



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

User Guide V2.21

Firmware version M404 and above

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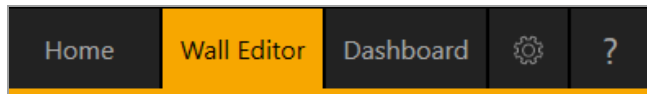
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# Welcome to tvONE™ Help

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.

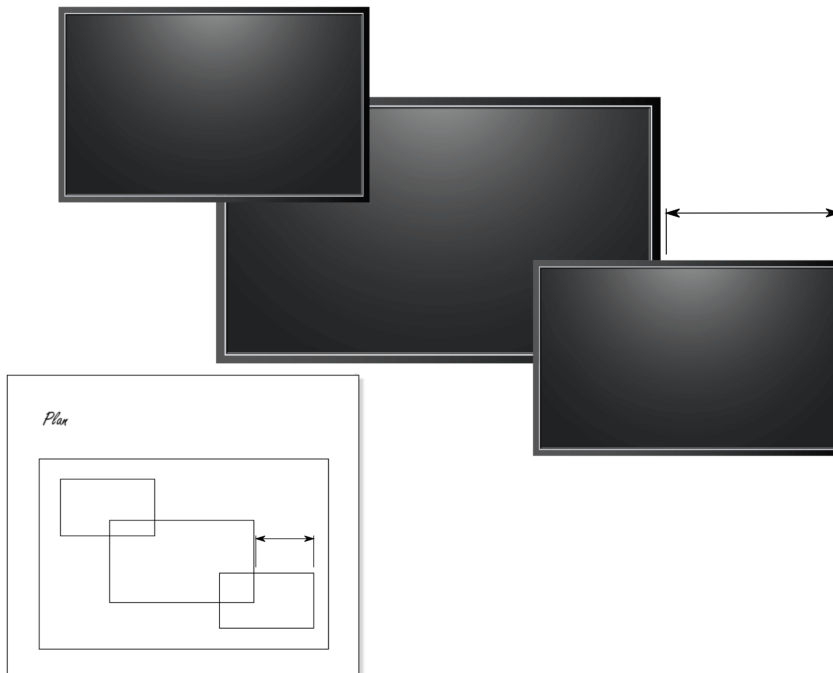
Read more about planning a video wall on page 38.

### Video tearing



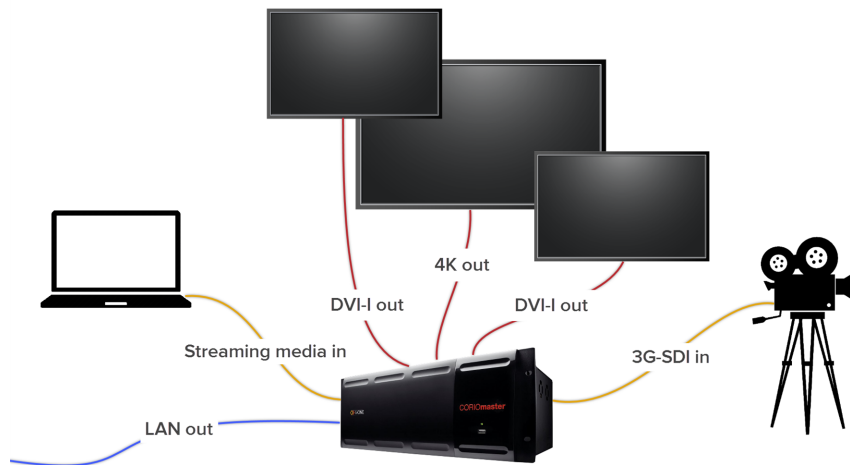
Using a mixture of display sizes and/or resolutions can cause video tearing. For best results, make sure all your displays use the same frame rate.

2. Install your hardware.
  - a. Position your displays.

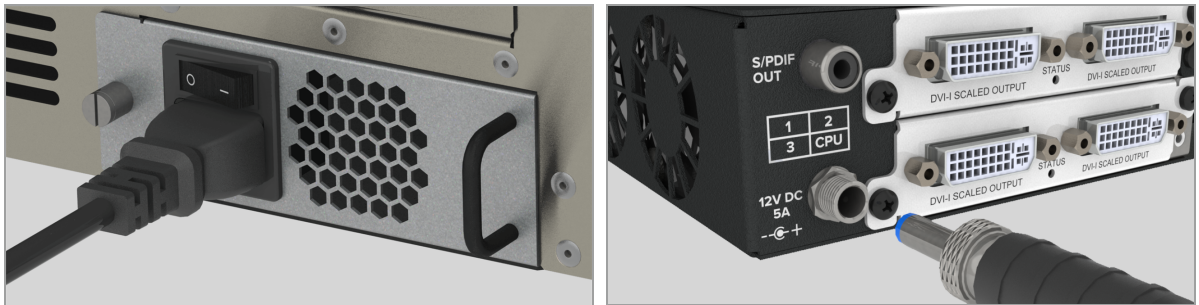


- b. Connect your displays and sources to your output and input modules. Connect the LAN port of the CPU module to your network.

**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 39.

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](http://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.

**Home**

**Start**

- Create an Offline Configuration
- Load Configuration from a file
- Connect to your device
- Read Configuration from the Device

**Recent Configurations**

CORIOg-sample-config  
CORIOmaster 19/09/2016 11:56:38

**Discovered CORIOmasters**

**My CORIOmaster mini**  
CORIOmaster mini  
172.x.x.x S/N 22180

**My CORIOmaster micro**  
CORIOmaster micro3  
172.x.x.x S/N 2218

172.x.x.x [ Offline ]  
CORIOmaster mini  
172.x.x.x S/N 2218

COM3  
COM1

Refresh

**Connect to Device**

Successfully logged into the device

You now have the following options:

- Read** Read Configuration from device
- Send** Send offline Configuration to device
- Connect** Just Connect to device (only Read system settings)

Send Read Connect

Read about what to do if you can't find your CORIOmaster™ in the list on page 113.

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

Device Configuration for C3-510 (CORIOmaster mini) Configuration Name: New Configuration

**CPU**

4 Input, Output  
NO CARD

**1** Input, Output  
NO CARD  
DVI\_I 2-OUT  
DVI\_U 2-IN  
DVI\_U 2-OUT  
HDBASET 2-IN  
HDBASET 2-OUT  
HDMI 4K 1-OUT  
HDMI\_4K 2-IN  
MEDIA\_4K IN  
SDI\_3G 2-IN  
SDI\_3G 2-OUT  
SDI\_HD 4-IN

**2** Input, Output  
NO CARD

**3** Input, Output  
NO CARD

6 Input  
DVI\_U 2-IN

reserved

Create Configuration Discard Configuration

! 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 43.

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

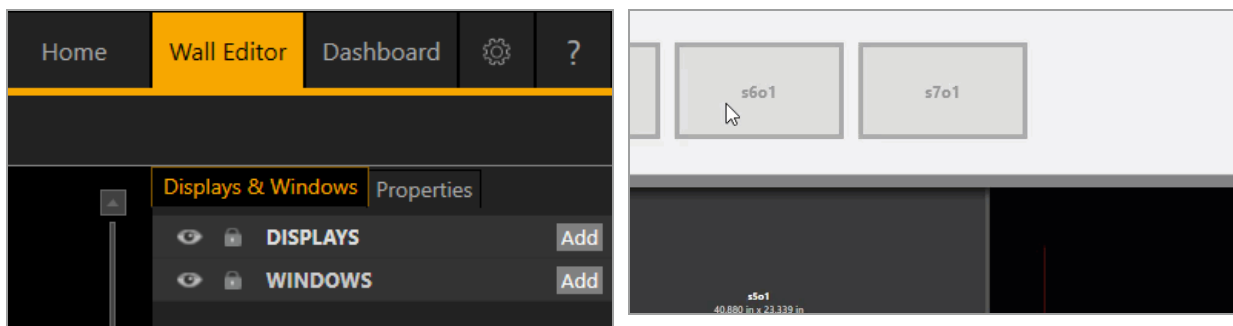
Select  > Slot Status. Give each port a name that describes the device connected to it.

| Input Slots |            |         |
|-------------|------------|---------|
| Slot        | Name       | Status  |
| Slot4.In1   | Camera1    | INVALID |
| Slot4.In2   | Camera2    | INVALID |
| Slot5.In1   | PlayQueue1 | OK      |
| Slot5.In2   | PlayQueue2 | OK      |

Read more about naming input and output ports on page 45.

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.

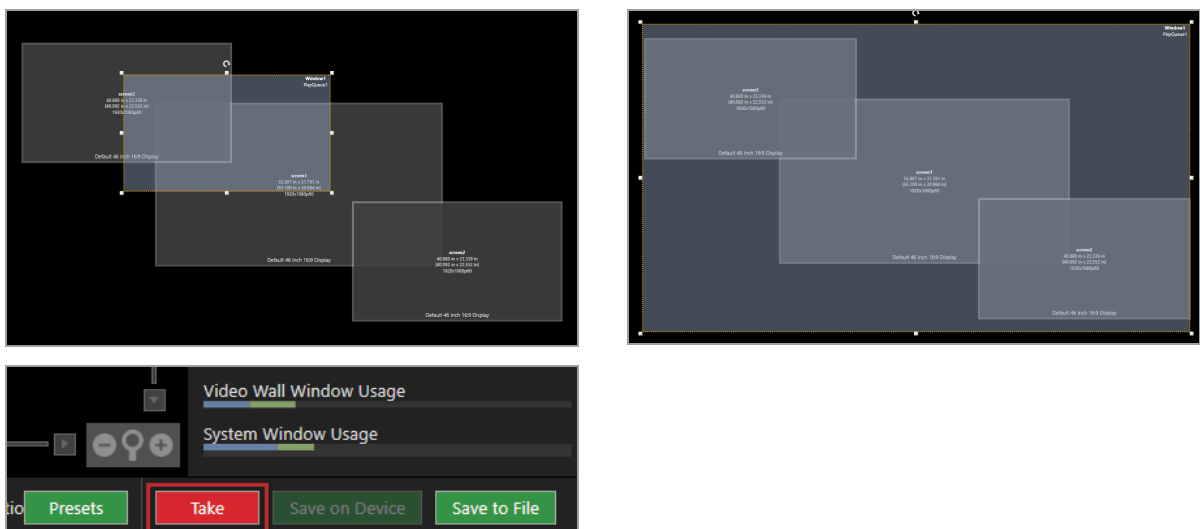


Create a rough arrangement at this stage. When you have tested your video wall you can make your arrangement more accurate.

Read more about creating a basic video wall on page 46.

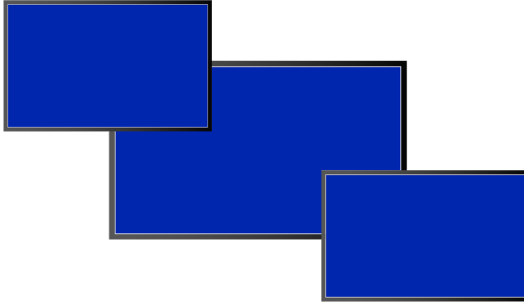
7. Add a window and scale it to cover the whole video wall.

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.

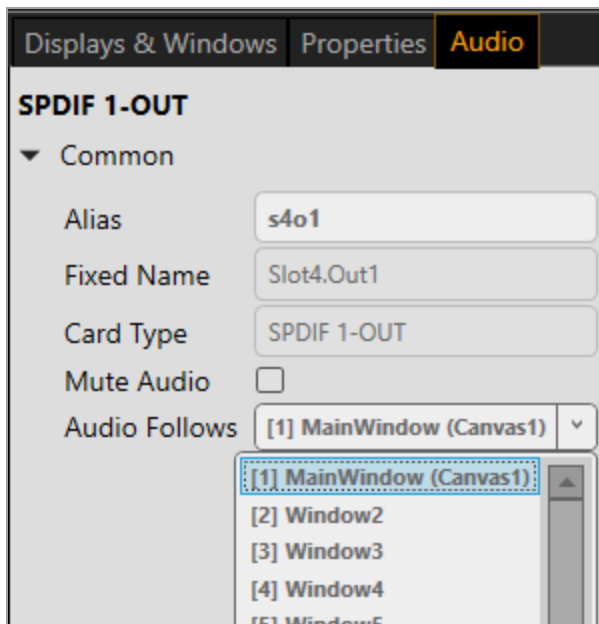
Possible causes:

- 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 119.

Read more about testing your video wall on page 47.

Read troubleshooting advice on page 111.

## 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.

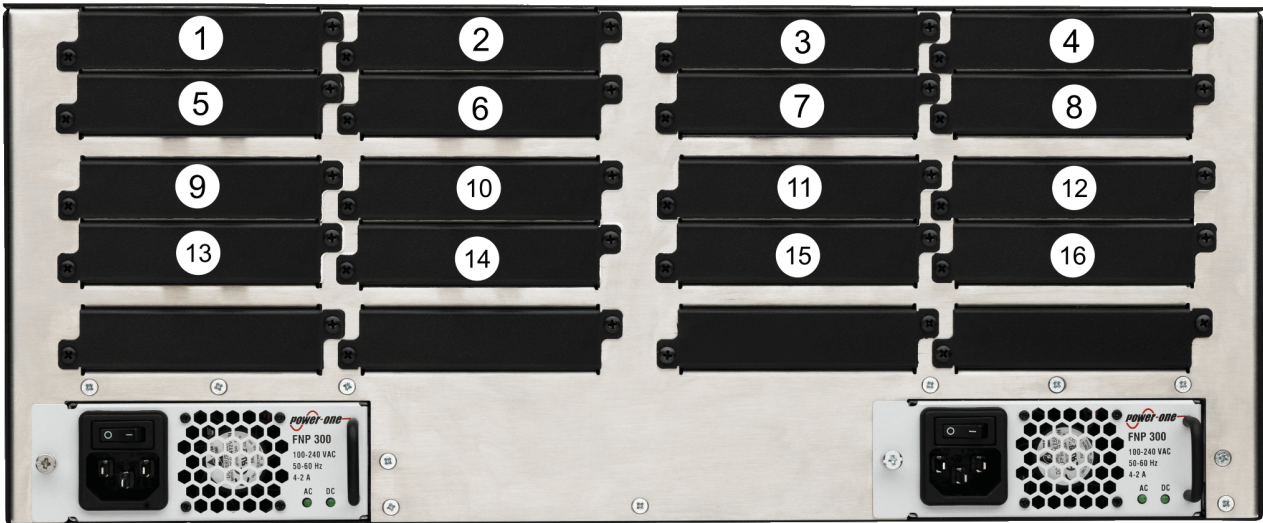
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## About your CORIOmaster™

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



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

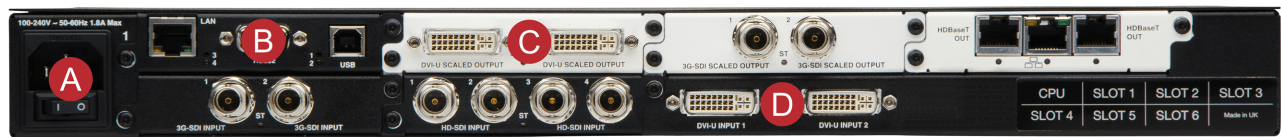


Your CORIOmaster mini™ has six slots that can contain input or output modules. You can have up to five input modules and up to five output modules. Of the five input modules, up to two can be Streaming media and 4K playback input modules.

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



- |          |                         |                                                                                                                                                           |
|----------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b> | Power supply unit (PSU) | Connect to electrical outlet                                                                                                                              |
| <b>B</b> | CPU module              | Connect to your network with Ethernet<br>Optional: connect to serial controller with RS-232<br>Optional: connect directly to a PC with Ethernet or RS-232 |
| <b>C</b> | Output module (white)   | Connect to displays                                                                                                                                       |
| <b>D</b> | Input module (black)    | Connect to sources<br><b>Note:</b> 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



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

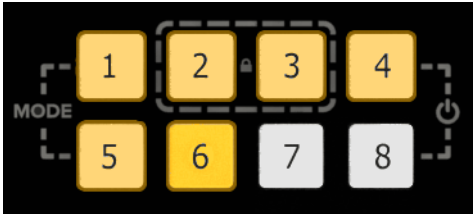
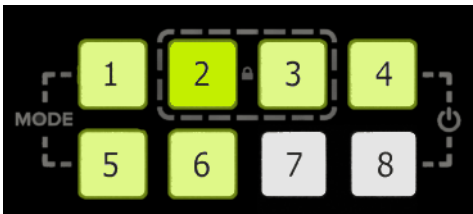
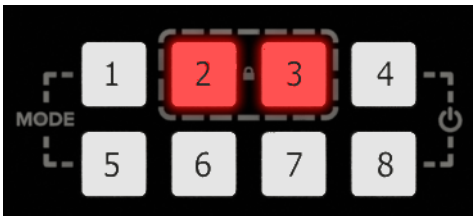
You can use the buttons of the front panel to load presets, choose which window to hear, change the source playing in a window, and lock the buttons.

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 56.

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<br>1 x HDMI up to 4096x2160 @60 Hz<br>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<br>For co-axial cables                                              |
| HD/SD-SDI CORIOmaster™ input module                                                                                              | CM-HDSDI-4IN         | 4 x HD/SD-SDI using BNC<br>For co-axial cables                                                 |
| HDBaseT™ CORIOmaster™ input module                                                                                               | CM-HDBT-2IN-1ETH     | 2 x HDBaseT<br>For CATx cables<br>Supports up to 2 x 4K @30Hz, or<br>1 x 4K @60 Hz             |
| Streaming media and 4K playback input module<br><br>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<br>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<br>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<br>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<br>USB 2.0 | Connect a USB drive to play media directly.<br>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.

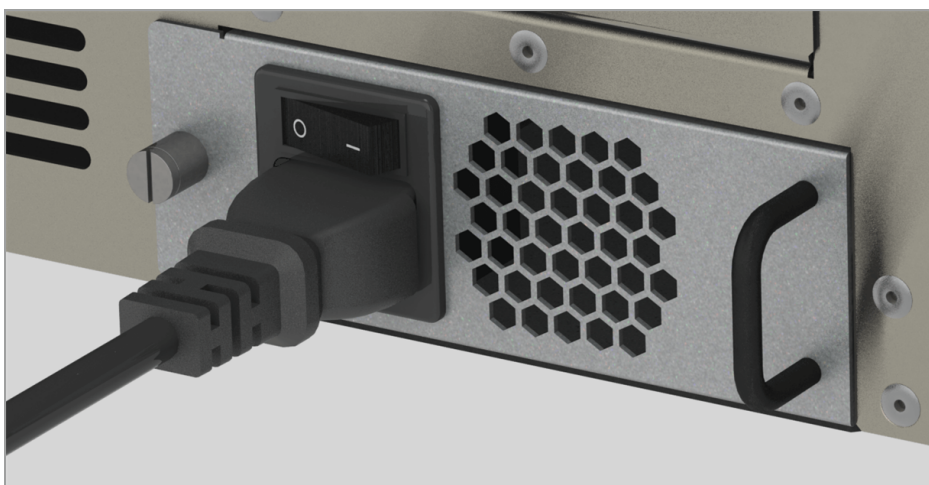
## Streaming media and 4K playback input module - quick start guide

### 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.

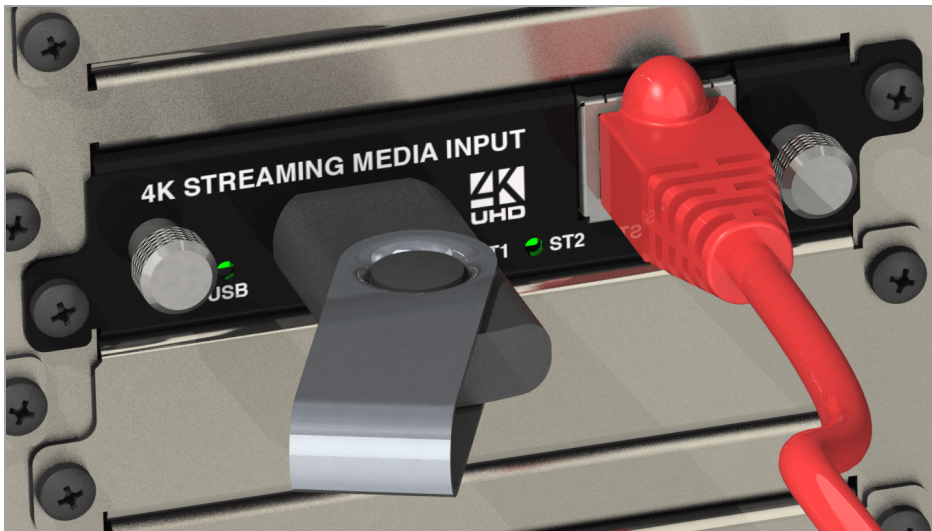
### Setting up the Streaming media and 4K playback input module

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



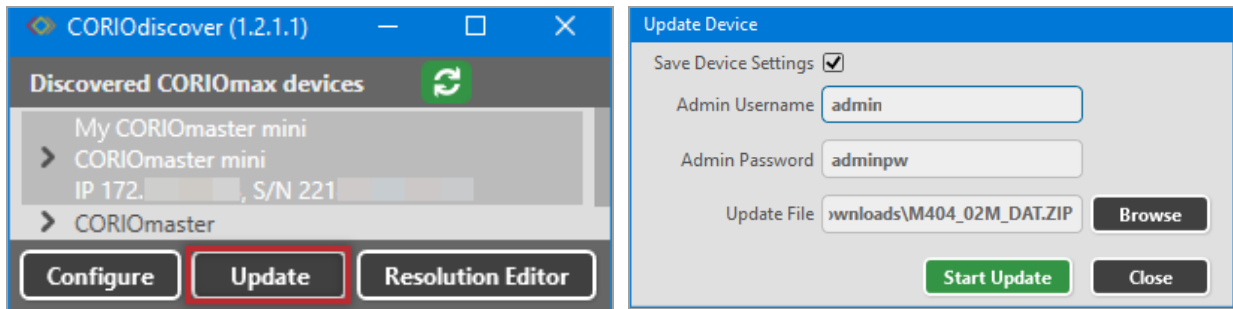
To stream media, connect an Ethernet cable to the Streaming media and 4K playback input module, or connect a USB drive to play media directly.

✓ 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](http://tvone.com/firmware-updates).
3. Use CORIODiscover™ to update your firmware.



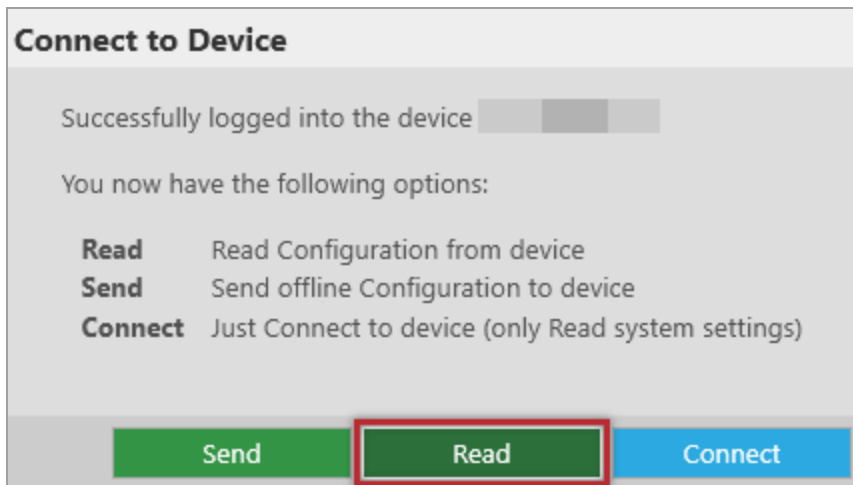
Read more about updating firmware on page 112.

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

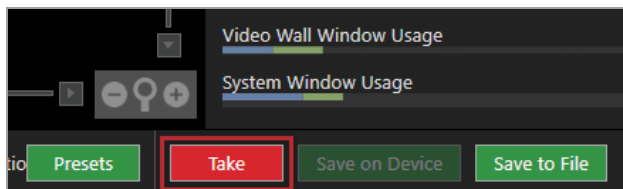
✓ The latest version of CORIOgrapher™ includes help files. If you need help with any of the following steps, select ? in CORIOgrapher™ and search, or ask a question.

