  In industrial environments, use shielded Ethernet cables.

Position your displays and sources



1. Use your plan to help you position your displays, which can be screens and/or projectors.

   Make sure you note all the measurements, so you can make an accurate video wall in CORIOgrapher™.
2. Position your sources. Follow the advice above when you choose where to put your sources.
3. Connect your displays or projectors to the output modules of your CORIOmaster™.

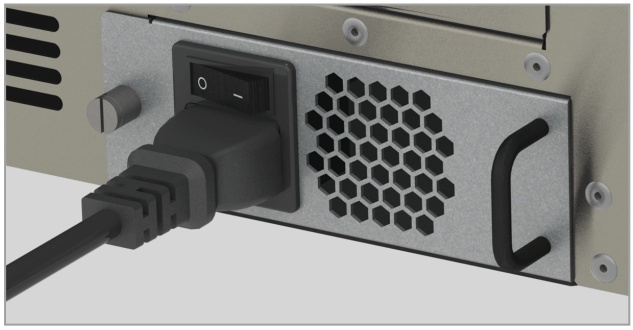
Keep a note of which display is connected to which port. You can use this information later when you name inputs and outputs in CORIOgrapher™. You can also label the inputs and outputs directly.

4. Connect your sources to the input modules of your CORIOmaster™.

Keep a note of which source is connected to which port. You can use this information later when you name inputs and outputs in CORIOgrapher™.

5. Connect your CORIOmaster™ to your network. If you want to control your CORIOmaster™ with a serial controller, connect a serial controller.

6. Connect your CORIOmaster™ to an electrical outlet and power on.



You can now create your video wall in CORIOgrapher™.

Setting up a video wall in CORIOgrapher™

When you've finished installing your video wall hardware and connected everything to your CORIOmaster™, you can create your video wall in CORIOgrapher™.

In this section

About CORIOgrapher™ 40
Getting started with CORIOgrapher™ 41
Naming input and output ports 43
Creating a video wall 44
Testing your video wall installation 45

About CORIOgrapher™

CORIOgrapher™ is the software that controls your CORIOmaster™. You can create up to four video walls with multiple screens and windows, and add transitions and effects for a state-of-the-art dynamic video wall experience.

CORIOgrapher™:

- Works with PCs running Windows® 7 and 10
- Does not work with touch-screen-only devices, including tablets or phones
- Installs Windows® .NET 4.6, if you don't have it
- Needs 600 MB of disk space during installation
- Is approximately 50 MB in size once installed

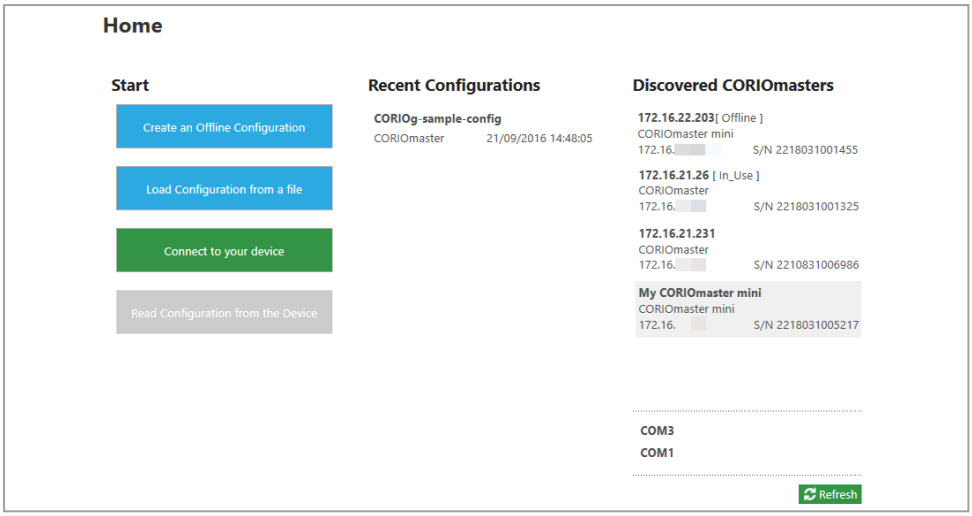
To use the preview feature, your PC must have Windows® Media Player installed, and it must have been launched at least once.

CORIOgrapher™ main areas

Home	Home is where you connect to a CORIOmaster™, load a configuration from a file, or create an offline configuration.
Wall Editor	Wall Editor is where you create up to four video walls.
Dashboard	Dashboard is where you control the actions of your video walls.
⚙	Settings is where you configure your system, network, modules, and more.
?	? opens the online help.

Getting started with CORIOgrapher™

When you first open CORIOgrapher™, you see the Home window.



- If you've set up your hardware already, you can connect to your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™ and get information about its configuration of input and output modules.
- If you haven't set up your hardware yet, you can create a configuration offline, or, if you have one, you can load a configuration from a file. You can save your configuration, and send the configuration to your CORIOmaster™ later.

Read about setting up hardware on page 37.

To connect to your CORIOmaster™ and get its configuration

The easiest way to get started using CORIOgrapher™ is to get the configuration of inputs and outputs directly from your CORIOmaster™.

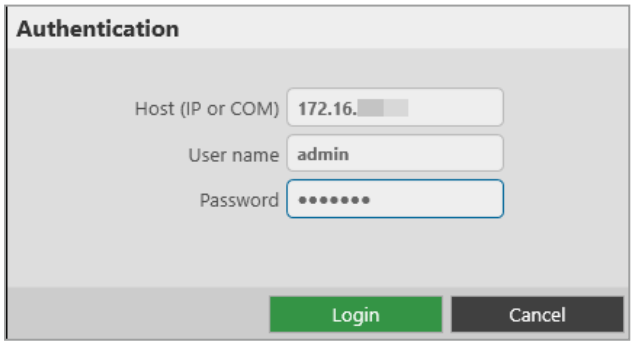
1. From Home, select your CORIOmaster™ from Discovered CORIOmasters.

   If your CORIOmaster™ isn't in the list, select Refresh.

   If you can't see your CORIOmaster™, read troubleshooting advice on page 100.

2. Enter your administrator login details.

   When you first log in as an administrator, enter the username `admin` and password `adminpw`.

   If Host (IP or COM) doesn't contain an IP address, read troubleshooting advice on page 101.

3. When you have logged in to your CORIOmaster™, select Read to get its configuration.

   You can now name your input and output ports.

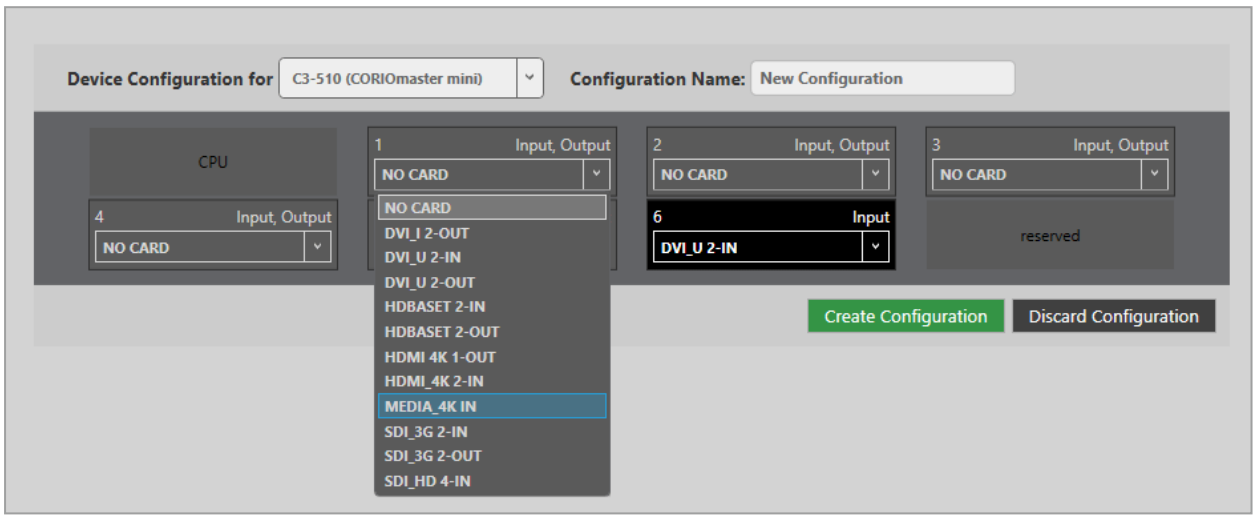
   Read about naming input and output ports on page 43.

To create a configuration offline

You don't need to be connected to a CORIOmaster™ to create video walls, but you do need to recreate the configuration of your CORIOmaster™ so that you're using the correct inputs, outputs, and devices.

You can also create offline configurations to help you decide what hardware you need.

1. From Home, select Create an Offline Configuration.
2. On the Configuration Editor window, choose a device, and give your configuration a name.
3. For each slot, choose an input or output module from the list.



- The number of slots available depends on your device.
- You don't have to use all the slots.
- If you are creating a configuration for an existing CORIOmaster™, match your configuration to the modules of your CORIOmaster™.
- If you are creating a configuration to help you decide what modules you need, there are some guidelines on where to put your modules.

  Read about the configuration of a CORIOmaster™ on page 10.

  Read about the configuration of a CORIOmaster mini™ on page 12.

To send a configuration to your CORIOmaster™

You can send a configuration to your CORIOmaster™ from Home. You can either create a configuration offline, or load a saved configuration.

1. Create or load a configuration.
2. Select Connect to your device and enter your administrator login details.

   When you first log in as an administrator, enter the username `admin` and password `adminpw`.
3. Select Send.

Naming input and output ports

You can name the input and output ports for each slot in CORIOgrapher™.

Why should I name input and output ports?

CORIOgrapher™ uses slot identifiers to give each input or output port in each slot a unique name. For example, the first port in slot 1 is named s1i1 for slot 1 input 1. These unique identifiers tell you the position, but not what is connected to that input or output.

Naming your ports with something that indicates what is connected to the port can help you identify what is what in your configuration, and will make it easier for you to see quickly which source is playing in which window. For example, you might rename s1i1 to Camera 1.

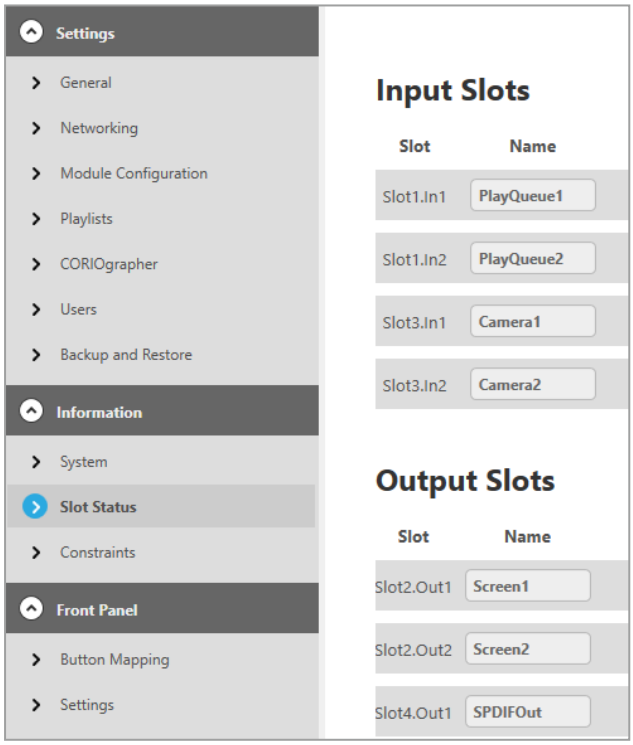
> Naming the input ports of a Streaming media and 4K playback input module
>
> The Streaming media and 4K playback input module has two virtual input ports. Each port refers to a play queue, not to a specific streaming source. If you intend to build play queues with multiple sources, for example, one or two streaming sources and media items from a USB drive, then consider unique names such as PlayQueue1 and PlayQueue2. If you intend to always have just one streaming source in a play queue, then you could use names like WOWZAstream, or LectureTheatreStream.

Naming rules

Names must be unique and start with a letter. They can contain letters, numbers, and underscores, and can be up to 21 characters long.

To name input and output ports

1. In CORIOgrapher™, select ⚙ > Slot Status.
2. For each port, enter a useful name.



3. To save your new names, select Wall Editor > Save on Device.

   If you are creating an offline configuration, select Wall Editor > Save to File.

Creating a video wall

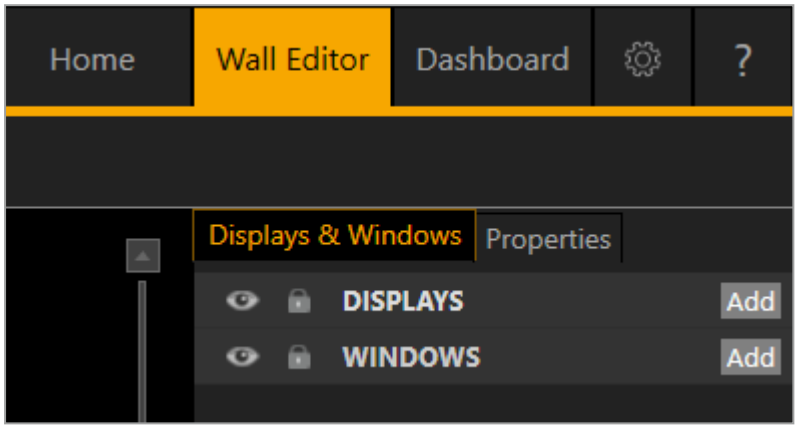
To create a video wall in CORIOgrapher™, you need sources and displays. Make sure you've either loaded your configuration from your CORIOmaster™, or created an offline configuration.

Read about reading the configuration from your CORIOmaster™ on page 41.

Read about creating an offline configuration on page 42.

To create a video wall

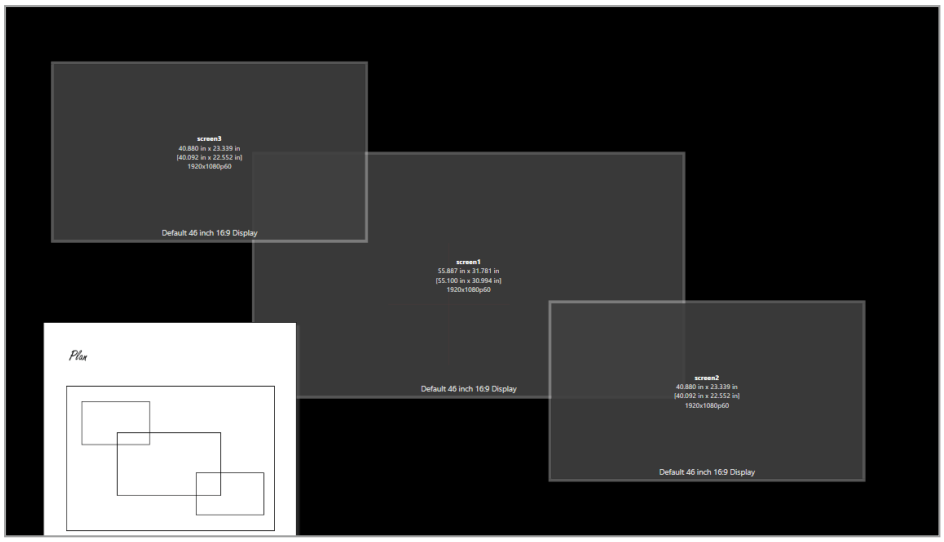
1. From Wall Editor, select (DISPLAYS) > Add.



2. Select a display and drag it onto the video wall.

Repeat this step for each display that you want to use.

3. Arrange the displays on the video wall until they match your plan.



4. Add windows the same way that you add displays. Select (WINDOWS) > Add.
5. When you are happy with your video wall, select Take and then Save on Device to save your settings on your CORIOmaster™.

Before you start refining and using your video wall, it's a good idea to test it to make sure everything is connected properly.

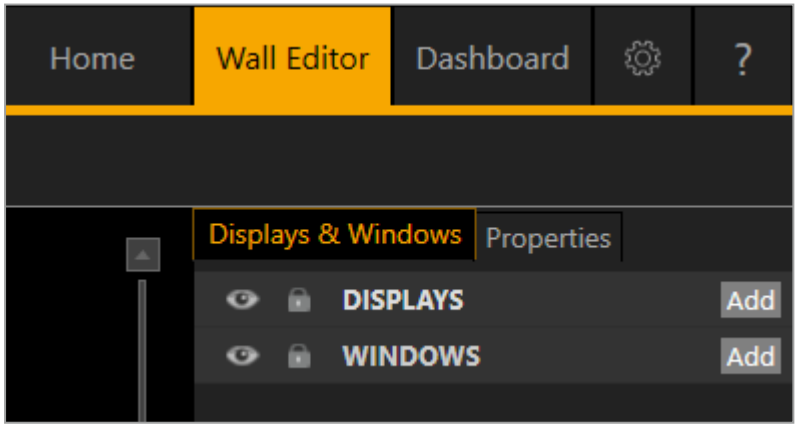
Read about testing your video wall on page 45.

Testing your video wall installation

Once you've created your basic video wall, make sure that you've correctly connected all your hardware, and named and positioned your displays and windows correctly in CORIOgrapher™.

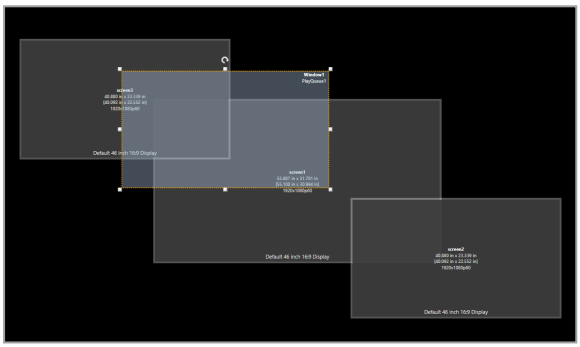
> Testing your video wall is much easier if you've named your input and output ports. It also helps to label your sources and displays. Read more on page 43.

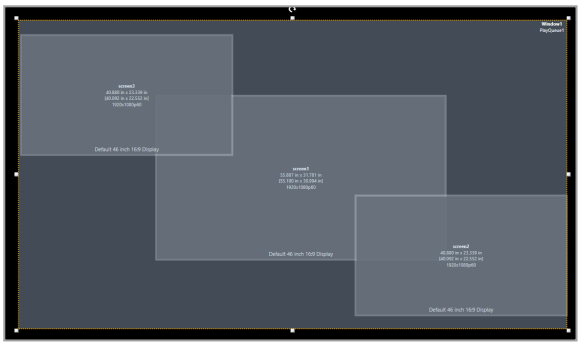
1. From Wall Editor, select (WINDOWS) > Add.



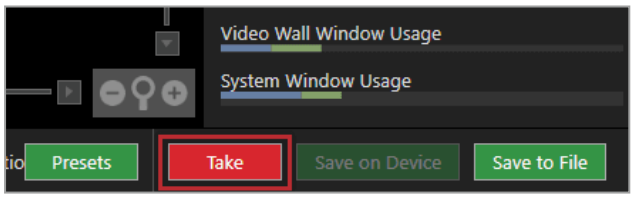
2. Select a source and drag it onto the video wall.

3. Drag the edges of the window until it covers all of your displays.



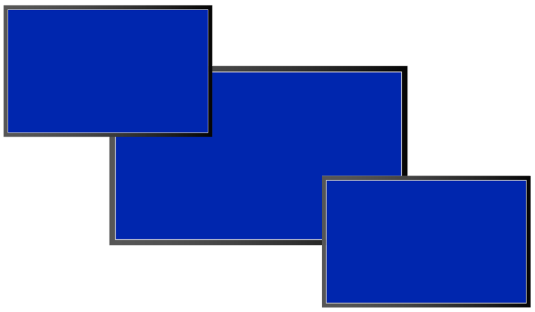


4. Select Take to send the video wall to your displays.



5. Check that your video wall looks correct.

   Make sure that the source for the window is playing, and check that the picture is assembled correctly.



✖ Not the source you were expecting, blue screen, display keeps dropping signal, or no image.

Possible causes:

- Source connected incorrectly
- Input ports named incorrectly
- Source not playing
- Source resolution not supported
- Display does not support HDCP
- Source does not support the required number of HDCP keys
- Poor quality or damaged cables

✔ Source correct, connected, and playing.

✖ Image appears in the wrong places.

Possible causes:

- Displays arranged incorrectly in CORIOgrapher™
- Output ports named incorrectly
- Displays connected incorrectly

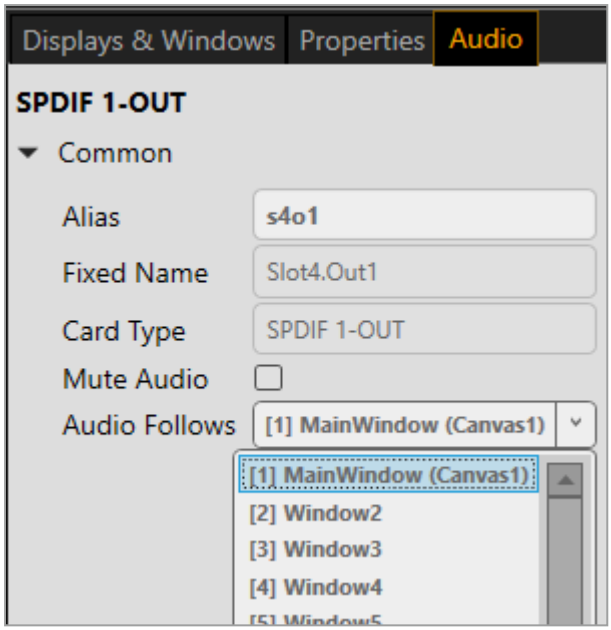
✔ Source and displays connected and arranged correctly.

