



# Dolby Atmos Production Suite

## Release Notes

Software version 3.0  
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# 1 Introduction to the release notes

This documentation covers installation steps, software changes, and known issues for Dolby Atmos Production Suite v3.0.

- [About this documentation](#)
- [New in this version](#)
- [Dolby Atmos Production Suite software package](#)
- [Contacting Dolby](#)

## 1.1 About this documentation

This documentation is for engineers, sound designers, and others who install or use Dolby Atmos Renderer software for editorial, pre-mix, and sound design workflows when authoring sound for digital home theater or VR, and creating Dolby Atmos masters.

 **Note:** This documentation also includes a list of features and improvements added in v3.0. For complete information, see the *Dolby Atmos Renderer Guide*.

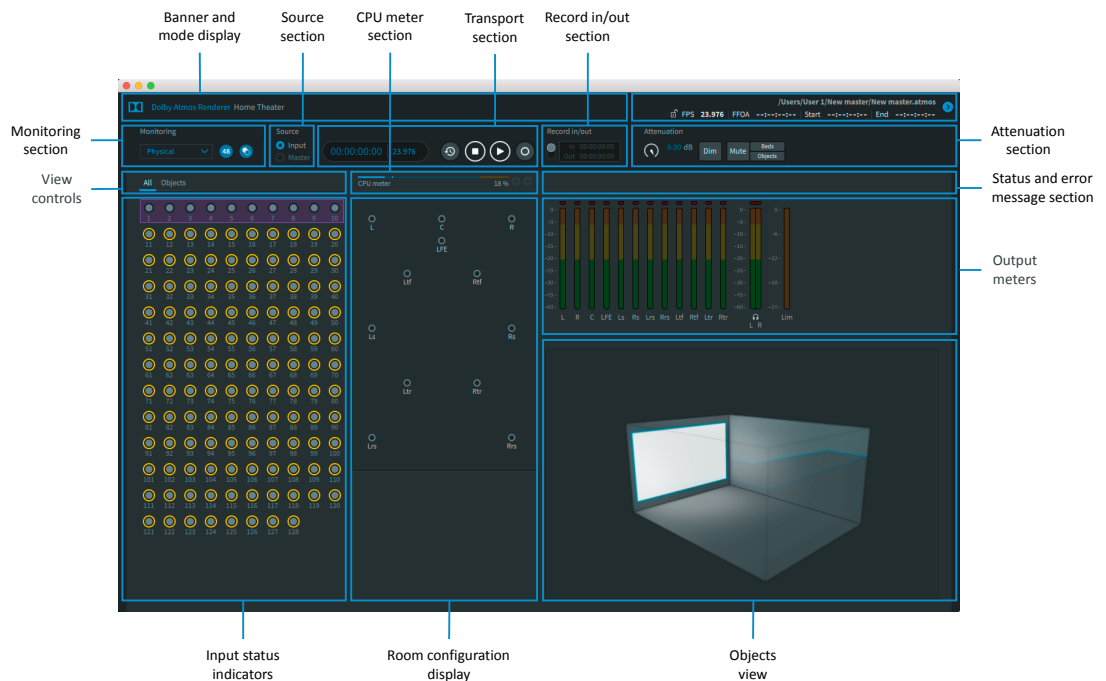
## 1.2 New in this version

Dolby Atmos Production Suite v3.0 includes new features, improvements, and fixes for using Dolby Atmos Renderer software to author content in Dolby Atmos.

- Support for Dolby Atmos system configurations with a single central processing unit (CPU) for in-the-box workflows.

In these configurations, the Dolby Atmos Production Suite Renderer is installed on a digital audio workstation (DAW) machine:

- Renderer and Pro Tools on a Mac (using Send and Return plug-ins), with up to 128 channels of input/output (I/O)
- Renderer and Pro Tools on a Mac (using the Dolby Audio Bridge), with up to 32 channels of I/O
- Renderer and Nuendo on a Mac (using the Dolby Audio Bridge), with up to 128 channels of I/O
- Panning options
  - Configurations with Pro Tools include support for Pro Tools panners (or Dolby Atmos panner plug-ins).
  - Configurations with Nuendo include support for Nuendo built-in panners.
- New user interface (UI)



- File menus and keyboard shortcuts for access to commands and windows for Dolby Atmos workflows
- Common system controls accessible in a single window via a **Preferences** (Mac) or **Settings** (Windows) menu
- Monitoring displays, controls, and metering in the Renderer, replacing the Dolby Atmos Monitor application (which is no longer installed with Renderer v3.0)
- Ability to export to Audio Definition Model (ADM) Broadcast Wave Format (BWF) media format
- Support for different active audio drivers
  - Send/Return plug-ins driver, for Mac systems using Send and Return plug-ins
  - Core Audio driver, for Mac systems.
 


