OMNIBUS 3.0

USER GUIDE

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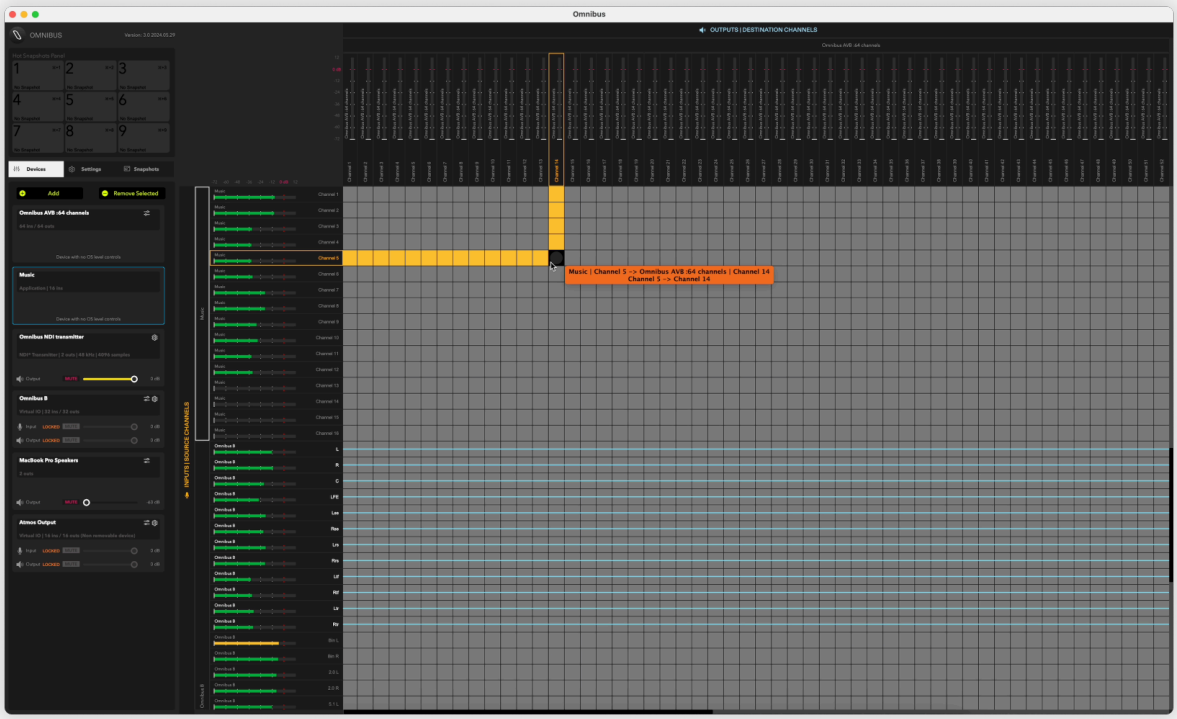
2. Welcome to OMNIBUS 3.0

OMNIBUS 3.0 is a powerful software solution designed for seamless audio routing between multiple devices and applications. It communicates with all Core Audio devices on your system, functioning like a virtual patchbay and enabling effortless audio routing across devices and software.



2.1. What's New in OMNIBUS 3.0

OMNIBUS 3.0 boasts new networking options, a revamped UI and enhancements to existing features, offering significantly greater flexibility in audio routing. OMNIBUS 3.0 updated features include:

- **Networking Capabilities:** Route multichannel audio between different machines on the same network via AVB or NDI®.
- **Configurable Virtual Audio Devices:** Four virtual devices, each supporting up to 256 I/O channels.
- **Application Capture:** Separate system and application audio outputs.
- **Session Management:** Save and export entire OMNIBUS 3.0 sessions as files.
- **Snapshot and Parameter Control:** Recall snapshots and adjust parameters using Elgato Stream Deck or MIDI program change.

3. Technical Specifications

Minimum System Requirements	
Processor	Intel core i7-8750H 2018+ or M1+
Operating System	Mac OS 12+
Memory	8 GB RAM

4. Installation

If you are new to Audiomovers, you need to create an account before you can start using OMNIBUS. To create an account, click here, and then confirm your account via the email sent to you.

To download OMNIBUS 3.0, log in to your Audiomovers account, navigate to the Downloads page, and click the "Download" button under the OMNIBUS app section.

To install OMNIBUS 3.0, run the OMNIBUS Installer and follow the instructions. Once the installation is complete, you will be prompted to restart your computer.

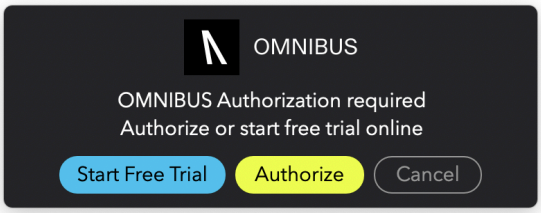
MacOS Installation Path:

/Applications/Omnibus

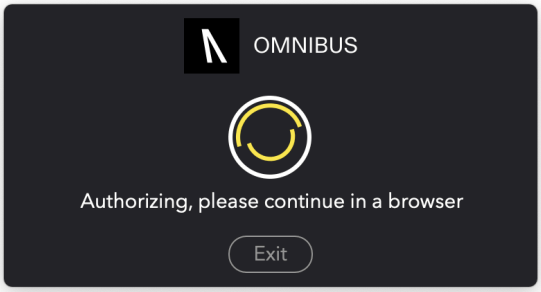
/Library/Audio/Plug-Ins/HAL/Audiomovers.Omnibus.driver

