

**ZOOMISO VERSION 1.1.0**

# **ZOOMISO USER MANUAL**

## **Overview**

Thank you for downloading ZoomISO, a macOS program for exporting the participants in a Zoom Meeting or Webinar as isolated video outputs. ZoomISO is capable of transmitting these video feeds as NDI, Syphon, or as a Floating Window. With the help of programs like Black Syphon and hardware like the DeckLink Duo 2, ZoomISO can additionally export to SDI infrastructure and video switchers like the ATEM from BlackMagic. ZoomISO contains an OSC engine, allowing the app to be remote controlled by devices like a StreamDeck to provide a wide variety of video routing workflows for the Zoom ecosystem.

## **In this Document**

We have listed several categories of information that should prove useful

- **Installation and Accounts** guides you through the initial setup process and login workflow
- **User Interface Guide** examines the GUI to provide familiarity for the application
- **Output Workflows** provides an overview of the different options for exporting participant video feeds and the workflows that surround them.
- **OSC for Remote Routing** provides information that you can use to remotely operate ZoomISO from other software and hardware

**Please also review [these additional documents](#)** related to our *ZoomOSC* technology

- **ZoomOSC Command Syntax (API)** where you can find information on all of the commands and outputs of the ZoomOSC application
- **ZoomOSC Quick Start Guide** which contains helpful information for those just getting started with ZoomOSC for the first time

# INSTALLATION AND ACCOUNTS

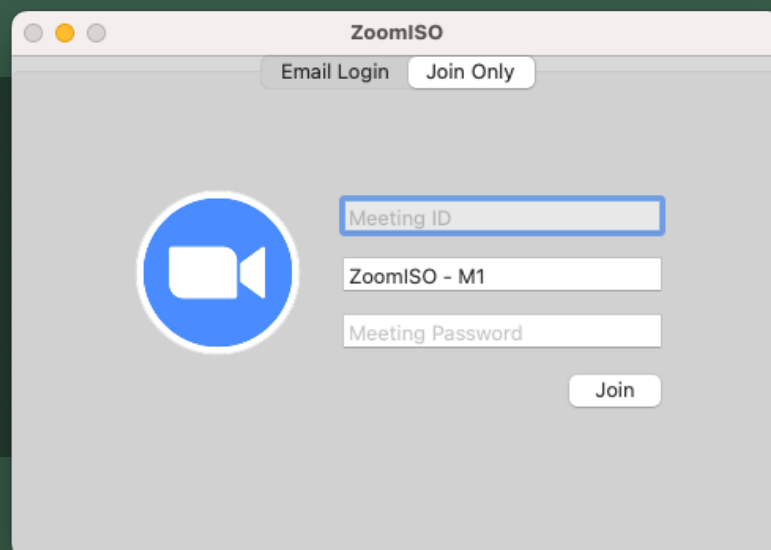
## Using a Zoom Account with ZoomISO

### Accounts

ZoomISO can join meetings that require registration by having the user log into the application with their Zoom account.

It is not possible to log into ZoomISO via Single Sign On (SSO) at this time due to the limitations of the Zoom SDK. However, it is possible to join an SSO provisioned webinar via **Only Join**, and entering the email from the webinar invitation when prompted during the joining process. It is also possible to allow accounts created via SSO to enter a username and password instead via the Zoom account settings.

Zoom SDK applications cannot join Zoom.GOV meetings and webinars, along with a few other restricted domains.