6. If your test was successful, select and delete the window you tested, and repeat the test for each input.

   If your test was not successful, you might need to contact tvONE support.

See contact details on page 123.

7. **OPTIONAL:** if you have a CORIOmaster micro™, you can test the audio for each window. From the wall editor, select Audio and select each window in turn from Audio Follows.



You should hear the audio from the source playing in that window.

Read about what to do if you cant hear audio on page 105.

8. When you are happy with your video wall, select Take and then Save on Device to save your settings on your CORIOmaster™.

If your video wall is displaying the right sources in the right windows, but doesn't look quite right, you can use the settings in Wall Editor to refine your video wall and make it more accurate.

Settings

You can manage device settings, network settings, and user settings. You can also get information about your CORIOmaster™, and name your input and output modules.

In this section

Device settings 50
- Naming your CORIOmaster™ 50
- Resetting your CORIOmaster™ to factory default settings 50
- Choosing your default working units 51
- Backing up and restoring your settings 51

CORIOmaster micro™ settings 54
- Configuring the buttons of your CORIOmaster micro™ 54

User settings 55
- Creating and editing users 55
- Changing other users' passwords 56
- Changing your own password 56

Network settings 57
- Configuring network settings for your CORIOmaster™ 57
- Configuring network settings for streaming media 58

Playlist settings 60
- Renaming playlists and moving playlists between modules 61
- Deleting playlists 61

Encoders and streams settings 62
- Managing encoders and streams 62

What are user roles?

CORIOgrapher™ has four types of user. Only the administrator role is currently supported. You can assign other roles to users, but all users can perform all tasks.

Device settings

Administrators can configure settings for your CORIOmaster™, including creating and changing its name, changing the units you use to create video walls, backing up and restoring your configuration, and resetting the CORIOmaster™ to its factory default settings.

In this section

Naming your CORIOmaster™ 50
Resetting your CORIOmaster™ to factory default settings 50
Choosing your default working units 51
Backing up and restoring your settings 51

Naming your CORIOmaster™

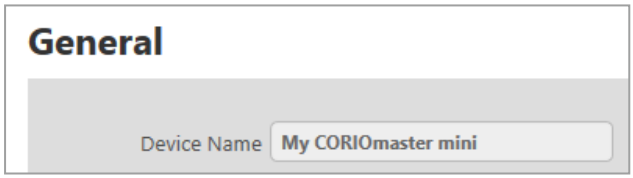
You can give your CORIOmaster™ a unique name.

Why should I name my CORIOmaster™?

If you have more than one CORIOmaster™ unit on your network, giving each unit a unique name can make it easier to find and log in to that unit quickly.

To name your CORIOmaster™

1. Select ⚙ > General.
2. Enter a name for your CORIOmaster™.



Resetting your CORIOmaster™ to factory default settings

Why restore factory default settings?

If your CORIOmaster™ has become unstable, you have repeated errors that you can't fix, or you need to remove all settings and presets, you can reset your CORIOmaster™ to its factory default settings.

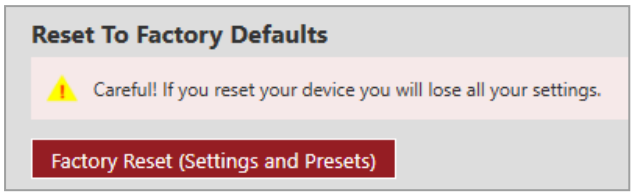
> When you reset your CORIOmaster™ to factory default settings, all of your settings and configurations are deleted.

Before you reset your CORIOmaster™, you might want to back up your configuration. When you set up your CORIOmaster™, you can restore your configuration.

Read about backing up and restoring your configuration on page 51.

To reset your CORIOmaster™ to factory default settings

1. Select ⚙ > General.
2. Select Factory Reset.

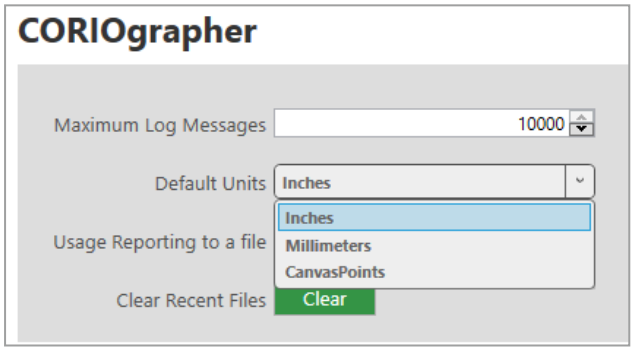


Choosing your default working units

You can choose to work in inches or millimeters when you build video walls in CORIOgrapher™. You can also choose to work in canvas points. Canvas points are equal to pixels in most cases.

To choose a unit

1. Select ⚙ > CORIOgrapher™.
2. From Default Units, choose your preferred units.



Backing up and restoring your settings

You can save your settings to a file on your CORIOmaster™, or to a file on your computer. You can restore your settings from either file. You can share a file saved on a computer between several CORIOmaster™ units that have the same configuration of modules.

Backing up your settings on your CORIOmaster™

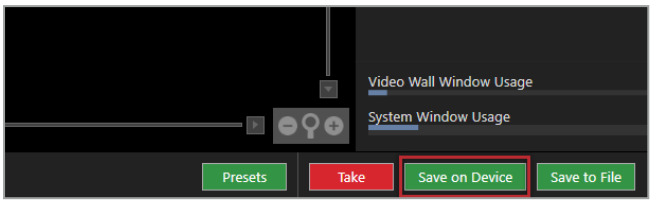
Settings that are saved on your CORIOmaster™

All settings are saved to a backup file on your CORIOmaster™, including:

- Presets
- Configuration, including custom names
- Video walls
- The play queue of a Streaming media and 4K playback input module
- Network settings
- Manually added streams

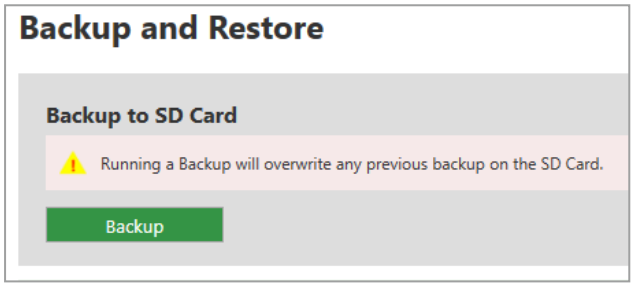
What isn't saved to your CORIOmaster™

Work that you haven't saved to file, or saved to your CORIOmaster™ using Save on Device, isn't saved to a backup file on your CORIOmaster™.



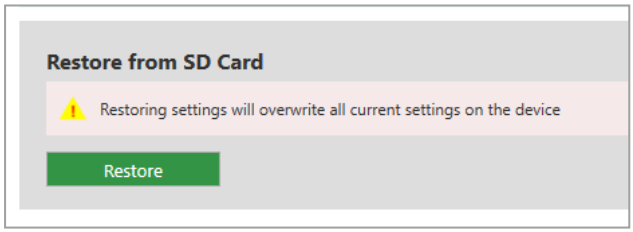
To back up your settings on your CORIOmaster™

1. Check that you've saved all your work.
2. Select ⚙ > Backup and Restore > Backup.



Restoring your settings from your CORIOmaster™

1. Select ⚙ > Backup and Restore.
2. Select Restore.



Backing up your settings to a file on your computer

Settings that are saved on your computer

Most settings are saved to a backup file on your CORIOmaster™, including:

- Presets
- Configuration, including custom names
- Video walls
- Network settings
- Manually added streams
- Custom resolutions

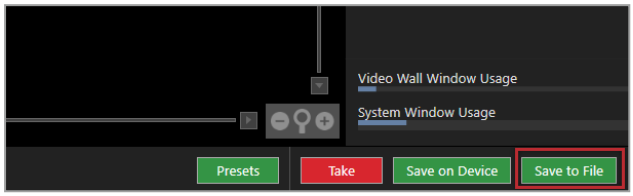
Note: device name and network settings are saved as part of the backup file, but are not included when you restore settings to your device. This allows you to share the backup file between devices without causing conflicts with names and network settings.

What isn't saved to your computer

The play queue and playlists of a Streaming media and 4K playback input module aren't saved to your computer.

To back up your settings to a file on your computer

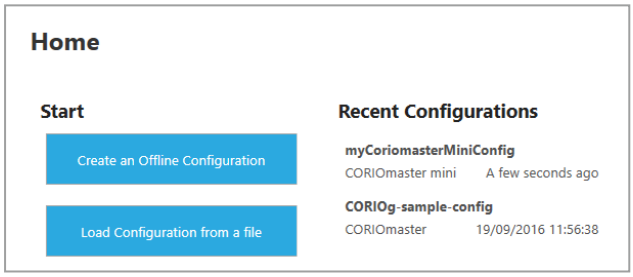
1. Select Wall Editor > Save to File.



2. Choose a location for the file, and save.

Restoring or copying settings from a file on your computer

1. Connect to the CORIOmaster™ that you want to update with saved settings.
2. Select Home.
3. Under Recent Configurations, select a saved file.



If you can't see your file in the list, select Load Configuration from a file and browse to your file.

Problems sharing settings between CORIOmaster™ units

You can't share saved settings between different sizes of CORIOmaster™ unit. For example, if you save the settings from a CORIOmaster mini™, you can't use it in a CORIOmaster™.

You can't share saved settings between devices with different configurations of modules.

You might not be able to copy settings from one CORIOmaster™ to another if they have very different firmware versions, or you might lose some data in the process.

CORIOmaster micro™ settings

You can configure settings for your CORIOmaster micro™, including configuring the buttons of the front panel.

In this section

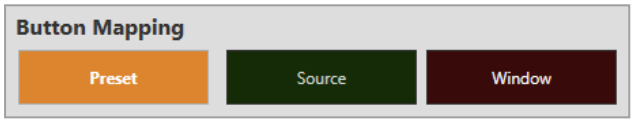
Configuring the buttons of your CORIOmaster micro™ 54

Configuring the buttons of your CORIOmaster micro™

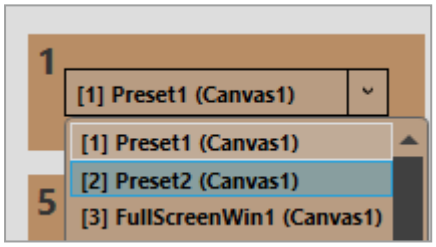
You can choose which presets, sources, and windows correspond to the buttons on the front panel of your CORIOmaster micro™. Configure the buttons in CORIOgrapher™.

Mapping presets, sources, and windows to the buttons of the front panel

1. Select ⚙ > (Front Panel) Button Mapping.
2. Select the option you want to configure.



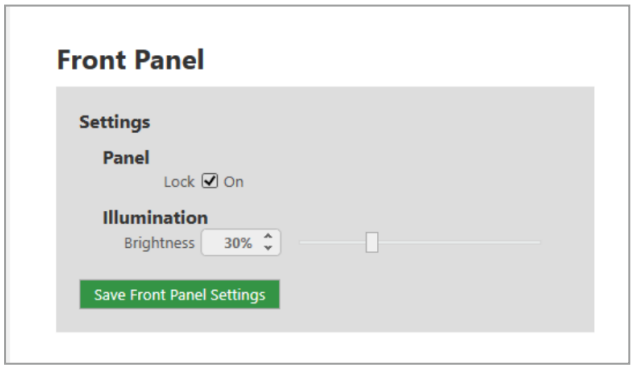
3. For each button, select a preset, source, or window from the list.



4. Repeat steps **2** and **3** until you have configured all modes and buttons, and then select Save.

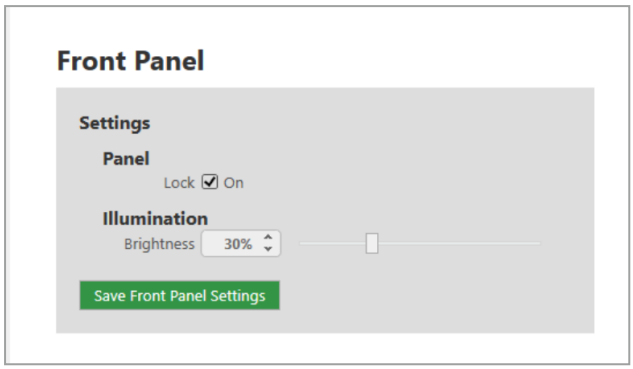
Changing the brightness of the buttons of the front panel

1. Select ⚙ > (Front Panel) Settings.
2. Use the slider to adjust the brightness.



Locking the buttons of the front panel

1. Select ⚙ > (Front Panel) Settings.
2. Select or clear Lock.



User settings

Administrators can create and edit users, change user roles, and enable specific timeout times. Users and power users can change their own passwords.

In this section

Creating and editing users 55
Changing other users' passwords 56
Changing your own password 56

Creating and editing users

You can create and edit users, change user roles, and enable specific timeout times. You can have up to four additional users.

What are user roles?

CORIOgrapher™ has four types of user. Only the administrator role is currently supported. You can assign other roles to users, but all users can perform all tasks.

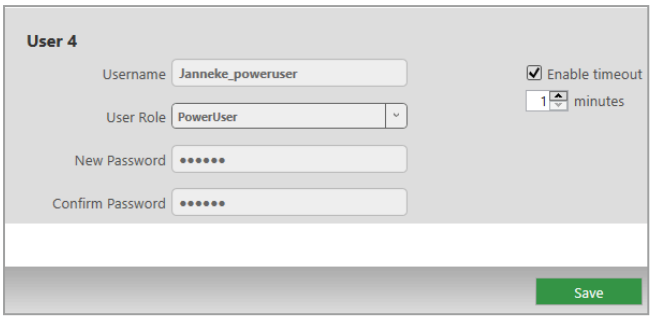
Why set a timeout time?

By default, a connection to a CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™ must stay active, or it is disconnected after five minutes. An active connection sends at least one command to the CORIOmaster™ every five minutes.

To stay connected while idle for more than five minutes, set a longer timeout time for each user. You can also allow the user to stay connected permanently, with no timeout time, by clearing the Enable timeout option.

Locking out other users
CORIOgrapher™ only allows one connection at a time. If you allow any user to connect permanently, or with a long timeout time, they can lock out other users. This can also prevent commands from other devices reaching the CORIOmaster™.

To create a new user, or edit an existing user



1. Select ⚙ > Users.
2. To create a new user, choose an empty slot. To edit an existing user, find that user's details.
3. Enter a username.

   Usernames must start with a letter, and can contain only letters, numbers, and underscores.
4. Select a user role.
5. Enter a password in the New Password box and the Confirm Password box.

   Passwords must be between 5 and 32 characters, must start with a letter, and can contain any combination of alphanumeric characters and symbols. Passwords cannot contain spaces.
6. Select the Enable timeout option, and enter or select a timeout time from 1–540 minutes.

   tvONE recommends a timeout time from 1–5 minutes.
7. Select Save.

Changing other users' passwords

You can make changes to other users' accounts.

Password rules

Passwords must be between 5 and 32 characters, must start with a letter, and can contain any combination of alphanumeric characters and symbols. Passwords cannot contain spaces.

To change other users' passwords

1. Select ⚙ > Users.
2. Find the user whose password you wish to change and enter the new password in the New Password box.
3. Enter the same password in the Confirm Password box and select Save.

Changing your own password

Password rules

Passwords must be between 5 and 32 characters, must start with a letter, and can contain any combination of alphanumeric characters and symbols. Passwords cannot contain spaces.

To change your password

1. Select ⚙ > Users.
2. Find your user details and enter your new password in the New Password box.
3. Enter the same password in the Confirm Password box and select Save.

Network settings

Administrators can configure network settings for CORIOmaster™ units and Streaming media and 4K playback input modules.

In this section

Configuring network settings for your CORIOmaster™ 57
Configuring network settings for streaming media 58

Configuring network settings for your CORIOmaster™

You can choose a DHCP or static IP address, and configure your static IP settings.

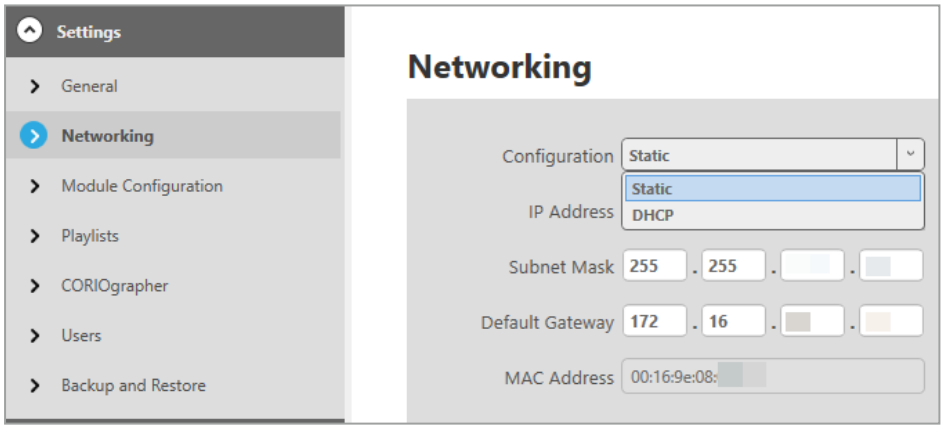
Before you start

If you want to use a static IP address, you need some information about the range of available IP addresses on your network. Your network administrator should be able to help you.

> **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.

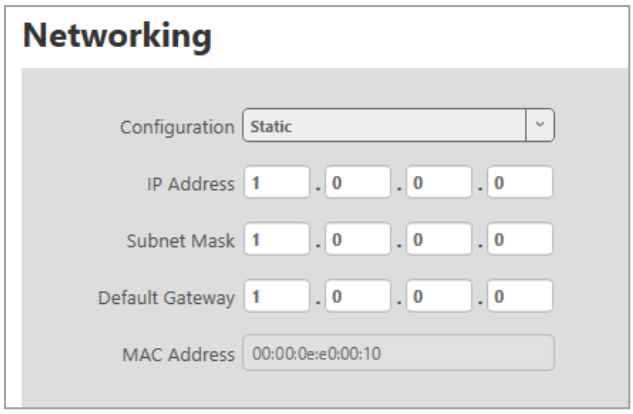
To configure network settings for your CORIOmaster™

1. In CORIOgrapher™, select ⚙ > Networking.
2. Choose an IP configuration.



- If you choose DHCP, an IP address is assigned to you.
- If you choose Static, the last static IP address you saved is available to edit. If you haven't previously saved a static IP address, default values for a static IP address are available to edit.

3. **OPTIONAL:** Configure your static IP address.



- Enter a value for your IP address and subnet mask.
- If your CORIOmaster™ and PC are on different networks, enter a value for your gateway.

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

Configuring network settings for streaming media

If you want to stream media over your network, or from the internet, configure the network settings for your Streaming media and 4K playback input module.

If you only want to use your Streaming media and 4K playback input module to play media from a USB drive, you don't need to configure network settings.

You can also configure the network settings for your Encoder-100.

Read about configuring your Encoder-100 on page 30.

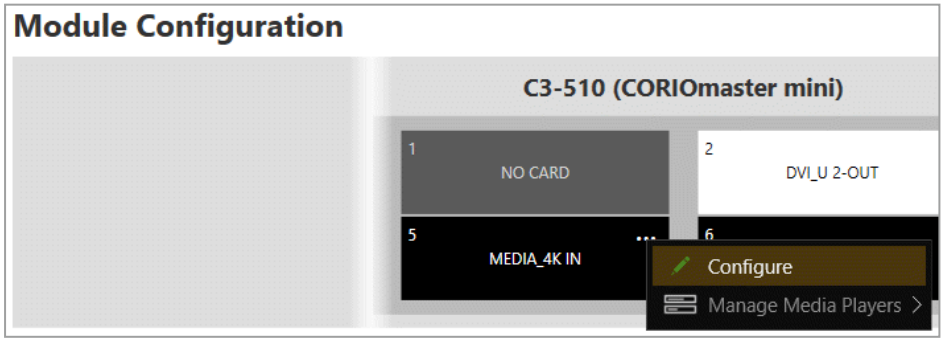
About static IP addresses

If you want to use a static IP address, you need some information about the range of available IP addresses on your network. Your network administrator should be able to help you.

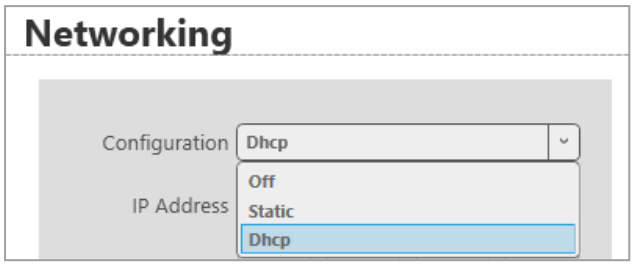
> **Static IP address**
> If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

To configure network settings for streaming media

1. In CORIOgrapher™, select ⚙ > Module Configuration.
2. Find the Streaming media and 4K playback module that you want to set up, and select ••• > Configure.