## 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.

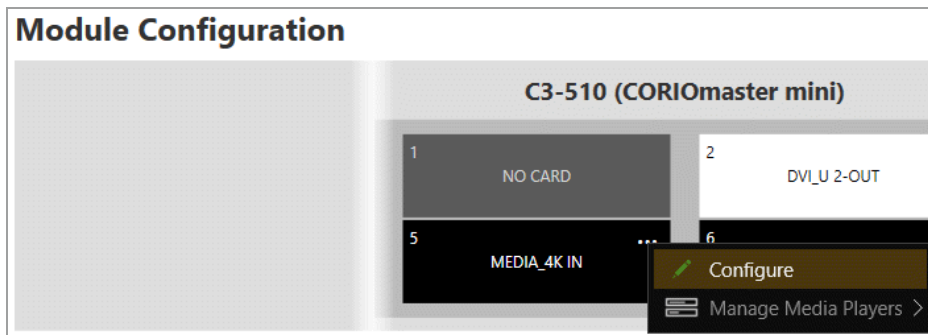


2. **OPTIONAL:** if you only want to play media from a USB drive, you don't need to do this step.

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.



## Networking

Configuration Dhcp ▼

IP Address 172 . 16 .  .

Subnet Mask 255 . 255 .  .

Default Gateway 172 . 16 .  .

DNS (Preferred) 172 . 16 .  .

DNS (Alternative) 10 . 1 .  .

MAC Address 00:13:95:20

Link Speed 1 Gbps

Save and close
Cancel

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.

**MEDIA\_4K IN**

▼ Common

Alias Window1

Input Slot PlayQueue1 ▼

Input Name Slot5.In1

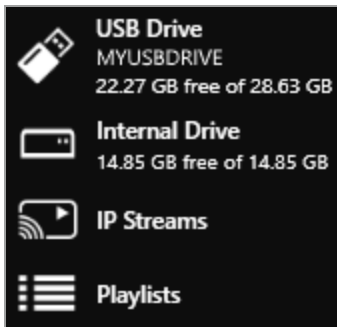
Input Type MEDIA\_4K IN

Resolution 1920x1080p60

HDCP Off

Media Player Manage...

2. Select your media source.



Your media items appear as icons.



Still image



Saved stream



Video clip



Found encoder

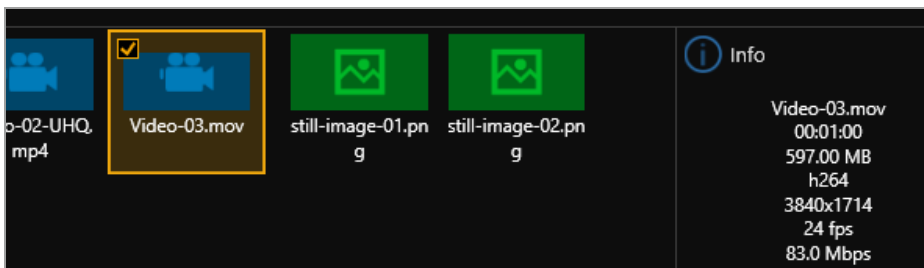


Playlist



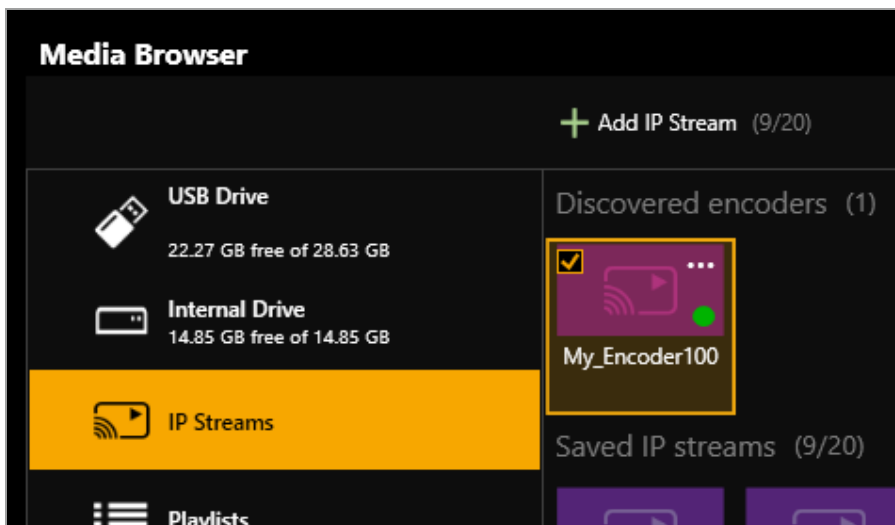
Found encoder, streaming

Information about the media item appears on the right.

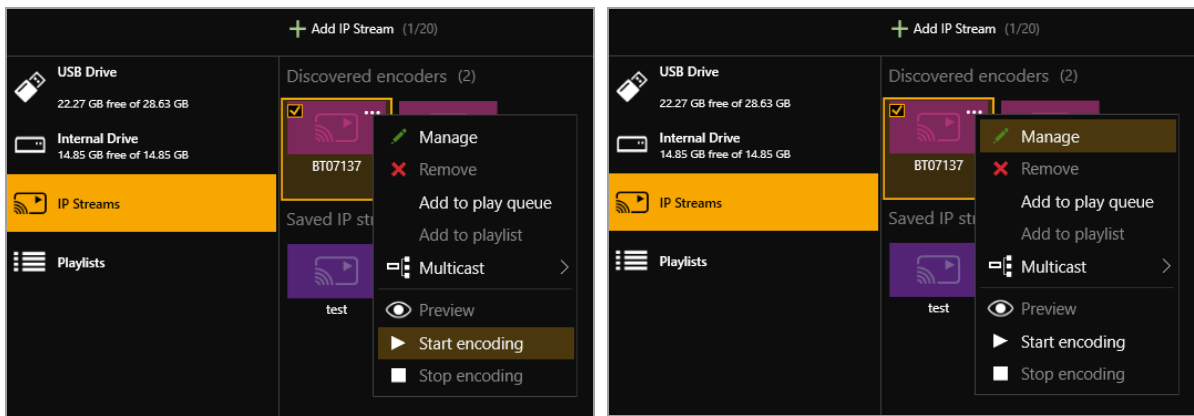


3. **OPTIONAL:** if you want to stream media, add your streams.

- 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.



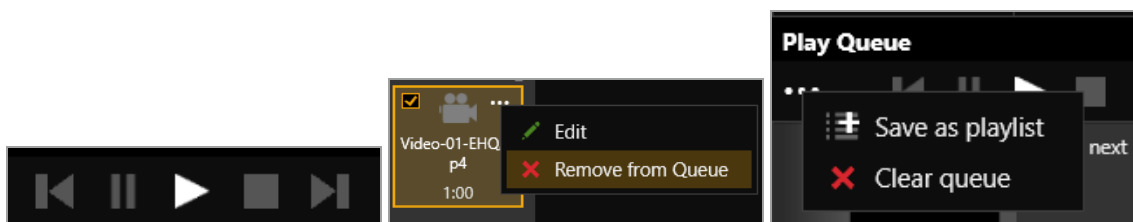
Read more about starting and configuring the Encoder-100 on page 31.

- 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 96.

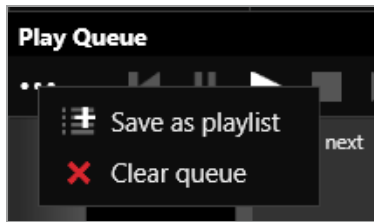
5. Drag media items and streams into the play queue and use the playback controls to play your media. Check that the media is playing on your video wall.
6. Use the playback controls start, stop, pause, skip to the next item, and return to the previous item. You can select and delete media items, or 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 87.

## Setting up the internal drive

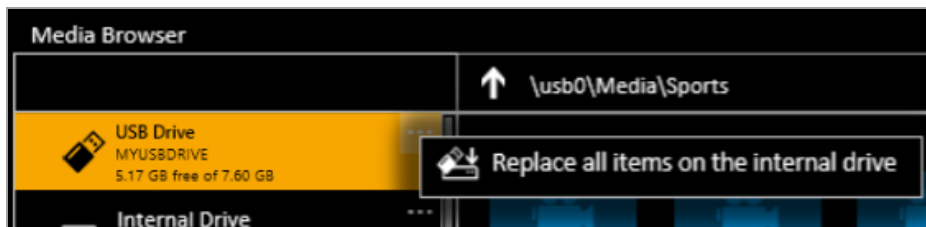
You can save media items from your USB drive to the internal drive.

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 93.

## 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.
- Single channel encoder.
- 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<br>Connect to your network with Ethernet                                                          |
| PREVIEW   | Allows you to preview your encoded signal<br>Connect to a display with a VGA cable                                                     |
| HDMI OUT  | Allows you to preview your encoded signal<br>Connect to a display with an HDMI cable                                                   |
| HDMI IN   | Receives video and digital audio signal from a source<br>Connect to a source with an HDMI cable                                        |
| AUDIO OUT | Allows you to preview your audio signal<br>Connect a speaker with a 3.5 mm jack audio cable                                            |
| AUDIO IN  | Receives analog audio from a source<br>Connect a 3.5 mm jack audio cable<br><b>Note:</b> 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.



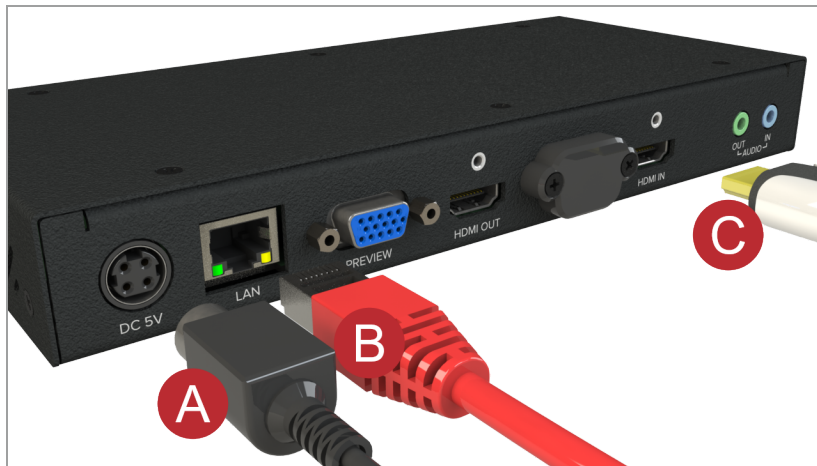
The Encoder-100 cannot encode HDCP encoded sources.

## Before you start

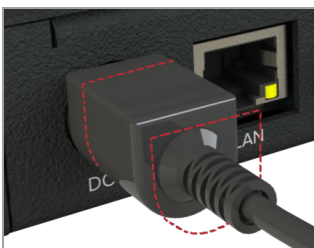
To use an Encoder-100, you must have a Streaming media and 4K playback input module installed in your CORIOmaster™, CORIOmaster mini™, or CORIOmaster micro™.

## Setting up the Encoder-100

Connect your cables.



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

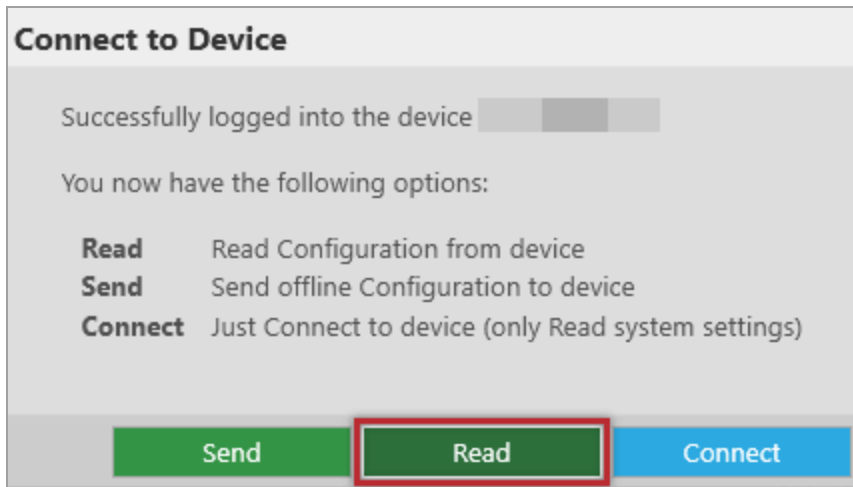


The power connector is a latching power connector. To remove the power connector from your Encoder-100, slide the sleeve backward.

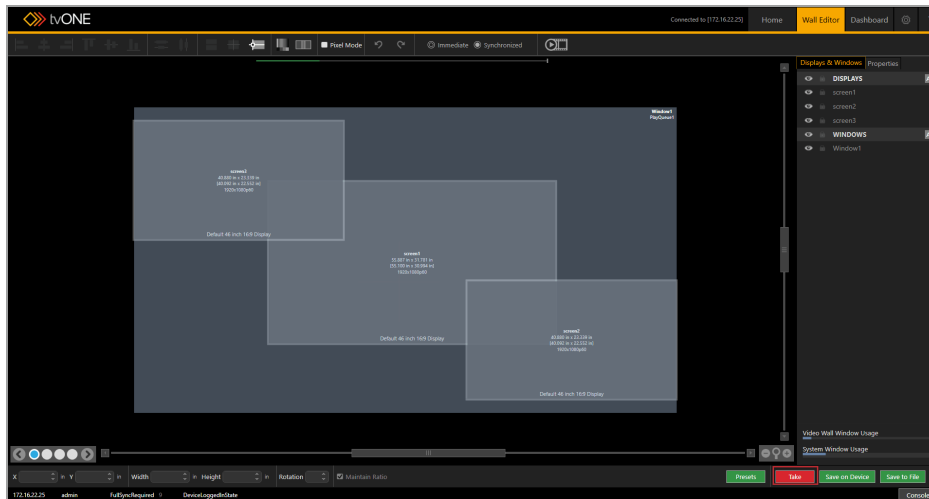
## Configuring the Encoder-100 with CORIOgrapher™

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

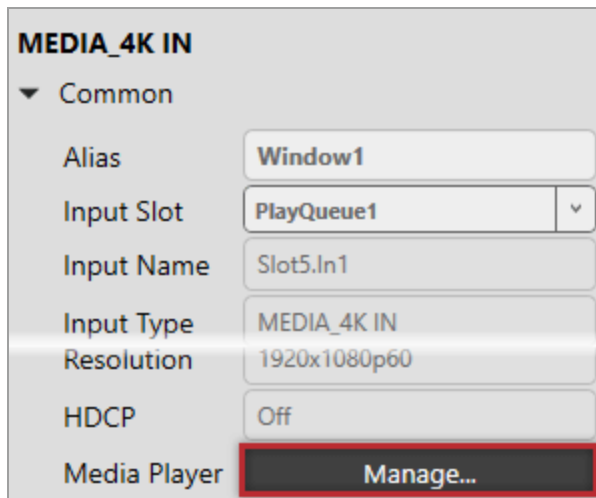
1. Open CORIOgrapher™, connect to your CORIOmaster™, and read the configuration from your device.



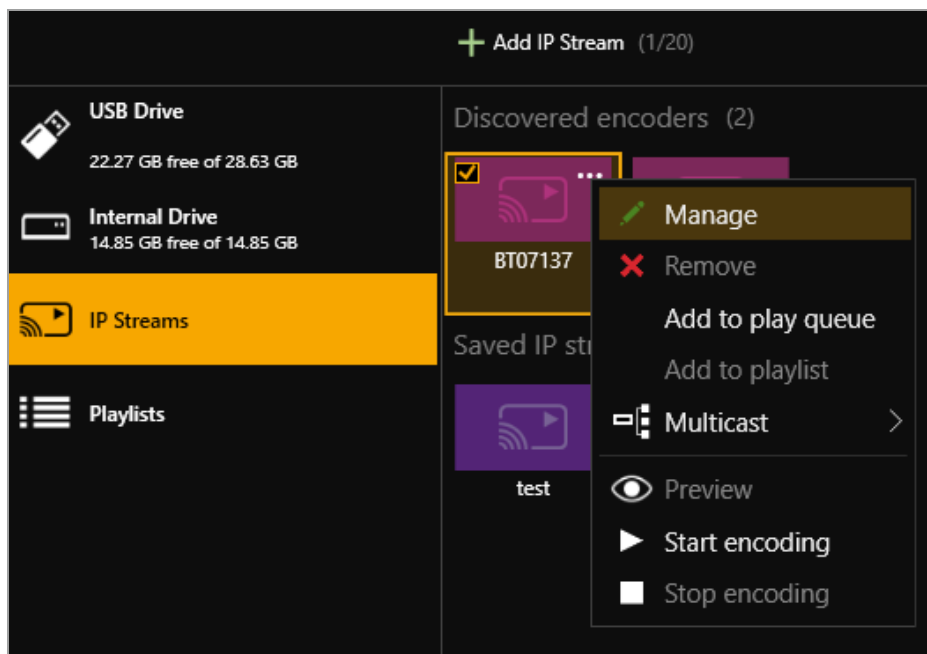
2. Set up a video wall that includes at least one window playing the Streaming media and 4K playback input module, and select Take.



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.
- If you can't find or connect to your Encoder-100, read troubleshooting advice on page 122.

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

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

The screenshot shows the 'Manage encoder [My\_Encoder100] - Encoding' window with the 'System' tab selected. The left sidebar contains tabs: Status, Capture, Encode, Stream, Network, and System. The main area is titled 'System:' and contains the following fields: 'Name' with the value 'My\_Encoder100', 'Serial number' with the value 'BT07159', and 'Version' with the value '1.05.03.007'. Below these fields is a 'Reboot' button. At the bottom of the window are 'Apply' and 'Close' buttons.

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

The screenshot shows the 'Manage encoder [My\_Encoder100] - Encoding' window with the 'Network' tab selected. The left sidebar contains tabs: Status, Capture, Encode, Stream, Network, and System. The main area is titled 'Network' and contains the following fields: 'Configuration' with a dropdown menu set to 'DHCP', 'IP Address' with fields for 192, 168, 1, and 1, 'Subnet Mask' with fields for 255, 255, 255, and 0, 'Default Gateway' with fields for 192, 168, 1, and 254, and 'MAC Address' with the value '74DAEA15DDCE'. At the bottom of the window are 'Apply' and 'Close' buttons.

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

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

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

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

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

Manage encoder [My\_Encoder100] - Encoding?

Status

Capture

Video: 1920x1080p60

Audio: Analog

Sample rate: 48.0 kHz

Encode

Stream

Network

System

Apply

Close

8. Select Encode, and choose a profile.

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

Manage encoder [My\_Encoder100] - Encoding?

Status

Capture

Encode

Stream

Network

System

Profile

Higher quality

Balanced quality and bandwidth

Lower bandwidth

Custom

Encoding

Specific video size: Use input frame

Target bitrate: 15 Mbps

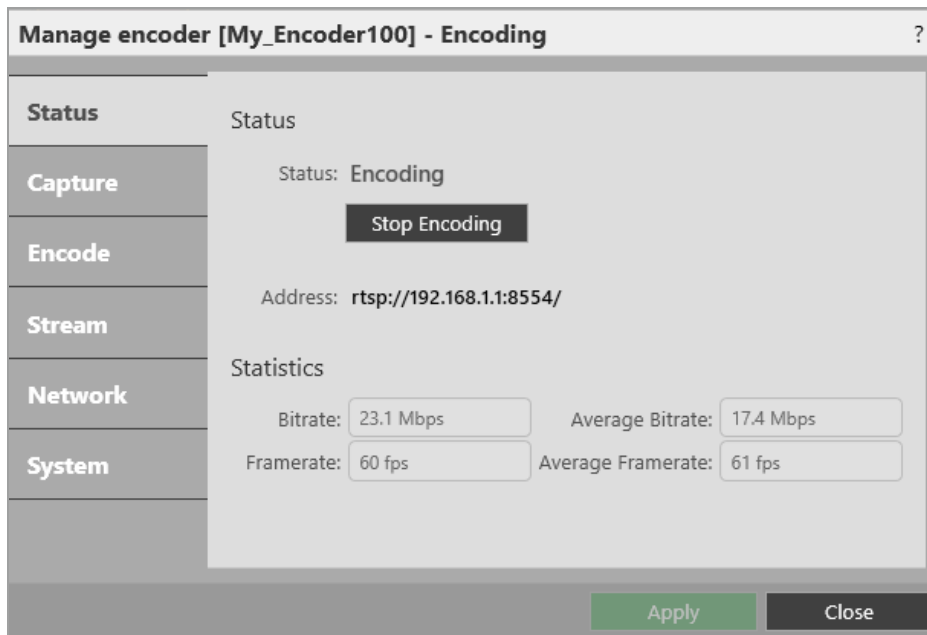
Audio bitrate: 192 kbps

Bitrate encoding: VBR

Apply

Close

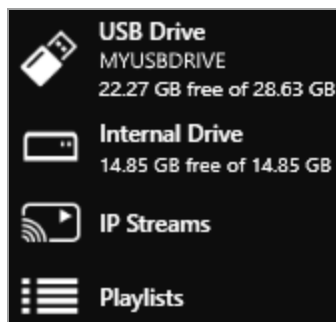
9. Select Status > Start encoding.



Read more about configuring encoders on page 31.

## 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.



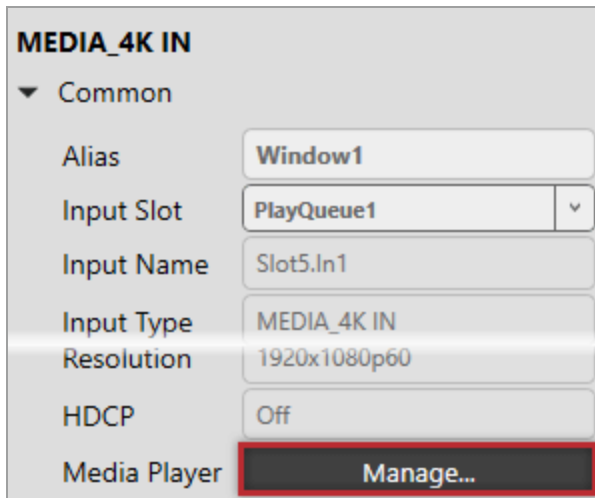
Read more about playing streaming media on page 78.

## Configuring your Encoder-100

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

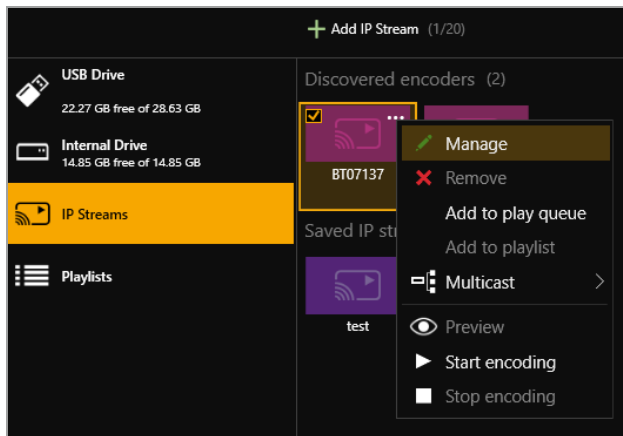
### To open Encoder settings for a specific Encoder-100

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



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

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



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

## Naming your Encoder-100

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

The screenshot shows the 'Manage encoder [My\_Encoder100] - Encoding' window with the 'System' tab selected. The left sidebar has tabs for Status, Capture, Encode, Stream, Network, and System. The main area is titled 'System:' and contains the following fields: 'Name' (text box with 'My\_Encoder100'), 'Serial number:' (text box with 'BT07159'), and 'Version:' (text box with '1.05.03.007'). Below these fields is a 'Reboot' button. At the bottom of the window are 'Apply' and 'Close' buttons.

## Configuring network settings

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

The screenshot shows the 'Manage encoder [My\_Encoder100] - Encoding' window with the 'Network' tab selected. The left sidebar has tabs for Status, Capture, Encode, Stream, Network, and System. The main area is titled 'Network' and contains the following fields: 'Configuration:' (dropdown menu with 'DHCP' selected), 'IP Address:' (four text boxes with values 192, 168, 1, 1), 'Subnet Mask:' (four text boxes with values 255, 255, 255, 0), 'Default Gateway:' (four text boxes with values 192, 168, 1, 254), and 'MAC Address:' (text box with '74DAEA15DDCE'). At the bottom of the window are 'Apply' and 'Close' buttons.