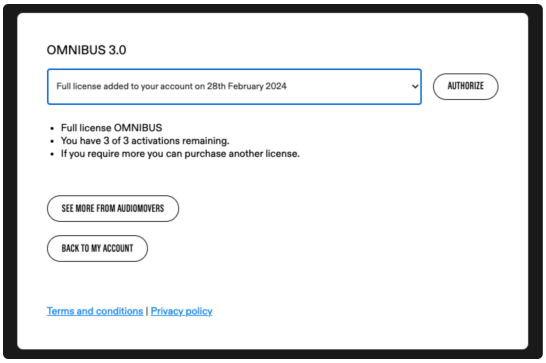
4.1. Authorization

To start using OMNIBUS 3.0, you need to authorize it. Upon launching OMNIBUS 3.0, an authorization dialog will appear.

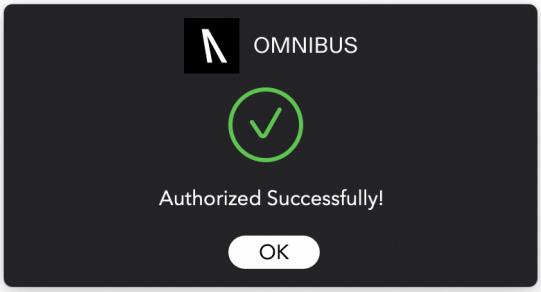


Click "Authorize" to be directed to your Audiomovers account to complete the authorization process.





Follow the on-screen instructions to finish the authorization.

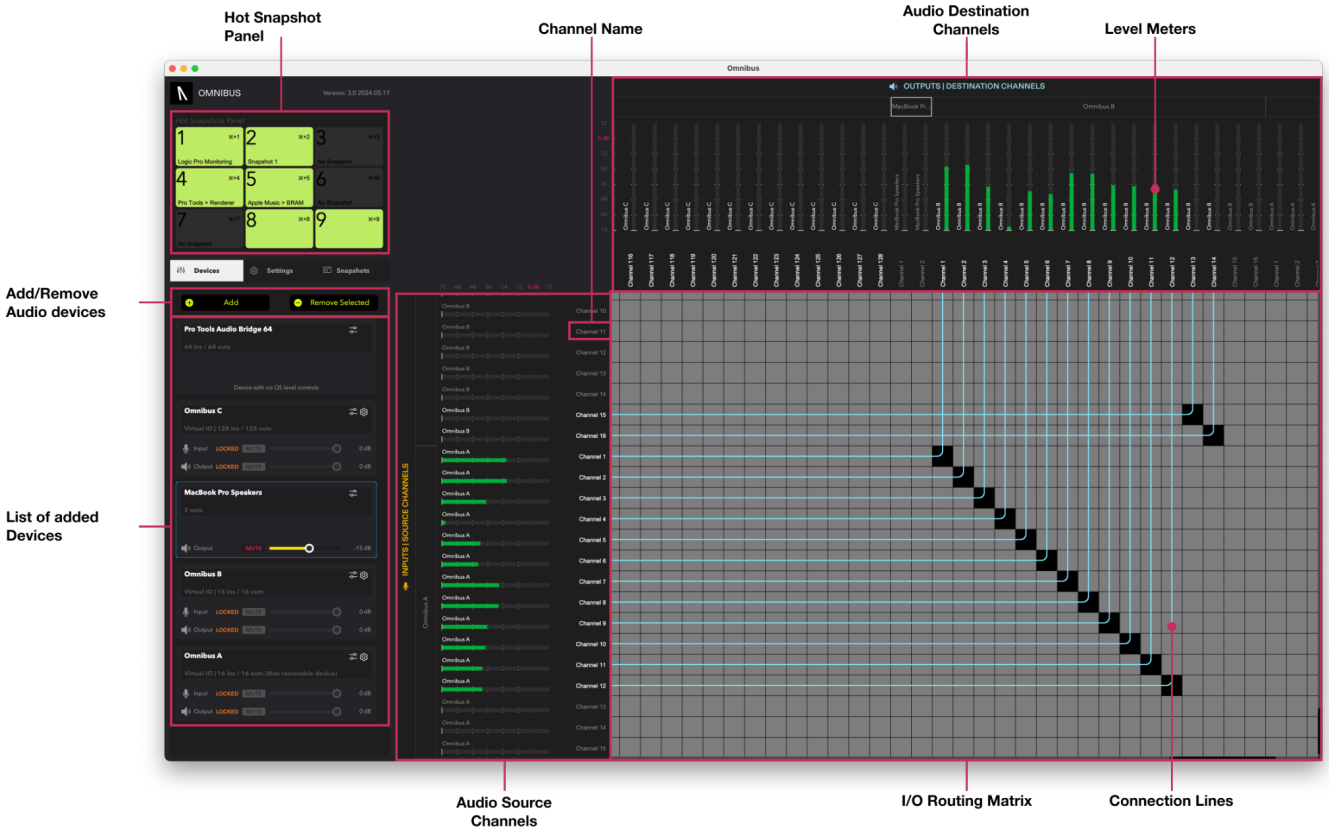


Note: If OMNIBUS is not authorized, all previously configured audio routes will be muted.