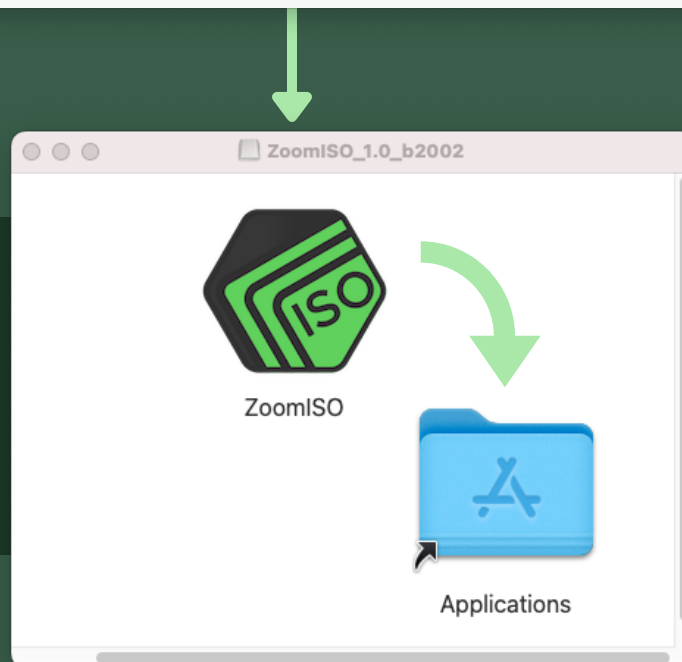
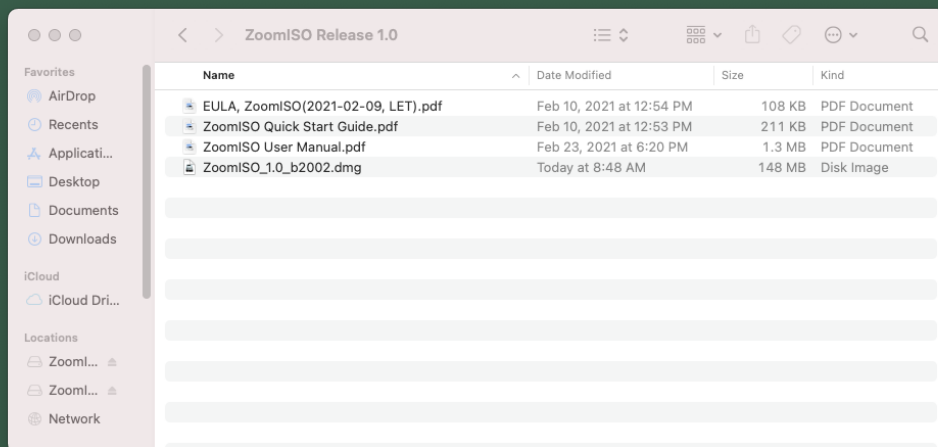


# INSTALLATION AND ACCOUNTS

## For macOS Mojave, Catalina, and Big Sur

### Installation

ZoomISO is installed via a .dmg file on macOS. Download the official installer from [www.liminalet.com/zoomiso-downloads](http://www.liminalet.com/zoomiso-downloads).



Drag and drop the  
ZoomISO  
app icon into the  
applications folder.

# USER INTERFACE GUIDE

## Outputs Tab

In this view, video exports are created via an "output focused" workflow.

The number of video feeds, the default display to render them to, and the resolution to create by default are selected in the top area.

After the outputs are created, the rows of the middle table allow for the routing of specific users to specific outputs via a dropdown.

ZoomISO - Settings

ZoomISO Trial

**CUSTOM OUTPUTS**

Number of outputs: 4 (dropdown)    Default Display: (dropdown)    Default Output Size: 1080p (dropdown)

To get started, join a meeting from the zoom meeting window, then select the number of output feeds that you want to generate. Choose the participant you want to assign to the output, and adjust the desired resolution.

Output	Mode	Participant	Resolution	Display
Main Window	(dropdown)	(dropdown)	2439x1301 (dropdown)	ASUS VP28U (dropdown)
Secondary Window	(dropdown)	(dropdown)	880x518 (dropdown)	ASUS VP28U (dropdown)
ZoomISO Output 1	User (dropdown)	Guy Cochran (dropdown)	Default (dropdown)	ASUS VP28U (dropdown)
ZoomISO Output 2	User (dropdown)	Karl Asmusse (dropdown)	Default (dropdown)	ASUS VP28U (dropdown)
ZoomISO Output 3	User (dropdown)	Kenn Jordan (dropdown)	Default (dropdown)	ASUS VP28U (dropdown)
ZoomISO Output 4	User (dropdown)	Alex Lindsay (dropdown)	Default (dropdown)	ASUS VP28U (dropdown)

**GALLERY OUTPUTS** (creates additional outputs from cropping gallery)

☒ UserName  
☐ ZoomID  
☐ TargetID  
☐ GalleryIndex

Output when video off: (dropdown)    ☒ Enable NDI®    Prefix ISO name with: ZoomISO  
☒ Enable Syphon

NDI® is a registered trademark of NewTek, Inc.    NDI.tv    liminalet.com

## Gallery Outputs

The gallery output modes allow for video feeds of members of the gallery view to be individually exported, eliminating the need to crop them in external software.