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

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

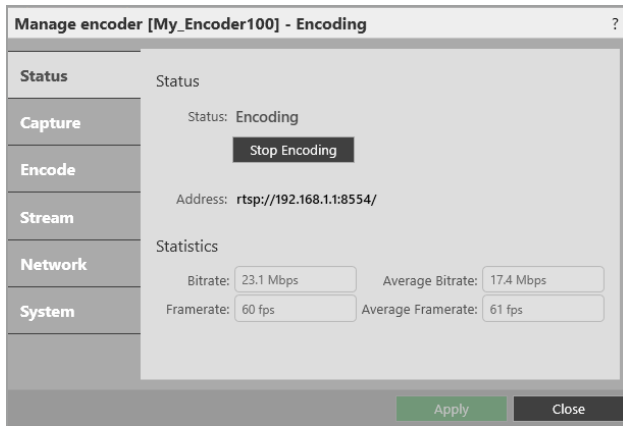


### Static IP address

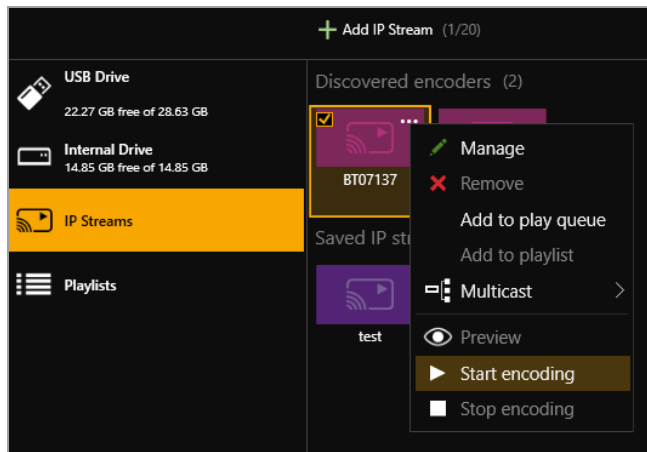
If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

## Starting and stopping encoding

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



You can also start and stop encoding from Media Browser.



## Configuring audio

This task is optional.

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.



### **Risk of delayed signal**

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

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

Manage encoder [My\_Encoder100] - Encoding?

Status

Capture

Encode

Stream

Network

System

Capture

Video: 1920x1080p60

Audio: Analog ▾ Sample rate: 48.0 kHz ▾

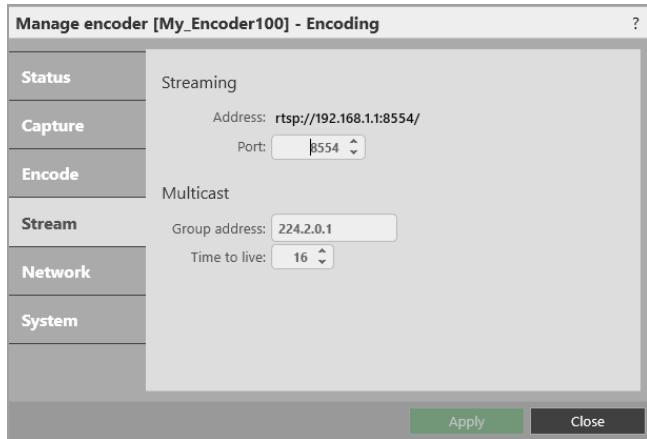
Apply

Close

## Changing the port number

This task is optional.

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

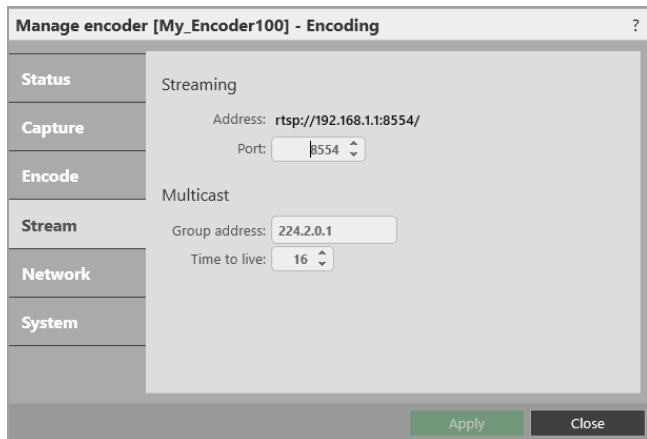


The screenshot shows a web interface window titled "Manage encoder [My\_Encoder100] - Encoding". On the left is a sidebar with tabs: Status, Capture, Encode, Stream (selected), Network, and System. The main area displays the "Stream" configuration. It shows "Address: rtsp://192.168.1.1:8554/" and "Port: 8554" with a spinner control. Below this, the "Multicast" section is visible, showing "Group address: 224.2.0.1" and "Time to live: 16" with a spinner control. At the bottom right are "Apply" and "Close" buttons.

## Multicasting

This task is optional.

You can configure multicasting in Stream.



This screenshot is identical to the one above, showing the "Stream" configuration in the "Manage encoder [My\_Encoder100] - Encoding" window. It displays the "Address: rtsp://192.168.1.1:8554/", "Port: 8554", and the "Multicast" section with "Group address: 224.2.0.1" and "Time to live: 16".

## 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.

The screenshot shows the 'Manage encoder [My\_Encoder100] - Encoding' window with the 'System' tab selected. The left sidebar has tabs for Status, Capture, Encode, Stream, Network, and System. The main area displays system information: Name (My\_Encoder100), Serial number (BT07159), and Version (1.05.03.007). A 'Reboot' button is visible below the version information. At the bottom of the window are 'Apply' and 'Close' buttons.

## 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.

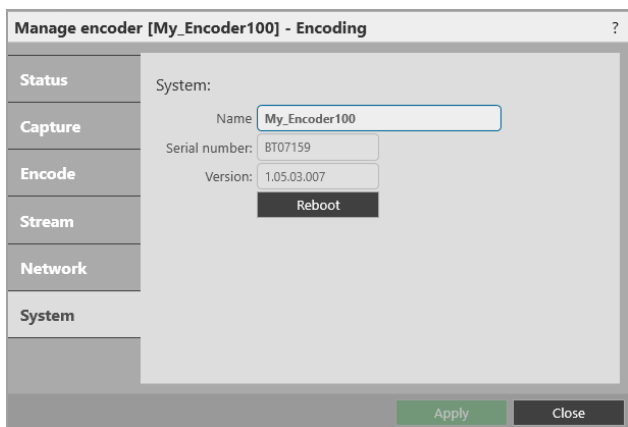
The first screenshot shows the 'Manage encoder [My\_Encoder100] - Encoding' window with the 'Stream' tab selected. The left sidebar has tabs for Status, Capture, Encode, Stream, Network, and System. The main area displays streaming settings: Address (rtsp://192.168.1.1:8554/), Port (8554), Multicast Group address (224.2.0.1), and Time to live (16). At the bottom are 'Apply' and 'Close' buttons.

The second screenshot shows the same window with the 'Status' tab selected. The left sidebar has tabs for Status, Capture, Encode, Stream, Network, and System. The main area displays the status: Status: Encoding, a 'Stop Encoding' button, Address: rtsp://192.168.1.1:8554/, and Statistics: Bitrate (23.1 Mbps), Average Bitrate (17.4 Mbps), Framerate (60 fps), and Average Framerate (61 fps). At the bottom are 'Apply' and 'Close' buttons.

Read more about saving streams on page 78.

## 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 64.

## 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](http://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 .....          | 38 |
| Installing video wall hardware ..... | 39 |

## 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.

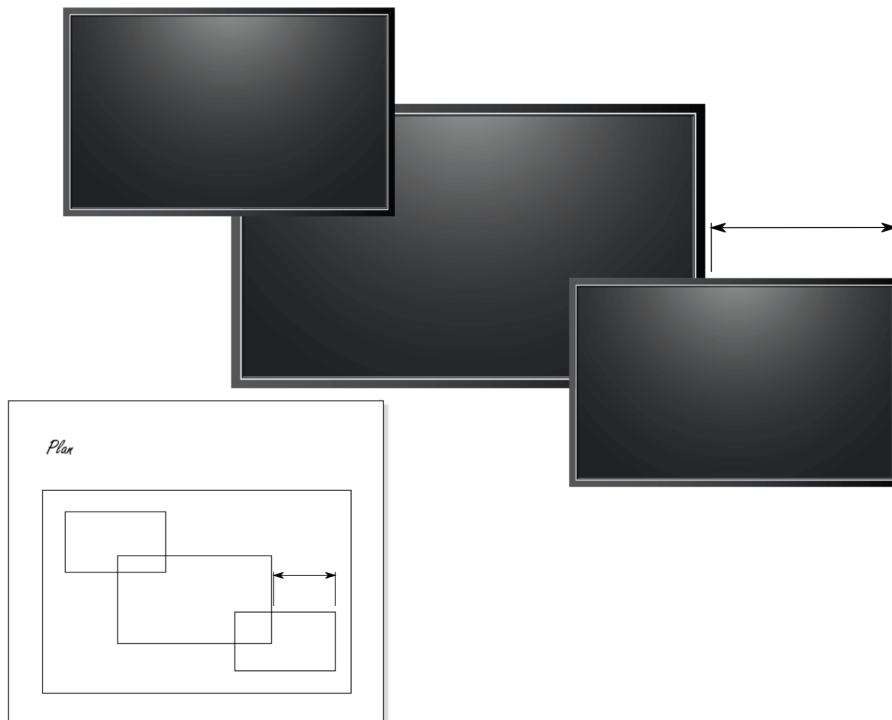
Read about our adapters on page 16.

See our range of signal extenders at [tvone.com](http://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™ .....                  | 42 |
| Getting started with CORIOgrapher™ .....   | 43 |
| Naming input and output ports .....        | 45 |
| Creating a video wall .....                | 46 |
| Testing your video wall installation ..... | 47 |

## About CORIOgrapher™

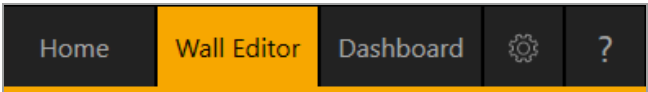
CORIOgrapher™ is the software that controls your CORIOmaster™. You can create up to four video walls with multiple screens and windows, and add transitions and effects for a state-of-the-art dynamic video wall experience.

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.

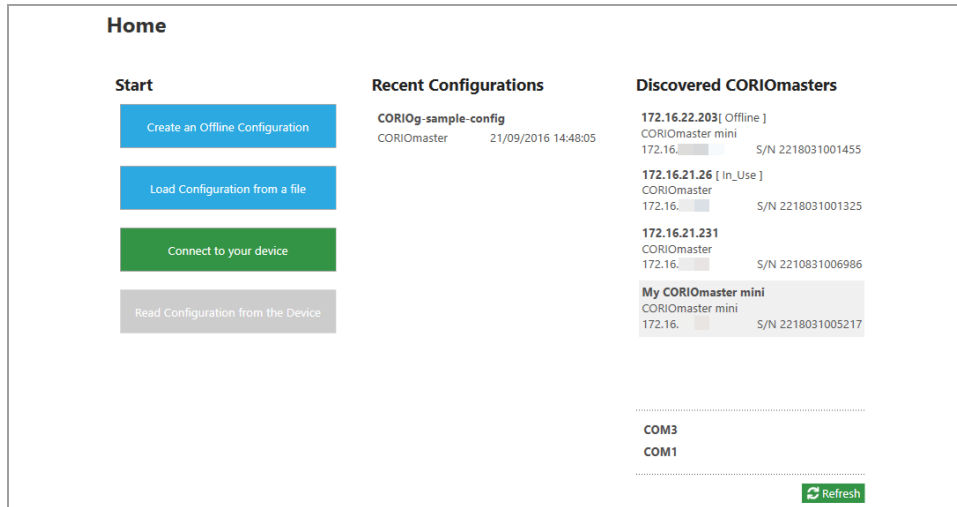
## CORIOgrapher™ main areas



|             |                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------|
| 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 39.

## 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 113.

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 114.

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

You can now name your input and output ports.

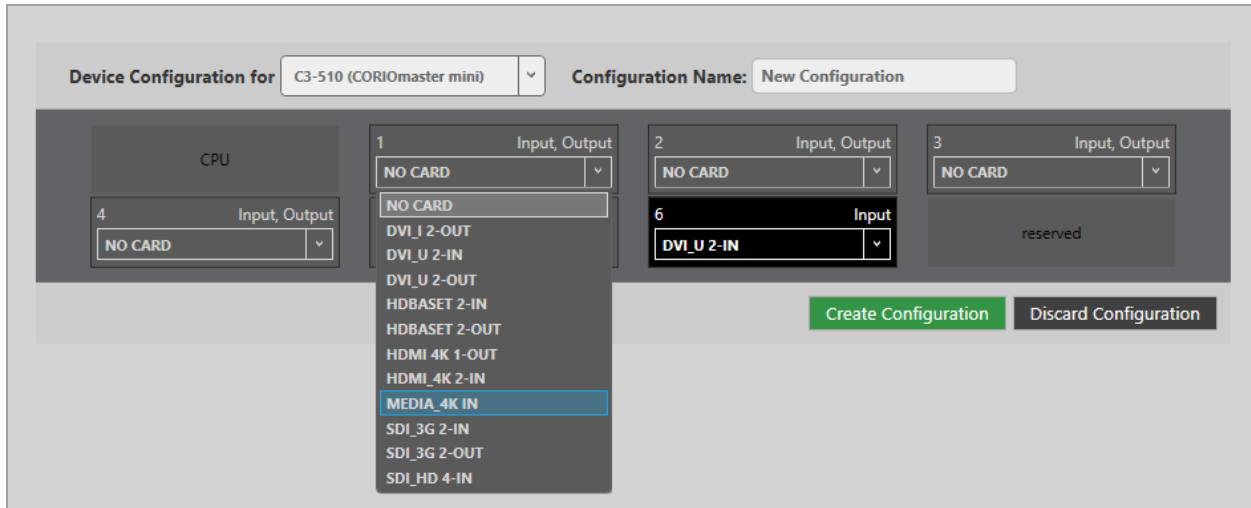
Read about naming input and output ports on page 45.

## 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

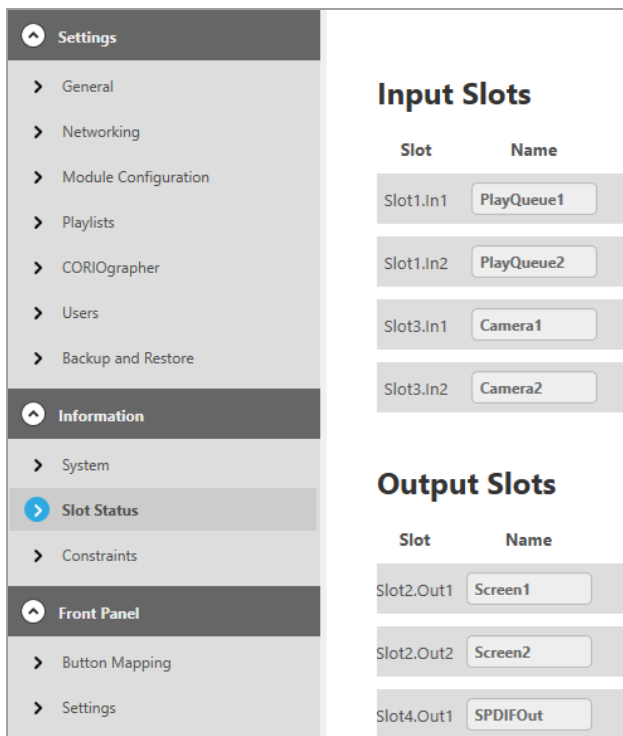
The Streaming media and 4K playback input module has two virtual input ports. Each port refers to a play queue, not to a specific streaming source. If you intend to build play queues with multiple sources, for example, one or two streaming sources and media items from a USB drive, then consider unique 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

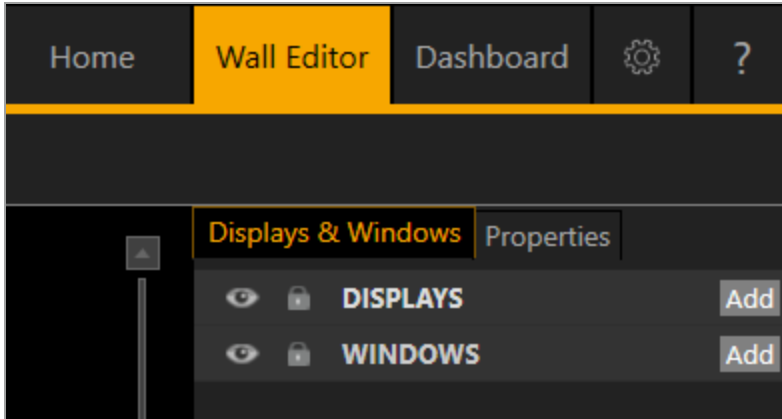
To create a video wall in CORIOgrapher™, you need sources and displays. Make sure you've either loaded your configuration from your CORIOmaster™, or created an offline configuration.

Read about reading the configuration from your CORIOmaster™ on page 43.

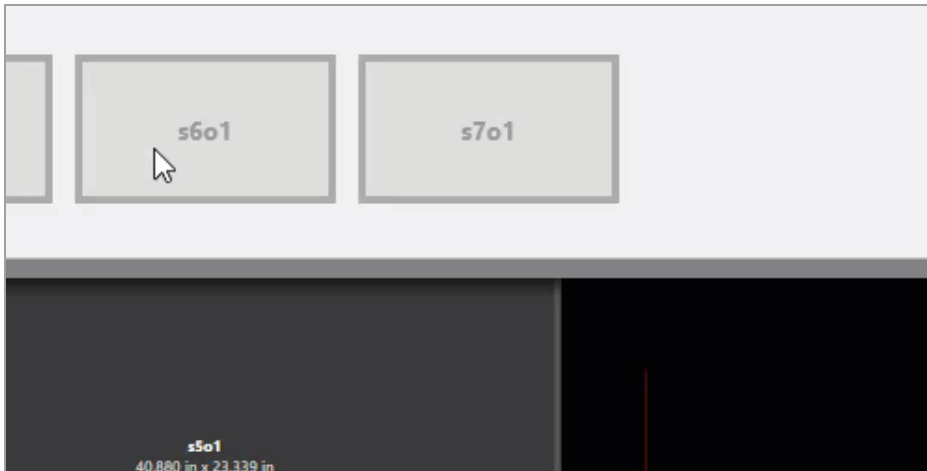
Read about creating an offline configuration on page 44.

### To create a video wall

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

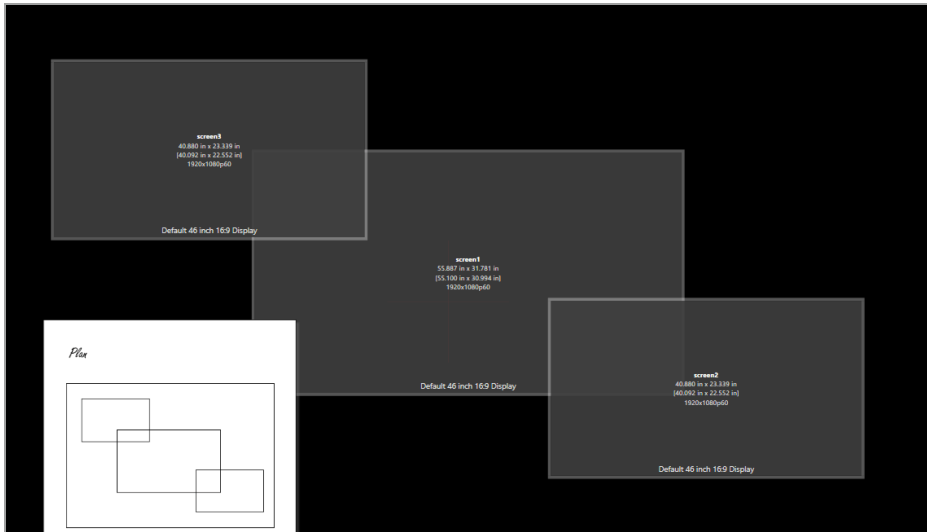


2. Select a display and drag it onto the video wall.



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 47.

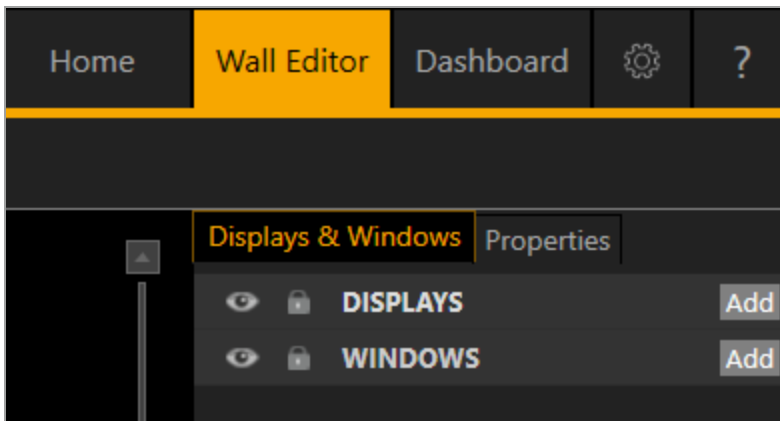
## Testing your video wall installation

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 45.

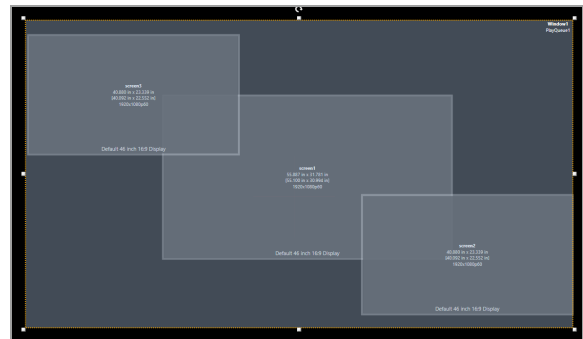
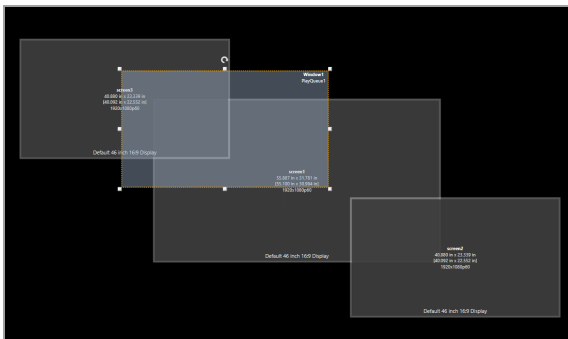
1. From Wall Editor, select (WINDOWS) > Add.



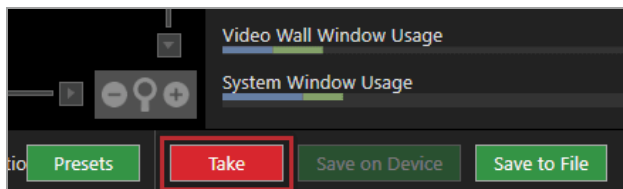
2. Select a source and drag it onto the video wall.



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

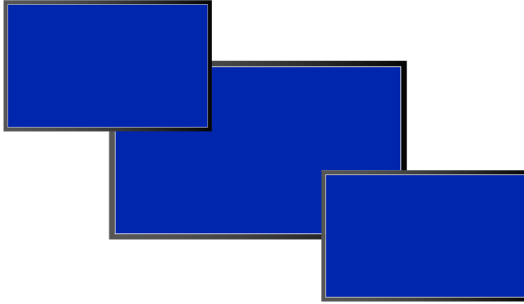


4. Select Take to send the video wall to your displays.



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



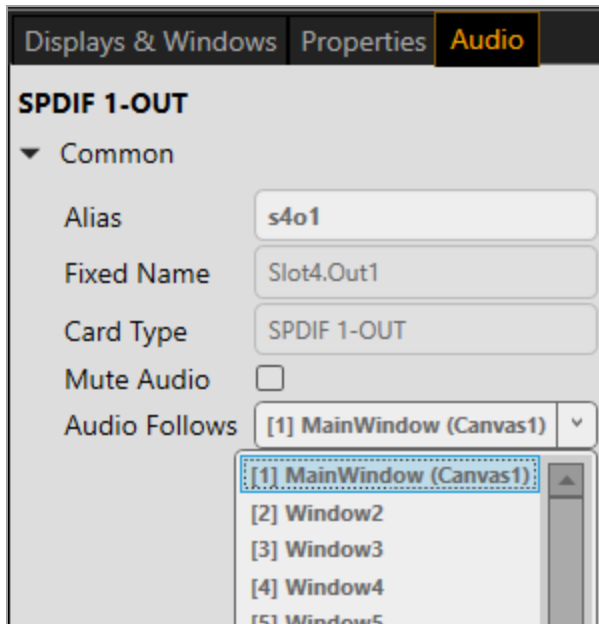
✅ Source and displays connected and arranged correctly.