Core Audio includes the new Dolby Audio Bridge, which is a virtual Core Audio device that lets you route audio (beds and objects) to or from a DAW that uses the bridge.
- Updates to downmix controls
  - Binaural controls
  - Additional re-render channel widths (with 5.1.4 and 9.16)

## 1.3 Dolby Atmos Production Suite software package

The Dolby Atmos Production Suite package includes the Dolby Atmos Renderer, which provides the software components required to monitor and play back Dolby Atmos content in a premix or editorial workflow.

This suite is for engineers, sound designers, and others who install or use Dolby Atmos Renderer software for editorial, premix, and sound-design workflows when authoring sound for digital home theater or VR, and creating Dolby Atmos masters.

The Dolby Atmos Production Suite provides access to one license for running the suite on a supported Mac CPU.

 **Note:** The Dolby Atmos Renderer Remote application, included as an option when installing the Renderer, is used for Dolby Atmos Mastering Suite workflows only. If you are working with the Dolby Atmos Production Suite only, you do not need the Dolby Atmos Renderer Remote.

### 1.3.1 Dolby Atmos Renderer installer components

The Dolby Atmos Renderer installer provides software for mixing and recording Dolby Atmos content.

Component	Description
Dolby Atmos Renderer	This application is required to render audio and Dolby Atmos metadata from a supported DAW. The software supports various tasks, including monitoring and listening to a Dolby Atmos mix, and recording or playing back a Dolby Atmos master.
Dolby Renderer Send plug-in (Mac only)	This optional Pro Tools plug-in is installed with the Dolby Atmos Renderer and can be used to send object or bed source audio to the Dolby Atmos Renderer from Pro Tools. The Send and Return plug-ins are designed for in-the-box workflows with the Dolby Atmos Production Suite.
Dolby Renderer Return plug-in (Mac only)	This optional Pro Tools plug-in is installed with the Renderer and can be used to receive Dolby Atmos audio from the Dolby Atmos Renderer, and then route the rendered mix to Pro Tools outputs. The Send and Return plug-ins are designed for in-the-box workflows with the Dolby Atmos Production Suite.
Dolby Atmos Renderer Remote (Dolby Atmos Mastering Suite workflows only)	This optional application enables remote control of a Dolby Atmos Renderer that is running with a Dolby Atmos Mastering Suite license and is located on the same network. This option is integral for two-CPU systems, where the Dolby Atmos Renderer Remote on the DAW machine controls the Dolby Atmos Renderer on the rendering and mastering workstation.
Dolby Audio Bridge (Mac only)	This optional Core Audio driver enables the rendering application to act as a virtual Core Audio device. It supports routing audio (beds and objects) to or from a DAW configured to use the bridge. Installing this component requires restarting your computer.
Dolby Atmos Panner plug-in (Mac only)	This optional Pro Tools plug-in enables you to position audio objects in a Dolby Atmos home theater mix in Pro Tools. This panner plug-in lets you position audio objects in a three-dimensional audio field.
Dolby Atmos VR panner plug-ins (Mac only)	These optional Pro Tools plug-ins enables you to position audio objects in a Dolby Atmos VR mix in Pro Tools. The Dolby Atmos VR Spherical Panner plug-in lets you position objects using a polar coordinate system. The Dolby Atmos VR XYZ Panner plug-in lets you position objects in a three-dimensional audio field.
Dolby Atmos VR Transcoder (Mac only)	This optional Mac application enables you to encode Dolby Atmos content to B-Format (Furse-Malham [FuMa], AmbiX) output formats and Dolby Digital Plus (.ec3, .ec3 in .mp4 container) for VR applications. For more information, see the <i>Dolby Atmos VR Transcoder Guide</i> .
Documentation	The installer includes user documentation for working with Dolby Atmos home theater or VR content.
Session templates (Mac only)	The installer includes DAW session templates for creating a session that is configured and ready for Dolby Atmos authoring.