The feeds can be generated and identified by any of the parameters on the checklist.

Configuration options for the exports, including ON/OFF toggles for NDI and Syphon, are available in the bottom area.

## IMPORTANT NOTE ON OUTPUT LIMITS

Zoom enforces a bandwidth limit to each endpoint in a meeting. We believe this limit currently allows for five 720p / 1080p video feeds to be generated at 30FPS.

After creating five or more outputs, all HD video feeds may drop to 15FPS. Hardware specifications will determine the number of SD (360p / 180p) outputs that ZoomISO can export.



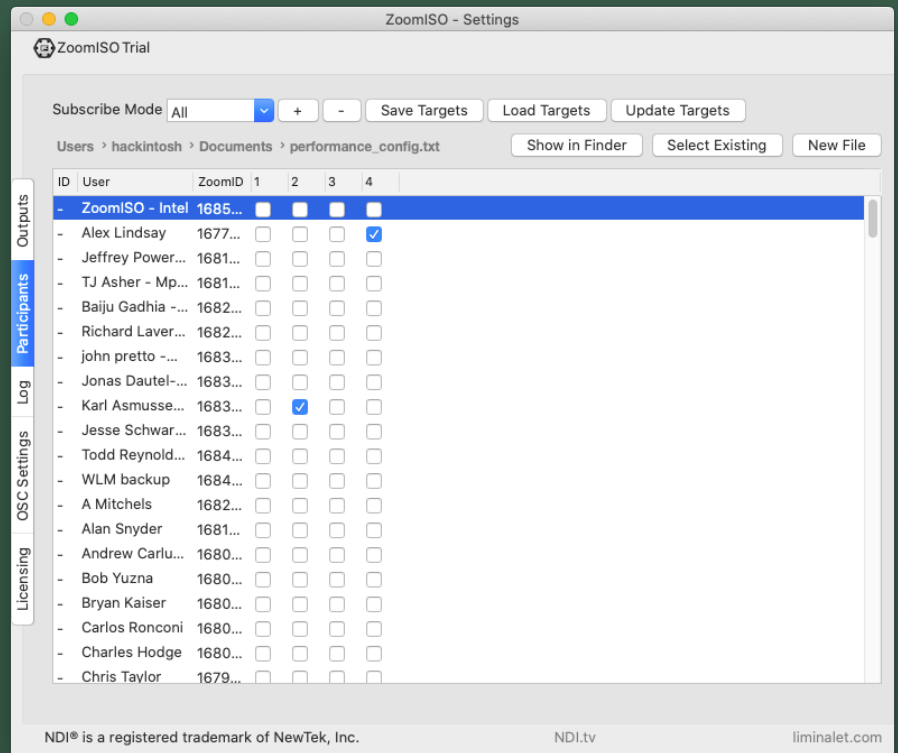
# USER INTERFACE GUIDE

## Participants Matrix Tab

This view allows outputs to be configured via a "participant focused" view.

After the outputs are generated in the Outputs Tab, columns for each output will appear for each user row.

This matrix will route participants to outputs.



## Target Configuration and Subscribe Mode

Just like ZoomOSC, ZoomISO supports the Target workflow, allowing custom identifiers to be set from a preset file.