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 138.

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 119.

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 .....52
  - Naming your CORIOmaster™ .....52
  - Resetting your CORIOmaster™ to factory default settings .....52
  - Choosing your default working units .....53
  - Backing up and restoring your settings .....53
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- Playlist settings .....62
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- Encoders and streams settings ..... 64
  - Managing encoders and streams ..... 64

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

|                                                               |    |
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| Resetting your CORIOmaster™ to factory default settings ..... | 52 |
| Choosing your default working units .....                     | 53 |
| Backing up and restoring your settings .....                  | 53 |

# Naming your CORIOmaster™

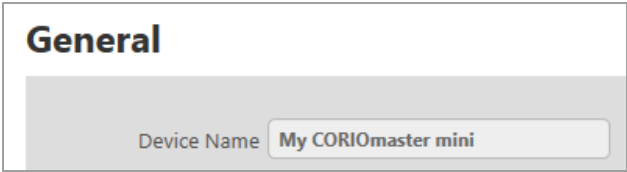
You can give your CORIOmaster™ a unique name.

## 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.



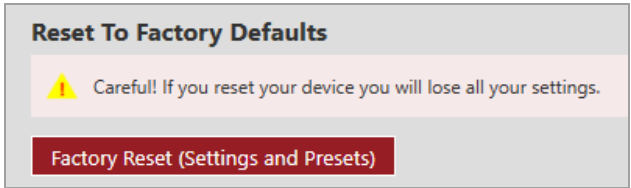
When you reset your CORIOmaster™ to factory default settings, all of your settings and configurations are deleted.

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 53.

## To reset your CORIOmaster™ to factory default settings

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

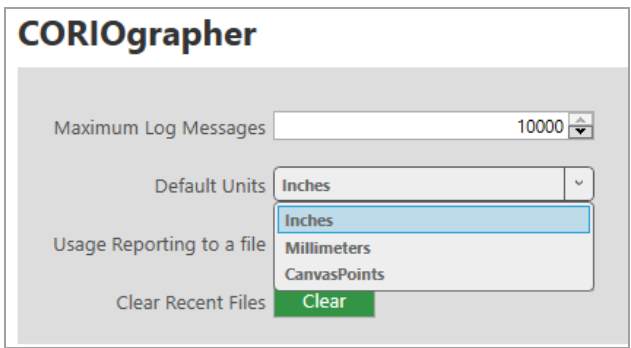


## Choosing your default working units

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™

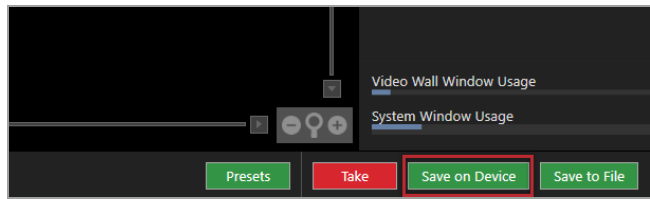
#### Settings that are saved on your CORIOmaster™

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

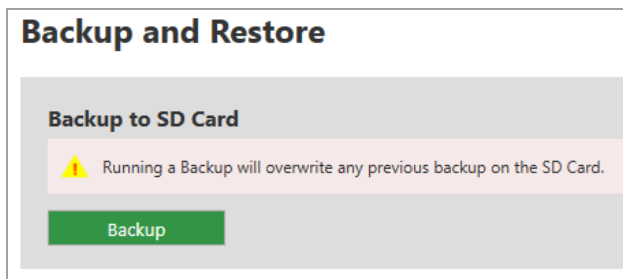
## What isn't saved to your CORIOmaster™

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™.



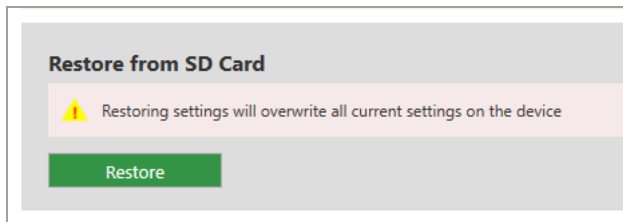
## To back up your settings on your CORIOmaster™

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

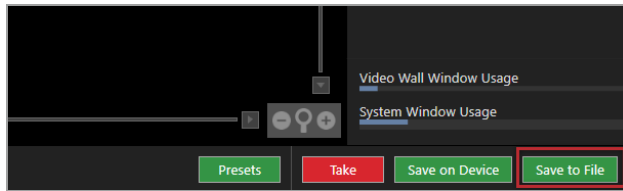
**Note:** device name and network settings are saved as part of the backup file, but are not included when you restore settings to your device. This allows you to share the backup file between devices without causing conflicts with names and network settings.

## 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

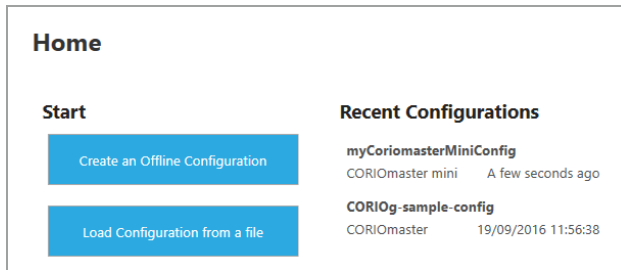
1. Select Wall Editor > Save to File.



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™ .....56

## Configuring the buttons of your CORIOmaster micro™

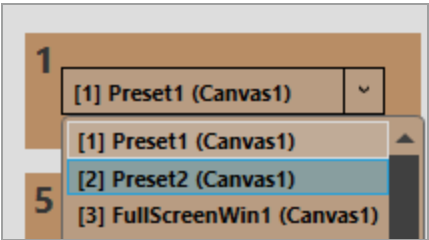
You can choose which presets, sources, and windows correspond to the buttons on the front panel of your CORIOmaster micro™. Configure the buttons in CORIOgrapher™.

### 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.



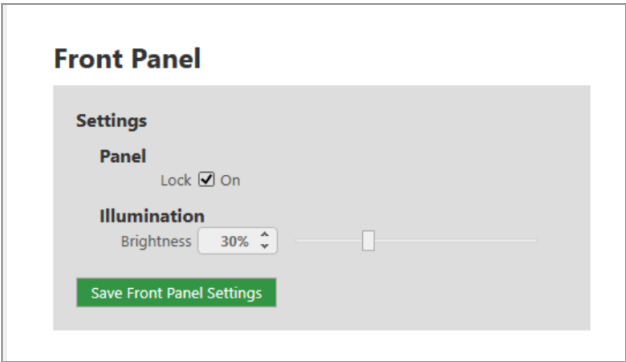
- 3. For each button, select a preset, source, or window from the list.



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

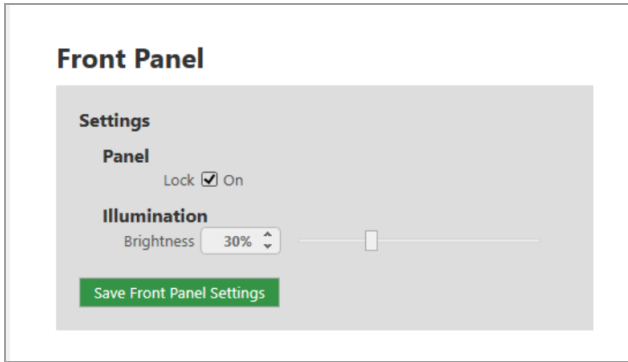
### Changing the brightness of the buttons of the front panel

- 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 .....      | 57 |
| Changing other users' passwords ..... | 58 |
| Changing your own password .....      | 58 |

## 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.

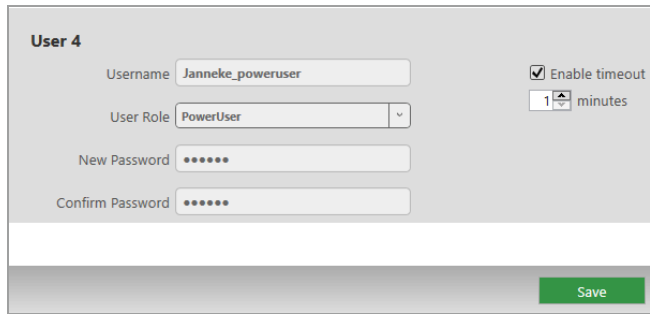
To stay connected while idle for more than five minutes, set a longer timeout time for each user. You can also allow the user to stay connected permanently, with no timeout time, by clearing the Enable timeout option.



#### 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



The screenshot shows a form titled "User 4" for configuring a user. It includes the following fields and options:

- Username:** A text input field containing "Janneke\_poweruser".
- User Role:** A dropdown menu showing "PowerUser".
- Enable timeout:** A checked checkbox.
- Timeout:** A numeric input field set to "1" with a unit of "minutes".
- New Password:** A text input field with masked characters (dots).
- Confirm Password:** A text input field with masked characters (dots).
- Save:** A green button at the bottom right.

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™ ..... | 59 |
| Configuring network settings for streaming media .....   | 60 |

# 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.

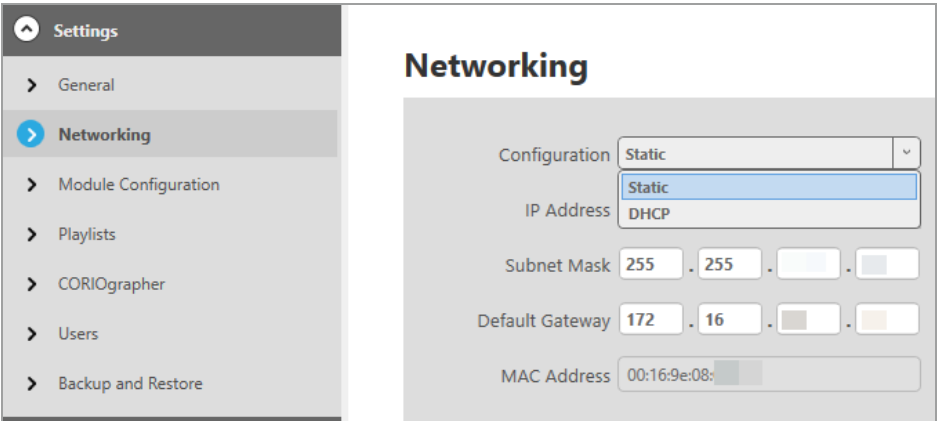
!

**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.

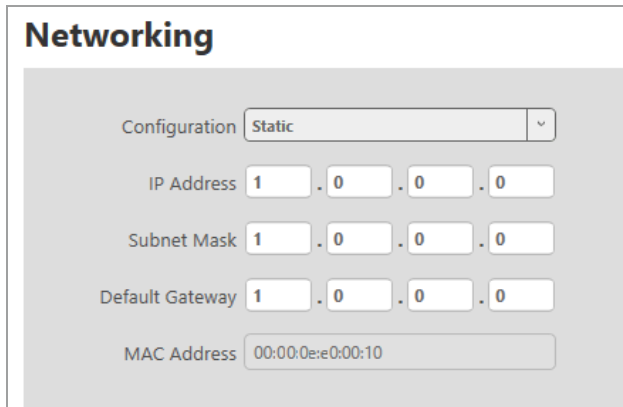
## To configure network settings for your CORIOmaster™

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.



The Networking configuration screen has a title 'Networking' in bold. Below it is a 'Configuration' dropdown menu set to 'Static'. There are four input fields for IP Address, Subnet Mask, and Default Gateway, each with a dropdown arrow. The MAC Address field is a single text input. All IP-related fields are currently set to '1' for the first octet and '0' for the others.

| Field           | Value             |
|-----------------|-------------------|
| Configuration   | Static            |
| IP Address      | 1 . 0 . 0 . 0     |
| Subnet Mask     | 1 . 0 . 0 . 0     |
| Default Gateway | 1 . 0 . 0 . 0     |
| MAC Address     | 00:00:0e:e0:00:10 |

- 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 31.

### 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.

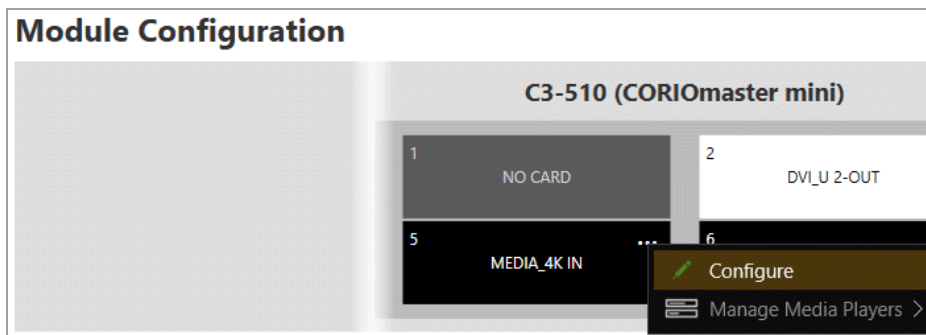


#### Static IP address

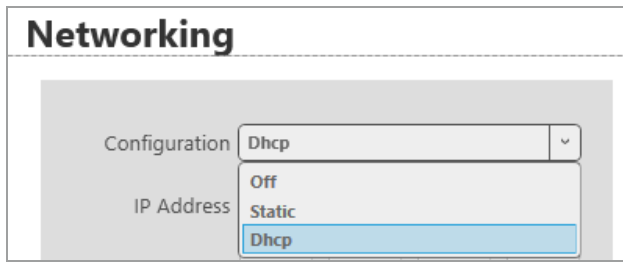
If you choose a static IP address, make sure you enter a unique value for your IP address. Using the same IP address for multiple devices can cause your devices to disconnect. Contact your network administrator for help.

### 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.



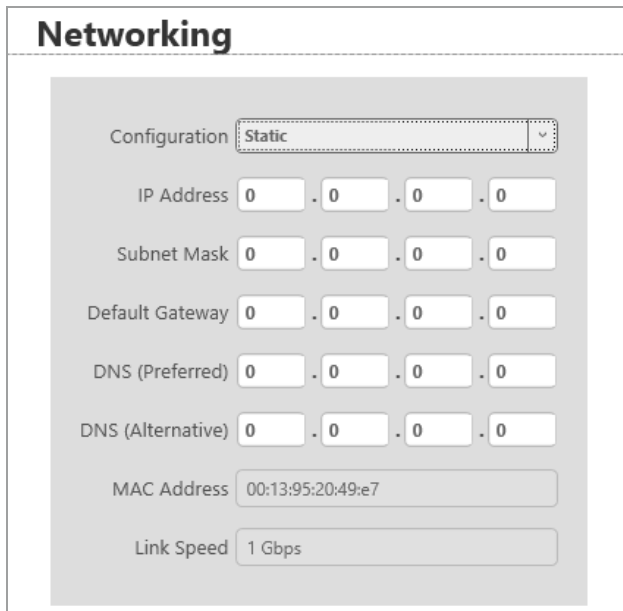
3. Choose an IP configuration.



The screenshot shows a 'Networking' configuration window. It has a 'Configuration' dropdown menu with options 'Dhcp', 'Off', 'Static', and 'Dhcp'. The 'Static' option is currently selected and highlighted in blue.

- 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.



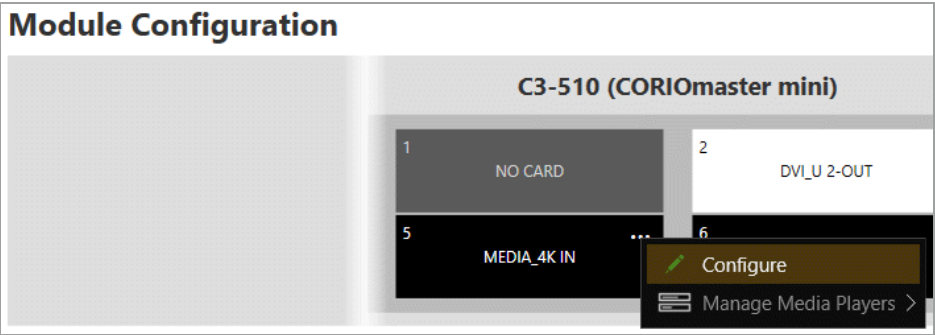
The screenshot shows the 'Networking' configuration window with 'Static' selected in the 'Configuration' dropdown. Below this, there are input fields for 'IP Address', 'Subnet Mask', 'Default Gateway', 'DNS (Preferred)', and 'DNS (Alternative)', each with four digit boxes (0-9). The 'MAC Address' field is pre-filled with '00:13:95:20:49:e7'. The 'Link Speed' field is set to '1 Gbps'.

- 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.

Networking

Configuration

Dhcp

IP Address

172

.

16

.

.

Subnet Mask

255

.

255

.

.

Default Gateway

172

.

16

.

.

DNS (Preferred)

172

.

16

.

.

DNS (Alternative)

10

.

1

.

.

MAC Address

00:13:95:20

Link Speed

1 Gbps

Save and close

Cancel

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 ..... | 63 |
| Deleting playlists .....                                      | 63 |

## 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.

| Number | Name                                    | Module                             | Resolution   |                         |
|--------|-----------------------------------------|------------------------------------|--------------|-------------------------|
| 1      | <input type="text" value="Playlist 1"/> | <input type="text" value="Slot2"/> | 1920x1080p60 | <button>Remove</button> |
| 2      | <input type="text" value="Playlist 2"/> | <input type="text" value="Slot2"/> | 1920x1080p60 | <button>Remove</button> |
| 3      | <input type="text" value="Playlist 3"/> | <input type="text" value="Slot2"/> | 1280x720p60  | <button>Remove</button> |

### Moving playlists

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

| Number | Name                                    | Module                             | Resolution   |                         |
|--------|-----------------------------------------|------------------------------------|--------------|-------------------------|
| 1      | <input type="text" value="Playlist 1"/> | <input type="text" value="Slot2"/> | 1920x1080p60 | <button>Remove</button> |
| 2      | <input type="text" value="Playlist 2"/> | <input type="text" value="Slot2"/> | 1920x1080p60 | <button>Remove</button> |
| 3      | <input type="text" value="Playlist 3"/> | <input type="text" value="Slot2"/> | 1280x720p60  | <button>Remove</button> |

## 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.

### Playlists

Total

Used

Available

Remove all playlists

## Deleting individual playlists

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

| Number | Name                                    | Module           | Resolution   |                   |
|--------|-----------------------------------------|------------------|--------------|-------------------|
| 1      | <input type="text" value="Playlist 1"/> | <div>Slot2</div> | 1920x1080p60 | <div>Remove</div> |
| 2      | <input type="text" value="Playlist 2"/> | <div>Slot2</div> | 1920x1080p60 | <div>Remove</div> |
| 3      | <input type="text" value="Playlist 3"/> | <div>Slot2</div> | 1280x720p60  | <div>Remove</div> |

## Encoders and streams settings

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

In this section

|                                     |    |
|-------------------------------------|----|
| Managing encoders and streams ..... | 64 |
|-------------------------------------|----|

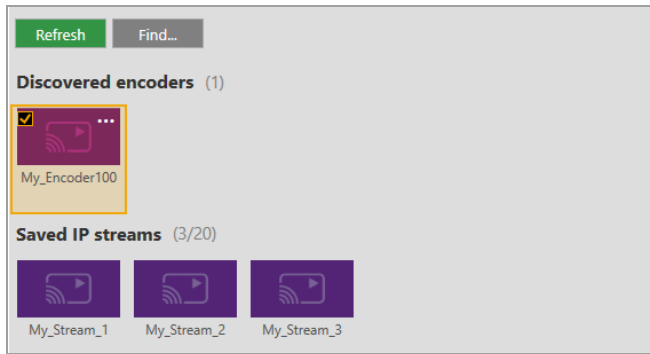
## Managing encoders and streams

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

Select ⚙️ > IP Streams.

### Managing your encoders

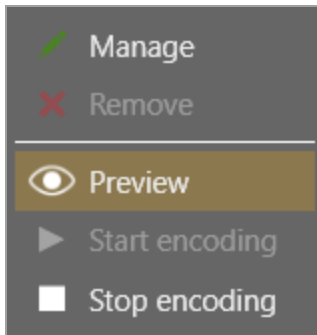
Encoders that CORIOgrapher™ detects appear under Discovered encoders.



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 31.
  - Remove an inactive encoder.
  - Preview the stream from an encoder.

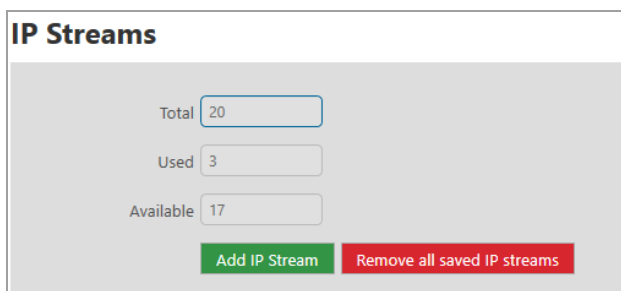
- Start or stop encoding.



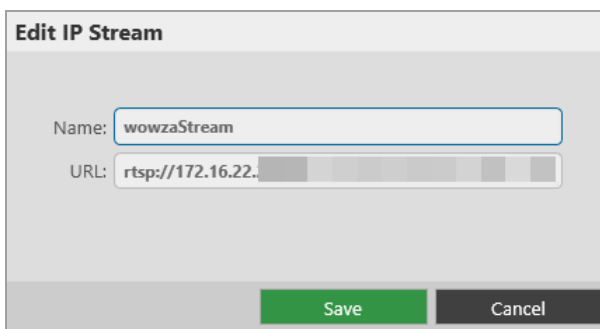
## Managing your saved streams

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 .....                                                                        | 66  |
| Creating and editing presets .....                                                   | 66  |
| Loading a preset .....                                                               | 71  |
| Changing the source playing in a window .....                                        | 72  |
| Playing audio .....                                                                  | 74  |
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| Playing media and streams .....                                                      | 78  |
| Creating and managing playlists .....                                                | 87  |
| Using the internal drive .....                                                       | 93  |
| Choosing the best resolution for your playlist or play queue .....                   | 96  |
| Using the buttons of your CORIOmaster micro™ .....                                   | 98  |
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## Presets

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

## In this section

|                                    |    |
|------------------------------------|----|
| Creating and editing presets ..... | 66 |
| Loading a preset .....             | 71 |

- 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 53.

## 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

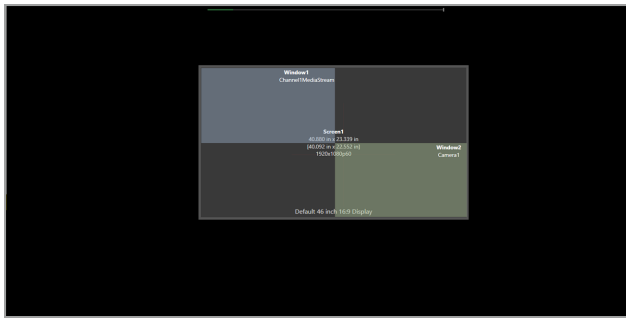
If you want to remove a window from your display with a preset, don't delete the window.

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

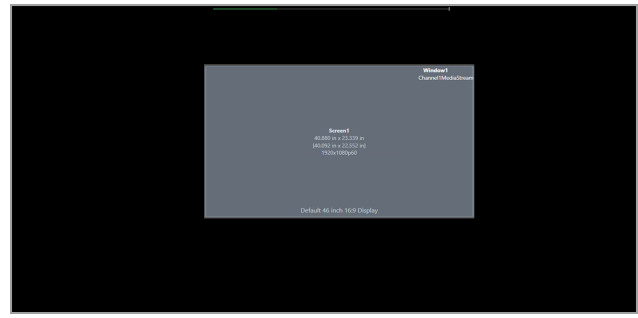
**Note:** windows that aren't on the display still take up bandwidth.

- Set the preset duration to 0 seconds.