4.2. Free Demo

We offer a one-time, 7-day demo period available for new accounts. The demo license can be authorized on a single computer only.

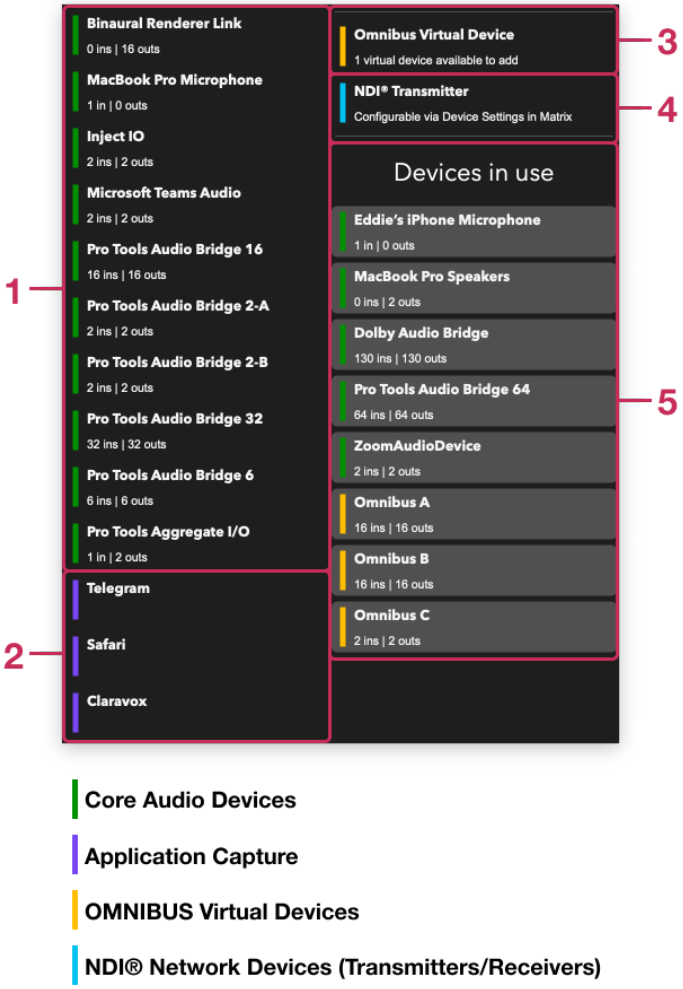
5. User Interface



5.1. Device List

When opening OMNIBUS 3.0 for the first time, the routing matrix will be empty apart from the “OMNIBUS A” virtual device. Users will need to add the audio devices they wish to use. To do this, click the “Add” button at the top of the devices window.

Here, you can select any hardware or virtual devices on your computer, create new OMNIBUS devices, add applications for application capture, and include NDI® transmitters/receivers. This dropdown is color coded:



1. **Devices:** All available Core Audio devices on your system (excluding OMNIBUS virtual drivers).

2. **Application Capture:** Selected applications will appear as audio sources in the routing matrix. (Only available when your Mac's system audio is set to an OMNIBUS device, e.g. OMNIBUS A).

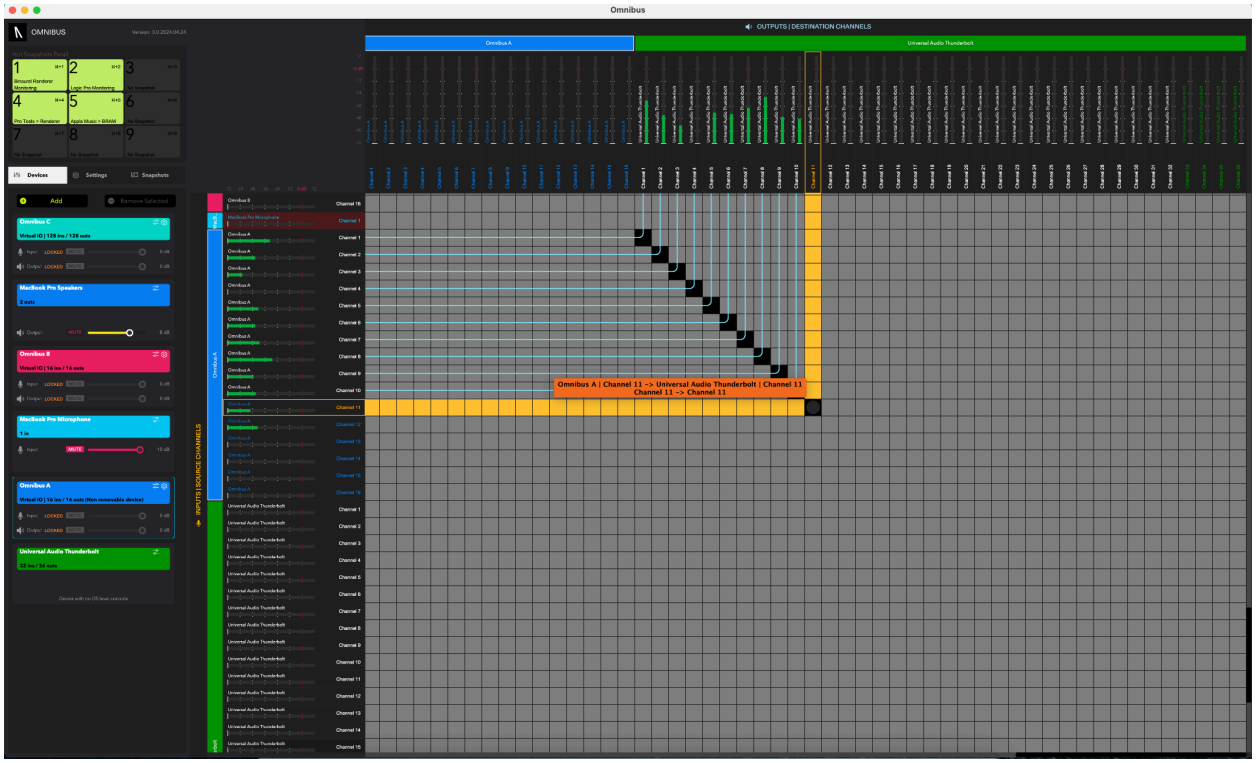
3. **OMNIBUS Virtual Devices:** Here you can create OMNIBUS devices. These multichannel virtual drivers can be used as I/O devices in any software. You can create up to four OMNIBUS devices, each configurable with 2 to 256 channels of I/O.