Additionally, users can download the Dolby Atmos Conversion Tool. This tool enables you to convert one Dolby Atmos media file format to another, or perform other conversion tool operations (such as changing the frame rate of a Dolby Atmos media file).

## Dolby Atmos authoring documentation

The Renderer installer includes supporting documentation.

When selected during installation, documentation for Dolby Atmos Production Suite and Dolby Atmos Mastering Suite on Mac are installed at `~/Applications/Dolby/Dolby Atmos Renderer/Documentation`. For Dolby Atmos Mastering Suite on Windows, documentation is installed at `C:\Program Files (x86)\Dolby\Dolby Atmos Renderer\Documentation`.

After installation, installed documentation is also available in the Renderer. You can access an version of the Renderer guide via the **Help > Dolby Atmos Renderer Guide** menu command. You can access all Renderer documentation via the **Help > Open Documentation** menu command.

Dolby Atmos Production Suite and Dolby Atmos Mastering Suite on Mac include the entire documentation set. Dolby Atmos Mastering Suite on Windows does not include the documentation noted as Mac only.

### *Dolby Atmos Renderer Guide*

This documentation provides information for using the Dolby Atmos Renderer and other Dolby Atmos software to create or play back a Dolby Atmos master, listen to a Dolby Atmos mix, and pan audio objects in a Dolby Atmos mix.

### Suite release notes

Refer to this documentation for installation instructions, new features and improvements, and known issues. There are separate release notes for the Dolby Atmos Production Suite and Dolby Atmos Mastering Suite.

### *New in Dolby Atmos Renderer*

This documentation provides a list of what is new in the release. For releases with major UI changes, this documentation details these changes as a primer to the main guide.

### *Dolby Atmos Production Suite Quick Start Guide (Mac only)*

This documentation introduces you to the Dolby Atmos Production Suite components and provides the steps needed to install the suite and then verify your setup by playing audio from a supported DAW session.

### *Dolby Atmos Panner Plug-ins Guide (Mac only)*

This documentation provides reference and task information about Dolby Atmos panner plug-ins that can be used for Dolby Atmos authoring in a home theater or VR workflow.

### *Dolby Atmos VR Transcoder Guide (Mac only)*

This documentation describes how to use the Dolby Atmos VR Transcoder application to encode .atmos files.

### *Dolby Atmos Renderer Open Source Software Guide*

This documentation provides the third-party software licensed under open source licenses that are incorporated into the Dolby Atmos Renderer software along with the required notices.

## Dolby Atmos Renderer session templates

The Renderer installer includes DAW templates for Dolby Atmos Production Suite workflows. Use the installer to install templates on the computer running the DAW.

### Pro Tools session templates

Pro Tools session templates are installed in a Pro Tools session templates folder, based on the operation (home theater or VR).

- Home theater templates: `~/Documents/Pro Tools/Session Templates/Dolby Atmos Production Suite`

Template names are based on the system setup and number of Renderer channels the session supports.

- Templates designed for systems using Send and Return plug-ins
  - Dolby Atmos Renderer Send Return 32
  - Dolby Atmos Renderer Send Return 64
  - Dolby Atmos Renderer Send Return 128
- Template designed for systems using the Dolby Audio Bridge
  - Dolby Atmos Renderer Dolby Audio Bridge 32
- VR templates: ~/Documents/Pro Tools/Session Templates/Dolby Atmos VR Production Suite

Template names are based on the VR plug-in type and number of Renderer channels the session supports.

- Dolby Atmos VR Production Spherical 32
- Dolby Atmos VR Production Spherical 64
- Dolby Atmos VR Production Spherical 128
- Dolby Atmos VR Production XYZ 32
- Dolby Atmos VR Production XYZ 64
- Dolby Atmos VR Production XYZ 128

#### **Nuendo project template**

A Nuendo project template (Dolby Atmos Production Suite - 128 channels) is installed at Users/username/Library/Preferences/Nuendo 8/Project Templates/Dolby Atmos/Production Suite.

## **1.4 Contacting Dolby**

You can contact Dolby regarding this product and its supporting documentation.

If you have technical questions about this product, visit <https://developerkb.dolby.com/support/home>.