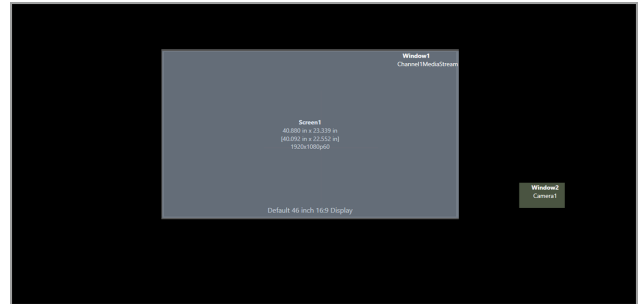
## ✓ Preset 1



## ✗ 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.

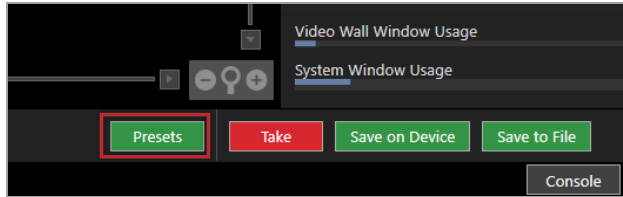
## Windows used in presets only appear on one video wall

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.

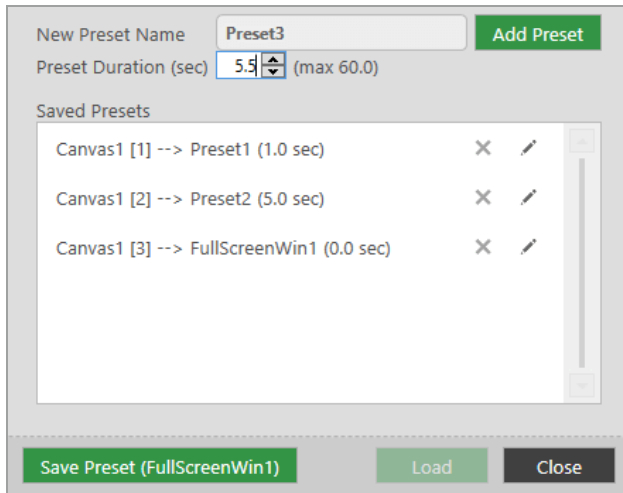
## Saving presets

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 ".".



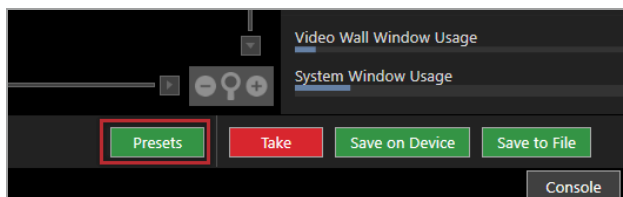
3. Enter or select a duration for your preset.  
The duration is the time taken to transition to this preset.
4. Select Add Preset.

## 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.

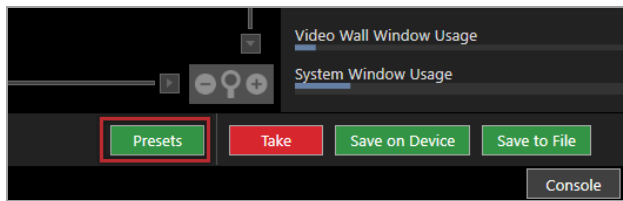


2. Find the preset you want to edit and select .
3. Enter a new name or duration.
4. Select any area outside the dialog box to save your changes, or select Close to save and exit the dialog box.

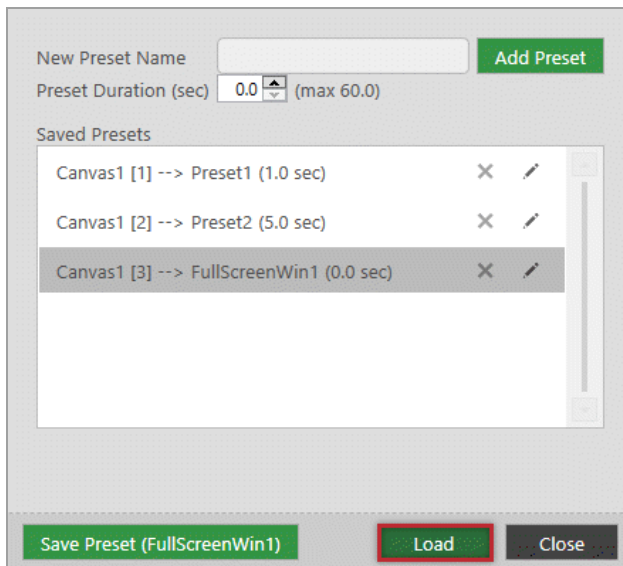
## To update a preset with a new configuration

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

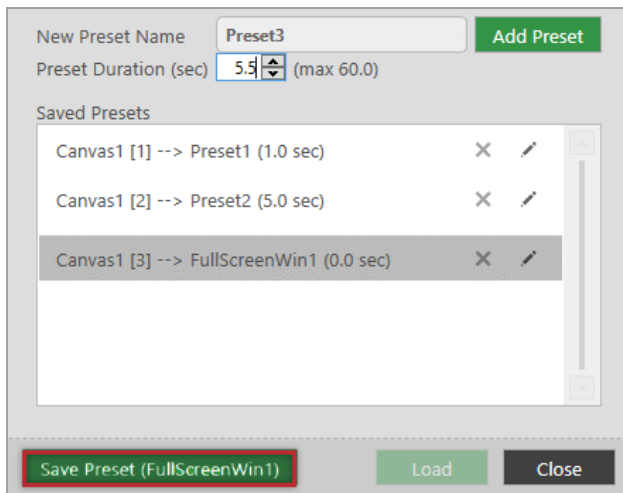
1. Select Presets.



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.

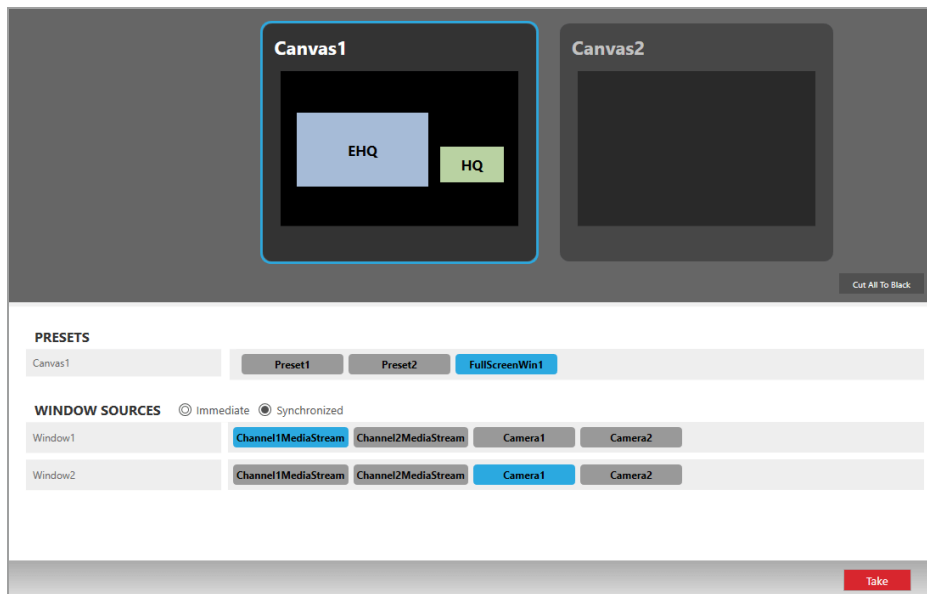
### What is a preset?

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™.

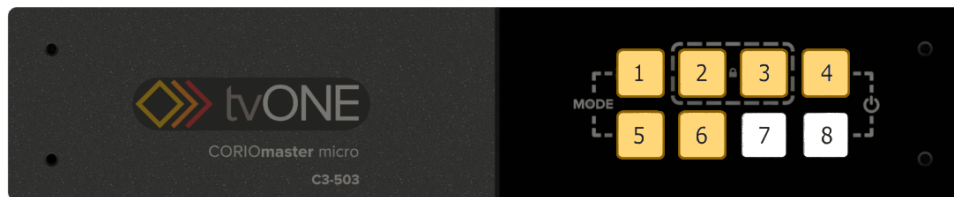
- From Dashboard, select a preset.



## Loading a preset with the buttons of your CORIOmaster micro™

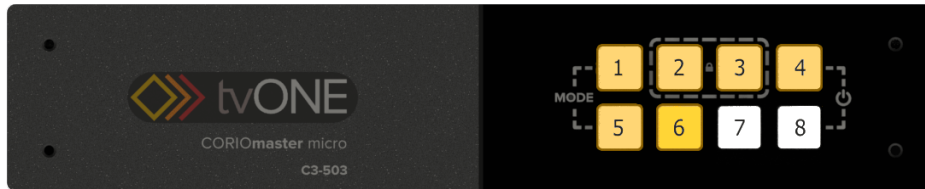
You can choose from eight presets with the buttons of your CORIOmaster micro™. By default, the eight buttons correspond to saved presets 1 to 8. You can configure your buttons to correspond to your choice of presets.

Read about configuring the buttons of your CORIOmaster micro™ on page 56.



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.



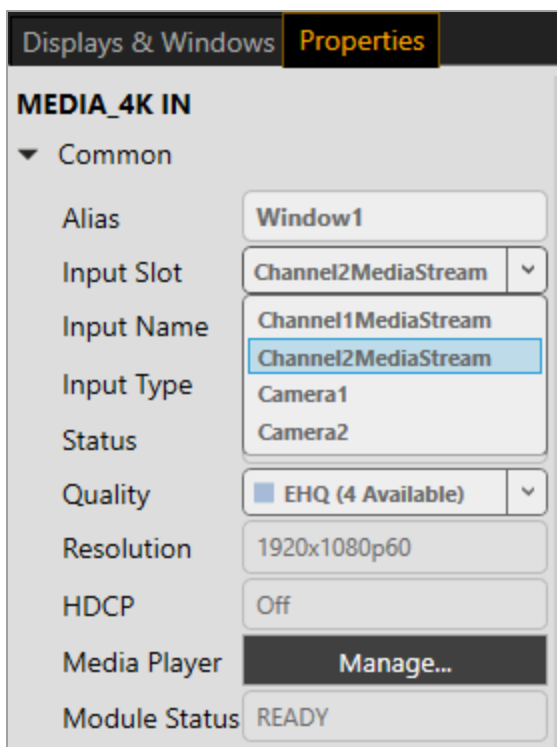
**Note:** while a preset is loading and the button is flashing, you cannot select another preset. Wait until the button stops flashing.

## 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.

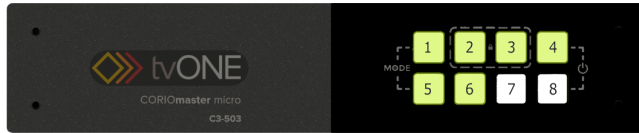


### Changing the source with the buttons of your CORIOmaster micro™

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 56.

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.

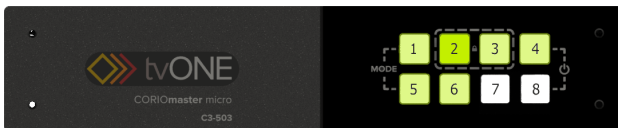
If your CORIOmaster micro™ is not in the correct mode, press and hold buttons 1 and 5.

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.

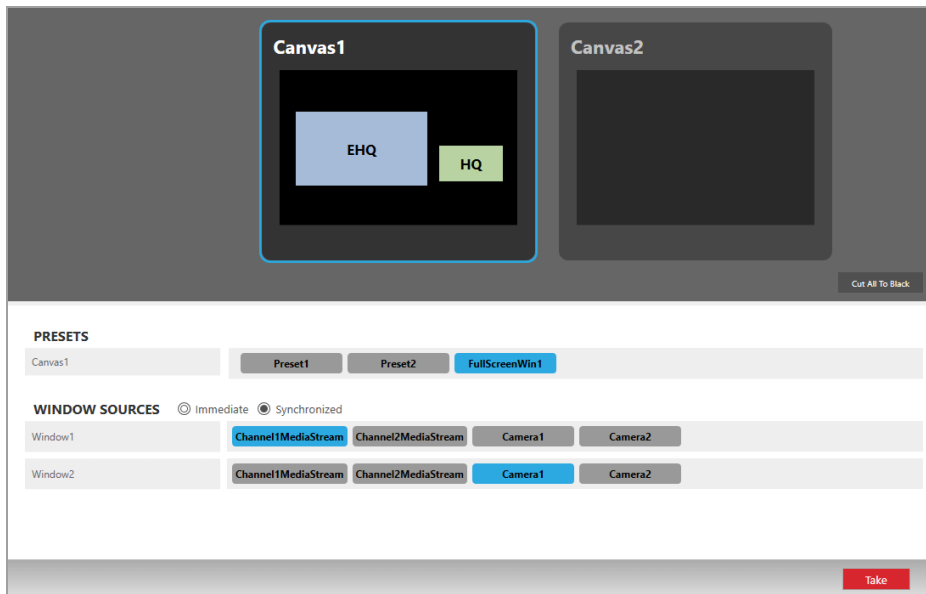


4. **Optional:** change the audio source back to your previous source. Press and hold the button that corresponds to the window that you want to hear, until it starts flashing.

## 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

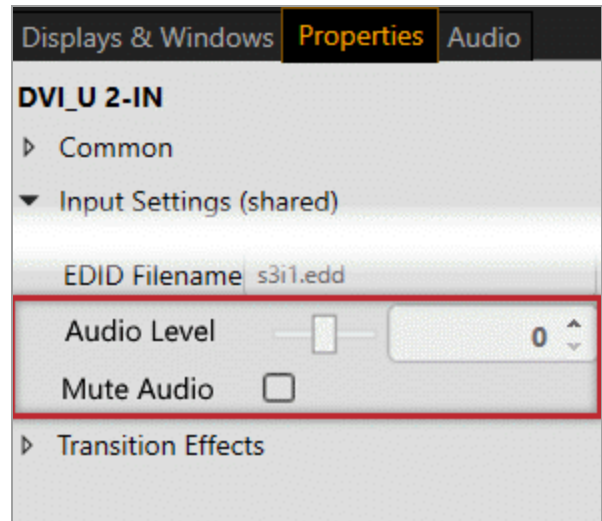
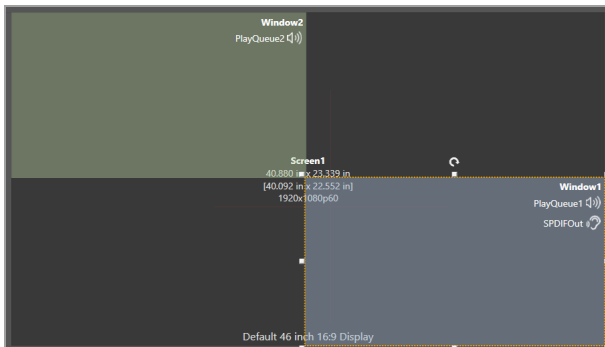
If you have a CORIOmaster micro™, you can play audio. Connect the S/PDIF port of your CORIOmaster micro™ to a digital audio device, with an RCA cable.



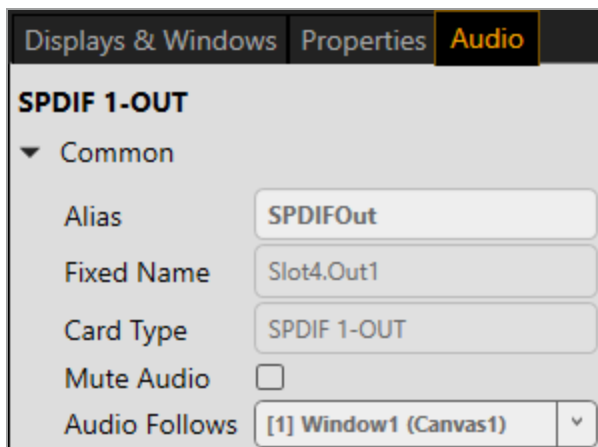
Audio settings are set for sources, not windows. If you adjust or mute the audio from a window, all the windows playing that source are affected.

### 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

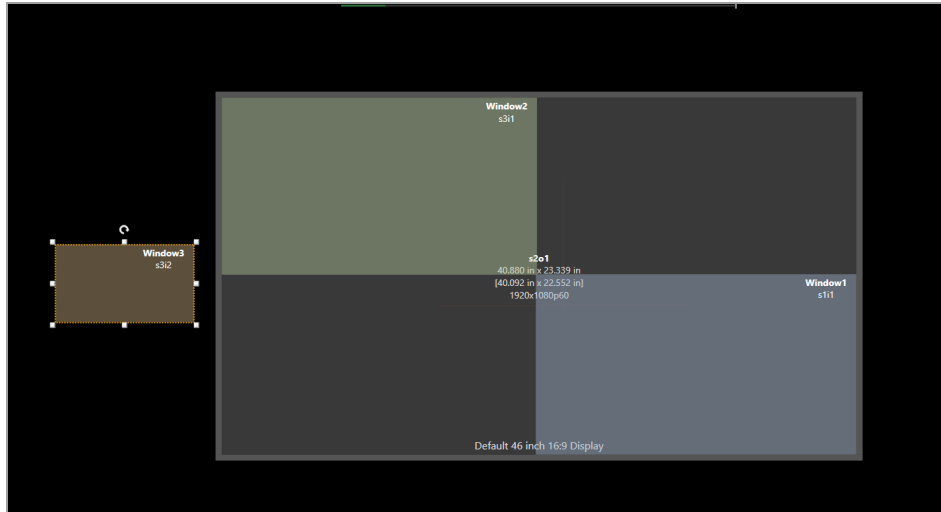
## Choosing which window to hear with the buttons of the front panel

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.

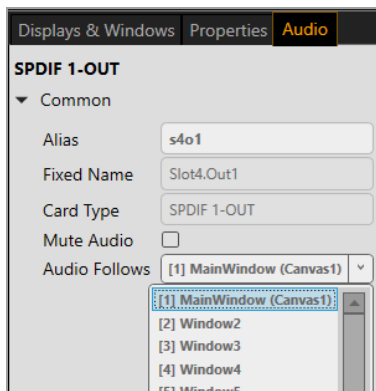


- Press and hold the button that corresponds to the window you want to hear, until it flashes red.

## 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

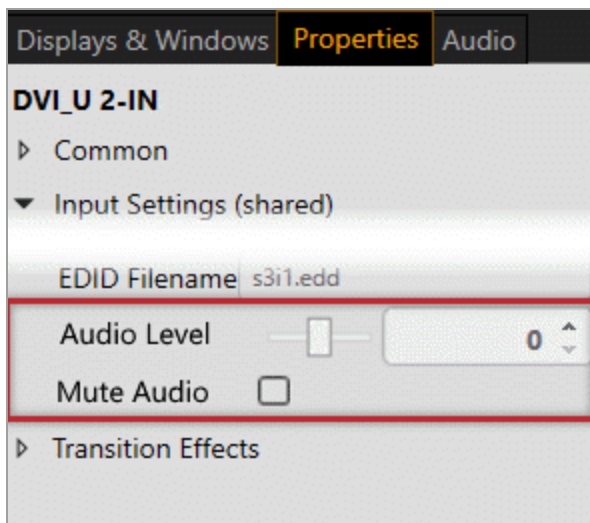
For each source, you can mute, unmute, and adjust the audio input level in CORIOgrapher™.



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.

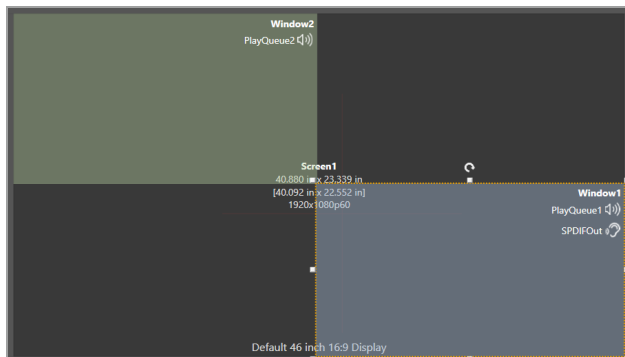
## Adjusting audio input level and muting using source properties

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™.

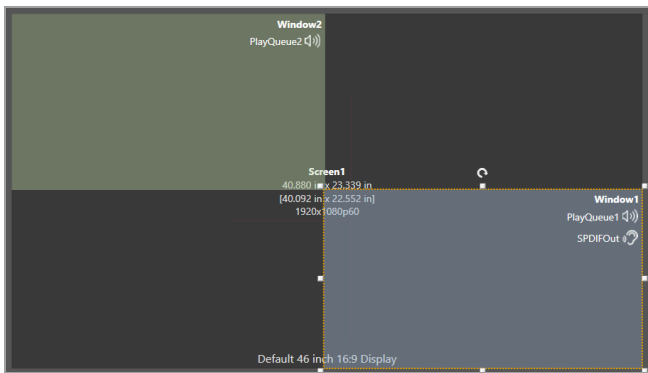
Muting using audio properties

- 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

|                                                                    |    |
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| Playing media and streams .....                                    | 78 |
| Creating and managing playlists .....                              | 87 |
| Using the internal drive .....                                     | 93 |
| Choosing the best resolution for your playlist or play queue ..... | 96 |

# 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

|                                                                                     |    |
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| Before you start .....                                                              | 79 |
| Adding and editing media streams .....                                              | 79 |
| Adding media items, streams, and playlists to your play queue .....                 | 81 |
| Playing a multicast stream from an Encoder-100 on multiple CORIOmaster™ units ..... | 82 |
| Changing the duration of media items .....                                          | 83 |
| Using the playback controls .....                                                   | 83 |
| Managing the play queue .....                                                       | 85 |
| Saving the play queue .....                                                         | 85 |
| Playing the play queue automatically .....                                          | 85 |
| Saving media to internal storage .....                                              | 86 |

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

MEDIA\_4K IN

▼ Common

Alias

Window1

Input Slot

PlayQueue1

▼

Input Name

Slot5.In1

Input Type

MEDIA\_4K IN

Resolution

1920x1080p60

HDCP

Off

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 60.

- 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 46.

## Adding and editing media streams

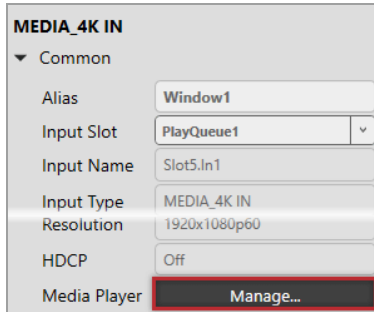
You can manually add media streams from your network or from the internet. You can configure and add streams from an Encoder-100.

Learn how to configure your Encoder-100 on page 31.

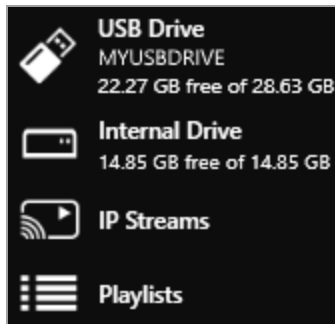
## To manually add a stream

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

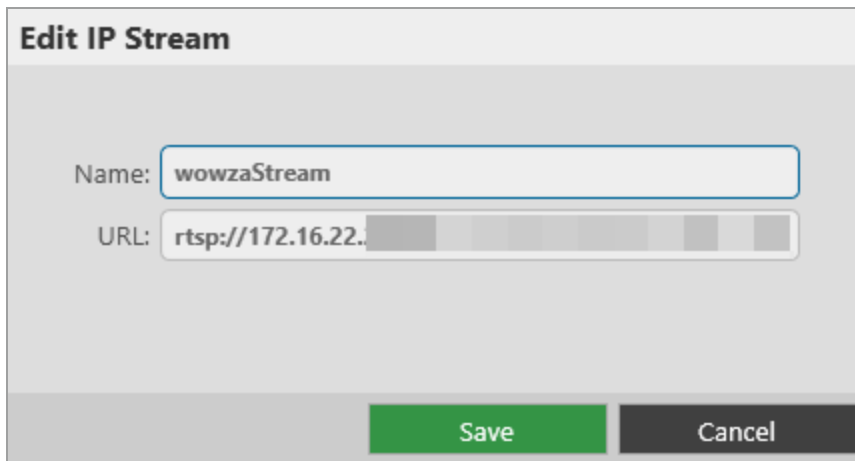
1. In CORIOgrapher™, double-click the window you wish to play streaming media, and select (Media Player) Manage.