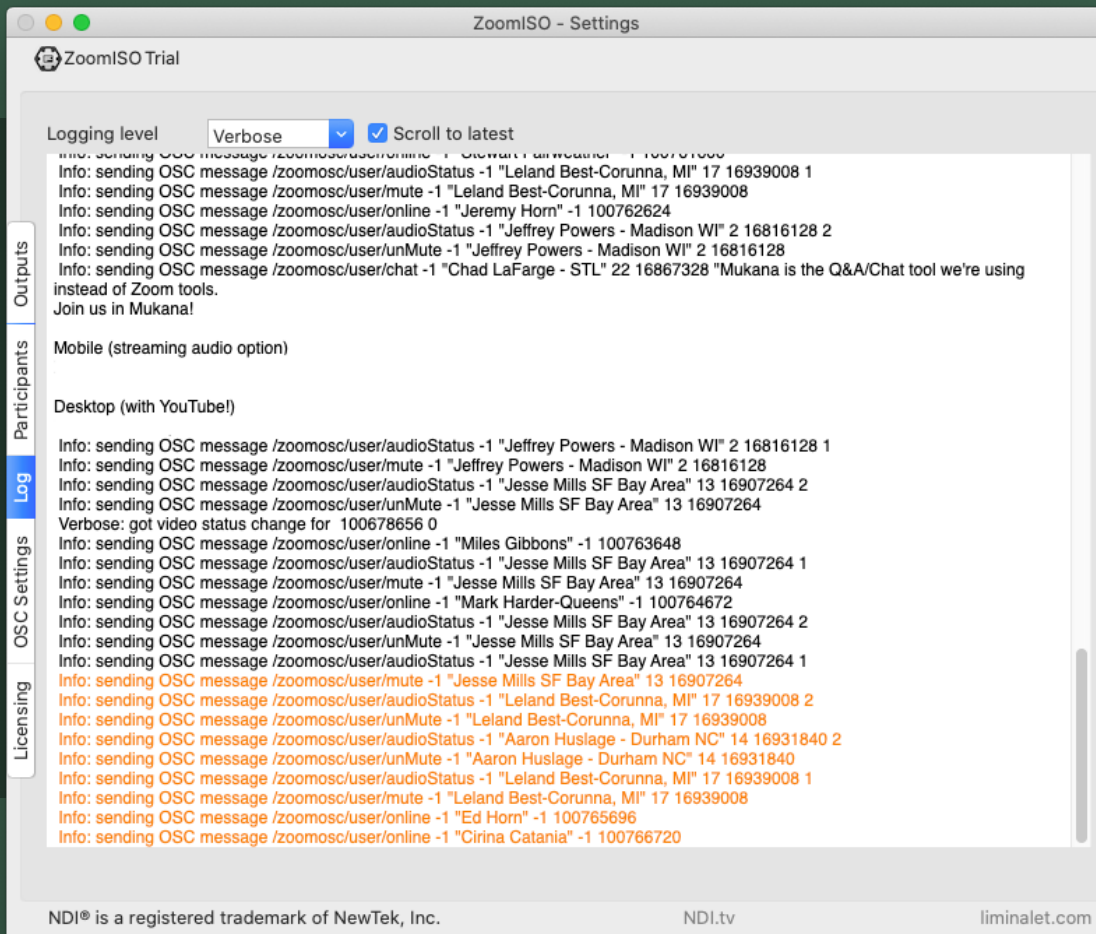
The level for Subscribe Mode can also be set to filter the Matrix in the upper area.



# USER INTERFACE GUIDE

## Log Tab

This view contains all outputs of the ZoomISO Program. There are 5 levels of filtration access through the Logging Level selection menu: None, Errors, Warnings, Info, and Verbose. Reducing the logging level may improve performance at scale.