4. **NDI® Transmitter/Receiver:** NDI® transmitters create an audio device that uses the NDI® protocol for network-based audio transmission.

5. **Devices in Use:** Audio devices added to the OMNIBUS routing matrix.

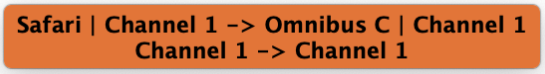
5.2. Routing Matrix

The OMNIBUS routing matrix allows you to create and manage your routing configurations. Input/source channels are listed on the left side of the matrix, while output/destination channels are displayed at the top.



To route audio through the routing matrix, click on the corresponding cell to connect a source to a destination. For example, you can route the “MacBook built-in microphone” to channel 1 of OMNIBUS B.

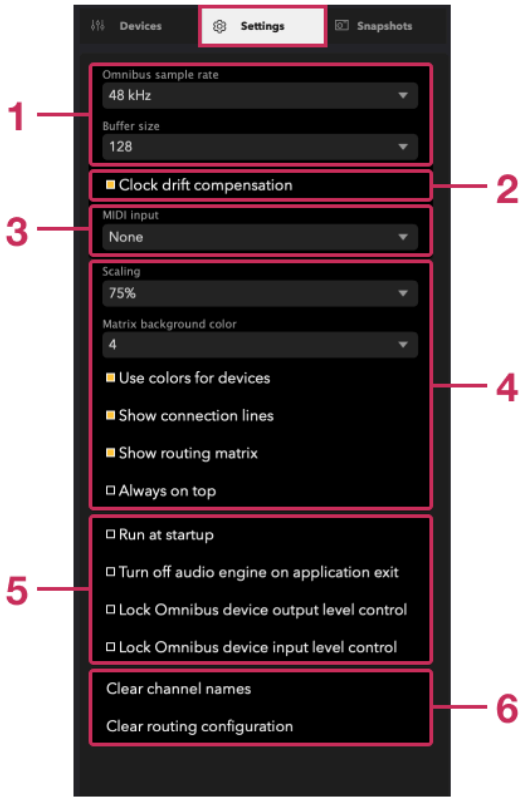
Hovering your cursor over a cell will display a prompt indicating the source device channel and the destination device channel associated with that cell. To finalize the routing, click on the cell to assign the audio path.



To route multiple channels in series, click and hold while moving your cursor along the matrix. This allows you to cascade your routing. You can route multiple channels horizontally, vertically, and diagonally.

5.3. Settings

OMNIBUS features an enhanced settings panel on the left side of the UI, allowing for easy adjustment of your settings.



1. **Global Sample Rate & Buffer Size:** Select from 44.1 to 192 kHz as the global sample rate for OMNIBUS. Any device routed through OMNIBUS with a different sample rate will be converted to this global sample rate.

The buffer size set in OMNIBUS is added to the overall roundtrip buffer. For example, if your DAW is set to 32 samples and OMNIBUS is set to 32 samples, the total buffer will be 64 samples.

2. **Clock drift compensation:** When enabled, OMNIBUS will apply sample rate conversion to audio passing through the application. When disabled, audio will be bit perfect. In some cases, external device clocking may be needed. (N.B. the sample rate of OMNIBUS and external device must match to achieve bit-accurate audio output).

3. **MIDI Input:** Select the MIDI input device you wish to use to control snapshot switching.

4. **View/Visual Settings:** Adjust OMNIBUS visual settings, including UI scaling, brightness/darkness of the routing matrix, device coloring for easier navigation, visibility of the routing matrix, and the option to keep OMNIBUS always on top of your Mac monitor.

5. **Run at Startup/Turn off Audio Engine/Lock I/O Levels:** Choose whether you want OMNIBUS to launch at startup. OMNIBUS will run in the background by default, even if the application is closed.

   To conserve processing power when not using OMNIBUS, you can turn off the audio engine upon quitting the application.

   You can also lock the output and input level sliders of your OMNIBUS devices to prevent accidental adjustments.

6. **Clear Channel Names/Routing Configurations:** Quickly remove your routing configurations and custom channel names using this option.

5.4. Snapshots

OMNIBUS 3.0 allows you to save your routing configurations as snapshots for future use. You can store up to 128 snapshots in the Snapshots tab, each of which can be individually named. Additionally, nine of these snapshots can be assigned to hotkeys. All 128 snapshots can be assigned to Stream Deck buttons, or MIDI Program Changes on a MIDI controller.