2. Select IP Streams.



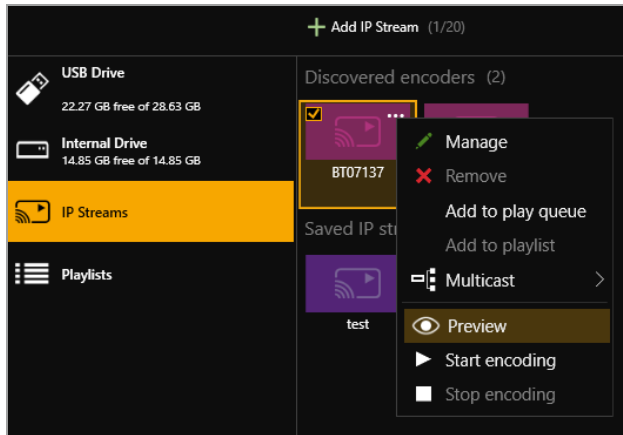
3. Select Add IP Stream.
4. Enter a descriptive name and the URL of the media stream, and then select Add IP Stream.
5. To edit the details of a media stream, select the stream and then select ... > Edit.
6. Edit the name or URL of the media stream.



## 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.



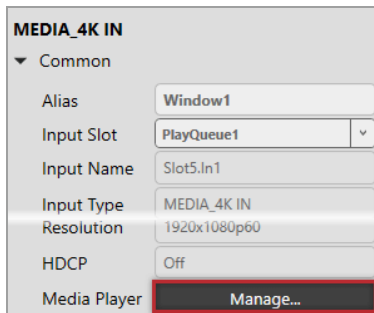
## Adding media items, streams, and playlists to your play queue

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.

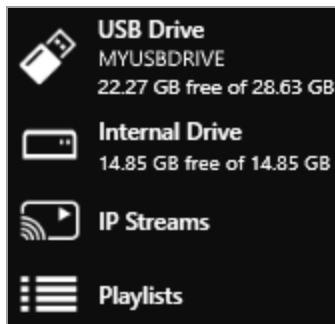
You can also add a playlist to a play queue. When you add a playlist to a play queue, the playlist replaces all the items in the play queue.

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



Saved stream



Video clip



Found encoder

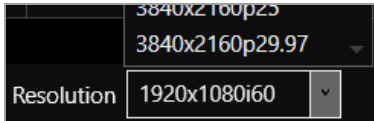


Playlist



Found encoder, streaming

4. Choose a resolution for your play queue.



Read about choosing the right resolution on page 96.

Read more about playlists on page 87.

See a list of supported video formats on page 133.

## 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™.

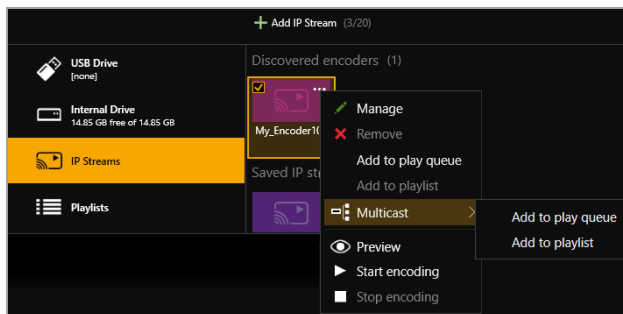
### Adding a multicast stream from an Encoder-100 to a play queue or playlist

- 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.

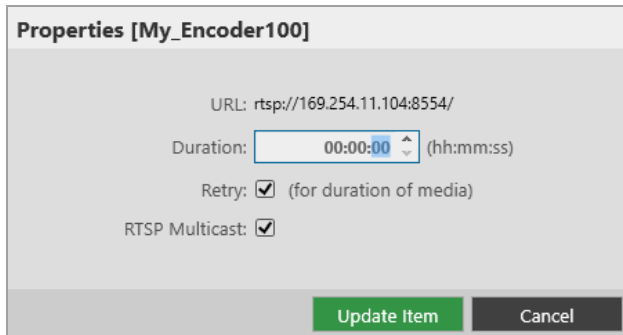
1. Select IP Streams.
2. Select the Encoder-100 you want to add.
3. Select **•••** > Multicast > Add to play queue or Add to playlist.



## 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.



The image shows a 'Properties [My\_Encoder100]' dialog box. It contains the following fields and controls:

- URL: rtsp://169.254.11.104:8554/
- Duration: 00:00:00 (hh:mm:ss) with up and down arrows.
- Retry: ☒ (for duration of media)
- RTSP Multicast: ☒
- Buttons: 'Update Item' (green) and 'Cancel' (grey).

## For best results

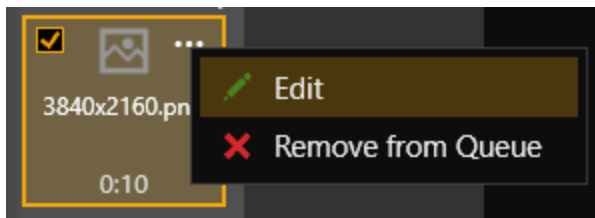
If you send a multicast stream on a large network, tvONE™ recommends using equipment with IPv4 multicast addressing, and/or IGMP v2 support. For more information, contact your network administrator.

## 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.

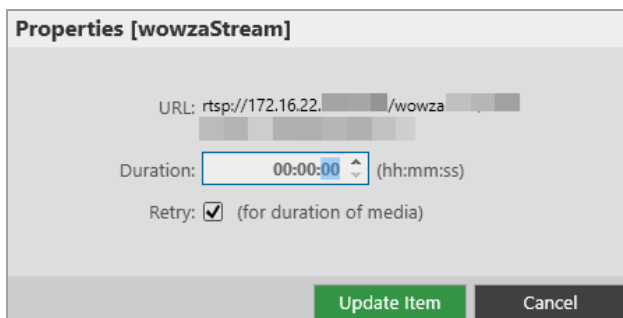
You can choose how long to play each media stream, video clip, or still image in the play queue.

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.

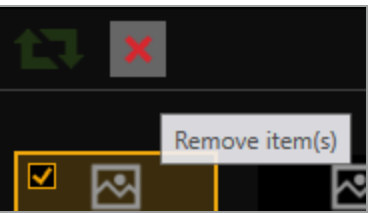
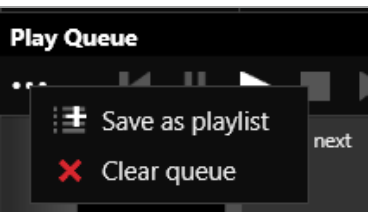


The image shows a 'Properties [wowzaStream]' dialog box. It contains the following fields and controls:

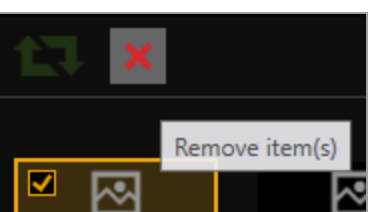
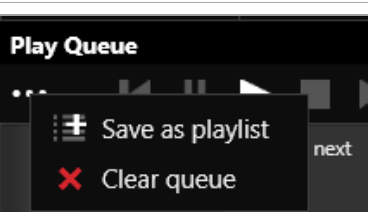
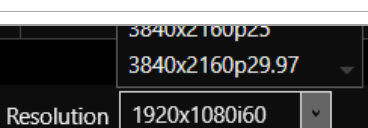
- URL: rtsp://172.16.22. /wowza
- Duration: 00:00:00 (hh:mm:ss) with up and down arrows.
- Retry: ☒ (for duration of media)
- Buttons: 'Update Item' (green) and 'Cancel' (grey).

## 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:

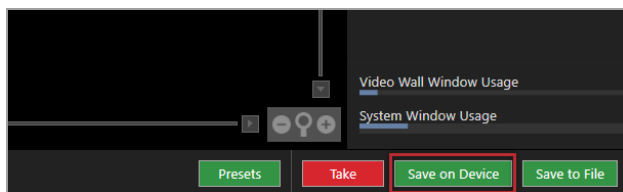
- Drag new media items or streams into the play queue, up to a total of 20 items.
- Drag items to re-order the play queue.
- Change the duration of a media item in the play queue.
- Remove any item from the play queue.
- Clear the entire play queue.
- Choose to play the play queue when your CORIOmaster™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

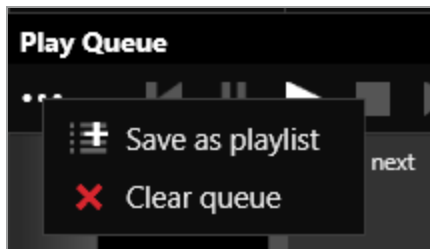
You can save your play queue so that it is available the next time you start your CORIOmaster™.

- Build your play queue and select **Save on Device**.



You can save your play queue as a playlist.

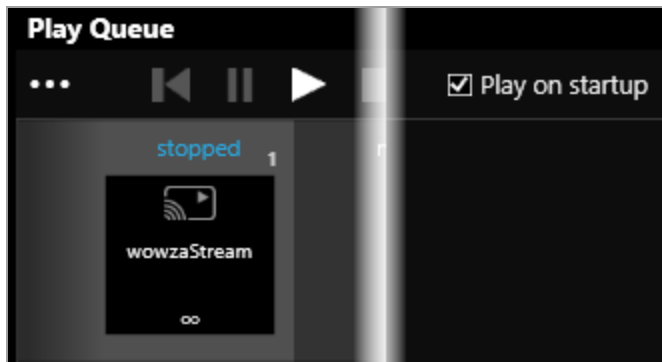
- Build your play queue and select **⋮ > Save as playlist**.



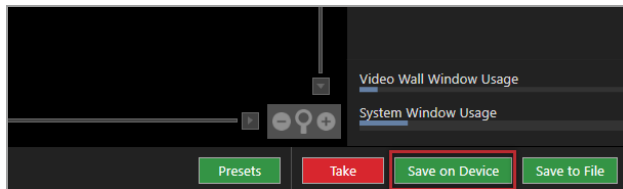
## Playing the play queue automatically

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 93.

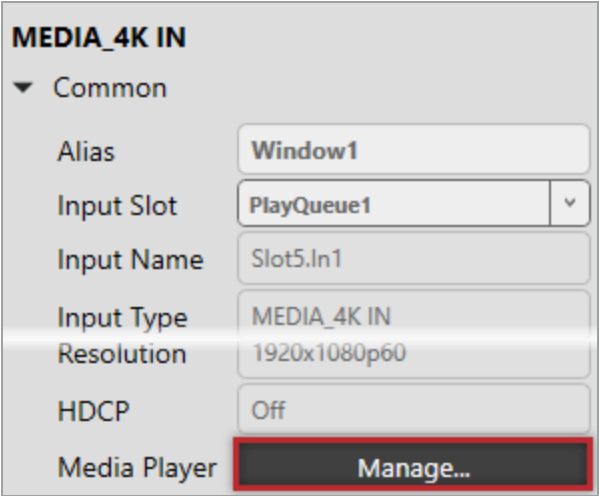
# Creating and managing playlists

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 .....                     | 87 |
| Creating a new playlist .....             | 88 |
| Saving the play queue to a playlist ..... | 89 |
| Managing and editing playlists .....      | 90 |
| Deleting a playlist .....                 | 92 |
| Moving playlists between modules .....    | 92 |
| Deleting all playlists .....              | 92 |
| Duplicating playlists .....               | 92 |

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



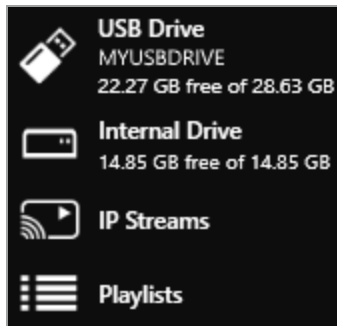
 The media player is not available when you work offline.

## 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.

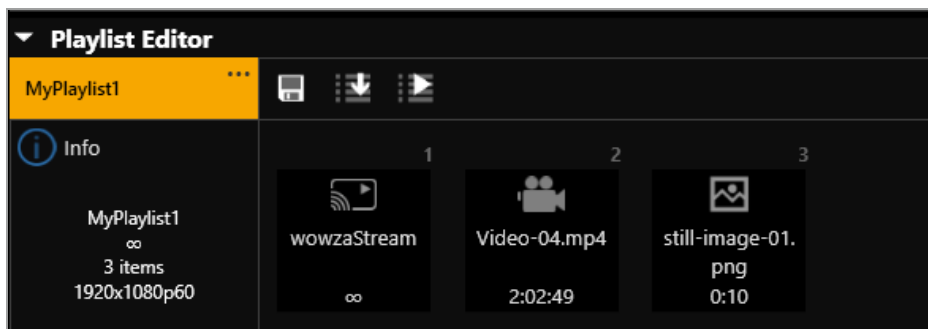
Names can be up to 64 characters long, or fewer, depending on your character set.

A light gray form with two fields. The first field is labeled 'Name:' and contains the text 'MyPlaylist1'. The second field is labeled 'Resolution:' and contains a dropdown menu with '1920x1080p60' selected.

Read about choosing the right resolution on page 96.

3. Select your new playlist.

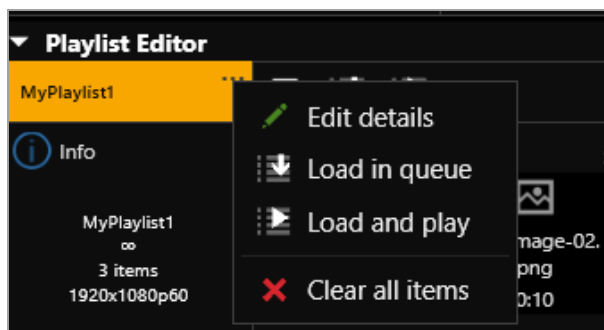
The playlist opens in the playlist editor. If the playlist editor is collapsed, select ► to open it.



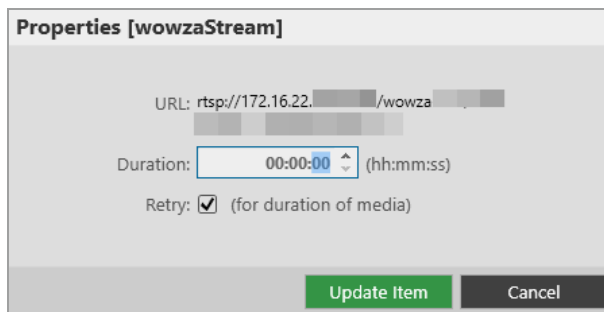
4. Drag up to 20 media items and streams from the media browser into the playlist editor.

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.



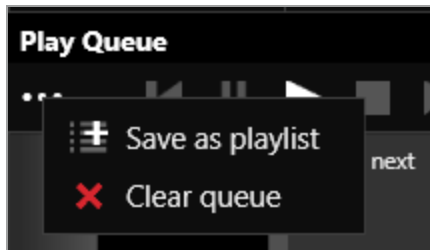
The 'Properties [wowzaStream]' dialog box contains the following fields and controls:

- URL: rtsp://172.16.22. /wowza
- Duration: 00:00:00 (hh:mm:ss) with up and down arrows for editing.
- Retry: ☒ (for duration of media)
- Buttons: 'Update Item' (green) and 'Cancel' (grey).

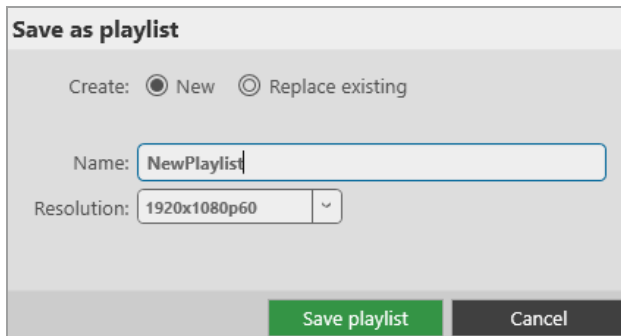
6. To save your playlist permanently, select .

## Saving the play queue to a playlist

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



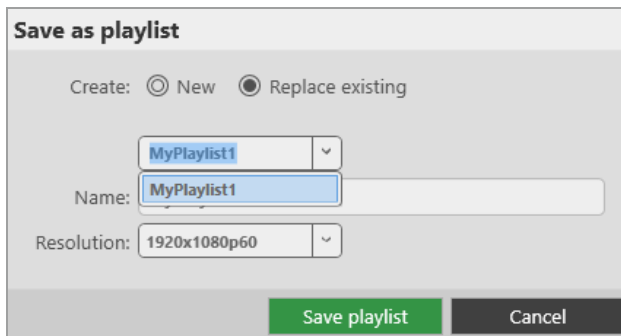
2. Choose to create a new playlist, or to replace an existing playlist.
3. If you create a new playlist, enter a name and choose a resolution for your playlist.



The 'Save as playlist' dialog box for creating a new playlist includes:

- Create: ☒ New ☐ Replace existing
- Name: NewPlaylist
- Resolution: 1920x1080p60
- Buttons: 'Save playlist' (green) and 'Cancel' (grey).

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.



The 'Save as playlist' dialog box for replacing an existing playlist includes:

- Create: ☐ New ☒ Replace existing
- A dropdown menu showing 'MyPlaylist1'.
- Name: MyPlaylist1
- Resolution: 1920x1080p60
- Buttons: 'Save playlist' (green) and 'Cancel' (grey).

Names can be up to 50 characters long.

Read about choosing the right resolution on page 96.

## 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.

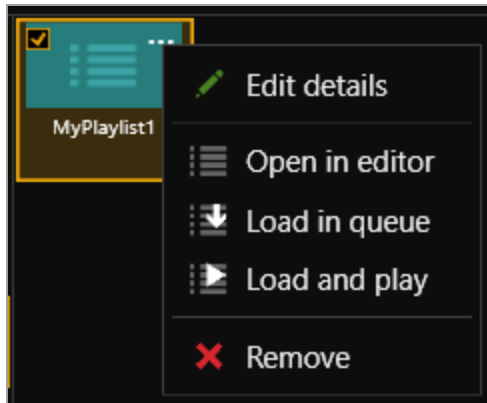
You can also manage the names and locations of your playlists in Settings > Playlists.

Read more about configuring playlist settings on page 63.

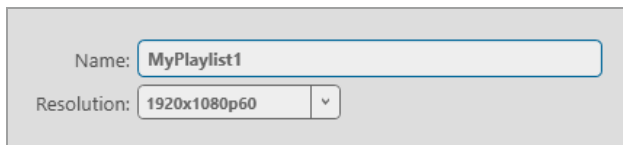
## Editing a playlist

You can change the name and resolution of a playlist.

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

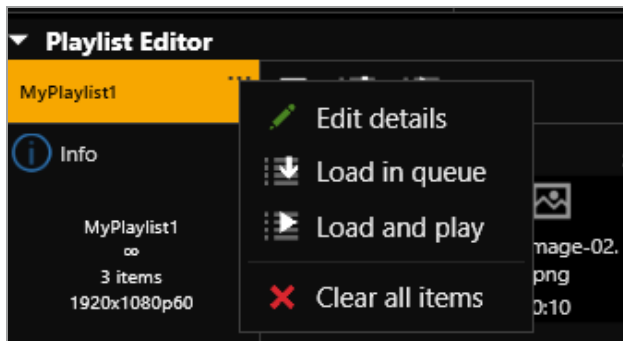


3. Enter a new name or choose a new resolution.

A screenshot of a form used for editing a playlist. It has a light gray background. The 'Name:' label is followed by a text input field containing 'MyPlaylist1'. Below it, the 'Resolution:' label is followed by a dropdown menu showing '1920x1080p60'.

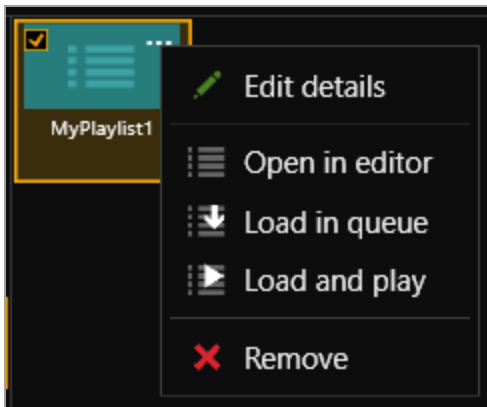
## Clearing all the items from a playlist

- 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

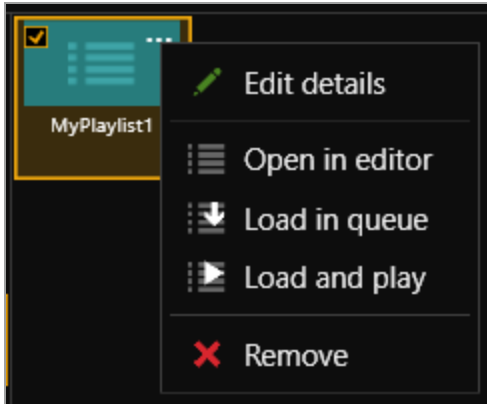
When you load and play a playlist, any items in the play queue are replaced.

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

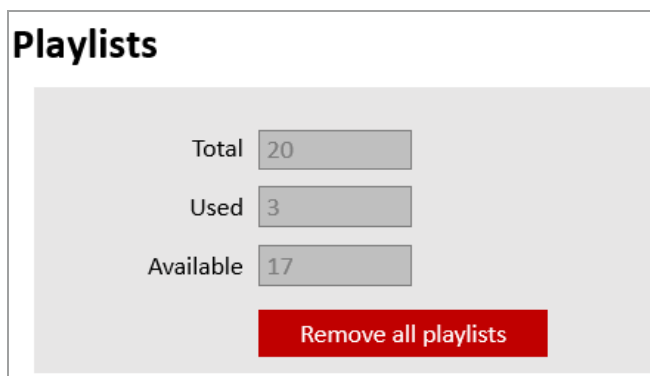
You can change the slot that a playlist is associated with in Settings > Playlists.

| Number | Name                                    | Module                             | Resolution   |                         |
|--------|-----------------------------------------|------------------------------------|--------------|-------------------------|
| 1      | <input type="text" value="Playlist 1"/> | <input type="text" value="Slot2"/> | 1920x1080p60 | <button>Remove</button> |
| 2      | <input type="text" value="Playlist 2"/> | <input type="text" value="Slot2"/> | 1920x1080p60 | <button>Remove</button> |
| 3      | <input type="text" value="Playlist 3"/> | <input type="text" value="Slot2"/> | 1280x720p60  | <button>Remove</button> |

Read more about configuring playlist settings on page 62.

## Deleting all playlists

You can delete all your playlists in Settings > Playlists.



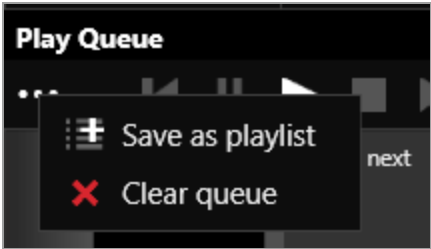
Read more about configuring playlist settings on page 62.

## 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.

A screenshot of a "Save as playlist" dialog box. It has a title bar "Save as playlist". Below the title bar, there are two radio buttons: "Create: New" (selected) and "Replace existing". Below that is a text field labeled "Name:" containing the text "NewPlaylist". Below the text field is a dropdown menu labeled "Resolution:" with the value "1920x1080p60". At the bottom of the dialog are two buttons: "Save playlist" (green) and "Cancel" (grey).

- 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.

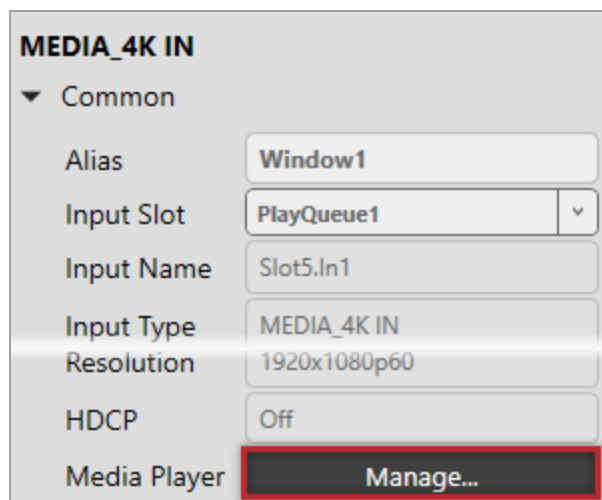
Using the internal drive

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 ..... | 94 |
| Removing all items from the internal drive .....                                | 95 |
| Current location .....                                                          | 95 |
| Copying a single item or folder to the internal drive .....                     | 95 |
| Managing media on the internal drive .....                                      | 95 |
| Playing items from the internal drive .....                                     | 96 |

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

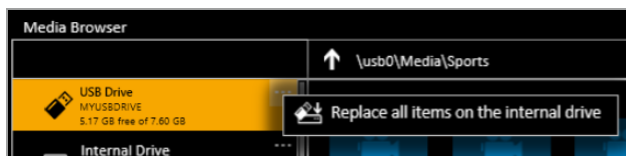
✓ Use this option when you first set up your Streaming media and 4K playback input module to quickly copy all your media items from your USB drive to the internal drive.