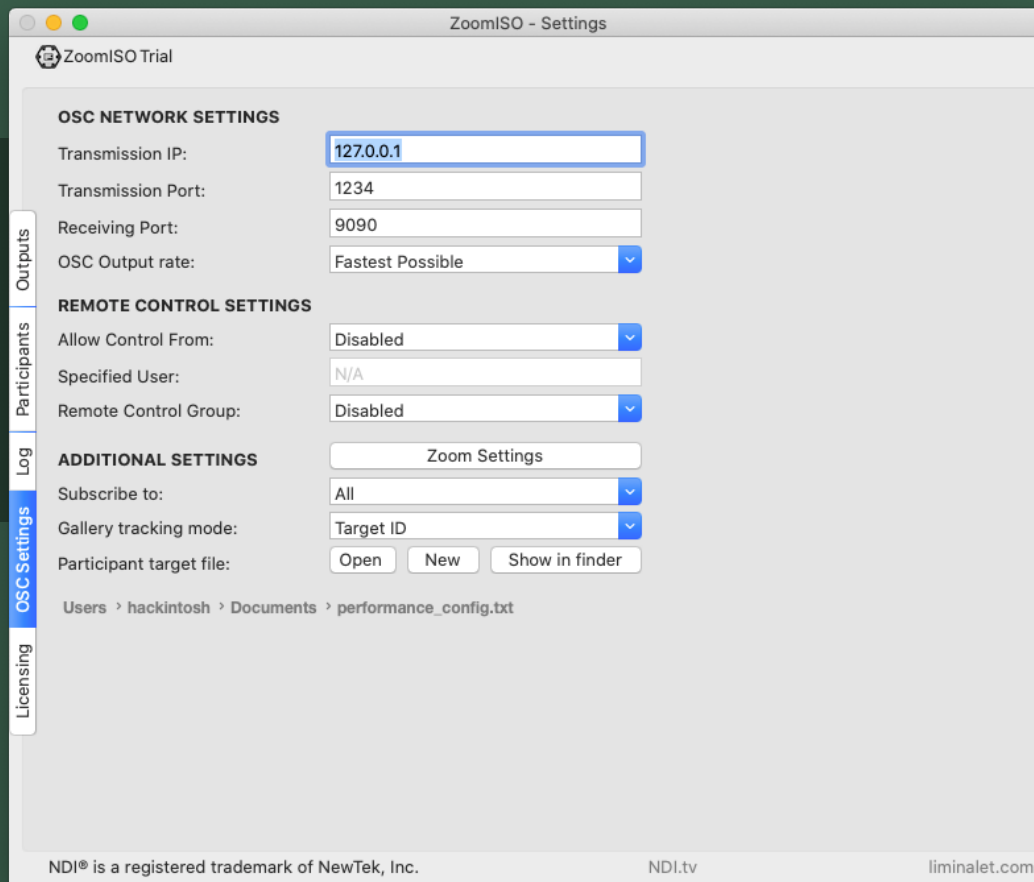


# USER INTERFACE GUIDE

## OSC Settings Tab

### OSC Network Settings

- Transmission IP (IP where ZoomOSC will send messages to)
- Transmission Port (port where ZoomOSC will send messages to)
- Receiving Port (port where ZoomOSC will listen for messages)
- OSC Output Rate (delay to introduce to OSC outputs for compatibility with slower programs)





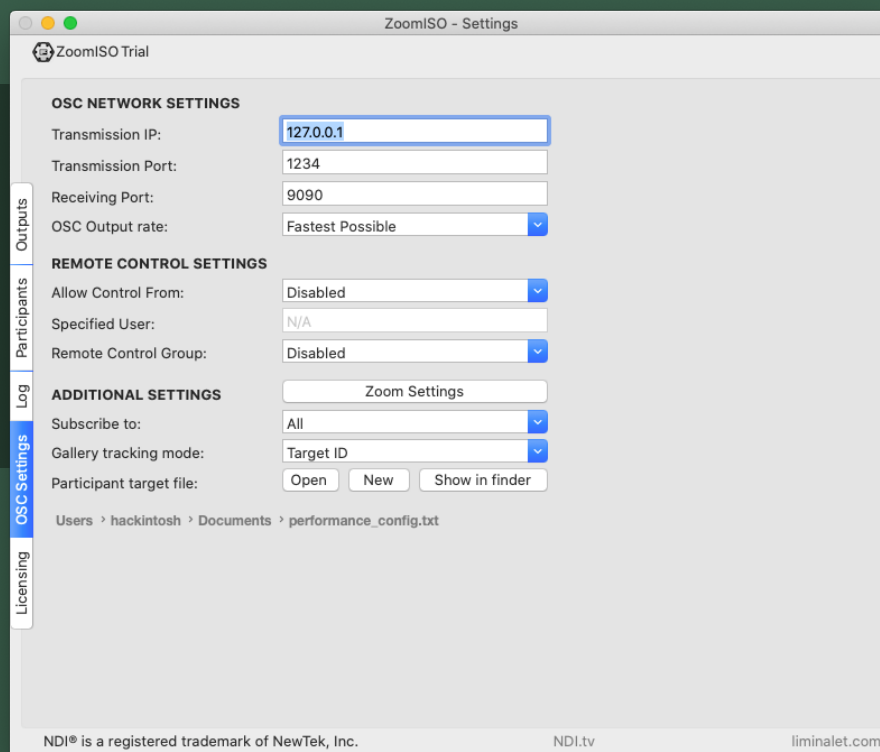
# USER INTERFACE GUIDE

## OSC Settings Tab (Continued)

### Remote Control Settings

*(For Endpoints using ZoomOSC Pro Keys)*

- Remote Control Group (remote users ZoomOSC can control)
- Allow Control From (who can control ZoomOSC remotely)
  - Optional field for the username will appear if Specific User is selected
- Custom OSC Control (who can pass through genuine OSC)
  - Optional field for the username will appear if Specific User is selected