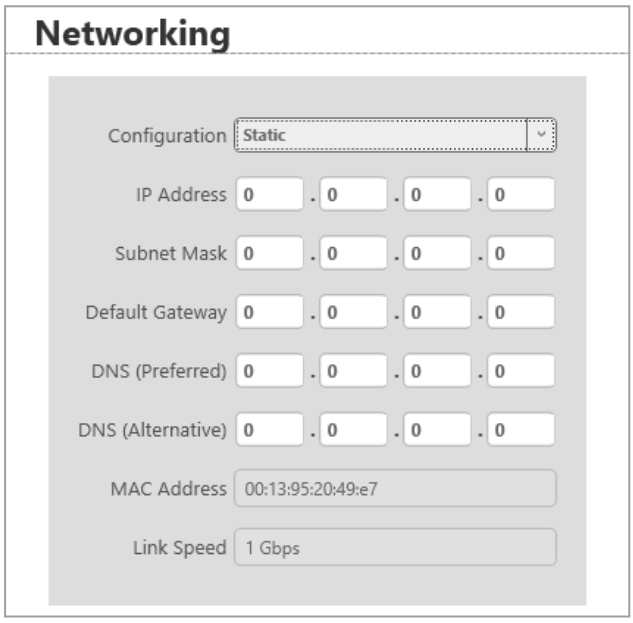


3. Choose an IP configuration.



   - If you choose DHCP, an IP address is assigned to you.
   - If you choose Static, the last static IP address you saved is available to edit. If you haven't previously saved a static IP address, default values for a static IP address are available to edit.

4. **OPTIONAL:** Configure your static IP address.

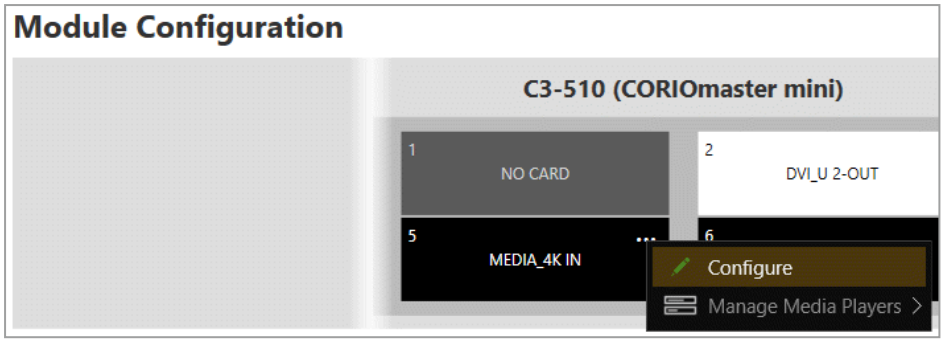


   - Enter a value for your IP address and subnet mask.
   - If you want to stream from the internet, for example from a Wowza server, enter a value for your gateway.
   - If you want to refer to a source by name, enter a value for DNS.

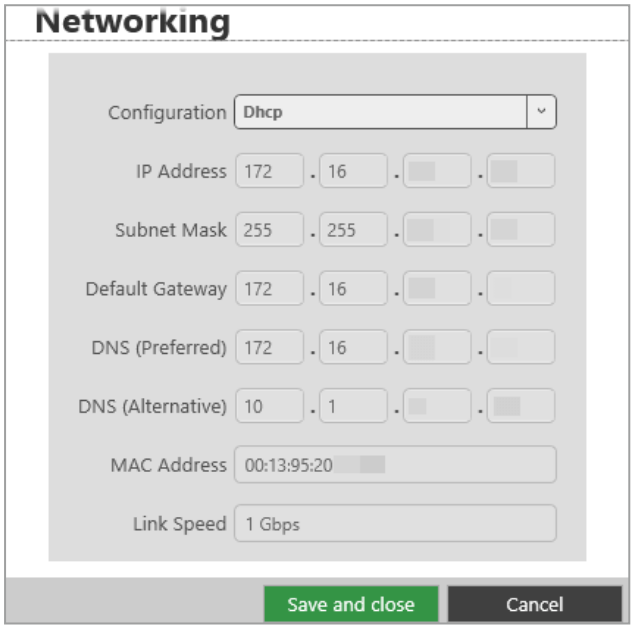
   If you need help with network settings, contact your network administrator.

Finding the MAC address of your Streaming media and 4K playback input module

1. In CORIOgrapher™, select ⚙ > Module Configuration.
2. Find the Streaming media and 4K playback module that you want to set up, and select ••• > Configure.



3. Read the MAC address.



Playlist settings

If you have a Streaming media and 4K playback input module, you can view the status of your playlists, delete all playlists or individual playlists, move playlists between modules, and rename playlists.

In this section

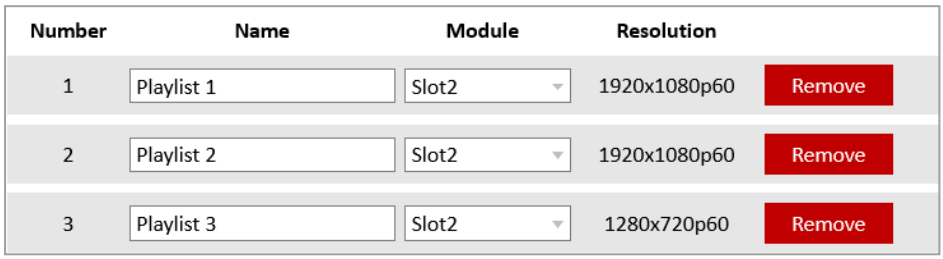
Renaming playlists and moving playlists between modules 61
Deleting playlists 61

Renaming playlists and moving playlists between modules

You can see a list of all your playlists on all your Streaming media and 4K playback input modules. You can rename your playlists and move them between modules.

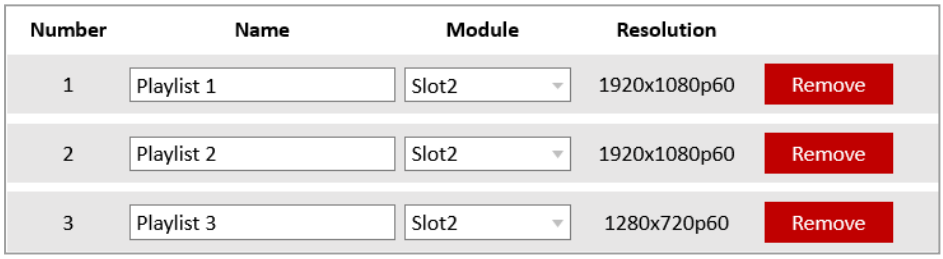
Renaming your playlists

1. In CORIOgrapher™, select ⚙ > Playlists.
2. Find the playlist you want to rename, and enter a new name.



Moving playlists

1. In CORIOgrapher™, select ⚙ > Playlists.
2. Find the playlist you want to move and select a module from the list.

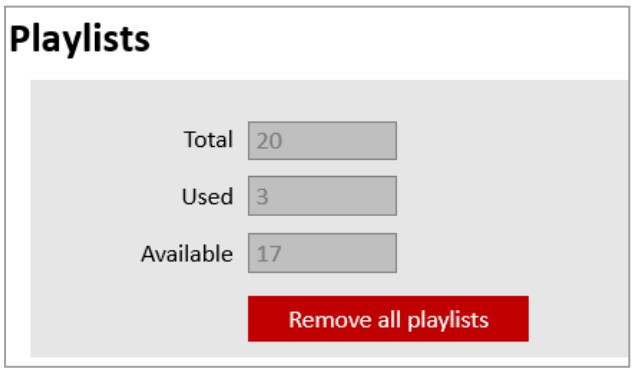


Deleting playlists

If you have a Streaming media and 4K playback input module, you can delete all your playlists, or individual playlists.

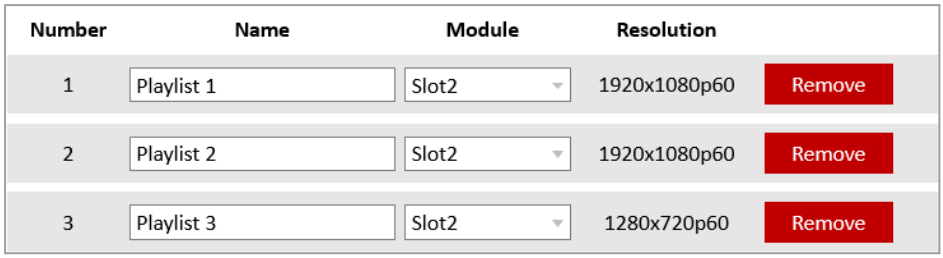
Deleting all your playlists

1. In CORIOgrapher™, select ⚙ > Playlists.
2. Select Remove all playlists.



Deleting individual playlists

1. In CORIOgrapher™, select ⚙ > Playlists.
2. Find the playlist you want to delete.
3. Select Remove.



Encoders and streams settings

You can view and manage all your encoders and saved streams.

In this section

Managing encoders and streams 62

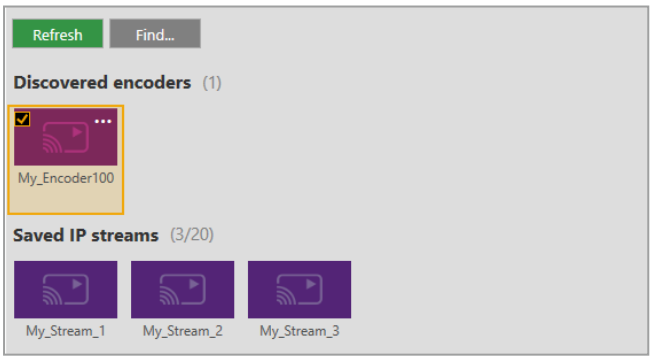
Managing encoders and streams

You can view and manage all your encoders and saved streams.

Select ⚙ > IP Streams.

Managing your encoders

Encoders that CORIOgrapher™ detects appear under Discovered encoders.

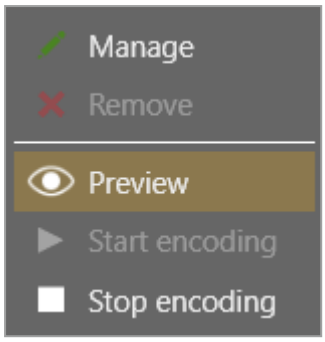


You can:

- Refresh the list of encoders.
- Search for an encoder that doesn't appear automatically.
- Select an encoder to see details about that encoder.
- Select ••• to:
  - Manage the encoder, or change your configuration.

    Read about configuring your Encoder-100 on page 30.
  - Remove an inactive encoder.
  - Preview the stream from an encoder.

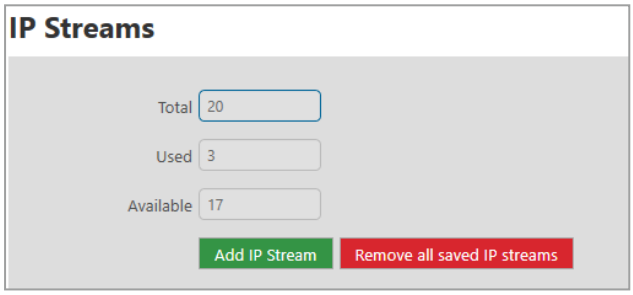
- Start or stop encoding.



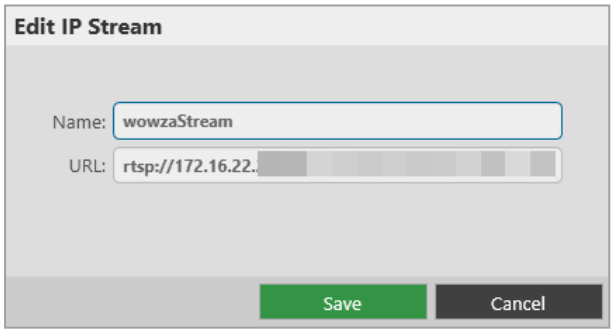
Managing your saved streams

Streams that you add and save manually appear under Saved IP streams.

- You can see how many streams you have, and how many slots you have left.
- You can add new streams, and remove all your saved streams.



- You can edit the name and URL of saved streams.
  1. Select the stream and then select ••• > Edit.
  2. Edit the name or URL of the media stream.



Using CORIOgrapher™

When your video wall equipment is installed and you've recreated your video wall in CORIOgrapher™, you can play streaming media, and add transitions and effects to your video wall.

In this section

Presets 64
Creating and editing presets 64
Loading a preset 69
Changing the source playing in a window 70
Playing audio 72
Media and streams 75
Playing media and streams 76
Creating and managing playlists 85
Using the internal drive 91
Choosing the best resolution for your playlist or play queue 94
Using the buttons of your CORIOmaster micro™ 96
Changing between preset and source selection mode with your CORIOmaster micro™ 96
Locking your CORIOmaster micro™ 96
Replacing a module 97

Presets

You can create and save up to 50 presets in CORIOgrapher™.

In this section

Creating and editing presets 64
Loading a preset 69

- Read about creating and editing presets
- Read about loading presets

Creating and editing presets

You can create and save up to 50 presets in CORIOgrapher™.

Risk of losing work
There is no Save As option. To update an existing preset, first load the preset, and then make changes.

What is a preset?

A preset stores information about windows, including positions, transitions, and effects such as borders or rotation. You can save presets and recall them later from the dashboard, or using the buttons of your CORIOmaster micro™.

What is included in a preset?

Presets store information about windows, including:

- Source playing in the window
- Position
- Z order, or stacking order
- Size
- Rotation
- Border
- Flip
- Source change transitions

What is not included in a preset?

- System settings
- Displays
- Video walls other than the one you are working on

  For example, if you have video wall 1 and video wall 2 set up, but you have video wall 1 open in Wall Editor when you save a preset, the preset contains only information about video wall 1.
- Which window is playing audio
- Window:
  - Quality
  - Full name
  - Alias
  - Video wall
  - Fade to black

You can save all this information as a backup file.
Read more on page 51.

For best results

To prevent your presets behaving unexpectedly, follow the advice below.

Build your busiest preset first

Build the preset with the highest number of windows first. Include all the windows you want to use in all your presets. Any windows that aren't for this preset, move away from the displays, and shrink to reduce bandwidth.

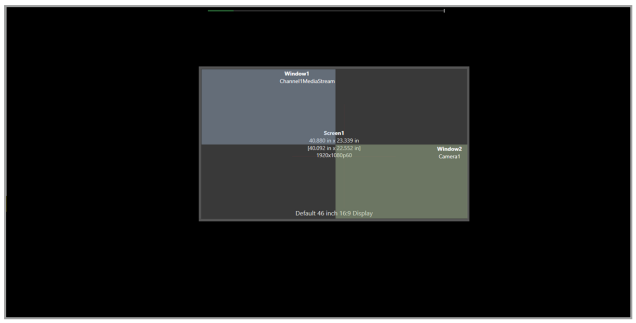
Don't use presets to add and remove windows

If you want to remove a window from your display with a preset, don't delete the window.

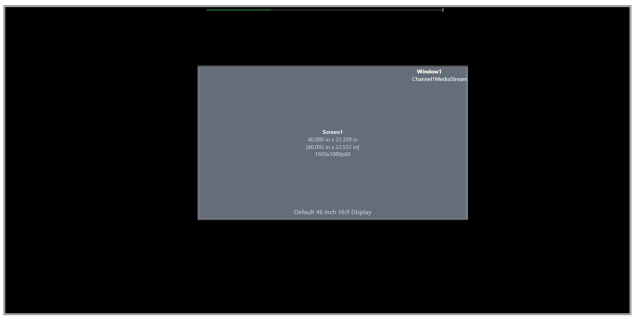
- Move the window away from the display.
- Reduce the size of the window to reduce unnecessary video bandwidth.

  Note: windows that aren't on the display still take up bandwidth.
- Set the preset duration to 0 seconds.

✔ Preset 1



✖ Preset 2



✔ Preset 2

Don't use presets to change window quality

Don't change the quality of a window that is included with a preset.

For example, if you save a preset that contains two windows of UHQ quality, and then change the quality of one window to EHQ, it will not return to UHQ when you load the preset.

If you want to reduce the video bandwidth consumed by a window, consider shrinking it instead.

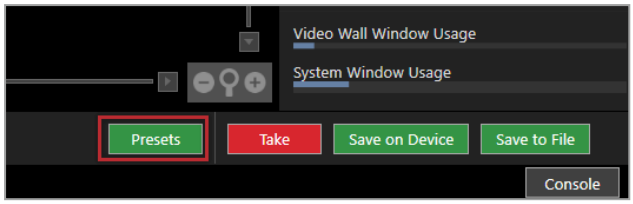
Windows used in presets only appear on one video wall

You can't use windows that are included in presets on more than one video wall.

For example, if you save a preset that contains window 1 on video wall 1, window 1 is not available for any other video wall, even if you delete window 1 from video wall 1. To make window 1 available again, delete the preset that contains window 1.

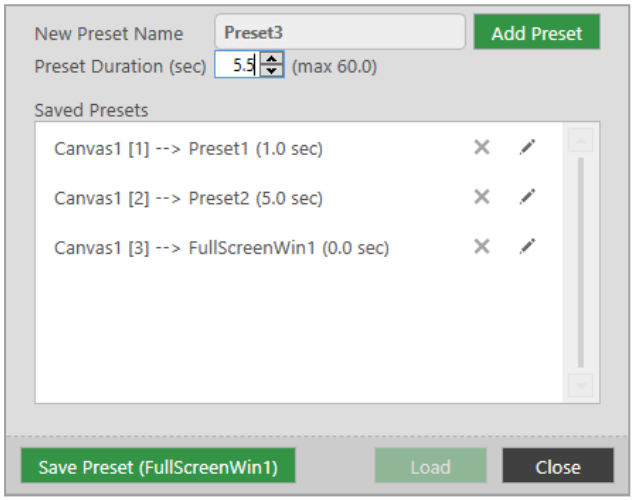
Saving presets

1. Create a video wall and select Presets.



2. Enter a name for your preset.

   Names can be up to 19 characters long, and cannot contain spaces or ".



3. Enter or select a duration for your preset.

   The duration is the time taken to transition to this preset.

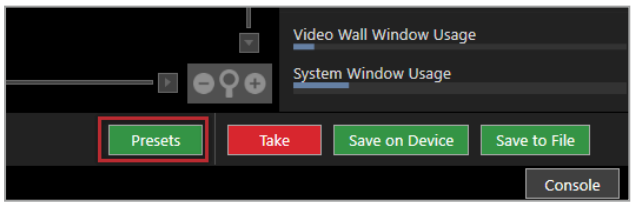
4. Select Add Preset.

Editing presets

You can change the name and duration with a preset, or update a preset with a new configuration.

To change the name or duration of a preset

1. Select Presets.

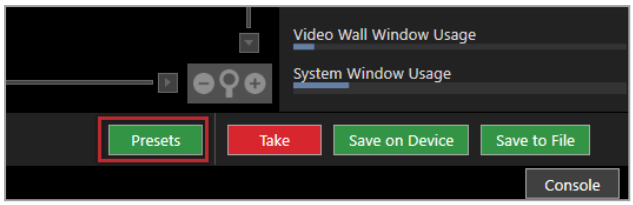


2. Find the preset you want to edit and select ✎.
3. Enter a new name or duration.
4. Select any area outside the dialog box to save your changes, or select Close to save and exit the dialog box.

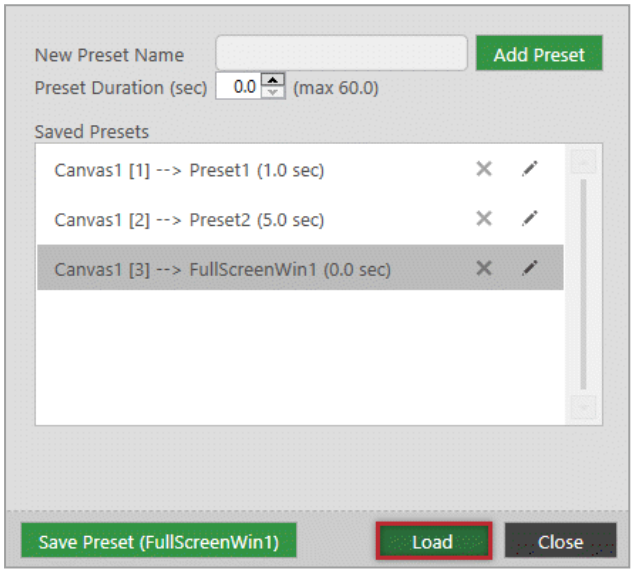
To update a preset with a new configuration

Make sure you load the preset you want to update before you make changes.