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 133.

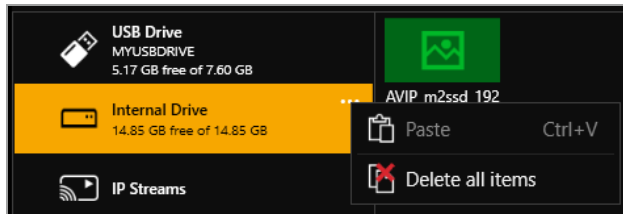
- Select (USB Drive)⋮> Replace all items on the internal drive.



## 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

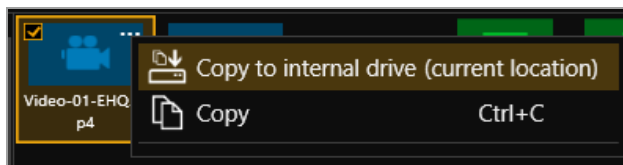
When you copy media items from your USB drive to the internal drive, the items are copied to the last location you visited on the internal drive.

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).

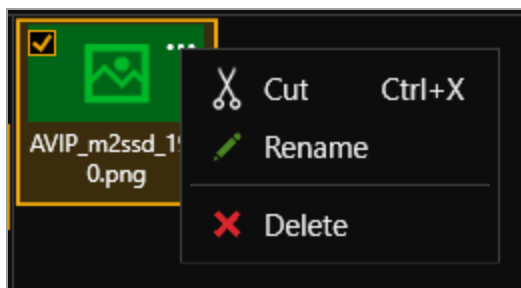


You can also copy or cut and paste individual items and folders from your USB drive to the internal drive with Ctrl+C or Ctrl+X, and Ctrl+V.

## Managing media on the internal drive

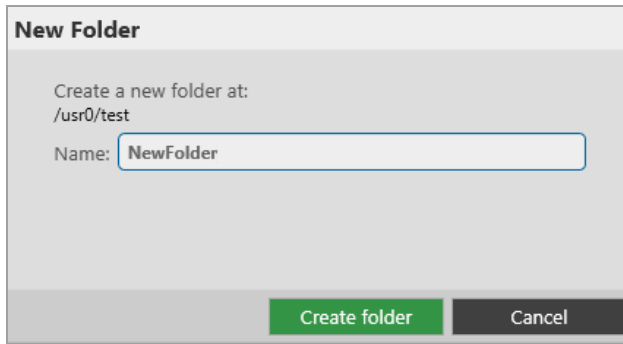
From Internal Drive, you can:

- 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.



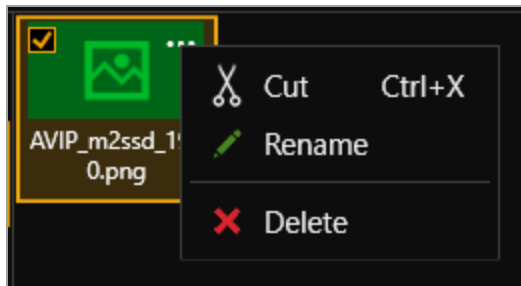
- Create a new folder.

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.

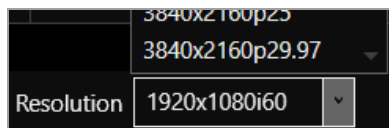
Read more about playing media and streams on page 78.

Read more about playlists on page 87.

## 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)

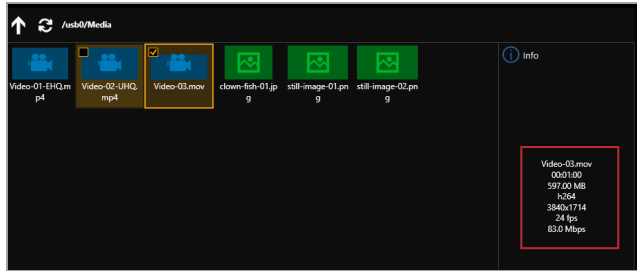
Where **p** means progressive scanning, and **i** means interlaced scanning.

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 <b>60</b> | 3840x2160p <b>60</b> | 1600x1200p <b>60</b> |

- 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 <b>60</b>   | 3840x2160p <b>30</b> | 1600x1200p <b>60</b> | 60              | 60 is a factor of both frame rates.<br>60/60 = 1<br>60/30 = 2                                       |
| ✓ | 3840x2160p <b>25</b>   | 1920x1080p <b>50</b> | 1280x720p <b>50</b>  | 50              | 50 is a factor of both frame rates.<br>50/50 = 1<br>50/25 = 2                                       |
| ✗ | 1280x720p <b>23.98</b> | 1280x720p <b>24</b>  | 1920x1080p <b>60</b> | -               | 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™.

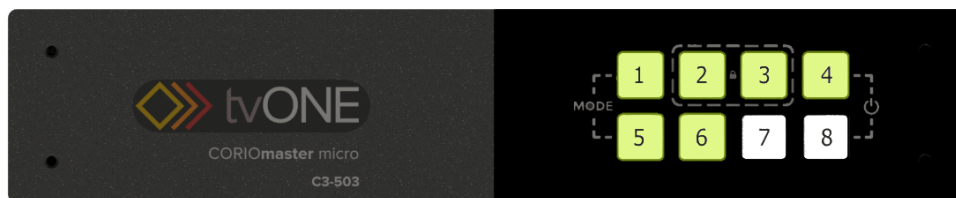
### In this section

|                                                                                      |    |
|--------------------------------------------------------------------------------------|----|
| Changing between preset and source selection mode with your CORIOmaster micro™ ..... | 98 |
| Locking your CORIOmaster micro™ .....                                                | 98 |

## 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.

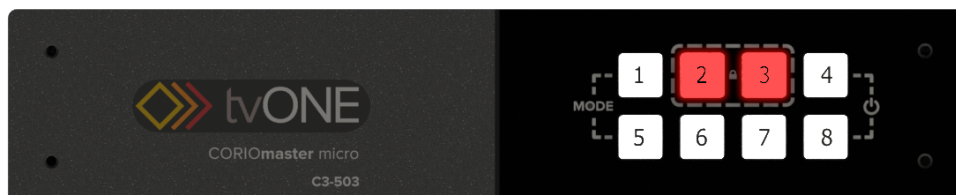


## Locking your CORIOmaster micro™

### Locking your CORIOmaster micro™ with the front panel

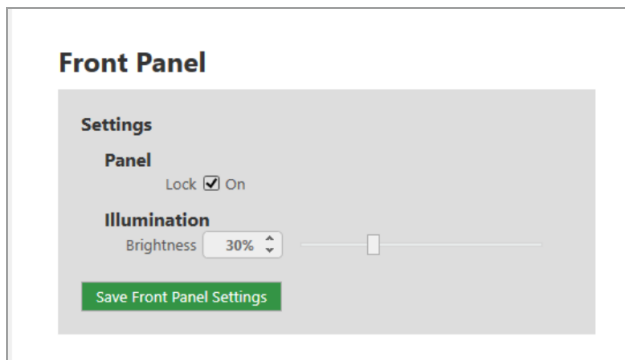
To lock and unlock your CORIOmaster micro™, press and hold buttons 2 and 3.

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.



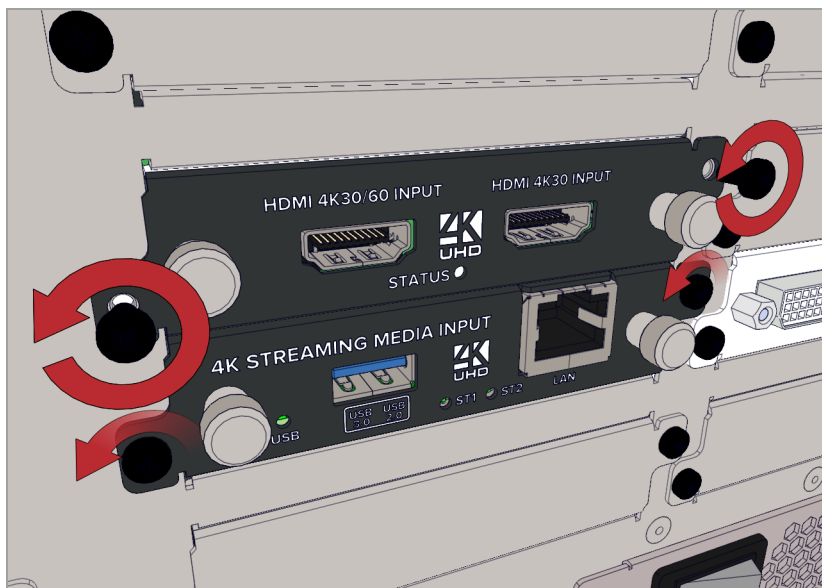
## Replacing a module

### Risk of damaging modules

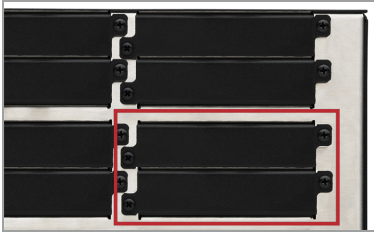
Take care when you replace modules. If the components of modules touch other modules, or the metal chassis, they can be damaged. If you don't have experience, ask a qualified technician for help.



## Removing a module from your CORIOmaster™

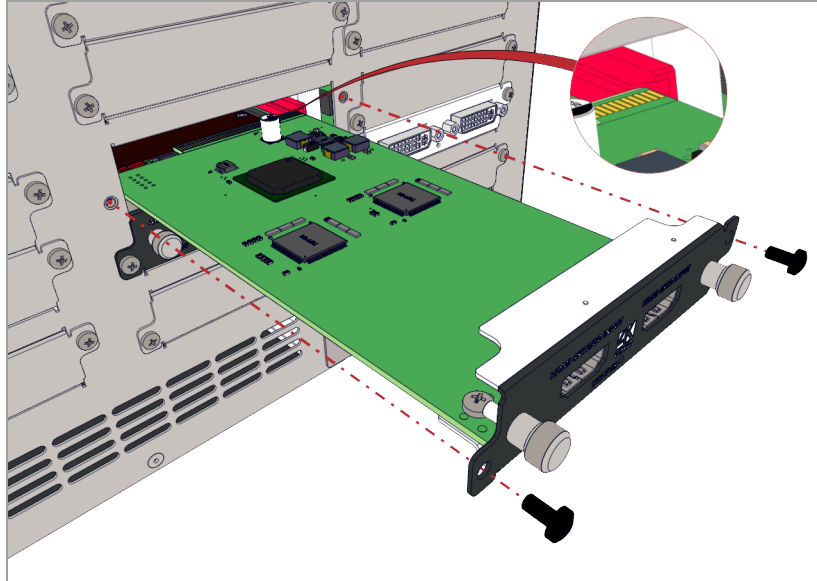


1. Unscrew the module that you want to replace.
2. Loosen the screws of the module above or below the module that you want to replace.



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.

## Removing a module from a CORIOmaster micro™

If you need to replace the module in slot 3, first remove the module in slot 1.



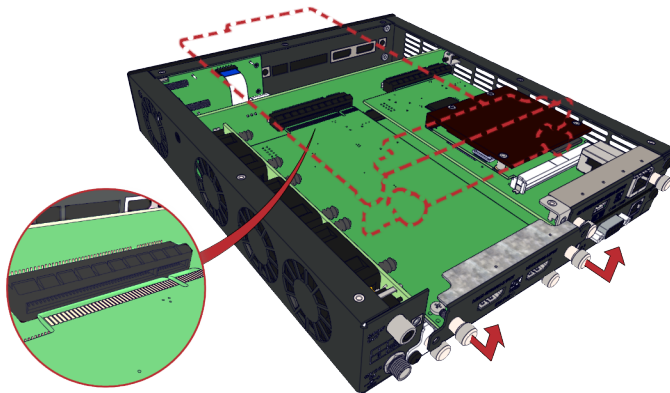
1. Remove the top cover of your CORIOmaster micro™.



2. Remove the screws of the module or modules you want to replace. Loosen the screws of the module below the module that you want to replace.

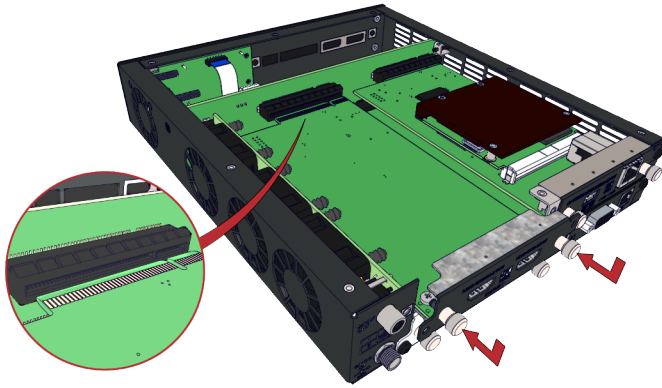


3. Grip the silver handles and pull the module forward a short distance, out of the dock on the back plane. Lift the module out of your CORIOmaster micro™. Keep the module flat.



## Inserting a module into your CORIOmaster micro™

1. Carefully lower the module into your CORIOmaster micro™, and then push the module firmly into the dock on the back plane.



2. Replace the screws and do them up loosely.
3. Replace the top cover of your CORIOmaster micro™.



4. Tighten all screws.

# Creating and editing custom resolutions

You can use CORIOdiscover™ to create and save up to 10 custom resolutions to use on your CORIOmaster™ or CORIOmatrix™ device. Custom resolutions are for both inputs and outputs. You can get the specific values for creating a custom resolution from the manufacturer of your source or display.

View standard resolutions and create custom resolutions in the resolution editor of CORIOdiscover™. Open CORIOdiscover™, select your device, and then select Resolution Editor.

CORIOdiscover

Discovered CORIOmax devices

> CORIOmaster

IP 1, S/N

1 [ In\_Use ]

> CORIOmaster

IP 1, S/N

My CORIOmatrix mini

CORIOmatrix mini

IP 1, S/N

Open

Configure

Update

Resolution Editor

Resolutions

all

custom only

| #  | IO | Name          | Width | Height | Frequency | Pixel Clock | Actions         |
|----|----|---------------|-------|--------|-----------|-------------|-----------------|
| 1  | IO | 640x480p60    | 640   | 480    | 59.941    | 25.175      | <div>Copy</div> |
| 2  | IO | 640x480p72    | 640   | 480    | 72.810    | 31.500      | <div>Copy</div> |
| 3  | IO | 640x480p75    | 640   | 480    | 75.000    | 31.500      | <div>Copy</div> |
| 4  | IO | 640x480p85    | 640   | 480    | 85.008    | 36.000      | <div>Copy</div> |
| 5  | IO | 720x487i59.94 | 720   | 487    | 59.940i   | 13.500      | <div>Copy</div> |
| 6  | IO | 720x480i59.94 | 720   | 480    | 59.940i   | 13.500      | <div>Copy</div> |
| 7  | IO | 720x480p59.94 | 720   | 480    | 59.941    | 27.000      | <div>Copy</div> |
| 8  | IO | 720x576i50    | 720   | 576    | 50.000i   | 13.500      | <div>Copy</div> |
| 9  | IO | 720x576p50    | 720   | 576    | 50.000    | 27.000      | <div>Copy</div> |
| 10 | IO | 800x600p56    | 800   | 600    | 56.250    | 36.000      | <div>Copy</div> |
| 11 | IO | 800x600p60    | 800   | 600    | 60.317    | 40.000      | <div>Copy</div> |
| 12 | IO | 800x600p72    | 800   | 600    | 72.188    | 50.000      | <div>Copy</div> |
| 13 | IO | 800x600p75    | 800   | 600    | 75.000    | 49.500      | <div>Copy</div> |
| 14 | IO | 800x600p85    | 800   | 600    | 85.062    | 56.250      | <div>Copy</div> |

Detailed Information

Name:

640x480p60

Scan type:

Progressive

CEA ID: 1

Pixel Clock:

25.175 MHz

Aspect: 4:3

Horizontal

Vertical

Total pixels:

800

525

Active pixels:

640

480

Front Porch (pixels):

16

10

Sync Pulse (pixels):

96

2

Back Porch (pixels):

48

33

Polarity:

Negative

Negative

Frequency:

31.469 kHz

59.941 Hz

Select a resolution to see detailed information on the right-hand side.

## In this article

About custom resolutions .....104

Custom resolution options .....105

Creating and editing custom resolutions ..... 107

Creating a custom resolution from a video standard .....108

Copying and editing a standard resolution .....109

Deleting a custom resolution .....110

## About custom resolutions

### Guidelines for all custom resolutions

- All numeric values are in pixels, unless otherwise stated.
- All numeric values are positive integers, or zero.
- String values may not contain spaces.
- String values may only be valid, printable ASCII characters.
- Strings have a limited number of characters.
- For resolutions with HActive up to and including 1920 pixels, the pixel clock must be between 13.5 MHz and 162 MHz.
  - You can also have a pixel clock of 297 MHz, on the HDMI output module only.
- The value for active video cannot be zero.
- The maximum size for a resolution created for a DVI module is 1920x1200 @60 Hz.

### Supported video standards

- VESA CVT
- CEA-861-D
- VESA DMT

### Not supported

You can't create custom resolutions for SDI sources or displays.

### Guidelines for 4K custom resolutions

If the HActive value is not divisible by 64, you cannot rotate the output.

The maximum values for a 4K custom resolution are:

- HActive = 3840
- VActive = 2528
- Pixel clock = 297 MHz

Supported values for pixel clocks, for resolutions with HActive > 1920:

- 27 MHz
- 74.175824 MHz
- 74.25 MHz
- 148.351648 MHz
- 148.5 MHz
- 260 MHz
- 296.703296 MHz
- 297 MHz



If the pixel clock your source or display is within 0.0001 MHz of a value in this list, it might work, depending on your other settings. If you can't see anything on your display, try using the exact values given here.

## Guidelines for interlaced custom resolutions

- The vertical front and back porches must be twice the even field.
- The vertical sync pulse must be twice the even value.

## Custom resolution options

When you create a custom resolution, you need to enter values for the following options. The values come from the manufacturer of your source or display.

|                       |                                               |         |                                           |
|-----------------------|-----------------------------------------------|---------|-------------------------------------------|
| Name:                 | <input type="text" value="3840x2160p29.97"/>  |         | ×                                         |
| Scan type:            | <input type="text" value="Progressive"/>      | CEA ID: | <input type="text" value="95"/>           |
| Pixel Clock (MHz):    | <input type="text" value="296.703296 MHz"/>   | Aspect: | <input type="text" value="16:9"/>         |
|                       | Horizontal                                    |         | Vertical                                  |
| Total pixels:         | <input type="text" value="4400"/>             |         | <input type="text" value="2250"/>         |
| Active pixels:        | <input type="text" value="3840"/>             |         | <input type="text" value="2160"/>         |
| Front Porch (pixels): | <input type="text" value="176"/>              |         | <input type="text" value="8"/>            |
| Sync Pulse (pixels):  | <input type="text" value="88"/>               |         | <input type="text" value="10"/>           |
| Back Porch (pixels):  | <input type="text" value="296"/>              |         | <input type="text" value="72"/>           |
| Polarity:             | <input type="text" value="Positive"/>         |         | <input type="text" value="Positive"/>     |
| Frequency:            | <input type="text" value="67.432567272 kHz"/> |         | <input type="text" value="29.970029 Hz"/> |

| Option | Notes                                    |
|--------|------------------------------------------|
| Name   | Enter a useful name for your resolution. |

### General naming rules

**Note:** it is possible to create more than one custom resolution with the same name. Check the list of custom resolutions available from [Resolutions](#).

Names:

- Can be 1–23 characters long.
- May only contain valid, printable ASCII characters.
- Must not contain spaces.

### Best practice naming rules

For best results, use the name format below:

[width]x[height][scantype][rate][optional]

Where:

- [width] and [height] are values in pixels
- X is the letter x
- [scantype] is i or p
- [rate] is the frame rate, and can contain a decimal point
- [optional] is any additional, optional, text

| Option        | Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |       |      |     |     |       |     |     |         |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|------|-----|-----|-------|-----|-----|---------|
| Scan type     | Choose between progressive and interlaced scanning.                                                                                                                                                                                                                                                                                                                                                                                                                      |         |       |      |     |     |       |     |     |         |
| CEA ID        | <p>Only enter a value when you define a custom resolution that complies with the CEA-861-D profile for that value.</p> <p>The CEA identifier information option (CEA ID) does not affect the custom resolution. It is there for providing information on the resolution to any connected equipment.</p> <p>If you enter a value for CEA ID and your custom resolution does not conform to the CEA format for that value, you might not see an image on your display.</p> |         |       |      |     |     |       |     |     |         |
| Pixel Clock   | <p>Enter a value between 13.5 and 162 MHz, or, for 4K resolutions, see the guidelines for 4K custom resolutions.</p> <p>Read the guidelines on page 104.</p> <p>If the specification of your source or display does not include a value for pixel clock, set the vertical and horizontal frequency instead. See below.</p>                                                                                                                                               |         |       |      |     |     |       |     |     |         |
| Aspect        | <p>If you are creating a custom resolution for a CORIOmatrix™ or CORIOmatrix™ mini, select an aspect ratio from the list. Choose from:</p> <table><tr><td>16:9</td><td>16:10</td><td>16:6</td></tr><tr><td>4:3</td><td>5:3</td><td>64:27</td></tr><tr><td>5:4</td><td>1:1</td><td>256:135</td></tr></table>                                                                                                                                                              | 16:9    | 16:10 | 16:6 | 4:3 | 5:3 | 64:27 | 5:4 | 1:1 | 256:135 |
| 16:9          | 16:10                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 16:6    |       |      |     |     |       |     |     |         |
| 4:3           | 5:3                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 64:27   |       |      |     |     |       |     |     |         |
| 5:4           | 1:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 256:135 |       |      |     |     |       |     |     |         |
| Active pixels | <p>Enter a number of pixels between 64 and 3840 to set the width of the visible image.</p> <p>Enter a number of pixels between 64 and 2528 to set the height of the visible image.</p>                                                                                                                                                                                                                                                                                   |         |       |      |     |     |       |     |     |         |
| Front Porch   | <p>The front porch is the gap between the end of the active video and the start of the sync pulse, in pixels.</p> <p>Enter a number of pixels between 1 and 2000 to set the horizontal and vertical front porch.</p>                                                                                                                                                                                                                                                     |         |       |      |     |     |       |     |     |         |
| Sync Pulse    | <p>The sync pulse identifies the start of each row or frame of video.</p> <p>Enter a number of pixels between 8 and 500 to set the horizontal sync pulse.</p> <p>Enter a number of pixels between 10 and 100 to set the vertical sync pulse.</p>                                                                                                                                                                                                                         |         |       |      |     |     |       |     |     |         |
| Back Porch    | <p>The back porch is the gap between the end of the sync pulse and the start of the active video, in pixels.</p> <p>Enter a number of pixels between 1 and 2000 to set the horizontal back porch.</p> <p>Enter a number of pixels between 1 and 100 to set the vertical back porch.</p>                                                                                                                                                                                  |         |       |      |     |     |       |     |     |         |
| Polarity      | <p>The sync pulse separates the video fields into positive and negative polarity.</p> <p>Choose between positive and negative.</p>                                                                                                                                                                                                                                                                                                                                       |         |       |      |     |     |       |     |     |         |
| Frequency     | <p>You only need to enter values here if the specification for your source or display specification does not include a value for pixel clock.</p> <p>Enter a value in kHz to set the horizontal frequency, and a value in Hz to set the vertical frequency.</p>                                                                                                                                                                                                          |         |       |      |     |     |       |     |     |         |

Options for custom resolutions based on the VESA CVT standard

Edit Custom Resolution 1000

Standard: CVT v1.2 Reduced Blanking (VESA Coordinated Video Timing)

Options:

Version: V2Factor: 1000

Horizontal

Desired Active pixels: 1920

Desired Frame Rate:

Scan type:

Vertical

1080

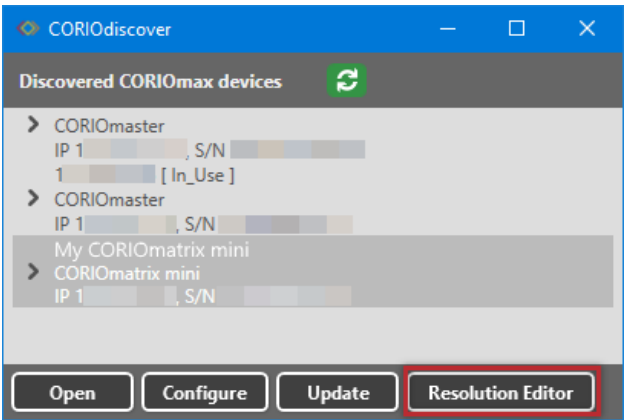
60

Progressive

| Option                | Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version               | Enter the version number of the VESA CVT standard you want to use.                                                                                                                                                                                                                                                                                                                                                                                   |
| Factor                | <div>The factor converts your desired frame rate into a vertical frequency. Choose between 1000 and 1001.</div> <div><div>Select 1000 to make the vertical frequency the same as your desired frame rate.</div><div>Select 1001 if you need a vertical frame rate that does not exactly match your desired frame rate.</div></div> <div>For example, select 1001 if your desired frame rate is 60, but you need a vertical frequency of 59.94.</div> |
| Desired Active pixels | <div>Enter a number of pixels to set the width and height of the displayed area.</div> <div>The highest resolution we support is 1920x1200p60, with reduced blanking. See the VESA standard for other CVT standard resolutions.</div>                                                                                                                                                                                                                |
| Desired Frame Rate    | Enter a frame rate in Hz.                                                                                                                                                                                                                                                                                                                                                                                                                            |

Creating and editing custom resolutions

1. Select your device, and then select Resolution Editor.



2. Enter your administrator username and password.
- The default username is admin, and the default password is adminpw.

3. Select custom only.

**Resolutions**

☐ all ☒ custom only

| #    | IO | Name      | V |
|------|----|-----------|---|
| 1000 | IO | Empty1000 | 0 |

4. Find an empty custom slot, or choose a custom resolution to edit, and then select Edit.
5. Enter a useful name for your custom resolution.
6. Enter values for any other options as needed.