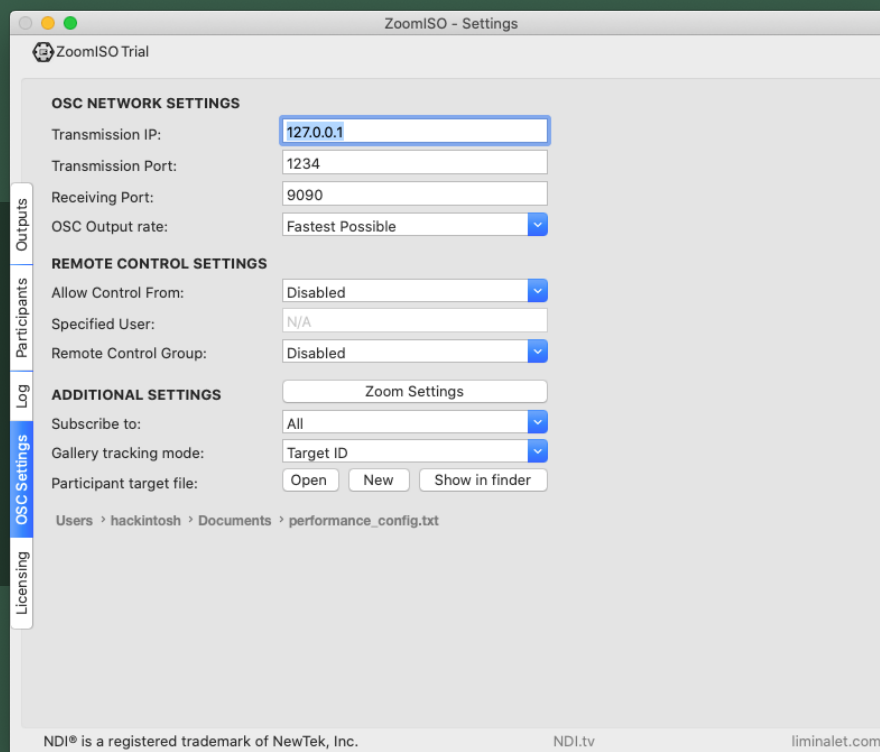


# USER INTERFACE GUIDE

## OSC Settings Tab (Continued)

### Additional Settings

- Zoom Settings
  - Opens the Zoom Settings Menu (helpful for confirming receiving resolutions).
- Subscribe to group
  - Determine who ZoomOSC sends OSC status updates about
- Gallery Tracking Mode
  - Preference on how Gallery Order is reported
- Participant Target File Browser
  - Browser to set load and save location for target\_list.txt