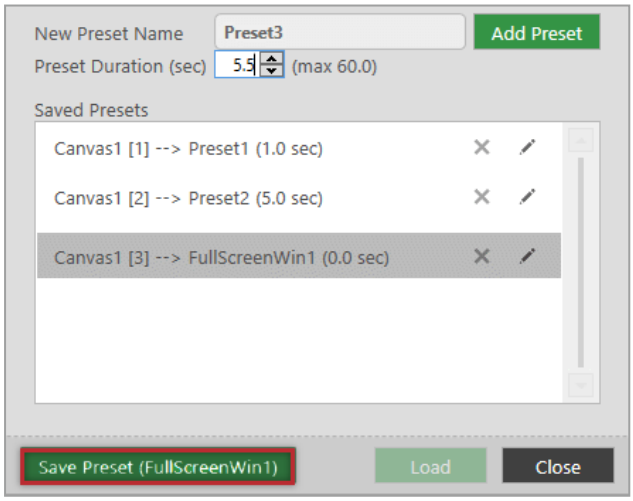
1. Select Presets.



2. Find the preset you want to edit and select Load.



3. Close Presets and make your changes to your video wall.
4. Select Presets > Save Preset.



Loading a preset

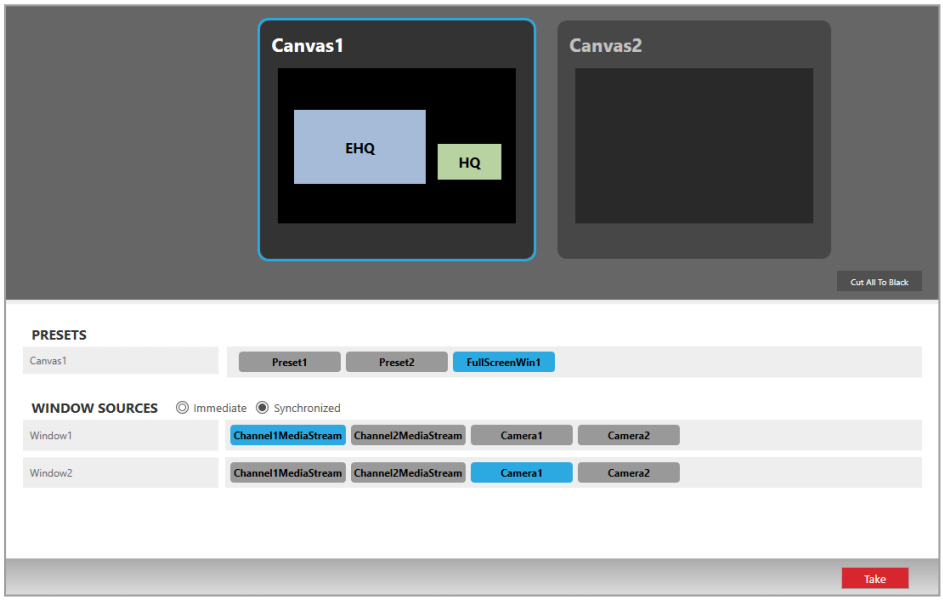
If you have saved one or more presets in CORIOgrapher™, then you can choose a preset to load. You can choose presets in CORIOgrapher™, and if you have a CORIOmaster micro™, you can use the buttons to choose from a selection of presets.

> What is a preset?
>
> A preset stores information about windows, including positions, transitions, and effects such as borders or rotation. You can save presets and recall them later from the dashboard, or using the buttons of your CORIOmaster micro™.

Loading a preset from CORIOgrapher™

You can load any of your saved presets from the dashboard in CORIOgrapher™.

- From Dashboard, select a preset.



Loading a preset with the buttons of your CORIOmaster micro™

You can choose from eight presets with the buttons of your CORIOmaster micro™. By default, the eight buttons correspond to saved presets 1 to 8. You can configure your buttons to correspond to your choice of presets.

Read about configuring the buttons of your CORIOmaster micro™ on page 54.

When your CORIOmaster micro™ is in preset selection mode, the buttons are orange. Any buttons that do not have a corresponding preset are unlit.

1. Check that your CORIOmaster micro™ is in the correct mode for choosing presets.

   If your CORIOmaster micro™ is not in the correct mode, press and hold buttons 1 and 5.

2. Press and release the button that corresponds to your chosen preset.

   The button flashes while the preset loads, and is then lit more brightly.

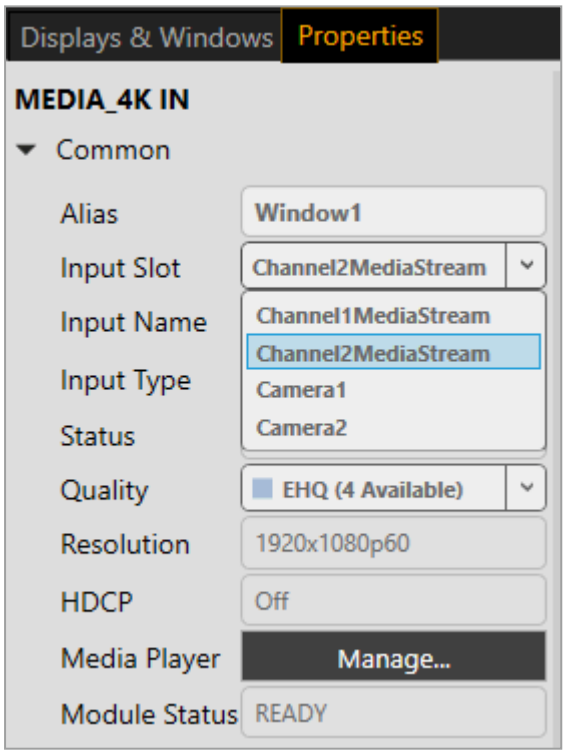
Note: while a preset is loading and the button is flashing, you cannot select another preset. Wait until the button stops flashing.

Changing the source playing in a window

You can choose which source plays in any window. If you have a CORIOmaster micro™, you can change the source with the buttons of the front panel.

Changing the source in CORIOgrapher™

1. From Wall Editor, double-click the window you want to change.
2. In Properties, choose a source from Input Slot.



Changing the source with the buttons of your CORIOmaster micro™

You can choose from up to eight sources with the buttons of your CORIOmaster micro™. By default, the eight buttons correspond to your first eight sources. You can configure your buttons to correspond to your choice of sources.

Read about configuring the buttons of your CORIOmaster micro™ on page 54.

When your CORIOmaster micro™ is in source selection mode, the buttons are green. Any buttons that do not have a corresponding source are unlit.

1. Check that your CORIOmaster micro™ is in the correct mode for choosing sources.

   If your CORIOmaster micro™ is not in the correct mode, press and hold buttons 1 and 5.

2. Press and hold the button that corresponds to the window that you want to change, until it starts flashing.

   Note: if you are listening to audio, when you choose a window, you hear the audio from that window. You can change the audio back to your chosen window at the end of this task.

3. Press and release the button that corresponds to your chosen source.

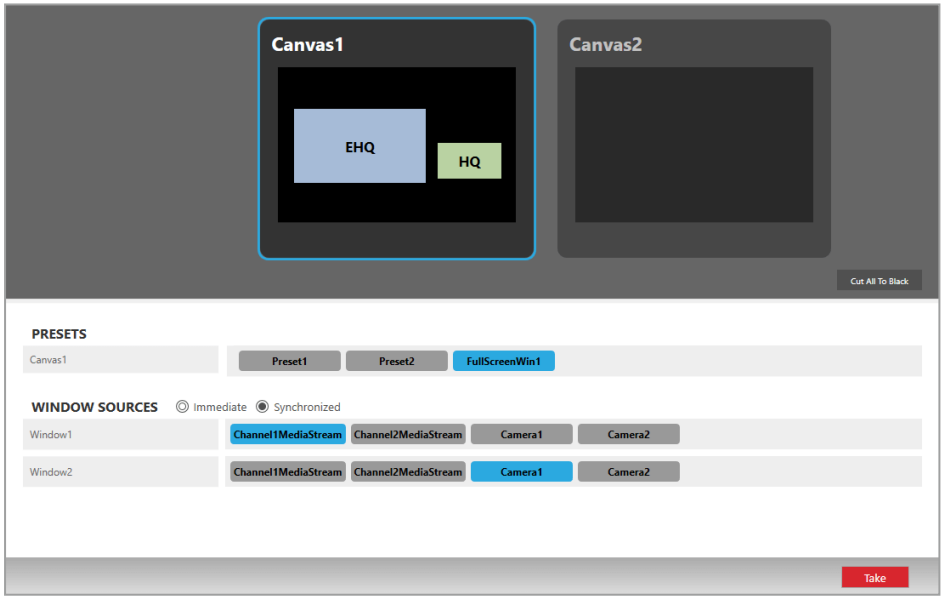
   The button flashes, and is then lit more brightly.

4. **Optional:** change the audio source back to your previous source. Press and hold the button that corresponds to the window that you want to hear, until it starts flashing.

Changing the source using the dashboard

You can change the source playing in any window from the dashboard in CORIOgrapher™.

1. From Dashboard, find the window you want to change, and select a source.



2. Select Take.

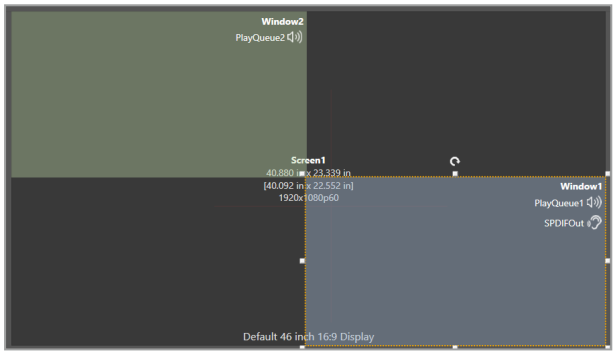
Playing audio

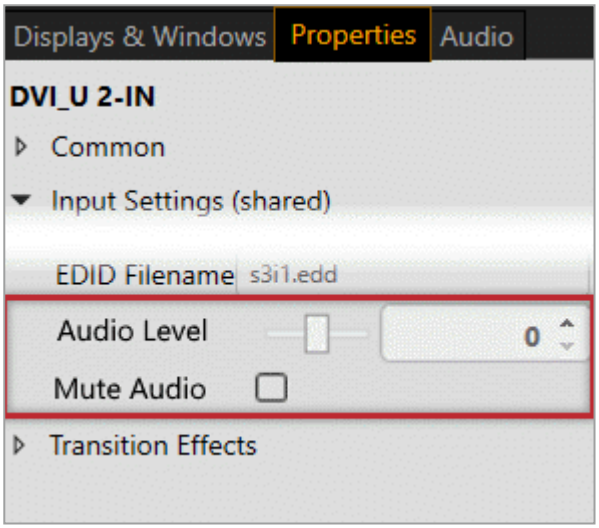
If you have a CORIOmaster micro™, you can play audio. Connect the S/PDIF port of your CORIOmaster micro™ to a digital audio device, with an RCA cable.

> Audio settings are set for sources, not windows. If you adjust or mute the audio from a window, all the windows playing that source are affected.

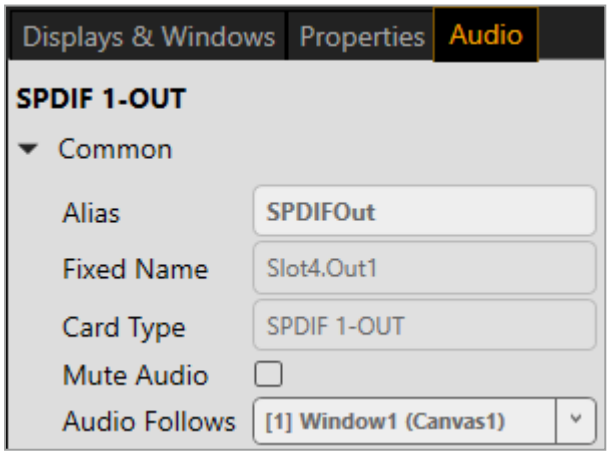
About audio

- Your CORIOmaster micro™ has an S/PDIF audio output that you can connect to a digital audio device with an RCA cable.
- You can listen to a source playing in a window. The window you hear is the active window. You can choose which window is active with the buttons of the front panel. On the wall editor, the active window shows .
- You can mute and adjust the audio input level of individual sources playing in windows in CORIOgrapher™.





- You can mute the audio output in CORIOgrapher™.



- The Streaming media and 4K playback input module only supports the following embedded audio formats:
  - mp3
  - aac

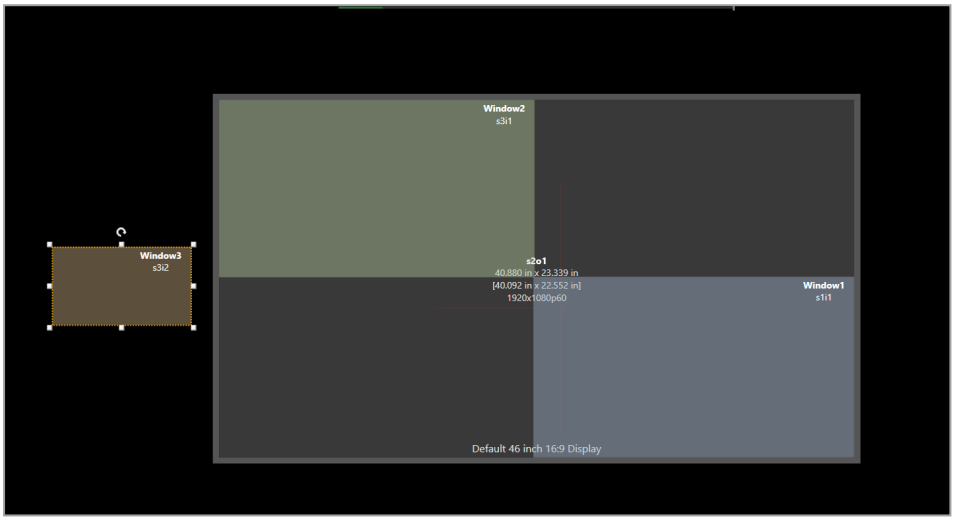
Choosing which window to hear with the buttons of the front panel

You can choose which window to hear with the buttons on your CORIOmaster micro™. By default, the eight buttons correspond to your first eight sources. You can configure your buttons to correspond with your choice of windows.

You can choose to hear any window, including windows that aren't showing on your video wall, or are on a different video wall.

Show me an example

In this example, window 3 is not showing on the video wall, but you can still choose to hear the audio from window 3. Note that window 3 is a preview window to reduce video bandwidth.

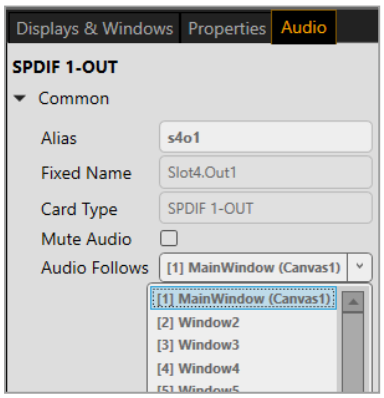


- Press and hold the button that corresponds to the window you want to hear, until it flashes red.

Choosing which window to hear with CORIOgrapher™

You can choose which window to hear in CORIOgrapher™.

1. From the wall editor, select Audio.
2. Select a window to hear from Audio Follows.



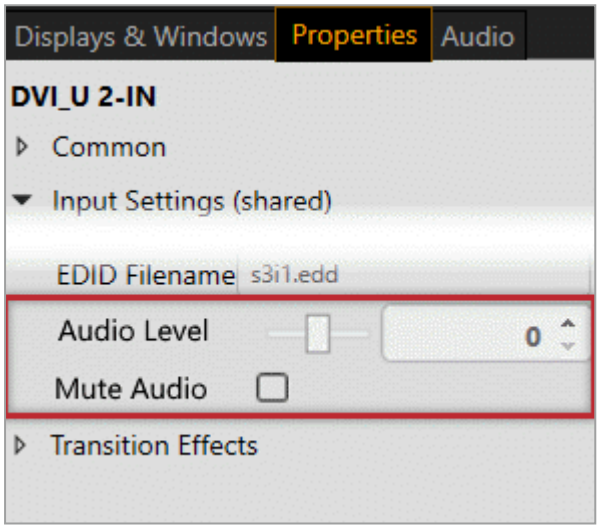
Adjusting the audio input level and muting individual sources

For each source, you can mute, unmute, and adjust the audio input level in CORIOgrapher™.

> Audio settings are set for sources, not windows. If you adjust or mute the audio from a window, all the windows playing that source are affected.

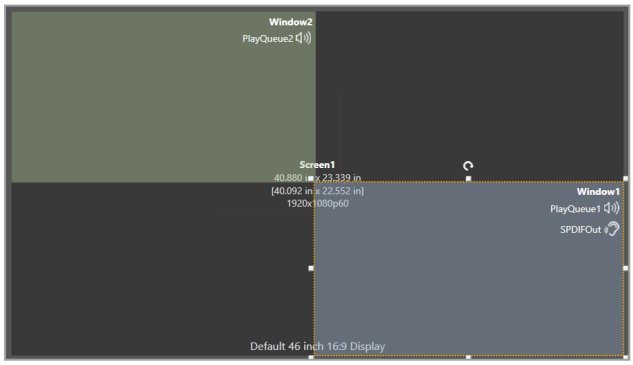
Adjusting audio input level and muting using source properties

1. Double-click any window playing the source you want to adjust.
2. In Properties, adjust the audio.
   - Use the Audio Level slider to set audio input level.
   - To mute the audio, select Mute Audio.
   - To restore audio, clear Mute Audio.



Muting sources from the wall editor

On the wall editor, you can mute and unmute the sources associated with the windows of your video wall.



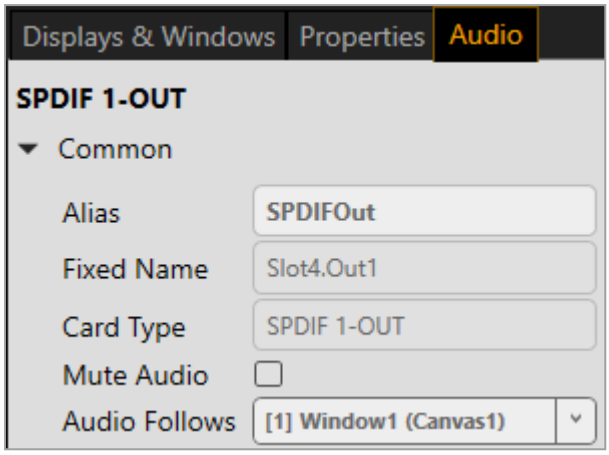
- To mute audio, select .
- To unmute audio, select .

Muting the audio output

You can mute and unmute the S/PDIF audio output in CORIOgrapher™.

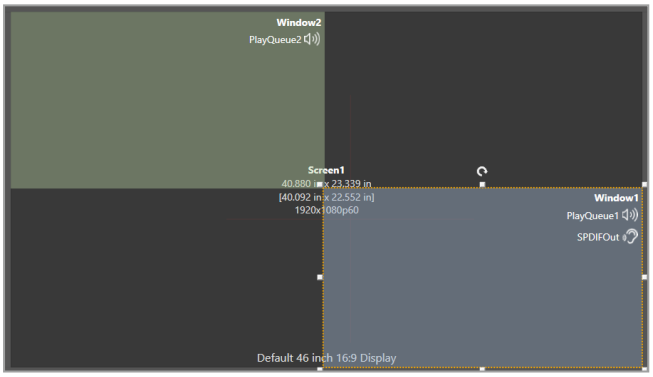
Muting using audio properties

- From the wall editor, select Audio.



Muting the audio output from the wall editor

On the wall editor, the window playing audio shows .



- To mute the audio output, select .
- To hear the audio output, select .

Media and streams

If you have a Streaming media and 4K playback input module, you can play media items and streams on your video wall.

In this section

Playing media and streams 76
Creating and managing playlists 85
Using the internal drive 91
Choosing the best resolution for your playlist or play queue 94

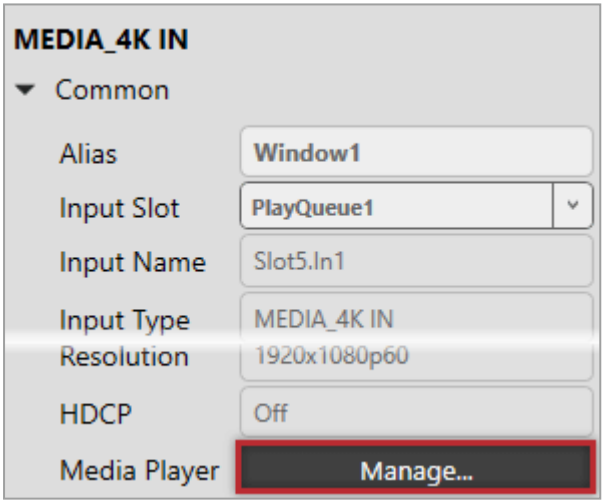
Playing media and streams

If you have a Streaming media and 4K playback input module, you can play media items and video streams. Add up to 20 media items or streams to a play queue or saved playlist. Each Streaming media and 4K playback input module can play up to two simultaneous play queues on your video wall.

In this article

Before you start 77
Adding and editing media streams 77
Adding media items, streams, and playlists to your play queue 79
Playing a multicast stream from an Encoder-100 on multiple CORIOmaster™ units 80
Changing the duration of media items 81
Using the playback controls 81
Managing the play queue 83
Saving the play queue 83
Playing the play queue automatically 83
Saving media to internal storage 84

Manage your media and streams in CORIOgrapher™. Double-click the window you wish to play media or streams, and select (Media Player) Manage.