To save a routing configuration as a snapshot, follow these steps:

1. Once you are satisfied with your OMNIBUS routing configuration, click the “Save As” button to create a snapshot.
2. Press “Save” to save the routing configuration. (If saving configuration on a selected snapshot).
3. To rename the snapshot, double-click on the default name “snapshot no.” and enter your chosen name.
4. To assign the snapshot to a hotkey, right-click on the snapshot number.

1. **Hot Snapshot Panel:** Users can assign up to nine snapshots in the Hot Snapshot Panel by right clicking on a snapshot. You can recall hot snapshots with key command Cmd + 1-9
2. **Snapshot Controls:**
    - Delete Snapshot
    - Save
    - Save As
    - Select next or previous snapshot
3. **Snapshot Number/Name** (selected snapshot highlighted in purple):
    - Right-click to assign hotkey
    - Double-click to change name

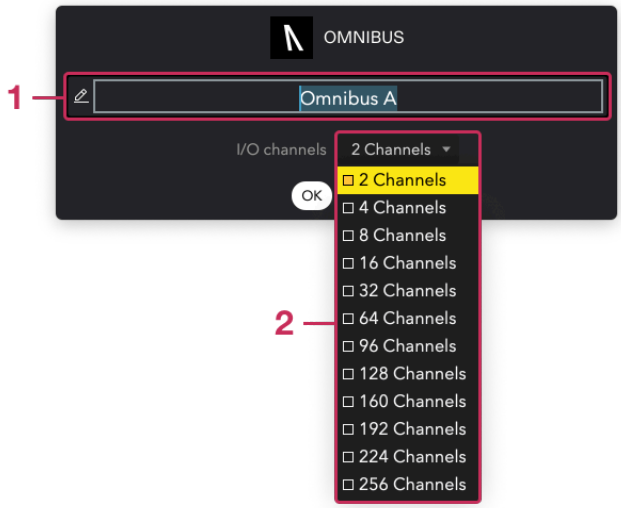
6. Creating OMNIBUS Devices

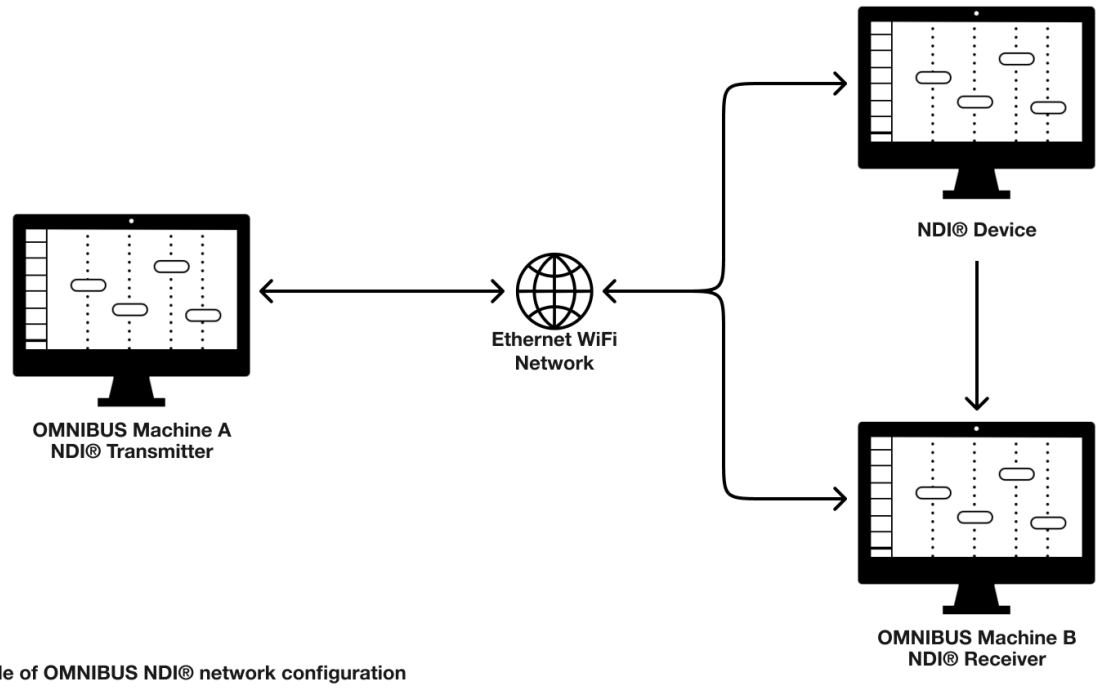
Users can create OMNIBUS devices in the device list, with the option to create up to four OMNIBUS drivers. To create these drivers, users can click on the “Add” button and then navigate to the “Add Virtual Device” button.

OMNIBUS virtual devices can be configured in the device settings. Users can select the IO channel count for these devices, ranging from 2 to 256 channels of I/O. Once created, the device will appear in both the OMNIBUS routing matrix and the device list.

For convenience, users can modify the virtual device’s name. Any changes made to the device name will be reflected in the system, appearing in both the Audio Midi Setup and Audio System menus.

To remove virtual devices, users can select the desired device and click on the “Remove Selected” button, or alternatively, right-click on the device box and choose the “Delete” option. It’s important to note that the OMNIBUS A virtual device is always present and cannot be removed.