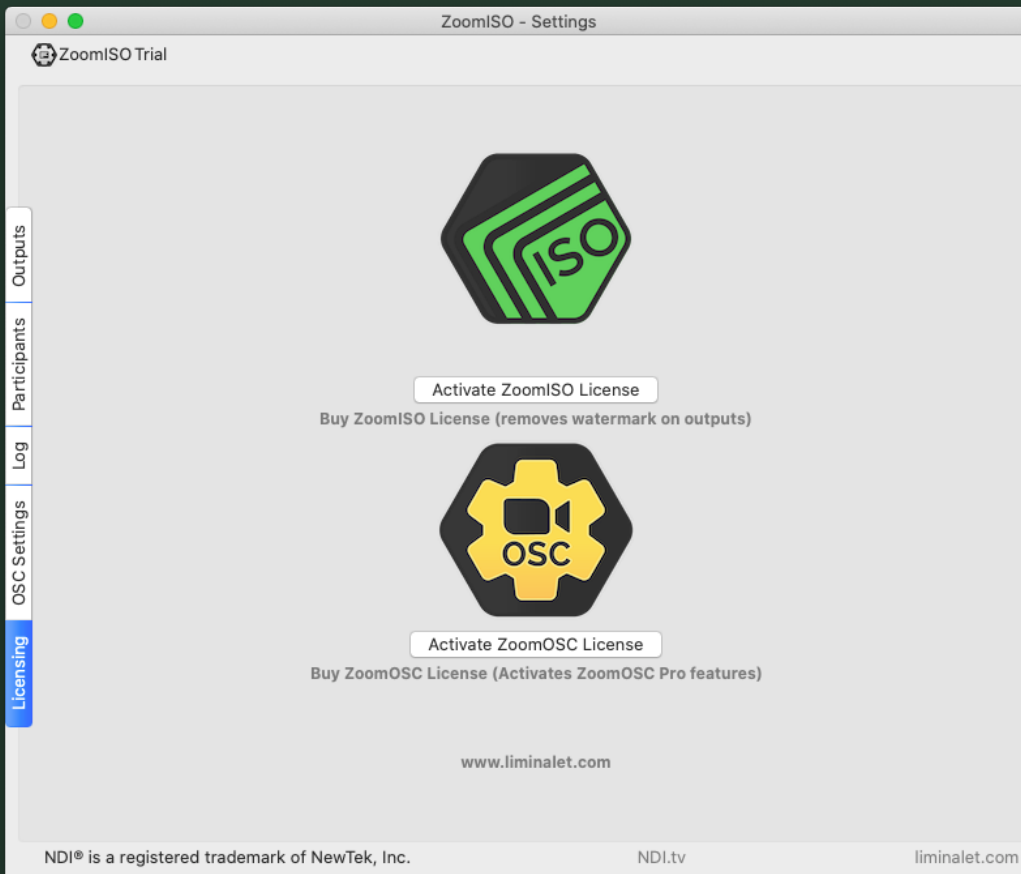


# INSTALLATION AND ACCOUNTS

## Licensing Tab

### How ZoomISO Licenses Work

The ZoomISO watermark on output feeds can be disabled by entering a license key purchased from Liminal Entertainment Technologies. In this tab, license keys can be entered or deactivated.



ZoomISO, both in demo mode and when licensed, contains the functionality of ZoomOSC Essentials.

To unlock ZoomOSC Pro functionality within ZoomISO, just enter a valid license key for ZoomOSC Pro in the Licensing Tab.

Upon request, a web portal can be created to manage activations of ZoomISO and ZoomOSC Pro online.

Contact [info@liminalet.com](mailto:info@liminalet.com) for support on setting up your management portal.

# OUTPUT WORKFLOWS

## Using NewTek NDI

ZoomISO currently supports the export of user video over IP using the NDI protocol from NewTek. The application currently supports NDI Gen4 technology but will update to NDI Gen5 when available for developers.

This should improve performance across the board, particularly on Apple Silicon (M1).

When using NDI with ZoomISO, processing of the frames will begin when the NDI feed is pulled from another application following discovery.

ZoomISO provides multiple settings for formatting the names of the NDI feeds.

# NDI<sup>®</sup>

# OUTPUT WORKFLOWS

## Using Syphon

ZoomISO can export participant video feeds to the Syphon framework, which is a low-latency, low-overhead frame sharing system for macOS. This will be an excellent option for transporting video frames within a single Mac due to its optimized performance.

As was the case with NDI, processing of the frames will begin when the NDI feed is pulled from another application following discovery.

ZoomISO also provides multiple settings for formatting the names of the Syphon feeds.



# OUTPUT WORKFLOWS

## Using Window Outputs

ZoomISO will always export a floating window of the participant video feed as a technical requirement. This window is draggable and can be freely located among available displays. Exporting to a window is a great option for using all sorts of export systems not natively supported by ZoomISO.

When using a floating window, the NDI and Syphon outputs may "wobble" when the frame is being actively dragged, so take care not to move them around when in use.

If there is a mis-match in screen resolutions between displays, there may be issues with the output feeds during the transition between displays.

In the Outputs Tab, you may select Full Screen for a user output window, which will be helpful if you need to render a user's video at the same size of the monitor hosting the user.



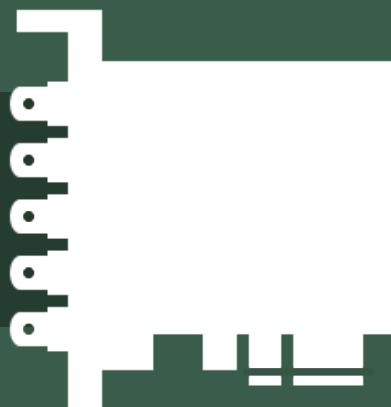
# OUTPUT WORKFLOWS

## Using SDI with a BlackMagic DeckLink

ZoomISO supports the export of participant video feeds via SDI in conjunction with an additional piece of software (for now) to convert a native export format to SDI on a BlackMagic DeckLink. We recommend converting the Syphon outputs to SDI using [Black Syphon](#), which is free.