The media player is not available when you work offline.

Streaming media and 4K playback input modules in CORIOmaster micro™ units only support embedded audio, for streams and media items with the following embedded audio formats:

- mp3
- aac

Before you start

- To stream media from the internet or your network, you need to connect an Ethernet cable and configure the network settings for your Streaming media and 4K playback input module.

> For best results, use Gigabit equipment and cables.

Read about configuring network settings for a Streaming media and 4K playback input module on page 58.

- To turn any video source into a stream, you need an encoder. The encoder takes video and audio signals, converts them to an AVIP (Audio-Visual over Internet Protocol) signal, and sends them over your network. For example, you could encode and stream the signal from an endoscope, or from a camera in a lecture theater.

Read about the Encoder-100 on page 23.

- To play media directly from a USB drive, or copy media from a USB drive to internal storage, you need to connect a USB drive to your Streaming media and 4K playback input module.

> For 4K media, use a good quality, high-speed 3.0 USB drive.

- To play media saved in the internal storage of the Streaming media and 4K playback input module, you don't need to connect anything.
- To play any kind of media you need to set up a video wall with a window pointing to your Streaming media and 4K playback input module.

Read about setting up a basic video wall on page 44.

Adding and editing media streams

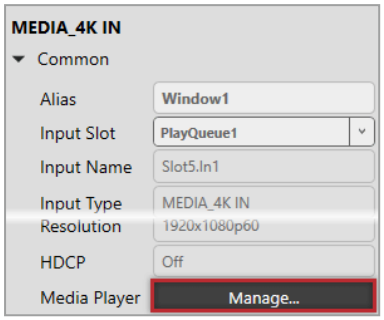
You can manually add media streams from your network or from the internet. You can configure and add streams from an Encoder-100.

Learn how to configure your Encoder-100 on page 30.

To manually add a stream

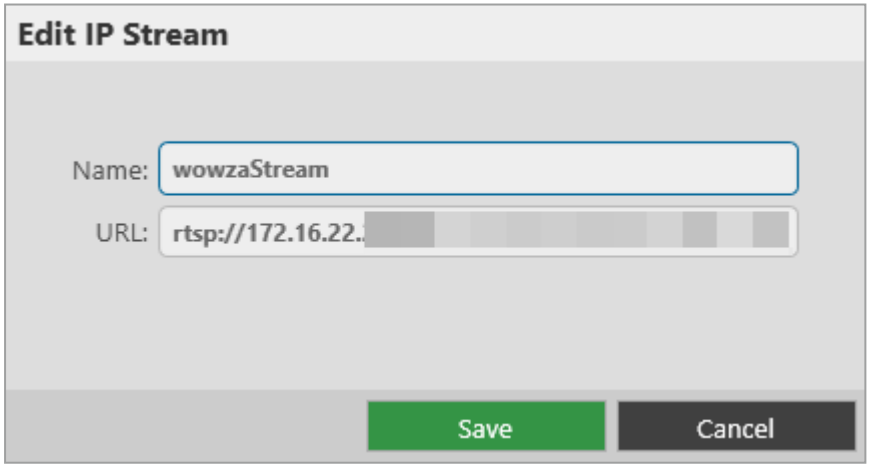
If you know the URL of the stream and the stream is not hosted by an Encoder-100, use this method.

1. In CORIOgrapher™, double-click the window you wish to play streaming media, and select (Media Player) Manage.



2. Select IP Streams.

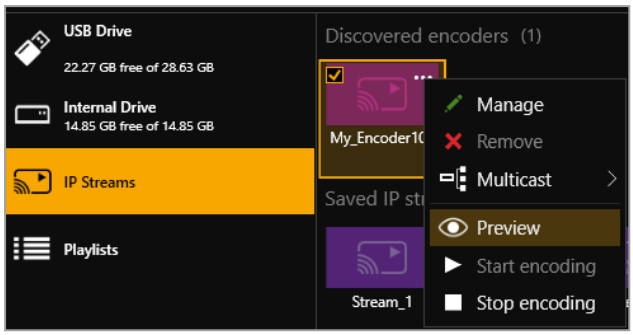
3. Select Add IP Stream.
4. Enter a descriptive name and the URL of the media stream, and then select Add IP Stream.
5. To edit the details of a media stream, select the stream and then select ••• > Edit.
6. Edit the name or URL of the media stream.



Previewing the stream from your Encoder-100

If you have an Encoder-100 that is streaming, you can preview the stream.

- Select the Encoder-100, and then select ••• > Preview.



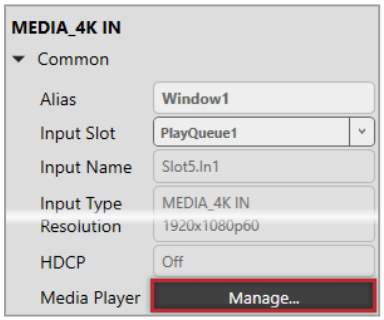
Adding media items, streams, and playlists to your play queue

You can add video clips, still images, and media streams to a play queue, up to a total of 20 items. Media items can be on a USB drive, in internal storage, streamed from your network, or streamed from the internet.

You can also add a playlist to a play queue. When you add a playlist to a play queue, the playlist replaces all the items in the play queue.

You add all types of media, streams, and playlists the same way, when the play queue is playing, paused, or stopped.

1. In CORIOgrapher™, double-click the window you wish to play media or streams, and select (Media Player) Manage.



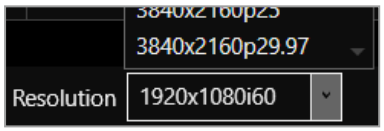
2. Select your media source.

3. Drag media items and streams, or a playlist, into the play queue.

Still image

	Video clip
	Playlist
	Saved stream
	Found encoder
	Found encoder, streaming

4. Choose a resolution for your play queue.



Read about choosing the right resolution on page 94.

Read more about playlists on page 85.

See a list of supported video formats on page 118.

Playing a multicast stream from an Encoder-100 on multiple CORIOmaster™ units

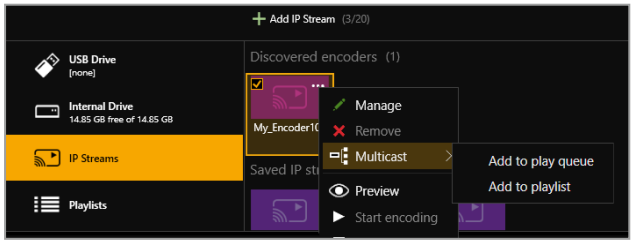
By default, your Encoder-100 supplies a single stream to a single CORIOmaster™. You can supply a multicast version of that stream to more than one CORIOmaster™.

Adding a multicast stream from an Encoder-100 to a play queue or playlist

- You don't need to configure your Encoder-100 to send a multicast stream, if your default address and TTL are correct for your network.

  For more help, contact your network administrator.
- To add a multicast stream to the play queue, the play queue must be stopped.
- To add a multicast stream to a playlist, first select a playlist.

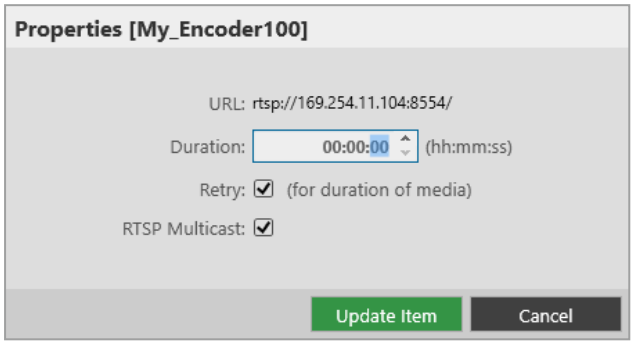
1. Select IP Streams.
2. Select the Encoder-100 you want to add.
3. Select ••• > Multicast > Add to play queue or Add to playlist.



Changing a single stream to a multicast stream

If you already added a single stream from an Encoder-100 to the play queue or a playlist, you can change the single stream to a multicast stream.

1. If the encoder is in a playlist, open the playlist.
2. Select the encoder, and select ••• > Edit.
3. Select RTSP Multicast.



For best results

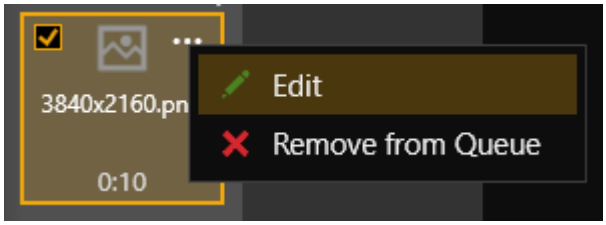
If you send a multicast stream on a large network, tvONE™ recommends using equipment with IPv4 multicast addressing, and/or IGMP v2 support. For more information, contact your network administrator.

Changing the duration of media items

By default, still images play for 10 seconds, video clips play for the length of the clip, and streams play indefinitely, until the stream ends.

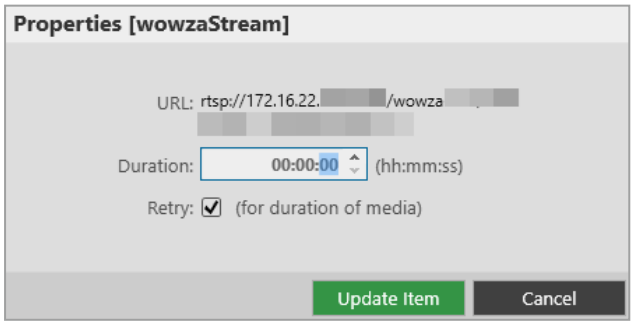
You can choose how long to play each media stream, video clip, or still image in the play queue.

1. In the play queue, select the media item.
2. Select ••• > Edit.



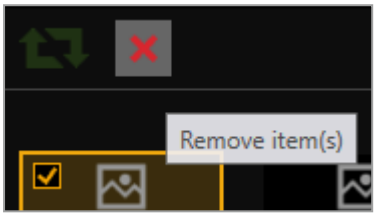
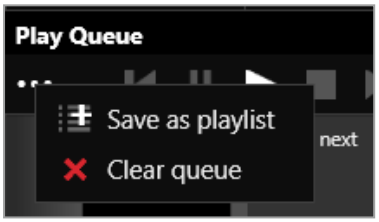
3. Edit the duration of the item and select Update Item.

   The maximum duration is 23 hours, 59 minutes, and 59 seconds.

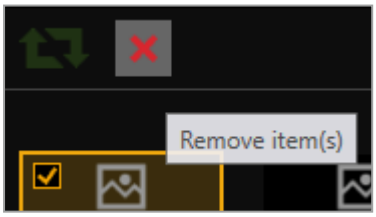
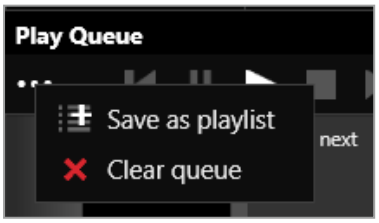
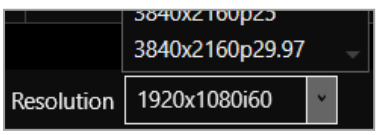


Using the playback controls

When the play queue is playing, you can:

	Stop playback
	Pause playback
	Skip to the next item
	Return to the previous item
	Remove an item from the play queue
	Clear the play queue

When the play queue is stopped, you can:

	Enable and disable looping
	Play the play queue
	Remove an item from the play queue
	Clear the play queue
	Change the resolution of the play queue

Managing the play queue

When the play queue is playing or stopped, you can:

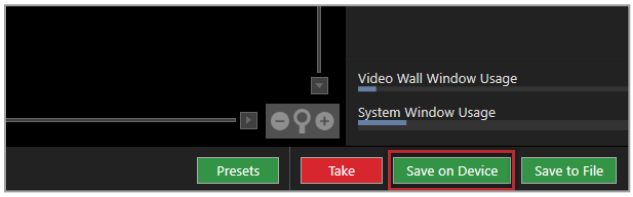
- Drag new media items or streams into the play queue, up to a total of 20 items.
- Drag items to re-order the play queue.
- Change the duration of a media item in the play queue.
- Remove any item from the play queue.
- Clear the entire play queue.
- Choose to play the play queue when your CORIOmaster™ starts up.
- Drag a playlist into the play queue.

  Dragging a playlist into the play queue replaces the existing play queue.

Saving the play queue

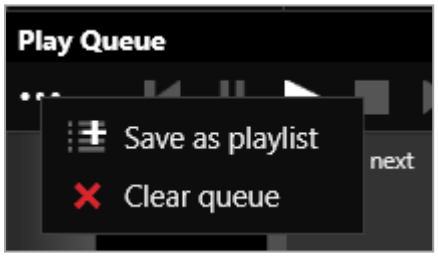
You can save your play queue so that it is available the next time you start your CORIOmaster™.

- Build your play queue and select Save on Device.



You can save your play queue as a playlist.

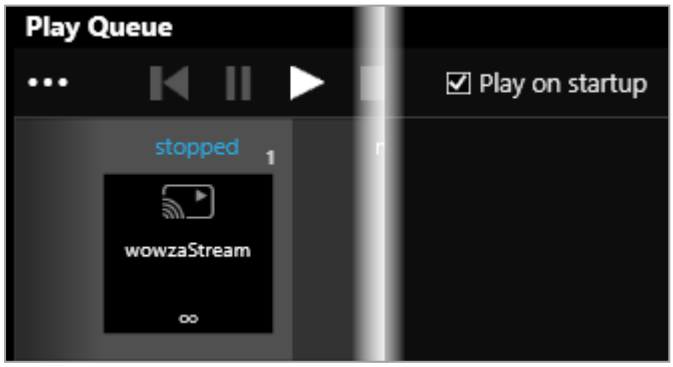
- Build your play queue and select ••• > Save as playlist.



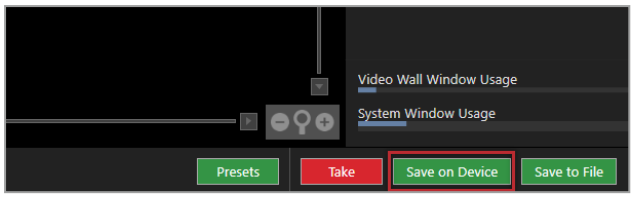
Playing the play queue automatically

You can choose to play the play queue automatically when you start your CORIOmaster™.

1. Build your play queue and select Play on startup.



2. Select Save on Device.



Saving media to internal storage

You can save media items from your USB drive to the internal drive.

Read more about the internal drive on page 91.

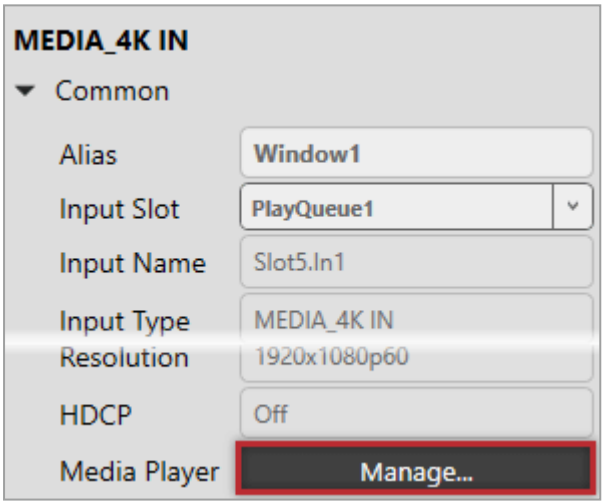
Creating and managing playlists

If you have a Streaming media and 4K playback input module, you can save media items and video streams to playlists. Your CORIOmaster™ can store up to 20 playlists.

In this article

About playlists 85
Creating a new playlist 86
Saving the play queue to a playlist 87
Managing and editing playlists 88
Deleting a playlist 90
Moving playlists between modules 90
Deleting all playlists 90
Duplicating playlists 90

Create and manage your playlists in CORIOgrapher™. Double-click the window you wish to create a playlist for, and select (Media Player) Manage.



The media player is not available when you work offline.

About playlists

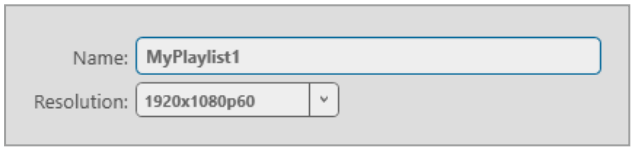
- Your CORIOmaster™ can store up to 20 playlists.
- Each playlist can include up to 20 items, including still images, video clips, and streams.
- Playlists are shared between the two channels of a Streaming media and 4K playback input module, but are not shared between Streaming media and 4K playback input modules.
- Playlists save the names and pathways of media items and streams. If you change the name, path name, or location of an item, the playlist cannot find it.
- You can create new playlists from scratch, or save your play queue as a playlist.
- Playlists are saved on your device
- You can choose to save or delete your playlists when you restore your CORIOmaster™ to factory default settings.

Creating a new playlist

1. Select Playlists > +.

2. Enter a name and choose a resolution for your playlist.

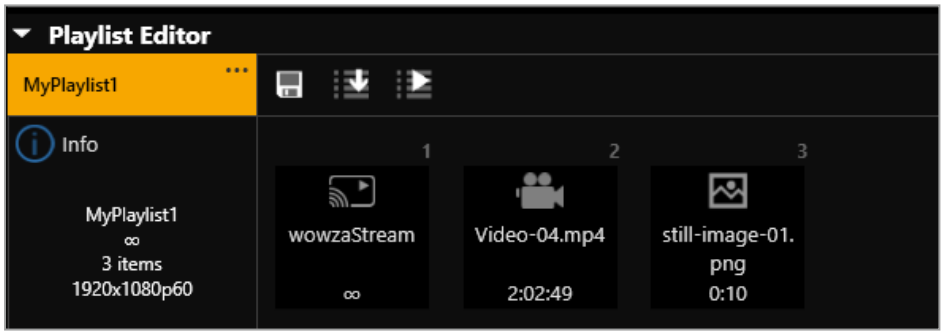
   Names can be up to 64 characters long, or fewer, depending on your character set.



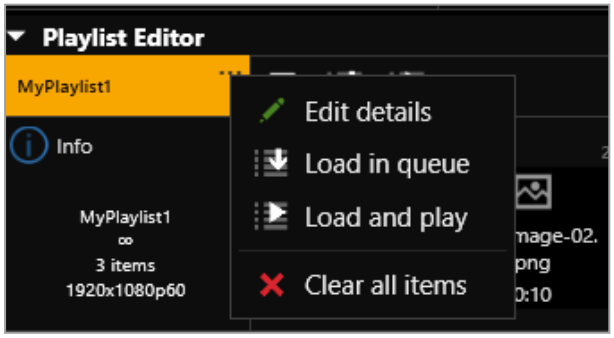
   Read about choosing the right resolution on page 94.

3. Select your new playlist.

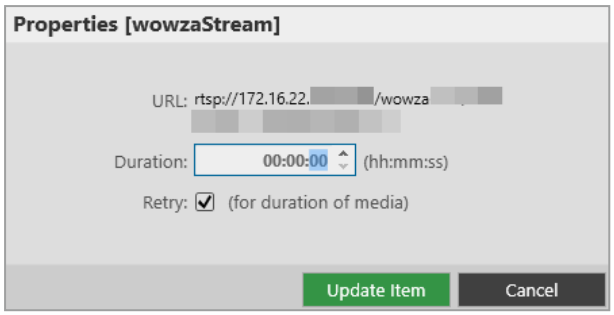
   The playlist opens in the playlist editor. If the playlist editor is collapsed, select ▶ to open it.



4. Drag up to 20 media items and streams from the media browser into the playlist editor.
5. Make any changes to your playlist.
   - To reorder the playlist, drag and drop items and streams.
   - To remove something from the playlist, select the item or stream and select ••• > Remove from playlist.
   - To remove all items from the playlist, select ••• > Clear all items.



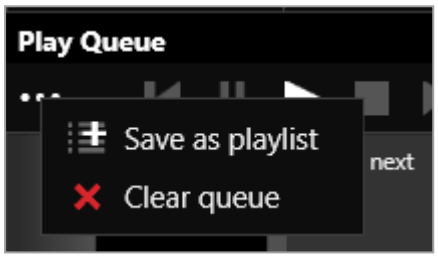
- To change the duration of an item in the playlist, select the item, and then select ••• > Edit.



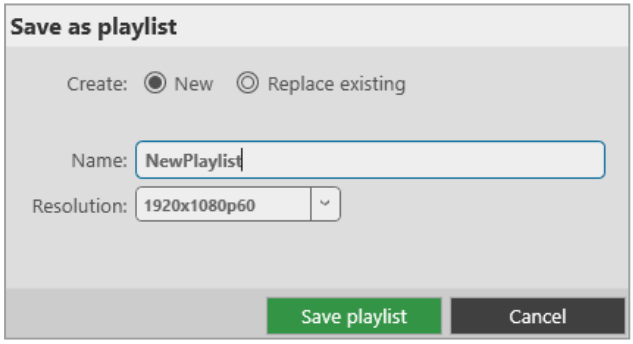
6. To save your playlist permanently, select 🖫.