Example of OMNIBUS NDI® network configuration

7. NDI®

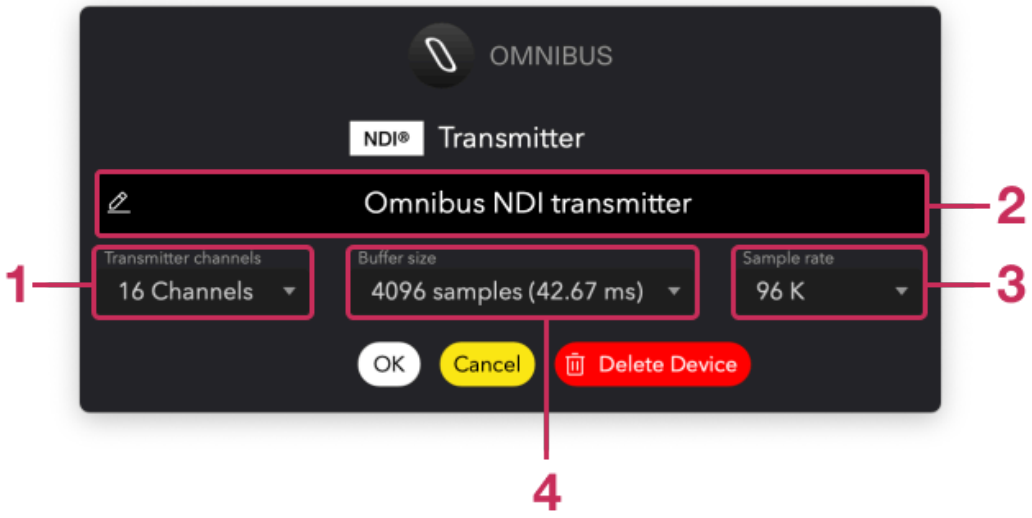
NDI®, or Network Device Interface, facilitates the connection between NDI-enabled devices over IP networks. With OMNIBUS 3.0, you can create NDI-enabled transmitters and receivers, enabling seamless audio transmission between other NDI-enabled devices or software applications.

7.1. Setting Up NDI Transmitters

You can create NDI transmitters in the device list located at the bottom of the “Add Devices” tab.

When you create an NDI transmitter, a stereo NDI transmitter will be added to both your device list and routing matrix. As it functions as a transmitter, it will only appear as an output destination in the routing matrix.

To adjust the settings of the NDI transmitter, click on the settings button located at the top right of the transmitter in the device list.



1. **I/O Channels:** Choose the channel count for your transmitter device, ranging from 2 to 128.
2. **Transmitter Name:** Assign a custom name to your transmitter. This is particularly useful when using multiple NDI transmitters.
3. **Sample Rate:** Select the sample rate for the NDI transmitter. This determines the sample rate of the stream, allowing transmission at a different sample rate than OMNIBUS' global sample rate.
4. **Buffer Size:** Determine the buffer size of the NDI transmitter, which is separate from the OMNIBUS buffer size. Higher buffer sizes are recommended when transmitting over wifi or slow network. Note: Higher sample rates result in lower buffer size.

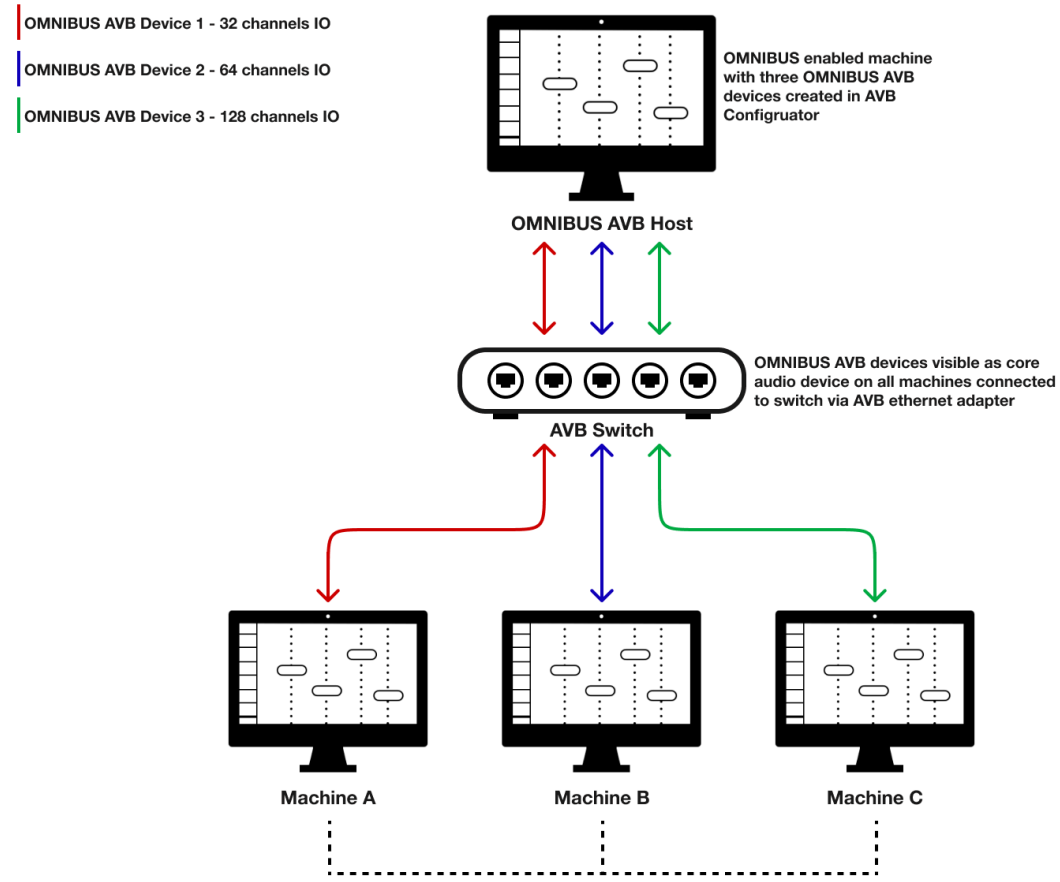
Any NDI transmitter available on your network will be visible in the device list, allowing you to add them into your routing matrix.