The advantages of DeckLink export workflows are numerous, and allow for all sorts of hardware-based Zoom integrations. A popular option might be as inputs to a Constellation Switcher or (with HDMI conversion) an ATEM Mini.

If using a Mac without PCI-E ports, an external ThunderBolt-3 enclosure such as the [Sonnet Echo Express SE1](#) could be used to attach a DeckLink Duo 2 to a Mac Mini, for example.



# OSC FOR REMOTE ROUTING

## The ../outputISO Command

ZoomISO has a special OSC command that is not available in ZoomOSC Pro, ../outputISO. It takes two arguments: the target and the ID of the output to route them to. ZoomISO supports the same target types as ZoomOSC: ../targetID, ../userName, ../galIndex, ../galleryPosition, ../me, and ../zoomID. If these are unfamiliar, review the ZoomOSC documentation.

A sample OSC command might be:

**/zoom/userName/outputISO "Andy Carluccio" 2**

This command would place a participant with Zoom username Andy Carluccio to output number 2, if it exists.



# ALL OSC COMMANDS

## ISO ROUTING COMMAND

### Route Participant to Output

Routes participant video to specified output, if it exists

PLEASE NOTE: OutputIDs begin with 1

**../outputISO**  
{int outputID}

## GALLERY OUTPUT COMMANDS

### Enable Gallery Outputs by Username

Generates Auto-Crop Gallery Outputs, identified by username

**/zoom/enableGalleryOutputUsername**

### Disable Gallery Outputs by Username

Deletes Auto-Crop Gallery Outputs, identified by username

**/zoom/disbleGalleryOutputUsername**

### Enable Gallery Outputs by ZoomID

Generates Auto-Crop Gallery Outputs, identified by ZoomID

**/zoom/enableGalleryOutputZoomID**

### Disable Gallery Outputs by ZoomID

Deletes Auto-Crop Gallery Outputs, identified by ZoomID

**/zoom/disbleGalleryOutputZoomID**

### Enable Gallery Outputs by TargetID

Generates Auto-Crop Gallery Outputs, identified by ZoomID

**/zoom/enableGalleryOutputTargetID**

### Disable Gallery Outputs by TargetID

Deletes Auto-Crop Gallery Outputs, identified by TargetID

**/zoom/disbleGalleryOutputTargetID**

### Enable Gallery Outputs by Gallery Index

Generates Auto-Crop Gallery Outputs, identified by index in gallery

**/zoom/enableGalleryOutputGalIndex**

### Disable Gallery Outputs by Gallery Index

Deletes Auto-Crop Gallery Outputs, identified by index in gallery

**/zoom/disbleGalleryOutputGalIndex**

## PREFERENCE COMMANDS

### Enable Clean Outputs

Disables overlays including username, wifi, and emoji

**/zoom/enableCleanOutputs**

### Disable Clean Outputs

Enables overlays including username, wifi, and emoji

**/zoom/disableCleanOutputs**

### Enable NewTek NDI Outputs

Enables the NDI Output Engine

**/zoom/enableNDI**

### Disable NewTek NDI Outputs

Disables the NDI Output Engine

**/zoom/disableNDI**

### Enable Syphon Outputs

Enables the Syphon Output Engine

**/zoom/enableSyphon**

### Disable Syphon Outputs

Disables the Syphon Output Engine

**/zoom/disableSyphon**

### Set the ISO Prefix

Used to set the prefix string used for ZoomISO Outputs

**/zoom/setISOPrefix**  
{string prefix}

### Set Resolution of ISO Outputs

Used to set the resolution / size of each output.

**/zoom/setISOSize**  
{int 0=default (required, only valid arg),  
int resolution= 180 | 360 | 720 | 1080}

PLEASE NOTE: Parameter 1 is always zero, which changes the default. Individual resolutions will be supported in the future.

### Set ISO Count

Set the number of ISO Outputs to create

**/zoom/setISOCount**  
{int count}



# RESOURCES

SIGN UP FOR LIMINAL'S NEWSLETTER TO STAY  
UP TO DATE ON UPDATES AND NEW RELEASES

JOIN LIMINAL'S PUBLIC SLACK GROUP FOR  
COMMUNITY-GENERATED SUPPORT

SUBSCRIBE TO LIMINAL ON YOUTUBE FOR  
TRAININGS AND TUTORIALS