Saving the play queue to a playlist

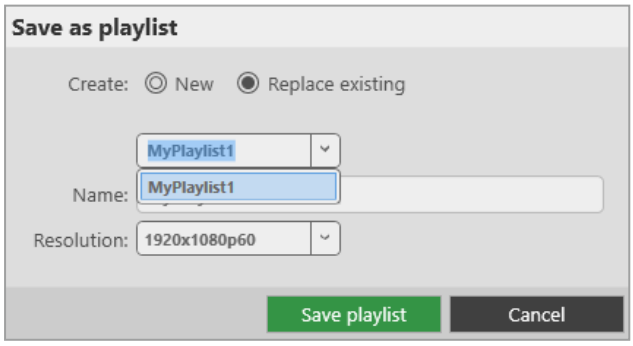
1. From the play queue, select ••• > Save as playlist.



2. Choose to create a new playlist, or to replace an existing playlist.
3. If you create a new playlist, enter a name and choose a resolution for your playlist.



4. If you replace an existing playlist, select a playlist to replace from the list. You can enter a new name and choose a new resolution for the playlist if you want to.



Names can be up to 50 characters long.

Read about choosing the right resolution on page 94.

Managing and editing playlists

You can edit playlists, clear all the items from a playlist, and open a playlist to edit the items. You can load a playlist to the play queue, and play a playlist.

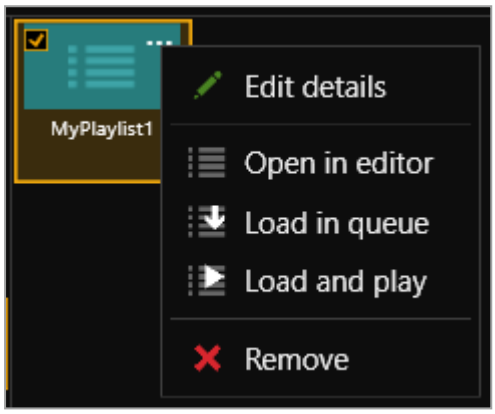
You can also manage the names and locations of your playlists in Settings > Playlists.

Read more about configuring playlist settings on page 61.

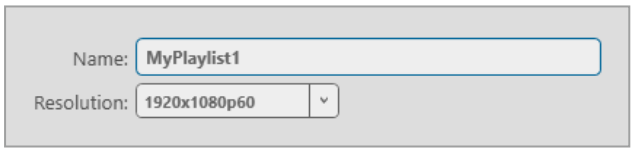
Editing a playlist

You can change the name and resolution of a playlist.

1. Select Playlists and select a playlist.
2. Select ••• > Edit.

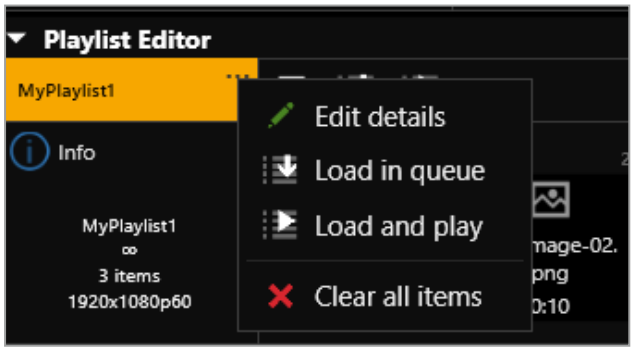


3. Enter a new name or choose a new resolution.



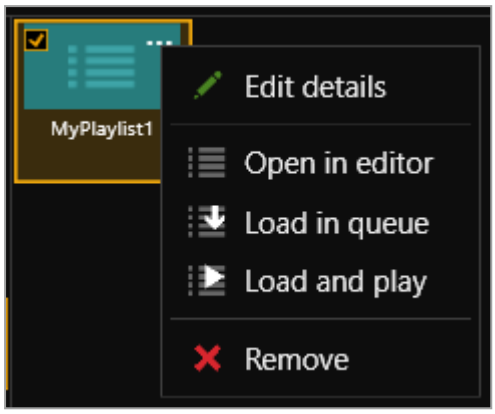
Clearing all the items from a playlist

- From the playlist editor, select ••• > Clear all items.



Opening a playlist to edit the items

1. Select Playlists and select a playlist.
2. Select ••• > Open in editor.



Read about the changes you can make to a playlist in Creating a new playlist above.

Loading a playlist to the play queue

When you load a playlist, any items in the play queue are replaced, and playback stops.

You can:

- Drag a playlist into the play queue
- Select a playlist and select ••• > Load in queue.
- From the playlist editor, select .

Playing a playlist

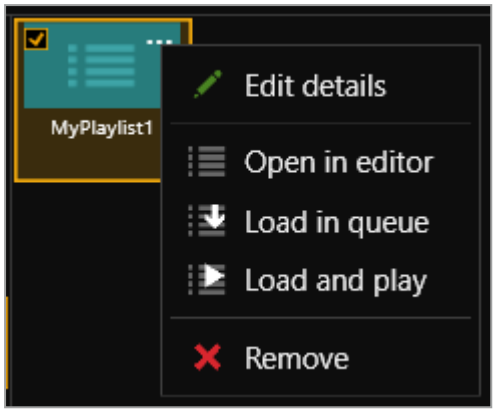
When you load and play a playlist, any items in the play queue are replaced.

You can:

- Drag a playlist into the play queue and select .
- Select a playlist and select ••• > Load and play.
- From the playlist editor, select .

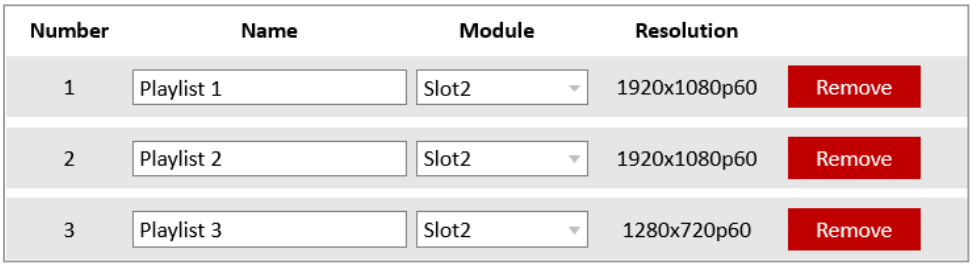
Deleting a playlist

- Select a playlist and select ••• > Remove.



Moving playlists between modules

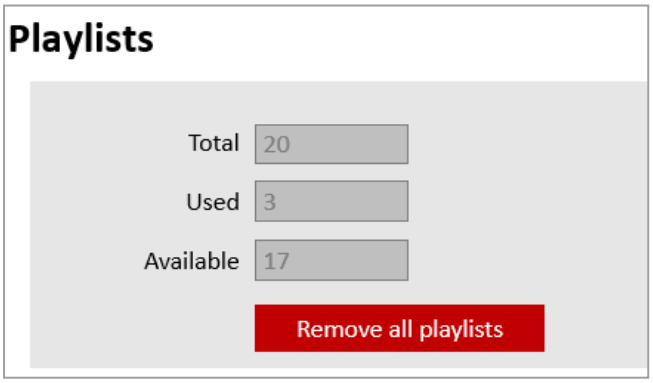
You can change the slot that a playlist is associated with in Settings > Playlists.



Read more about configuring playlist settings on page 60.

Deleting all playlists

You can delete all your playlists in Settings > Playlists.



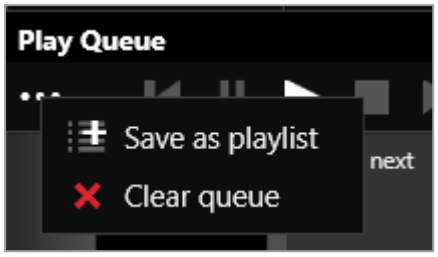
Read more about configuring playlist settings on page 60.

Duplicating playlists

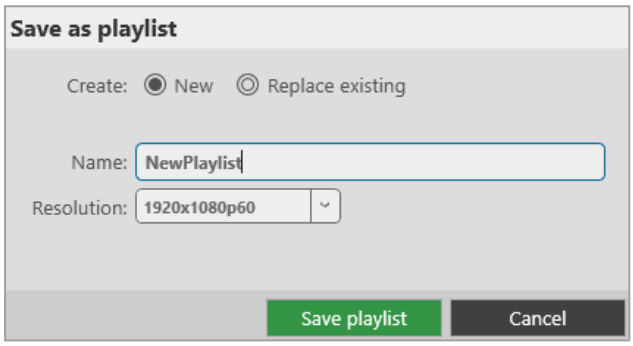
If you want several playlists to contain the same items, you can create a play queue and then save it under several different names.

For example, you might want all your playlists to contain a particular stream, and your company logo.

1. Drag items into the play queue.
2. From the play queue, select ••• > Save as playlist.



3. Enter a name and choose a resolution for your playlist.



4.
5. Repeat steps **2** and **3**. Enter a unique name for the playlist each time.
6. Open each new playlist and add items in the playlist editor.

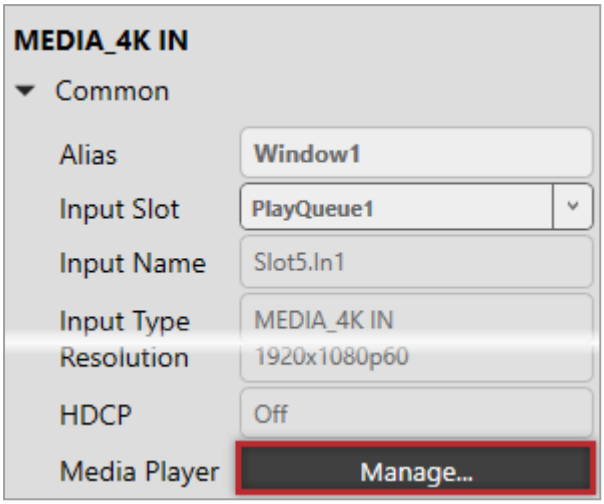
Using the internal drive

You can save media to the internal drive of your Streaming media and 4K playback input module. You can manage your saved media, and add media items to a playlist or play queue.

In this article

Replacing all items on the internal drive with all items on the USB drive 92
Removing all items from the internal drive 93
Current location 93
Copying a single item or folder to the internal drive 93
Managing media on the internal drive 93
Playing items from the internal drive 94

Manage your media and streams in CORIOgrapher™. Double-click the window you wish to play media or streams, and select (Media Player) Manage.



The media player is not available when you work offline.

Streaming media and 4K playback input modules in CORIOmaster micro™ units only support embedded audio, for streams and media items with the following embedded audio formats:

- mp3
- aac

Replacing all items on the internal drive with all items on the USB drive

Use this option when you first set up your Streaming media and 4K playback input module to quickly copy all your media items from your USB drive to the internal drive.

You can replace all the items on your internal drive with the items on the USB drive. All items currently on the internal drive are deleted.

All items on your USB drive are copied exactly to the internal drive, including folders and folder structure, up to path names of 480 characters, or fewer, depending on the language you use.

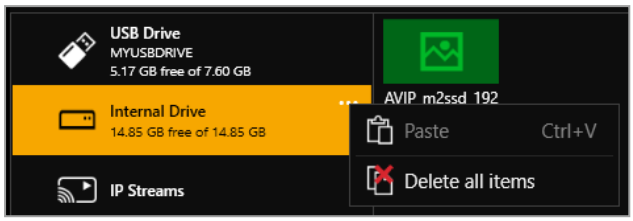
Items that aren't compatible with your Streaming media and 4K playback input module are copied to the internal drive, but not displayed. These items use memory, and you can't remove them manually. To remove hidden items, remove all items from the internal drive.
See a list of compatible file types on page 118.

- Select (USB Drive) ••• > Replace all items on the internal drive.

Removing all items from the internal drive

You can remove all visible and hidden items from the internal drive.

- Select Internal Drive > Clear all items.



Current location

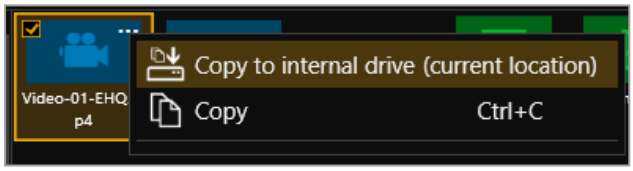
When you copy media items from your USB drive to the internal drive, the items are copied to the last location you visited on the internal drive.

For example, you create a folder on the internal drive called Videos. You open Videos and then select USB Drive. You select a media item and copy it to the internal drive. The media item is copied to Videos.

Copying a single item or folder to the internal drive

You can copy individual media items and folders from your USB drive to the internal drive. Items are copied to the last location you visited on the internal drive.

1. From USB Drive, select a media item or folder.
2. Select ••• > Copy to internal drive (current location).



You can also copy or cut and paste individual items and folders from your USB drive to the internal drive with Ctrl+C or Ctrl+X, and Ctrl+V.

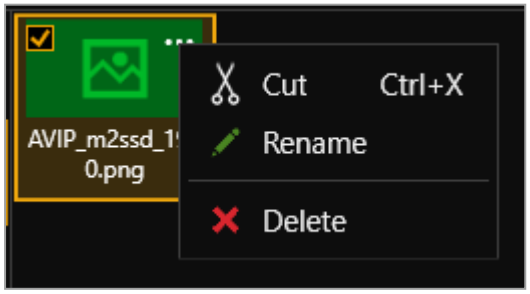
Managing media on the internal drive

From Internal Drive, you can:

- Copy or cut and paste individual items and folders.

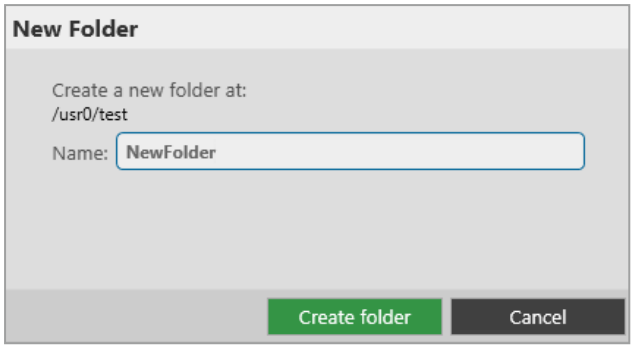
  Select a media item or folder, and then select ••• > Copy or Cut. Right-click in an empty space and select Paste.
- Copy or cut and paste individual items and folders with Ctrl+C or Ctrl+X, and Ctrl+V.
- Delete media items and folders.

  Select a media item or folder, and then select ••• > Delete.



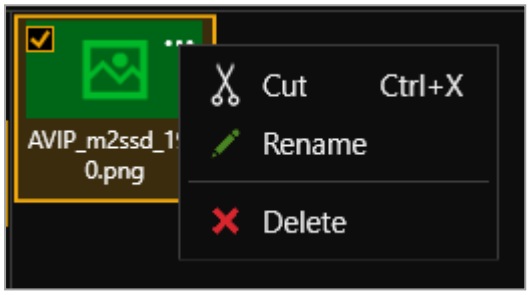
- Create a new folder.

  Right-click in an open space, and select New folder. Enter a name for your folder.



- Rename media items and folders.

  Select a media item or folder, and then select ••• > Rename.



Playing items from the internal drive

You play items from the internal drive in the same way you play all media items and streams. Drag items into the play queue, or into a playlist.

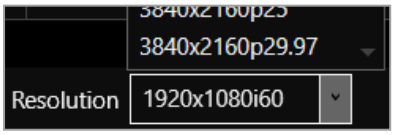
Read more about playing media and streams on page 76.

Read more about playlists on page 85.

Choosing the best resolution for your playlist or play queue

The best resolution for your play queue or playlist depends on the frame rate of your media items, and their size in pixels.

The resolution you choose determines the input resolution going into your CORIOmaster™. All media items in the play queue or playlist are automatically scaled to fit this resolution. If you find that the resolution you choose doesn't give you the results you want, you can change this resolution whenever you want.



The Streaming media and 4K playback input module supports two simultaneous channels playing media. The two channels can have different resolutions, and you can choose a custom value for channel one (slot *n* position 1). Channel two (slot *n* position 2) only supports 1920x1080p60.

Understanding the format of resolution

Resolution is shown in the form:

Width x **Height** (in pixels), **p** or **i**, **Frame Rate** (in Hz, or frames per second)

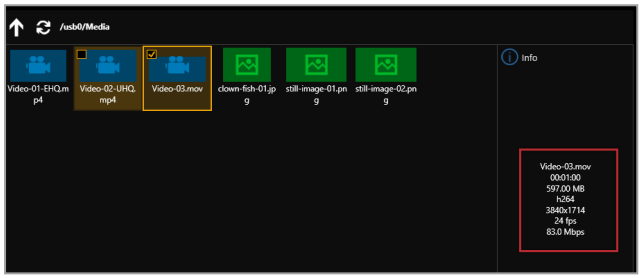
Where **p** means progressive scanning, and **i** means interlaced scanning.

For example, 1920x1080i60 is 1920 pixels wide, 1080 pixels high, interlaced, and has a frame rate of 60 Hz.

How do I know what resolution my media items are?

To find the resolution of a media stream, visit the source of the stream.

To find the resolution of a media item, select the item in the media browser. Information about that item is displayed on the right.



Frame rate

- For best results, add video clips and media streams with the same frame rate to a play queue. You can then choose a resolution with a frame rate that matches your media items.

	Video clip 1	Video clip 2	Video clip 3
✔	1920x1080p**60**	3840x2160p**60**	1600x1200p**60**

- If you have a mixture of frame rates, choose a resolution with a frame rate that is a factor of your frame rates. For example, you can add media items with frame rates of 30 Hz and 60 Hz, and then choose a resolution with a frame rate of 60 Hz. You can do this because you can divide 60 by 30.

  Note: don't round up frame rates. For example, don't treat 23.98 Hz as 24 Hz.

	Video clip 1	Video clip 2	Video clip 3	Best frame rate	Reason
✔	1920x1080p**60**	3840x2160p**30**	1600x1200p**60**	60	60 is a factor of both frame rates. 60/60 = 1 60/30 = 2
✔	3840x2160p**25**	1920x1080p**50**	1280x720p**50**	50	50 is a factor of both frame rates. 50/50 = 1 50/25 = 2
✘	1280x720p**23.98**	1280x720p**24**	1920x1080p**60**	-	This play queue doesn't work because 60 can't be divided by 24, and you can't round 23.98 up to 24.

Resolution

- Choose a resolution no larger than your largest media item. Upscaling at this stage takes up unnecessary bandwidth.
- Don't choose a resolution that is much smaller than your media items. Downscaling at this stage can cause your media to appear blocky and low in quality when it is upscaled later in the process.

- If you have a play queue with a wide range of resolutions, you could choose a resolution in the middle of the range. This means that your largest items are downscaled.
- Consider the types of media you want to play. If you have, for example, two large 4K video clips and two smaller still images, you might prefer to put up with poorer quality still images in return for best quality video. In this case, choose your resolution based on the size of the video clips.

Scanning

- Avoid mixing media items with progressive scanning and media items with interlaced scanning in the same play queue.

Using the buttons of your CORIOmaster micro™

You can use the buttons of your CORIOmaster micro™ to select presets and sources, and to lock your CORIOmaster micro™.

In this section

Changing between preset and source selection mode with your CORIOmaster micro™ 96

Locking your CORIOmaster micro™ 96

Changing between preset and source selection mode with your CORIOmaster micro™

To change between preset selection mode and source selection mode, press and hold buttons 1 and 5.

When the mode changes, the button color changes. In preset selection mode, the buttons are orange. In source selection mode, the buttons are green.

Locking your CORIOmaster micro™

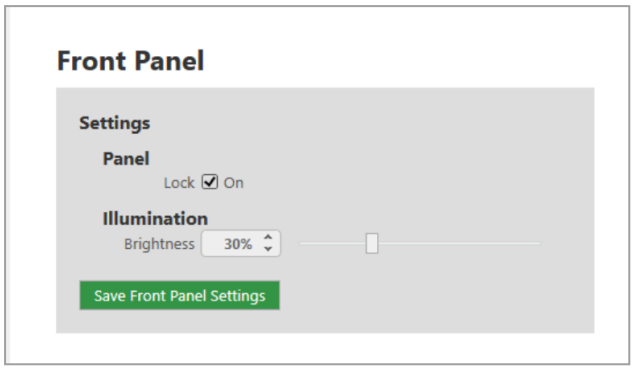
Locking your CORIOmaster micro™ with the front panel

To lock and unlock your CORIOmaster micro™, press and hold buttons 2 and 3.

When your CORIOmaster micro™ is locked, buttons 2 and 3 turn red.