7.2. Setting Up NDI Receivers

When OMNIBUS detects an NDI-enabled device with audio outputs on your network, it will be listed in the OMNIBUS device list for you to add to your routing matrix. Let's take another Mac with OMNIBUS 3 on the same network as an example.

Since this device functions solely as a receiver, once it's added to the routing matrix, it will only be visible on the input/source channels path of the routing matrix.

8. AVB



Example of OMNIBUS AVB Switch Configuration

Note: OMNIBUS AVB devices are bidirectional, allowing hosts to route audio to and from machines and AVB devices via an AVB switch.

AVB devices in OMNIBUS support a maximum sample rate of 192 kHz, a channel count of 256, and a maximum bit depth of 32-bit floating point.

To make use of AVB capabilities, you must have an ethernet interface with AVB support. Please refer to the Ethernet specifications sheet for details. Most Apple

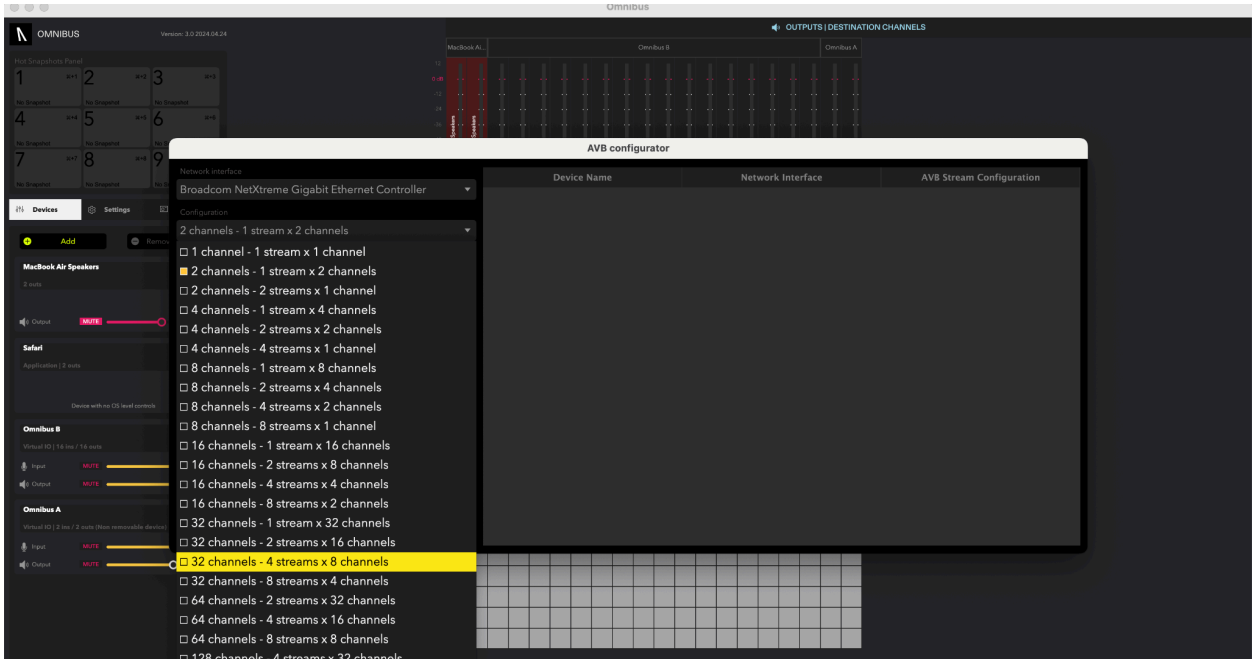
computers come with built-in Ethernet adapters that support the AVB protocol. Alternatively, you can add AVB-enabled Ethernet adapters via the Thunderbolt port.

OMNIBUS enables you to configure the AVB network and utilize its audio capabilities.

Note: Configuration settings are available only when an AVB-enabled Ethernet adapter is detected on your system. It will not be possible for non-AVB Ethernet adapters.

Note: AVB devices will appear as Core Audio devices when the connection is peer to peer. When connecting via a switch, the user will need to enable the device via the Apple Network Device Browser. (This can be found in Audio MIDI Setup/Menu/Window/Show Network Device Browser).

8.1. OMNIBUS AVB Configurator



You can access the OMNIBUS AVB Configurator from the OMNIBUS header icon on your computer. Here, you can configure OMNIBUS AVB devices.

OMNIBUS creates bidirectional AVB devices, which can be particularly useful when connecting a machine without OMNIBUS installed over a network.