**Name:** 3840x2160p29.97 ✕

**Scan type:** Progressive ▼ **CEA ID:** 95

**Pixel Clock (MHz):** 296.703296 MHz **Aspect:** 16:9 ▼

|                       | Horizontal              | Vertical                |
|-----------------------|-------------------------|-------------------------|
| Total pixels:         | 4400                    | 2250                    |
| Active pixels:        | 3840                    | 2160                    |
| Front Porch (pixels): | 176                     | 8                       |
| Sync Pulse (pixels):  | 88                      | 10                      |
| Back Porch (pixels):  | 296                     | 72                      |
| Polarity:             | Positive <span>▼</span> | Positive <span>▼</span> |
| Frequency:            | 67.432567272 kHz        | 29.970029 Hz            |

Read about rules for names and other options on page 105.

## Creating a custom resolution from a video standard

### Creating a custom resolution from the CEA-861-D or VESA DMT standard

1. From **Resolutions**, find an empty custom slot, or choose a custom resolution to edit, and then select **Edit**.
2. Select your standard from the list.

**Edit Custom Resolution 1000**

**Standard:** Manually create a custom resolution ▼

**Options:**

- Manually create a custom resolution
- CVT v1.2 Standard (VESA Coordinated Video Timing)
- CVT v1.2 Reduced Blanking (VESA Coordinated Video Timing)
- DMT 1.0r11 (VESA Display Monitor Timing)
- CEA-861-D (Consumer Electronics Association)

- Enter required resolution, refresh rate, and pixel clock.  
- Set Factor to 1001 if you are using a Video Optimized Frequency.

3. Select a resolution from the list.

**Edit Custom Resolution 1000**

Standard: DMT 1.0r11 (VESA Display Monitor Timing) ▼

Options:

Resolutions: 640x400p85-DM02 ▼

- 640x400p85-DM02
- 720x400p85-DM03
- 640x480p60-DM04
- 640x480p72-DM05
- 640x480p75-DM06
- 640x480p85-DM07
- 800x600p120-RB-DM0D

4. Enter a useful name for your custom resolution.
5. Enter values for any other available options as needed.

### Creating a custom resolution from the VESA CVT standard

1. From Resolutions, find an empty custom slot, or choose a custom resolution to edit, and then select Edit.
2. Select your standard from the list.

**Edit Custom Resolution 1000**

Standard: Manually create a custom resolution ▼

Options:

- Manually create a custom resolution
- CVT v1.2 Standard (VESA Coordinated Video Timing)
- CVT v1.2 Reduced Blanking (VESA Coordinated Video Timing)
- DMT 1.0r11 (VESA Display Monitor Timing)
- CEA-861-D (Consumer Electronics Association)

- Manual  
- For Int  
- Front  
- Enter r  
- Set Factor to 1001 if you are using a Video Optimized Frequency.

3. Enter a useful name for your custom resolution.
4. Enter values for any other available options as needed.

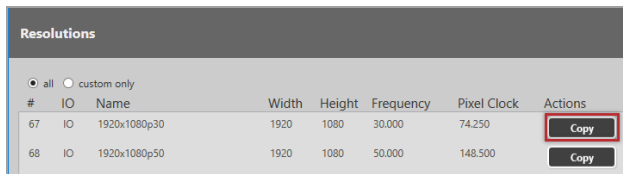
Read about rules for names and other options on page 105.

### Copying and editing a standard resolution

If you want to create a custom resolution that is only slightly different to a standard resolution, you can copy the closest resolution and then edit it.

CORIOdiscover™ saves the new custom resolution in the first available empty slot. If there are no empty slots available, choose which custom resolution to overwrite.

1. From **Resolutions**, find the resolution closest to the resolution you want, and select **Copy**.



The screenshot shows a window titled "Resolutions" with a table of resolution settings. At the top, there are radio buttons for "all" (selected) and "custom only". The table has columns for #, IO, Name, Width, Height, Frequency, Pixel Clock, and Actions. Two rows are visible, both with IO "IO". The first row has Name "1920x1080p30", Width 1920, Height 1080, Frequency 30.000, and Pixel Clock 74.250. The second row has Name "1920x1080p50", Width 1920, Height 1080, Frequency 50.000, and Pixel Clock 148.500. In the Actions column, the "Copy" button for the first row is highlighted with a red rectangular box.

| #  | IO | Name         | Width | Height | Frequency | Pixel Clock | Actions |
|----|----|--------------|-------|--------|-----------|-------------|---------|
| 67 | IO | 1920x1080p30 | 1920  | 1080   | 30.000    | 74.250      | Copy    |
| 68 | IO | 1920x1080p50 | 1920  | 1080   | 50.000    | 148.500     | Copy    |

2. Edit your new custom resolution.

For full instructions, see [Creating custom resolutions](#) on page 107.

## Deleting a custom resolution

You can't delete a custom resolution, but you can return it to factory default settings, which removes your custom settings.

- From **Resolutions**, find the custom resolution you want to delete, and select **Reset**.

## 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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## 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 53.

### Before you start

To install the latest CORIOmaster™ firmware, you need CORIODiscover™ V1.4 or above. V1.4 of CORIODiscover™ is available from the CORIOmaster™ C3-540 page at [tvone.com/firmware-updates](http://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](http://tvone.com/firmware-updates).

Select your device from the list and compare the firmware version to your own.

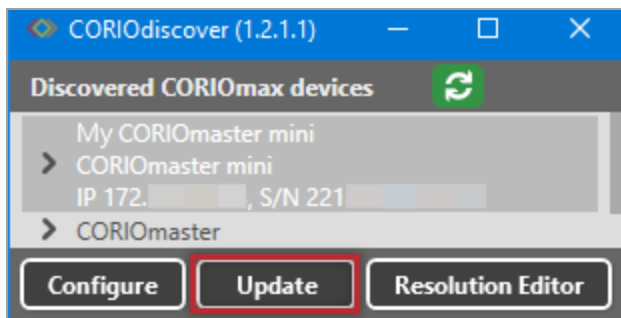
- If you have a CORIOmaster™, select CORIOmaster™ C3-540.
- If you have a CORIOmaster mini™, select CORIOmaster mini™ C3-510.
- If you have a CORIOmaster micro™, select CORIOmaster micro™ C3-503.

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

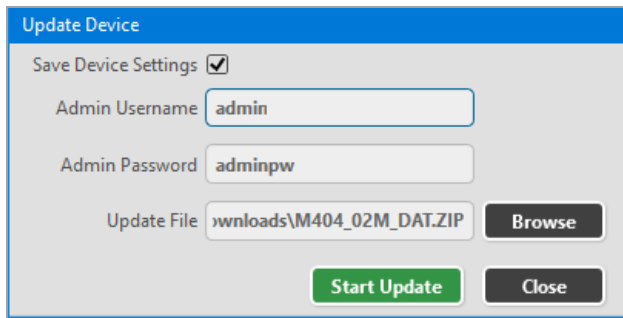
1. In CORIODiscover™, select ↻.



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.

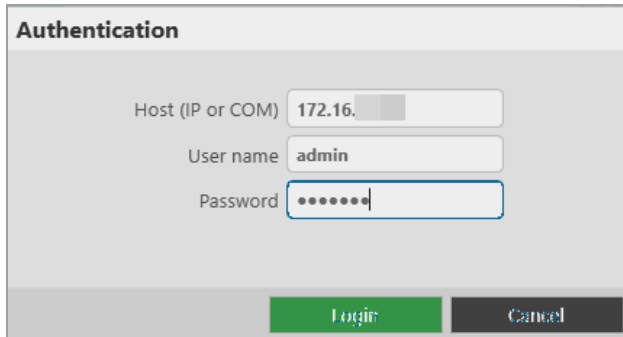
8. Find the IP address of your CORIOmaster™ in the `IP_Address` property and make a note of it.

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.

A screenshot of an 'Authentication' dialog box. It has a title bar with the word 'Authentication' in bold. Below the title bar, there are three input fields: 'Host (IP or COM)' with the value '172.16.', 'User name' with the value 'admin', and 'Password' with a masked password of seven dots. At the bottom of the dialog, there are two buttons: a green 'Login' button and a grey 'Cancel' button.

**Authentication**

Host (IP or COM) 172.16.

User name admin

Password .....

Login Cancel

### 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.

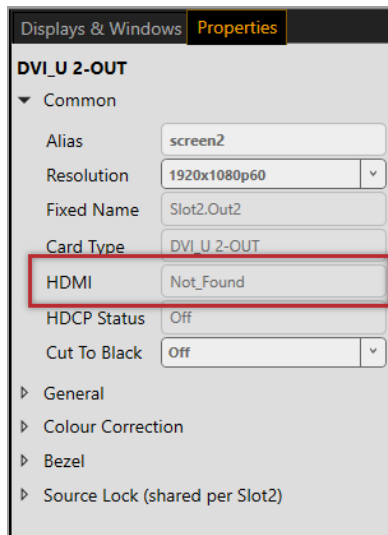
Read about changing the IP address of your CORIOmaster™ on page 59.

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](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto: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.



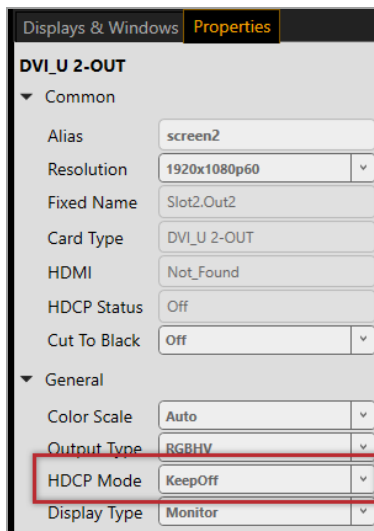
### Why does this happen?

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](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto: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](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto:tech.europe@tvone.com).

## The video signal from my Encoder-100 is delayed

### What's the problem?

I am streaming an HDMI™ signal from my Encoder-100. The video is delayed.

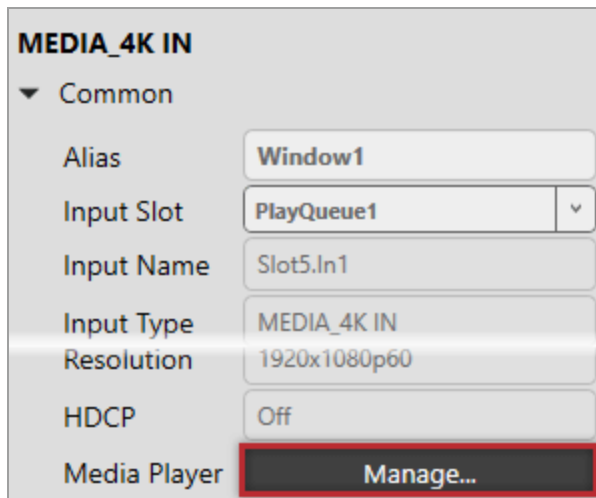
### Why does this happen?

- If there's no embedded audio in the HDMI signal, but you selected HDMI as your audio source, the video can be delayed.

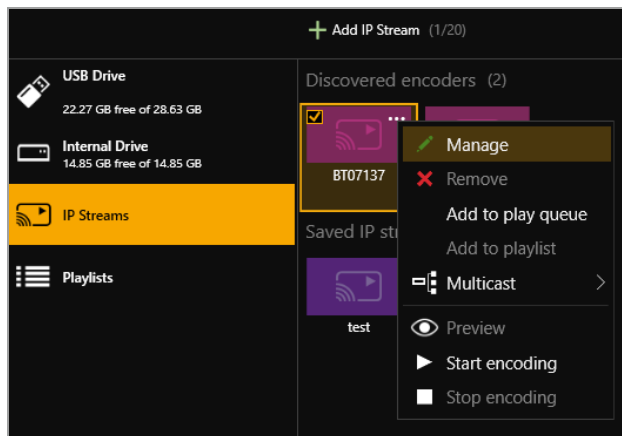
## What to do

### First try this

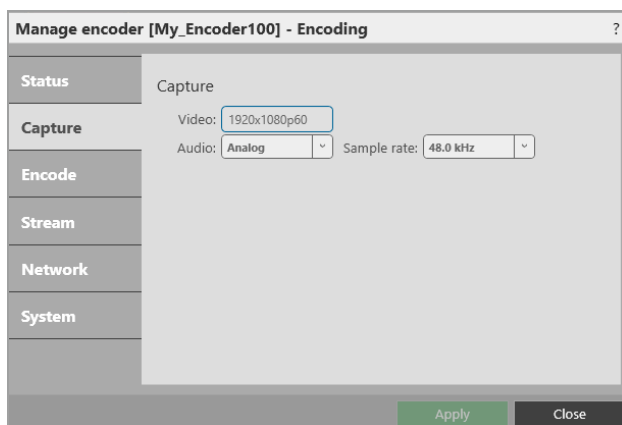
1. Double-click a window playing streaming media, and select (Media Player) Manage.



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



3. Select Capture.



4. Select None or Analog from Audio.

### If that doesn't work

If the advice here doesn't work, first contact your distributor. If your distributor can't help, contact tvONE

## 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

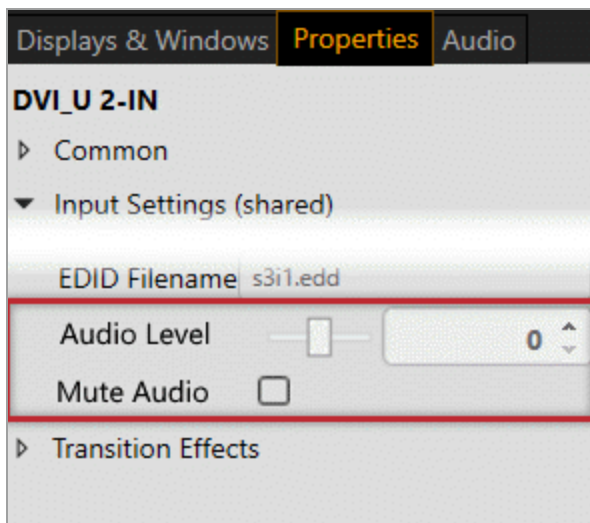
#### First try this

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](http://tvone.com/new-coriographer-videowall-design-software).

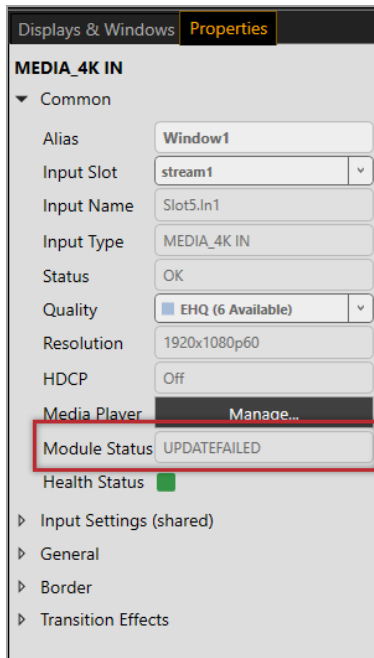
Read about updating your firmware on page 112.

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](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto: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 112.

## 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](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto: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 37.
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 31.
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 80.

## 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](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto: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 123.

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](mailto:tech.usa@tvone.com).
- Customers in Europe, the Middle East, and Africa (EMEA), email [tech.europe@tvone.com](mailto:tech.europe@tvone.com).
- Customers in Asia, email [tech.asia@tvone.com](mailto: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](http://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 133.

## 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.

## Where would I find the information to create a custom resolution?

You can use CORIOdiscover™ to create custom resolutions. You need information from the manufacturer of your source or display to create a custom resolution.

Information you need from the manufacturer includes:

- Pixel clock
- Active pixel area
- Front porch
- Back porch

- Sync pulse
- Polarity

Read about creating custom resolutions on page 103.

# More

## In this section

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- Product specifications .....127
  - CORIOmaster™ C3-540 specifications .....127
  - CORIOmaster mini™ C3-510 specifications .....129
  - CORIOmaster micro™ C3-503 specifications .....131
  - Streaming media and 4K playback input module specifications .....133
  - Encoder-100 specifications .....134
- End user license agreement for CORIOgrapher™ .....135
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- Contact us .....138

# 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 93.

CORIODiscover™ V1.4 supports:

- Creating 4K custom resolutions  
Read more on page 103.

 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](http://tvone.com/firmware-updates).

## Product specifications

Specifications contain all the details about our products.

### In this section

|                                                                   |     |
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| CORIOmaster mini™ C3-510 specifications .....                     | 129 |
| CORIOmaster micro™ C3-503 specifications .....                    | 131 |
| Streaming media and 4K playback input module specifications ..... | 133 |
| Encoder-100 specifications .....                                  | 134 |

## CORIOmaster™ C3-540 specifications

### Video processing power

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

### Computer input

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

### Computer outputs

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

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

## Power

|                              |                              |                    |                                         |
|------------------------------|------------------------------|--------------------|-----------------------------------------|
| <b>Internal Power Supply</b> | 110 to 240 V, auto-detecting | <b>Consumption</b> | 300 W maximum (fully populated chassis) |
| <b>Redundancy</b>            | Optional Internal PSU        |                    |                                         |

## CORIOmaster mini™ C3-510 specifications

### Video processing power

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

### Computer input

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

### Computer outputs

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

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

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

|                          |                                            |                          |                                            |
|--------------------------|--------------------------------------------|--------------------------|--------------------------------------------|
| <b>720p (1280x720)</b>   | 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz | <b>1080i (1920x1080)</b> | 50, 59.94, 60 Hz                           |
| <b>1035i (1920x1035)</b> | 59.94, 60 Hz                               | <b>1080p (1920x1080)</b> | 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 Hz |

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

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

## 4K Video Output Resolutions supported (via HDMI)

|                        |                               |
|------------------------|-------------------------------|
| <b>3840x2160 4:4:4</b> | 23.98/24/25/29.97/30 Hz 8-bit |
|------------------------|-------------------------------|

## Video inputs

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

## Video outputs

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

## 3G/HD/SD-SDI

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

## Control Methods

|               |                     |                     |                |
|---------------|---------------------|---------------------|----------------|
| <b>RS-232</b> | D9 Female Connector | <b>IP Interface</b> | RJ45 Connector |
|---------------|---------------------|---------------------|----------------|

## Dimensions

|                                |                    |                                         |      |
|--------------------------------|--------------------|-----------------------------------------|------|
| <b>Size (H x W x D) mm</b>     | 44 x 217 x 244     | <b>Weight (Net), including CPU, Kg</b>  | 1.3  |
| <b>Size (H x W x D) inches</b> | 1.77 x 8.54 x 9.61 | <b>Weight (Net), including CPU, lbs</b> | 2.87 |

## Environmental

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

## Power

|                              |                           |                    |                                        |
|------------------------------|---------------------------|--------------------|----------------------------------------|
| <b>External Power Supply</b> | 110-240 V, auto-detecting | <b>Consumption</b> | 60 W maximum (fully populated chassis) |
| <b>Redundancy</b>            | not available             |                    |                                        |

# Streaming media and 4K playback input module specifications

## Streaming media and 4K playback input module

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

## Media/Images

|                     |                                                  |                                     |                                                                            |
|---------------------|--------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------|
| <b>Interfaces</b>   | 1x USB 3.0, internal storage, network per module | <b>Multimedia container formats</b> | .mp4, .mov, .mkv, .m4v, .ts, .mts, .m2ts, .mt2                             |
| <b>Video Codecs</b> | H.264 (CBP, Main, High),<br>H.265/HEVC1 (Main)   | <b>Playback Bit Rates</b>           | Single stream to 100 Mbs (per module), Dual Streams to 40 Mbs (per module) |

## Audio

|               |          |
|---------------|----------|
| Audio formats | mp3, aac |
|---------------|----------|

## File Playback Resolutions Supported

|                        |              |                      |              |
|------------------------|--------------|----------------------|--------------|
| Up to 4096x2160 @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 at 16 or 128 GB per module |
| 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<br>■ 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)  |
| Channels:                | 1                                   |                            |                            |

## 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 |
|----------|--------------|-----------------|-----------------------------------|

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## Contact us

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621 Wilmer Avenue

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OH 45226

For customer support please contact:

[tech.usa@tvone.com](mailto:tech.usa@tvone.com) or [tech.europe@tvone.com](mailto:tech.europe@tvone.com)

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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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## Contact us

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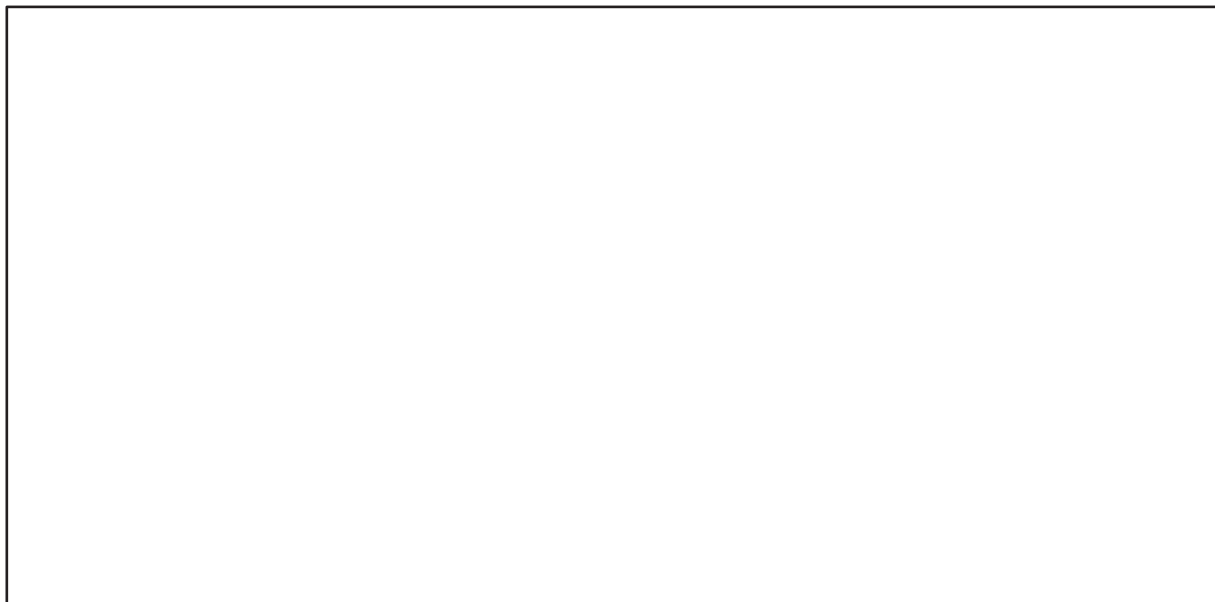
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## Video Wall Worksheet



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? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are the sizes of the displays? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 bezel sizes for the monitors? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are the native resolutions of the displays? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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.