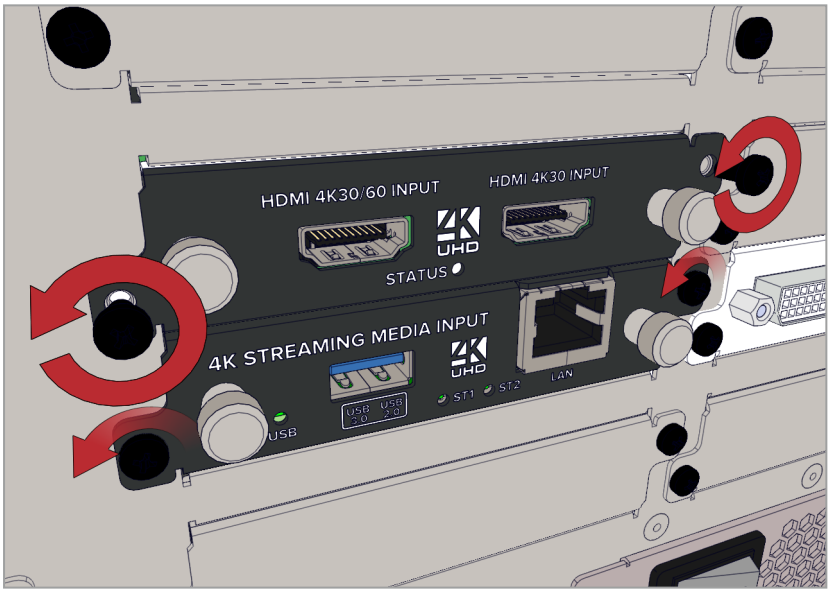
Locking your CORIOmaster micro™ in CORIOgrapher™

1. Select ⚙ > (Front Panel) Settings.
2. Select or clear Lock.



Replacing a module

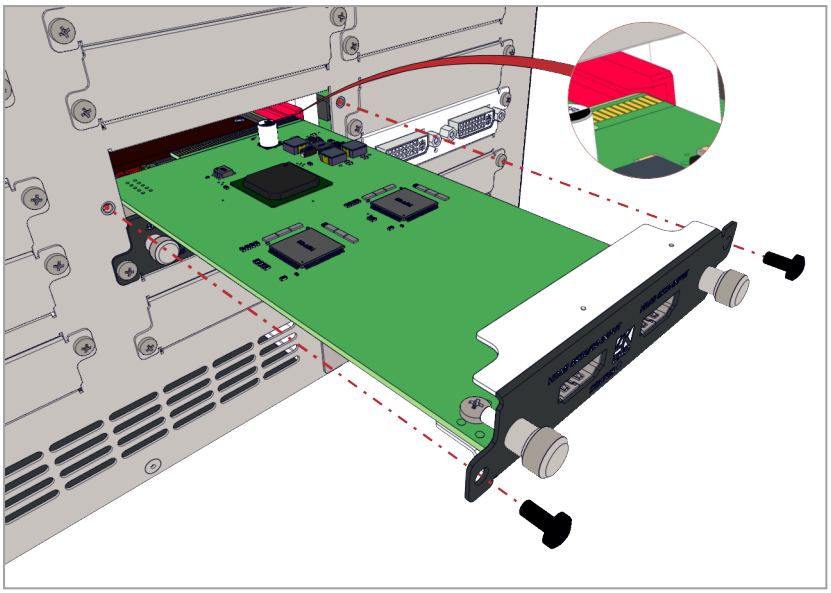
Removing a module from your CORIOmaster™



1. Unscrew the module that you want to replace.
2. Loosen the screws of the module above or below the module that you want to replace.

3. Grip the silver handles and pull the module forward, out of your CORIOmaster™.

Inserting a module into your CORIOmaster™



1. Insert the module into the guide rails of your CORIOmaster™.
2. Push the module firmly into the dock at the rear of your CORIOmaster™.
3. Screw the module in place.
4. Tighten the screws of the module above or below.

Troubleshooting and FAQs

This section contains frequently asked questions and advice on troubleshooting problems with your CORIOmaster™. If you can't find the help you need, contact your distributor, and if they can't help, contact tvONE™ support. Contact details are at the back of this guide.

In this section

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The picture keeps coming and going 103
My Streaming media and 4K playback input module keeps overheating 104
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How fast is my connection to the Streaming media and 4K playback input module? 110
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Checking and updating the CORIOmaster™ firmware

You must be connected to your CORIOmaster™ to check and update firmware.

You check the firmware of your CORIOmaster™ on the Settings window of the CORIOgrapher™ software. You update the firmware of your CORIOmaster™ on the Update Device window of the CORIOdiscover™ software.

> When you update the firmware, any unsaved configuration in CORIOgrapher™ is deleted. Make sure you save any configurations that you want to keep before you start the updating process. You can also save a backup file on your PC.
> Read about saving a backup file on page 51.

Before you start

To install the latest CORIOmaster™ firmware, you need CORIOdiscover™ V1.3 or above. V1.3 of CORIOdiscover™ is available from the CORIOmaster™ C3-540 page at tvone.com/firmware-updates.

Checking your firmware version and downloading new firmware

CORIOdiscover™ warns you if you try to install firmware that is older or the same as your existing firmware. If you don't want to check your existing firmware version, skip to step **2**.

1. In CORIOgrapher™, select ⚙ > System and look for your current firmware version.
2. Check for newer firmware at tvone.com/firmware-updates.

   Select your device from the list and compare the firmware version to your own.
   - If you have a CORIOmaster™, select CORIOmaster™ C3-540.
   - If you have a CORIOmaster mini™, select CORIOmaster mini™ C3-510.
   - If you have a CORIOmaster micro™, select CORIOmaster micro™ C3-503.
3. If your firmware is out of date, download the zipped DAT file.

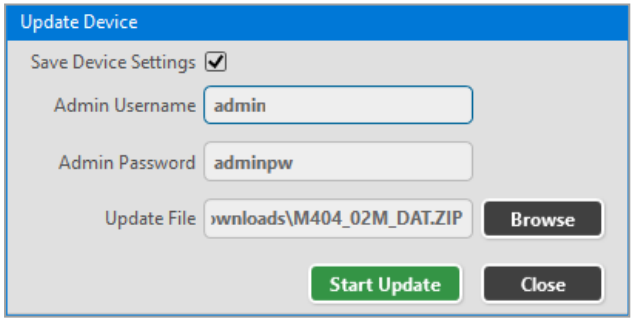
   You don't need to extract the DAT file.

Updating the firmware

1. In CORIOdiscover™, select 🔄.

2. Select your CORIOmaster™ from the list and select Update.
3. To save your CORIOmaster™ settings, select Save Device Settings.

   When you save your settings, your CORIOmaster™ keeps all your saved configurations and video walls.
4. Enter your administrator login details.



5. Browse to the zipped DAT file that you downloaded.
6. Select Start Update.

   When the update is finished, you can log in to your CORIOmaster™ again.

I can't see my CORIOmaster™ in the Discovered CORIOmasters list

What's the problem?

When I tried to find my CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™ in the Discovered CORIOmasters list on the Home window of CORIOgrapher™, I couldn't see it. I tried refreshing the list and it still wasn't there.

Why does this happen?

There might be a lot of CORIOmaster™ devices on your network and you're having trouble identifying yours.

Your CORIOmaster™ might be on a different network, there might be a problem with your network or firewall, or you might be in a high-security environment.

What to do

First try this

If you've got a long list of CORIOmaster™ devices with similar names, try these steps to find out which one is yours.

1. Write down the list or take a screenshot, and then turn off your CORIOmaster™.

   After a few seconds, your CORIOmaster™ should show as offline.
2. If nothing shows as offline, close and open CORIOgrapher™.
3. Compare the list to your screenshot.

   If a device is missing, it is most likely your device.
4. Turn on your CORIOmaster™, wait for ten seconds, and see if that device appears again in the list.

   You can now select your CORIOmaster™.

Then try this

If your CORIOmaster™ definitely isn't in the Discovered CORIOmasters list, first check your hardware. If your CORIOmaster™ still isn't in the list, connect directly to your device with an RS-232 serial connection, find the IP address of your CORIOmaster™, and use that IP address to log in.

> You can't connect to a CORIOmaster™ using Ethernet and serial connection at the same time. Make sure you log out when you've finished with the serial connection.

> API commands are not case-sensitive.

To check your hardware and firmware

1. Check that your CORIOmaster™ is turned on and the LED on the front panel is green.
2. Turn your CORIOmaster™ off and on again.
3. When the LED on the front panel is green, on the Home window of CORIOgrapher™, select Refresh.
4. Check the Ethernet or serial connectors that connect your CORIOmaster™ to your computer.
5. Check that you are using the latest firmware. You might need to update your firmware.

   Read about checking and updating your firmware

To find out the IP address of your CORIOmaster™

1. Connect the RS-232 port on your CORIOmaster™ to the RS-232 port on your computer with an RS-232 cable.
2. Open a suitable terminal application, such as puTTY or HyperTerminal.
3. Set your COM port settings to the following:

Speed (baud)	115200
Data bits	8
Stop bits	1
Parity	None
Flow control	None
4. To log in to the CORIOmaster™ as an administrator, enter `login(admin,adminpw)`.

Admin and adminpw are the default administrator login details. If you've changed them, use your own login details.

5. To check that DHCP is enabled, enter `System.Comms.Ethernet.DHCP` and press Return.

   If the Enabled property is set to On, then go to step **6**.

   If the Enabled property is set to Off, then go to step **7**.

6. Find the IP address of your CORIOmaster™ in the IP_Address property and make a note of it.

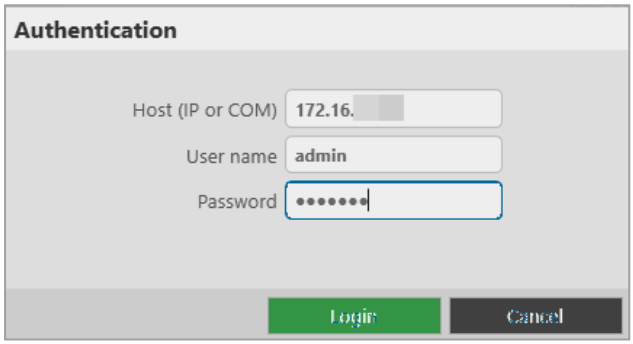
   Go to step **9**.

7. Enter `System.Comms.Ethernet` and press Return.
8. Find the IP address of your CORIOmaster™ in the IP_Address property and make a note of it.
9. Enter `logout()` and press Return.

To log in to your CORIOmaster™ with an IP address

Log in to your CORIOmaster™ on the Home window of CORIOgrapher™.

1. Select Connect to your device.
2. Enter the IP address that you got from the serial connection, and your administrator login details.



If that doesn't work

There might be a problem with your network or firewall. Talk to your network administrator. You might need to give your CORIOmaster™ a specific IP address.

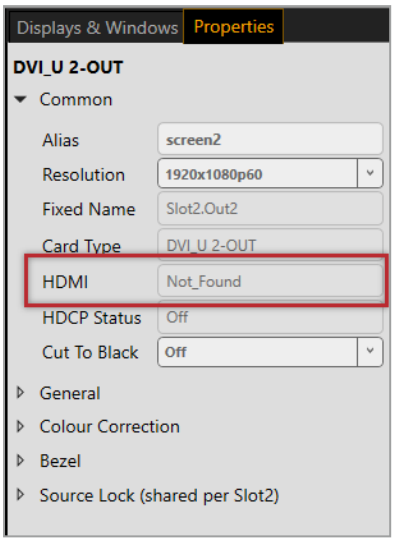
Read about changing the IP address of your CORIOmaster™ on page 57.

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 or tech.europe@tvone.com.

The picture keeps coming and going

What's the problem?

The display is continually dropping the signal and attempting to reconnect. The HDMI status property of the display switches between Found and Not_Found.



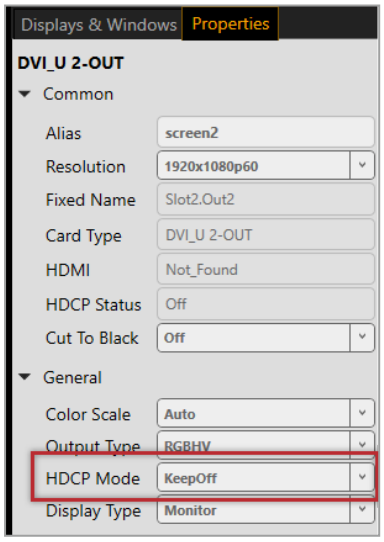
Why does this happen?

You probably have a display or output that doesn't support HDCP (High Definition Copy Protection).

What to do

First try this

1. On the Wall Editor, double-click the display.
2. Select General and set HDCP Mode to KeepOff.



If that doesn't work

If setting HDCP Mode to KeepOff doesn't work, try setting HDCP Mode to FollowSources.

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 or tech.europe@tvone.com.

My Streaming media and 4K playback input module keeps overheating

What's the problem?

I keep seeing an error message that tells me my Streaming media and 4K playback input module is too hot, or has overheated. The performance of the module is reduced. I've tried restarting my CORIOmaster™.

Why does this happen?

If the environment around the Streaming media and 4K playback input module is too warm, the module runs above specification, or the fans can't do their job properly, the module can overheat. When the module becomes hot and there is a risk of overheating, the performance of the module is reduced to lower the amount of data processed.

What to do

First try this

1. Switch off your CORIOmaster™.
2. Allow your CORIOmaster™ to cool down for at least 20 minutes.
3. Restart your CORIOmaster™.

Then try this

1. Place your hand near each fan outlet in turn and check that air is flowing out of your CORIOmaster™.
2. Check the environment around your CORIOmaster™.
   - Is there anything covering the fan outlets?
   - Is the space large enough?
   - Is there enough ventilation or cooling? For best results, make sure the air around your CORIOmaster™ is a maximum of 20 °C.
   - Is there an air gap all around your CORIOmaster™?
3. If there are any issues with the environment around your CORIOmaster™, switch off your CORIOmaster™ and allow it to cool down while you fix the issues.

If that doesn't work

Is your Streaming media and 4K playback input module playing media items or streams that are very high resolution and/or high bitrate? Try reducing the resolution or bitrate as much as you can without losing too much quality.

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 or tech.europe@tvone.com.

I can't hear any audio

What's the problem?

I have a CORIOmaster micro™. I am trying to play audio but I can't hear it.

Why does this happen?

- You might be listening to the wrong window.
- The source or output might be muted, or the audio input level turned down low.
- The audio from a media item might not be compatible with your Streaming media and 4K playback input module.
- There might be a loose connection or problem with your audio device.

What to do

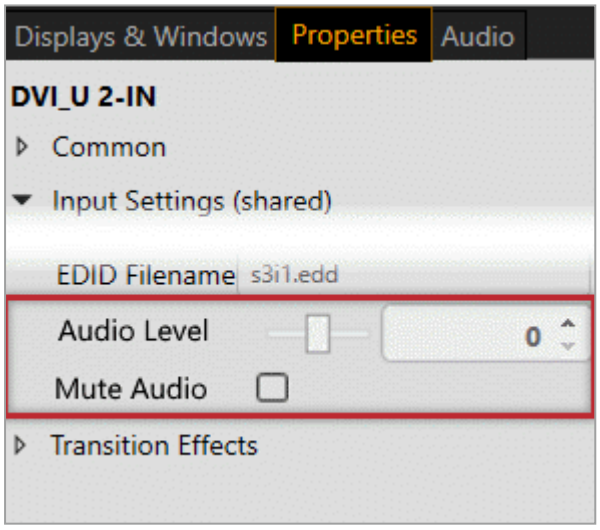
First try this

Check which window is active:

- On the front panel of your CORIOmaster micro™, press and hold the button that corresponds to the window you want to hear, until it flashes red.

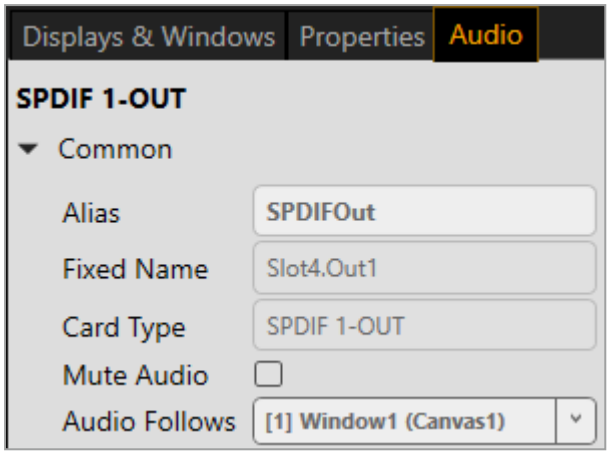
Check if the source is muted or the audio input level is turned down:

1. In CORIOgrapher™, select Wall Editor.
2. Double-click the window playing the source you want to hear.
3. In Properties, check the position of the Audio Level slider.
4. Make sure the Mute Audio option is cleared.



Check if the output is muted:

1. From the wall editor, select Audio.



2. Make sure the Mute Audio option is cleared.

Then try this

Check that the button you pressed is mapped to the correct window:

1. In CORIOgrapher™, select ⚙ > (Front Panel) Button Mapping.
2. In Window, check which window is mapped to the button you pressed.
3. If the window mapped to that button is not correct, you can choose a different window, or press a different button on the front panel.

Check the format of your media items:

- If you are playing audio from a Streaming media and 4K playback input module, check the format of your media items.

  The Streaming media and 4K playback input module only supports .mp3 and .aac formats.
- If your media items are not supported, consider converting them.

If that doesn't work

1. Restart your CORIOmaster micro™.
2. Check all hardware connections.
3. Check that your audio device is working. Try plugging in another source.
4. Make sure you are running the latest firmware and software.

   Request the latest version of the CORIOgrapher™ software from the Downloads tab at tvone.com/new-coriographer-videowall-design-software.

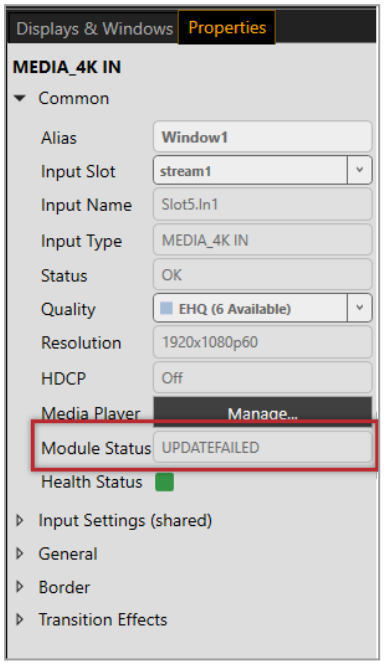
   Read about updating your firmware on page 99.

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 or tech.europe@tvone.com.

I can't update the firmware of my Streaming media and 4K playback input module

What's the problem?

1. In CORIOdiscover™, I have an error message that tells me one or more of my Streaming media and 4K playback input modules failed to update.
2. In CORIOgrapher™ I have an error message that tells me the firmware of my Streaming media and 4K playback input module failed to update. The module status is UPDATEFAILED.



Why does this happen?

- There was an error when you updated the firmware of your CORIOmaster™.
- The firmware download might be corrupted.
- There is a problem with a module.

What to do

First try this

1. Restart your CORIOmaster™.
2. In CORIOgrapher™, select ⚙ > Module Configuration.
3. For each Streaming media and 4K playback input module, select ••• > Configure and check the status.

Then try this

1. Download the firmware update again.

   Make sure you download the correct version for your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.
2. Repeat the firmware update.

Read more about updating your firmware on page 99.

If that doesn't work

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 or tech.europe@tvone.com.

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 35.
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 30.
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 78.

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 or tech.europe@tvone.com.

General troubleshooting checklist

If specific troubleshooting advice isn't helping, or your product has stopped working, go through the points below. If your product still doesn't work, you might need to return it for repair.

Read about returning your product on page 109.

1. Make sure your product is set up correctly, as shown in this guide.
2. Check that your cables and equipment are all connected firmly.
3. Check that your product is connected to an electrical outlet that is switched on.

   Can you see LED lights on the front of your product?
4. Test your sources by connecting them directly to a display.
5. Test your display by connecting it directly to a source.
6. Test each cable.
7. Try restoring your product to factory default settings.

   Note: during factory reset your custom settings are deleted.
8. Try updating your firmware.

   Note: during a firmware update your custom settings are deleted.

Returning a product for repair

You can request to return your product to tvONE™ for repair. When you contact tvONE™ support, have the following information ready.

- Product type
- Serial number of the faulty unit (this is on the underside of the unit)
- Full details of the issue
- Invoice number (if available)

Contact tvONE™ support for your area.

- Customers in North, Central, and South America (NCSA), email tech.usa@tvone.com.
- Customers in Europe, the Middle East, and Africa (EMEA), email tech.europe@tvone.com.
- Customers in Asia, email tech.asia@tvone.com.

EMEA and Asia

Customers in EMEA and Asia receive an RMA Request form from tvONE™ support. Complete the form and return it to tvONE™ support for your area.

All customers

tvONE™ support decides if your product needs to return for repair, and, if needed, provide a return authorization number.

Send your product to tvONE™ by insured carrier or registered mail. Write your return authorization number on the outside of the packaging, and on any documents you send with your product.

You must arrange and pay for shipping and insurance. Products in transit are your responsibility. tvONE™ does not accept responsibility for products lost in transit.

> Do not return a product for warranty repair without a return authorization number. tvONE™ will not repair your product.

What's the password for my CORIOmaster™?

The default administrator username and password for your CORIOmaster™ are `admin` and `adminpw`.

Can I use HDMI extenders with CORIOmaster™ output modules?

Yes. You can use HDMI extenders that draw up to 100 mA directly with DVI-I and DVI-U output modules. If you want to use an HDMI extender that draws more than 100 mA, use an external power supply.