When creating an AVB device in the AVB configurator, you will be prompted to select the OMNIBUS AVB device's channel count, name, and AVB path. Once added, this AVB device will appear in your OMNIBUS device list and routing matrix.

Custom names can be assigned to AVB devices, and each AVB device can support up to 256 channels. Channel configurations can be selected with streams and channels per stream in mind to optimize CPU usage and bandwidth.

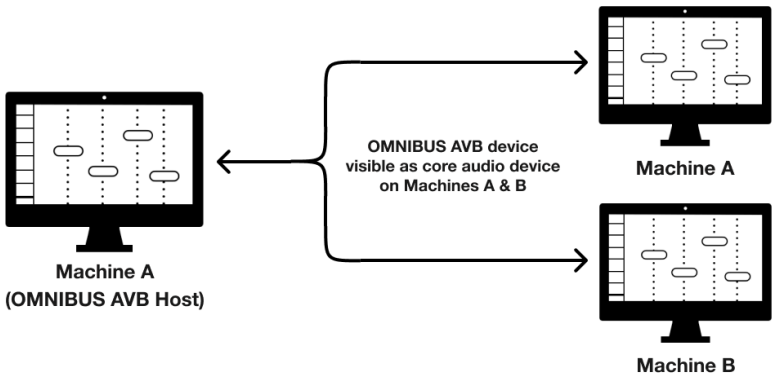
When selecting the number of channels and streams combination from the dropdown menu, you may find it helpful to refer to the AVB stream size and tradeoffs guide available at the provided link:

AVB Stream Size and Tradeoffs Guide

Note: If no network device with AVB support is detected on your computer, the AVB configurator will be unavailable.

8.2. Communicating with an OMNIBUS AVB Host

As previously mentioned, OMNIBUS 3.0 can communicate through AVB with other Macs that do not have OMNIBUS installed. This capability allows for seamless audio communication between OMNIBUS-equipped Macs and those without OMNIBUS, enhancing collaboration and flexibility in audio routing across networks.



Example of peer-to-peer OMNIBUS AVB connection

Once you have connected a Mac machine to an OMNIBUS-enabled machine, the OMNIBUS machine will appear as an audio device on your Mac. This enables bidirectional communication between the two, allowing both the Mac and the OMNIBUS-enabled machine to communicate seamlessly with each other.

9. Elgato Stream Deck Support

OMNIBUS now integrates Stream Deck functionality, enabling users to control multiple parameters of OMNIBUS directly from an Elgato Stream Deck without needing to access the OMNIBUS interface.

The Stream Deck plugin is included in the OMNIBUS 3.0 installer and must be installed in your Stream Deck application. You can assign the following parameters:

Audio Settings:

- Sample Rate: Assign the global sample rate of OMNIBUS.
- Buffer Size: Assign the global buffer size of the OMNIBUS application and view the current buffer size.

Miscellaneous:

- Toggle Input Volume for OMNIBUS Devices
- Toggle Output Volume for OMNIBUS Devices
- Use Colors for Devices
- Show Routing Matrix
- Keep OMNIBUS Always on Top
- Adjust the Scale/Zoom of the OMNIBUS User Interface

Snapshots:

- Display the Current Snapshot Used in OMNIBUS
- Navigate to Next or Previous Snapshots
- Save New Routing to Snapshot
- Delete Current Snapshot
- Recall Snapshots Saved in OMNIBUS

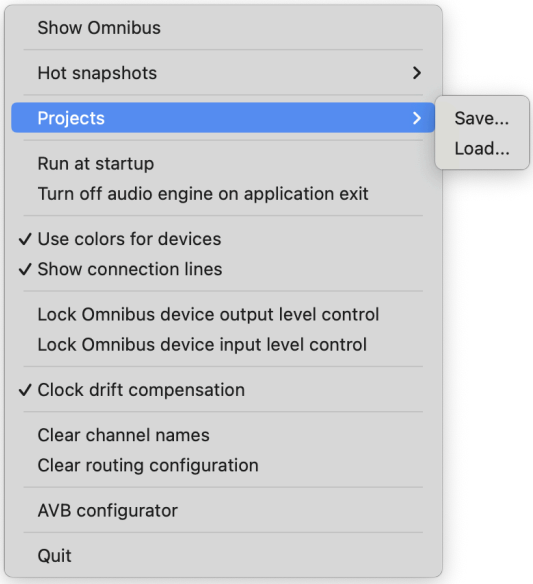
Each of these options can be assigned to a button on your Stream Deck for convenient and efficient control of OMNIBUS parameters.

10. Saving/Recalling OMNIBUS Configurations

OMNIBUS 3.0 introduces the capability to save your OMNIBUS settings to files on your computer. These files can then be utilized on multiple machines, allowing you to recall your OMNIBUS routing settings on any machine with OMNIBUS installed. This feature is particularly beneficial for large facilities and facilitates the sharing of routing setups with clients and colleagues.

To save OMNIBUS profiles, navigate to the OMNIBUS tab located at the top of your computer header and proceed to: OMNIBUS/Projects/Save. Users have the flexibility to choose the location where they want to save their OMNIBUS profiles on their machine.

To recall OMNIBUS sessions, go to: OMNIBUS/Projects/Load.



You can also find this under the “File” dropdown when OMNIBUS is open on the desktop. Select “Save” or “Load” here to save or load a previous profile.

This streamlined process ensures efficient management and retrieval of your OMNIBUS routing configurations.