See our range of HDMI extenders at tvone.com/signal-extension-systems.

How large is the internal storage on a Streaming media and 4K playback input module?

There are two models of Streaming media and 4K playback input module. One comes with 16 GB of internal storage, the other comes with 128 GB.

How do I find the MAC address of my Streaming media and 4K playback input module?

You can find the MAC address in Networking. Select ⚙ > Module Configuration, find the module, and select ••• > Configure.

How fast is my connection to the Streaming media and 4K playback input module?

You can find the connection speed in Networking. Select ⚙ > Module Configuration, find the module, and select ••• > Configure.

Which media formats can I add to a play queue?

You can add media streams, video clips, and still images to a play queue. For the full list of supported formats, see the specifications.

Read the specification sheet for the Streaming media and 4K playback input module on page 118.

Can I save my play queue?

If you add media items or streams to a play queue and select Save on Device from the wall editor, then when you restart your CORIOmaster™, the items and streams remain in the play queue.

You can save all your settings, including your play queue, to a backup file on your CORIOmaster™. If you want to load the same play queue at a later date, you can restore your settings from the backup file. **Note:** you will lose any work that you have done since creating the backup file.

From CORIOgrapher™ V2.4 onwards, you can save your play queue as a playlist.

More

In this section

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Encoder-100 specifications 119
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Contact us 123

What's new in CORIOgrapher™ V2.5

CORIOgrapher™ V2.5 supports:

- Streaming media with Encoder-100

  Read more on page 23.

- Internal storage on the Streaming media and 4K playback input module

  Read more on page 91.

Firmware version M404 does not support Genlock. If you need to use Genlock, do not upgrade to this firmware version.

For the full list of new features and things we've fixed, see the release notes.

Release notes are available at tvone.com/firmware-updates.

Product specifications

Specifications contain all the details about our products.

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CORIOmaster™ C3-540 specifications

Video processing power

Parrallel Processing Architecture	Yes	**Display Size Compensation**	Yes, different sizes in video walls
CORIO™3 Video Processing	Yes	**Output Rotation**	Yes for any outputs and windows
Real Time Video Quality	Yes	**Projector Edge Blending**	Yes
Up/Down/Cross Conversion	Yes	**HDCP Key Handling**	Yes
Number of Video walls	4		

Computer input

Digital DVI	Up to 28 via Universal DVI (HDMI™ and HDCP compliant)	**Scan Rate Detection**	Automatic
Analog	Up to 28 via Universal DVI	**Analog Signals**	PC to 1920x1080, HD to 108 p60
Analog Format	RGBHV, RGBS, RGsB, YPbPr	**DVI Signals**	PC to 1920x1200, HD to 1080p60
Analog Sync	TTL Level, 10 KΩ, Pos or Neg	**Max Horiz Scan Rate**	150 kHz
RGB Level Range	0.5-2.0 Vp-p		

Computer outputs

DVI-I Signals	Up to 28 via DVI-I (HDMI and HDCP compliant)	**Settings Memory**	Non-Volatile
Analog	Up to 28 via DVI-I	**Conversion Technology**	Proprietary – CORIO™3
Analog format	RGBHV, RGBS, RGsB, YPbPr	**Color**	RGB 24-bit 4:4:4, YPbPr 20-bit 4:2:2, SDI 20 bit 4:2:0
R-G-B Level	0.7 Vp-p	**Max. Sampling Rate**	162 MHz
DVI Signals	PC to 1920x1200, HD to 1080p60 w/EDID	**Firmware Memory**	Upgradeable via download
Analog Signals	PC to 1920x1080, HD to 1080p60	**Video Comb Filter**	Adaptive
Size and Position	User Adjustable	**Video Adjustments**	Contrast, Brightness, RGB Gamma

HD Video Resolutions supported (DVI, YPbPr, SDI)

720p (1280x720)	23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz	**1080p (1920x1080)**	23.98, 24, 25, 29.97, 30 Hz
1035i (1920x1035)	59.94, 60 Hz	**1080p (1920x1080)**	50, 59.94, 60 Hz
1080i (1920x1080)	50, 59.94, 60 Hz		

4K Video Input Resolutions supported (via HDMI)

3840x2160	4:4:4 23.98/24/25/29.97/30 Hz 8-bit	**3840x2160**	4:2:0 50/59.94/60 Hz 8-bit
4096x2160	4:2:0 50/59.94/60 Hz 8-bit		

4K Video Output Resolutions supported (via HDMI)

3840x2160	4:4:4 23.98/24/25/29.97/30 Hz 8-bit		

Video inputs

Television Standards	NTSC, PAL	**SD-SDI/HD-SDI**	Up to 56 via BNC
Composite Video	Up to 28 via DVI	**SD-SDI/HD-SDI/3G-SDI**	Up to 28 via BNC
YC (S-Video)	Up to 28 via DVI	**HDBaseT™**	Up to 28 via RJ45
YUV /YPbPr	Up to 28 via DVI	**4K**	Up to 28 via HDMI

Video outputs

YUV /YPbPr	Up to 28 via DVI-I	**HDBaseT**	Up to 28 via RJ45
SD-SDI/HD-SDI/3G-SDI	Up to 28 via BNC	**4K**	Up to 14 via HDMI

3G/HD/SD-SDI

SMPTE259M-C	270Mbps < 0.1UI jitter	**(HD-SDI Video)**	720p, 1035i, 1080i, 1080p
(SD-SDI Video)	525/625Line	**SMPTE424M**	2.97/2.967 Gbps < 0.3 UI jitter
SMPTE292M	1.485/1.4835 Gbps < 0.2 UI jitter	**(3G-SDI Video)**	1080p60/59.94

Control Methods

RS-232	via D9 Female Connector	**IP Interface**	RJ45 Connector

Dimensions

Size (H x W x D) mm	178 x 482 x 334	**Weight (Net), including redundant PSU, kg**	15
Size (H x W x D) inches	7.0 x 19.0 x 13.1	**Weight (Net), including redundant PSU, lbs**	33

Environmental

Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)	**Storage Temperature**	-10 °C to 70 °C (14 °F to 158 °F)
Operating Humidity	10% to 85%, non-condensing	**Storage Humidity**	10% to 85%, non-condensing
MTBF	Approximately 50,000 hours	**BTU**	1024 BTU/hr

Power

Internal Power Supply	110 to 240 V, auto-detecting	**Consumption**	300 W maximum (fully populated chassis)
Redundancy	Optional Internal PSU		

CORIOmaster mini™ C3-510 specifications

Video processing power

Parallel Processing Architecture	Yes	**Display Size Compensation**	Yes, different sizes in video walls
CORIO™3 Video Processing	Yes	**Output Rotation**	Yes for any outputs and windows
Real Time Video Quality	Yes	**Projector Edge Blending**	Yes
Up/Down/Cross Conversion	Yes	**HDCP Key Handling**	Yes
Number of Video walls	4		

Computer input

Digital DVI	Up to 10 via Universal DVI (HDMI™ and HDCP compliant)	**Scan Rate Detection**	Automatic
Analog	Up to 10 via Universal DVI	**Analog Signals**	PC to 1920x1080, HD to 1080p60
Analog Format	RGBHV, RGBS, RGsB, YPbPr	**DVI Signals**	PC to 1920x1200, HD to 1080p60
Analog Sync	TTL Level, 10 KΩ, Pos or Neg	**Max Horiz Scan Rate**	150 kHz
RGB Level Range	0.5-2.0 Vp-p		

Computer outputs

DVI-I Signals	Up to 10 via DVI-I (HDMI and HDCP compliant)	**Settings Memory**	Non-Volatile
Analog	Up to 10 via DVI-I	**Conversion Technology**	Proprietary – CORIO™3
Analog format	RGBHV, RGBS, RGsB, YPbPr	**Color**	RGB 24-bit 4:4:4, YPbPr 20-bit 4:2:2, SDI 20 bit 4:2:0
R-G-B Level	0.7 Vp-p	**Max. Sampling Rate**	162 MHz
DVI Signals	PC to 1920x1200, HD to 1080p60 w/EDID	**Firmware Memory**	Flash, upgradeable via download.
Analog Signals	PC to 1920x1080, HD to 1080p60	**Video Comb Filter**	Adaptive

Vertical refresh rate	Any to 250 Hz	**Video Adjustments**	Contrast, Brightness, RGB Gamma
Size and Position	User Adjustable		

HD Video Resolutions supported (HDMI, DVI, YPbPr, SDI, and HDBaseT™)

720p (1280x720)	23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz	**1080i (1920x1080)**	50, 59.94, 60 Hz
1035i (1920x1035)	59.94, 60 Hz	**1080p (1920x1080)**	23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz

4K Video Input Resolutions supported (via HDMI and HDBaseT)

3840x2160	4:4:4 23.98/24/25/29.97/30 Hz 8-bit	**3840x2160**	4:2:0 50/59.94/60 Hz 8-bit
4096x2160	4:2:0 50/59.94/60 Hz 8-bit		

4K Video Output Resolutions supported (via HDMI)

3840x2160 4:4:4	23.98/24/25/29.97/30 Hz 8-bit

Video inputs

Television Standards	NTSC, PAL	**SD-SDI/HD-SDI/3G-SDI**	Up to 8 via BNC
Composite Video	Up to 10 via DVI	**HDBaseT**	Up to 8 via RJ45
YC (S-Video)	Up to 10 via DVI	**4K 30**	Up to 8 via HDMI
YUV /YPbPr	Up to 10 via DVI	**4K 60**	Up to 4 via HDMI
SD-SDI/HD-SDI	Up to 16 via BNC		

Video outputs

YUV /YPbPr	Up to 10 via DVI-I	**HDBaseT**	Up to 10 via RJ45
SD-SDI/HD-SDI/3G-SDI	Up to 10 via BNC	**4K**	Up to 5 via HDMI

3G/HD/SD-SDI

SMPTE259M-C	270 Mbps < 0.1UI jitter	**(HD-SDI Video)**	720p, 1035i, 1080i, 1080p
(SD-SDI Video)	525/625Line	**SMPTE424M**	2.97/2.967 Gbps < 0.3 UI jitter
SMPTE292M	1.485/1.4835 Gbps < 0.2 UI jitter	**(3G-SDI Video)**	1080p 60/59.94

Control Methods

RS-232	D9 Female Connector	**IP Interface**	RJ45 Connector

Dimensions

Size (H x W x D) mm	45 x 482 x 336	**Weight (Net), including redundant PSU, Kg**	5
Size (H x W x D) inches	1.77 x 19.0 x 13.25	**Weight (Net), including redundant PSU, lbs**	11.03

Environmental

Operating Temperature	0-40 °C (32-104 °F)	**Storage Temperature**	-10-70 °C (14-158 °F)
Operating Humidity	10% to 85%, non-condensing	**Storage Humidity**	10% to 85%, non-condensing
MTBF	Approximately 50,000 hours	**BTU**	427 BTU/hr

Power

Internal Power Supply	110 to 240 V, auto-detecting	**Consumption**	125 W maximum (fully populated chassis)
Redundancy	not available		

CORIOmaster micro™ C3-503 specifications

Video processing power

Parallel Processing Architecture	Yes	**Display Size Compensation**	Yes, different sizes in video walls
CORIO™3 Video Processing	Yes	**Output Rotation**	Yes for any outputs and windows
Real Time Video Quality	Yes	**Projector Edge Blending**	Yes
Up/Down/Cross Conversion	Yes	**HDCP Key Handling**	Yes
Number of Video walls	2		

Audio

Output	S/PDIF	**Supported sample rates**	DVI and HDMI sources: 48 kHz Streams and media items in media player: 32 kHz, 44.1 kHz, 48 kHz

Computer input

Digital DVI	Up to 4 via Universal DVI (HDMI™ and HDCP compliant)	**Scan Rate Detection**	Automatic
Analog	Up to 4 via Universal DVI	**Analog Signals**	PC to 1920x1080, HD to 1080p60
Analog Format	RGBHV, RGBS, RGsB, YPbPr	**DVI Signals**	PC to 1920x1200, HD to 1080p60
Analog Sync	TTL Level, 10 KΩ, Pos or Neg	**Max Horiz Scan Rate**	150 kHz
RGB Level Range	0.5-2.0 Vp-p		

Computer outputs

DVI-I Signals	Up to 4 via DVI-I (HDMI and HDCP compliant)	**Settings Memory**	Non-Volatile
Analog	Up to 4 via DVI-I	**Conversion Technology**	Proprietary – CORIO™3
Analog format	RGBHV, RGBS, RGsB, YPbPr	**Color**	RGB 24-bit 4:4:4, YPbPr 20-bit 4:2:2, SDI 20 bit 4:2:2
R-G-B Level	0.7 Vp-p	**Max. Sampling Rate**	162 MHz
DVI Signals	PC to 1920x1200, HD to 1080p60 w/EDID	**Firmware Memory**	Flash, upgradeable via download
Analog Signals	PC to 1920x1080, HD to 1080p60	**Video Comb Filter**	Adaptive
Vertical refresh rate	Any to 250 Hz	**Video Adjustments**	Contrast, Brightness, RGB Gamma

HD Video Resolutions supported (HDMI, DVI, YPbPr, SDI, and HDBaseT™)

720p (1280x720)	23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz	**1080i (1920x1080)**	50, 59.94, 60 Hz
1035i (1920x1035)	59.94, 60 Hz	**1080p (1920x1080)**	23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz

4K Video Input Resolutions supported (via HDMI and HDBaseT)

3840x2160 4:4:4	23.98/24/25/29.97/30 Hz 8-bit	**3840x2160 4:2:0**	50/59.94/60 Hz 8-bit
4096x2160 4:2:0	50/59.94/60 Hz 8-bit		

4K Video Output Resolutions supported (via HDMI)

3840x2160 4:4:4	23.98/24/25/29.97/30 Hz 8-bit

Video inputs

Television Standards	NTSC, PAL	**SD-SDI/HD-SDI/3G-SDI**	Up to 4 via BNC
Composite Video	Up to 4 via DVI	**HDBaseT**	Up to 4 via RJ45
YC (S-Video)	Up to 4 via DVI	**4K 30**	Up to 4 via HDMI
YUV /YPbPr	Up to 4 via DVI	**4K 60**	Up to 2 via HDMI
SD-SDI/HD-SDI	Up to 8 via BNC		

Video outputs

YUV /YPbPr	Up to 4 via DVI-I	**HDBaseT**	Up to 4 via RJ45
SD-SDI/HD-SDI/3G-SDI	Up to 4 via BNC	**4K**	Up to 2 via HDMI

3G/HD/SD-SDI

SMPTE259M-C	270 Mbps < 0.1UI jitter	**(HD-SDI Video)**	720p, 1035i, 1080i, 1080p
(SD-SDI Video)	525/625Line	**SMPTE424M**	2.97/2.967 Gbps < 0.3 UI jitter
SMPTE292M	1.485/1.4835 Gbps < 0.2 UI jitter	**(3G-SDI Video)**	1080p 60/59.94

Control Methods

RS-232	D9 Female Connector	**IP Interface**	RJ45 Connector

Dimensions

Size (H x W x D) mm	44 x 217 x 244	**Weight (Net), including CPU, Kg**	1.3
Size (H x W x D) inches	1.77 x 8.54 x 9.61	**Weight (Net), including CPU, lbs**	2.87

Environmental

Operating Temperature	0-40 °C (32-104 °F)	**Storage Temperature**	-10-70 °C (14-158 °F)
Operating Humidity	10% to 85%, non-condensing	**Storage Humidity**	10% to 85%, non-condensing
MTBF	Approximately 50,000 hours	**BTU**	205 BTU/hr

Power

External Power Supply	110-240 V, auto-detecting	**Consumption**	60 W maximum (fully populated chassis)
Redundancy	not available		

Streaming media and 4K playback input module specifications

Streaming media and 4K playback input module

Modules available	CORIOmaster™: up to 5 CORIOmaster mini™: up to 2 CORIOmaster micro™: up to 2	**Color Depth**	4:2:0, 4:2:2
Interface	1x GbE Ethernet port per module	**Supported IP Resolutions**	Configurable to 1920x1080p @60 Hz
IP Video Decoding	H.264 (CBP, Main, High), H.265/HEVC1 (Main)	**Unicast Streams**	RTSP, RTMP, HTTP, MPEG-TS
IP Bit Rates	2x streams per module, up to 25 Mbs per stream	**Multicast Streams**	RTSP, MPEG-TS

Media/Images

Interfaces	1x USB 3.0, Internal Storage, Network per module	**Multimedia container formats**	.mp4, .mov, .mkv, .m4v, .ts, .mts, .m2ts, .mt2
Video Codecs	H.264 (CBP, Main, High), H.265/HEVC1 (Main)	**Playback Bit Rates**	Single stream to 100Mbs (per module), Dual Streams to 40Mbs (per module)

Audio

Audio formats	mp3, aac

File Playback Resolutions Supported

Up to 3480x2160 @30 Hz	1 per module	**Up to 1080p60 @60 Hz**	2 per module

Media Handling

External	1x USB 3.0 interface per module	**Internal**	High speed storage up 16 GB per module (Coming soon)
Supported devices	Flash file systems FAT, FAT32, ext3, ext4, NTFS	**Remote**	File transfer supported

Still image support

Up to 7680x4320	Rendered to 4K	**Supported file types**	JPEG, PNG, BMP

Encoder-100 specifications

Encoder

Video Input:	HDMI w/ L-PCM audio	**Audio Support:**	L-PCM audio via HDMI
Resolutions:	■ up to 1920x1080p60 ■ 1920x1200	**Audio Line-In:**	3.5 mm analog stereo audio
Video Output (loop out):	HDMI w/ L-PCM audio,	**Audio Line-Out (loop out):**	3.5 mm analog stereo audio
Preview mode:	w/ optional scaling; HDMI™ and VGA	**Network Connector:**	RJ45
Bit Rates:	100 Kbps to 20 Mbps	**Compression Standard:**	H.264/Mpeg4 Part 10 (AVC)

Dimensions

Size (H x W x D) mm	30 x 220 x 107	**Weight (Net), Kg**	0.75
Size (H x W x D) inches	1.2 x 8.7 x 4.2	**Weight (Net), lbs**	1.65

Environmental

Operating Temperature	0-45 °C (32-113 °F)	**Storage Temperature**	-40-55 °C (-40-131 °F)
Operating Humidity	20% to 80%, non-condensing	**Storage Humidity**	5% to 95%, non-condensing
MTBF	Approximately 1,118,000 hours at 40 °C		

Power

Power in	100-240 V AC	**Power connector**	15 W DIN4 locking power connector
Power out	5 V DC		

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11.6 *Authority to Bind.* You represent that you have validly entered into this Agreement and have the power and authority to do so.

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11.8 *Right to Update Terms.* Licensor may update the terms of the Agreement without prior notice to you in order to, among other things, reflect changes in laws, regulations, rules, technology, industry practices, patterns of system use, and availability of content.

11.9 *Independent Contractors.* Licensor is an independent contractor and you agree that no partnership, joint venture, or agency relationship exists between you and Licensor. Each party will be responsible for paying its own employees, including employment related taxes, and insurance.

11.10 *Third Parties.* This Agreement is personal to the parties. For the purposes of the Contracts (Rights of Third Parties) Act 1999, this Agreement is not intended to and does not give any person who is not a party to it any right to enforce any of its provisions.

Contact us

If you have any questions about this Agreement, or want to contact Licensor for any reason, please direct all correspondence to:

tvONE Limited Legal Department

621 Wilmer Avenue

Cincinnati

OH 45226

For customer support please contact:

tech.usa@tvone.com or tech.europe@tvone.com

Regulatory compliance for CORIOmaster™, CORIOmaster mini™, CORIOmaster micro™, Encoder-100, and all input and output modules

This product has been tested for compliance with appropriate FCC and CE rules and regulations. The power adapter and supply has been tested for compliance with appropriate UL, CUL, CE, PSE, GS, rules, regulations and/or guidelines. This product and its power adapter is RoHS compliant.

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Video Wall Worksheet

What is my display layout? In the space above, draw a picture showing what kind of wall you have in mind. Show both the displays you have in mind as well as the video windows that you would like to show.

What am I trying to accomplish with this video wall? _____

How many displays or outputs are needed? _____

How many monitors are needed? _____

How many projectors are needed? _____

How many LED walls are needed? _____

Is edge blending required? _____

What is the blending overlap size? _____

What are the sizes of the displays? _____

What are the bezel sizes for the monitors? _____

What are the native resolutions of the displays?

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How many source signals or inputs are required?

What are the source signal types? _____
_____
_____
_____
_____
_____
_____

What are the source resolutions? _____
_____
_____
_____
_____
_____
_____

What are the frame rates of the inputs?
_____
_____
_____

Will the signal feeds be available at all times that the video wall is in operation? _____
_____

Is there any switching or processing before the signal enters the video wall processor? _____

How many windows will be required for the video wall? Include all windows even windows that are not active at all times. _____
_____

What level of quality is required for each window? Not all windows can have the highest quality in most cases. _____
_____
_____
_____
_____
_____
_____

Are presets (video switching, source transitions, window movement) required for the video wall?
_____

What type of control system will operating the wall, if any? _____

In the spaces below, draw your preset destinations with window and transition attributes noted.

tvONE, 2791 Circleport Drive, Erlanger, KY 41018
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