If you have questions or comments about this documentation, please send an email to [documentation@dolby.com](mailto:documentation@dolby.com).



## 2 System configurations supported by the Dolby Atmos Production Suite

The Production Suite license supports three primary Renderer system configurations (or setups). Your system requirements, installation steps, and setup steps will be based on the configuration you use.

### 2.1 System configurations with a single CPU


Each supported configuration includes a CPU with a DAW qualified by Dolby, required licenses and software, and a choice of which Renderer driver and panners to use.

#### 2.1.1 Renderer and Pro Tools on a Mac (using Send and Return plug-ins)

CPU	DAW	I/O	Suite license	Renderer installer components (required)	Renderer driver (Renderer setting)	Panners
Mac	Pro Tools	In the box	Dolby Atmos Production Suite	Dolby Atmos Renderer, and panners (for workflows with Dolby Atmos panners)	Send/Return plug-ins (for up to 128 channels of I/O)	Pro Tools

#### 2.1.2 Renderer and Pro Tools on a Mac (using Dolby Audio Bridge)

CPU	DAW	I/O	Suite license	Dolby Atmos Renderer installer components (required)	Renderer driver (Renderer setting)	Panners
Mac	Pro Tools	In the box	Dolby Atmos Production Suite	Dolby Atmos Renderer, Dolby Audio Bridge	Core Audio (Dolby Audio Bridge, for up to 32 channels of I/O)	Pro Tools

 **Note:** The Dolby Audio Bridge is not compatible with an Avid HDX system. When Pro Tools is running, the HDX system cannot be used as a Core Audio device. If you are running Dolby Atmos Production Suite on an HDX system, use the Send/Return plug-ins driver.

#### 2.1.3 Renderer and Nuendo on a Mac (using Dolby Audio Bridge)

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CPU	DAW	I/O	Suite license	Dolby Atmos Renderer installer components (required)	Renderer driver (Renderer setting)	Panners
Mac	Nuendo	In the box	Dolby Atmos Production Suite	Dolby Atmos Renderer, Dolby Audio Bridge	Core Audio (Dolby Audio Bridge, for up to 128 channels of I/O)	Nuendo

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## 3 Installing Dolby Atmos Renderer components on a single CPU system

The Dolby Atmos Renderer installer package includes the components needed for a Dolby Atmos single CPU system. Installation steps are dependent on your system configuration.

- [Requirements for systems with a single CPU](#)
- [Installing the Renderer and Pro Tools on a Mac \(using Send and Return plug-ins\) overview](#)
- [Installing the Renderer and Pro Tools on a Mac \(using Dolby Audio Bridge\) overview](#)
- [Installing the Renderer and Nuendo on a Mac \(using Dolby Audio Bridge\) overview](#)
- [Installation tasks](#)

### 3.1 Requirements for systems with a single CPU

The Dolby Atmos Renderer with a Dolby Atmos Production Suite license has been tested in these configurations.

Setup	CPU	Operating system	DAW
Renderer and Pro Tools on a Mac (using Send and Return plug-ins)	Mac Pro 6,1; 6-Core Intel Xeon E5, 32 GB RAM	macOS High Sierra (version 10.13.4)	Pro Tools 2018.3
	MacBook Pro 14,3; Intel Core i7 2.9 GHz, 16 GB RAM	macOS High Sierra (version 10.13.4)	
	MacBook Pro 11,5; Intel Core i7 2.8 GHz, 16 GB RAM	macOS Sierra (version 10.12.6)	
Renderer and Pro Tools on a Mac (using Dolby Audio Bridge) *†	MacBook Pro 14,3; Intel Core i7 2.9 GHz, 16 GB RAM	macOS High Sierra (version 10.13.4)	Pro Tools 2018.3
	MacBook Pro 11,5; Intel Core i7 2.8 GHz, 16 GB RAM	macOS Sierra (version 10.12.6)	
Renderer and Nuendo on a Mac	MacPro 6,1; 6-Core Intel Xeon E5, 32 GB RAM	macOS High Sierra (version 10.13.4)	Nuendo 8.0
	MacBook Pro 14,3; Intel Core i7 2.9 GHz, 16 GB RAM	macOS High Sierra (version 10.13.4)	
	MacBook Pro 11,5; Intel Core i7 2.8 GHz, 16 GB RAM	macOS Sierra (version 10.12.6)	

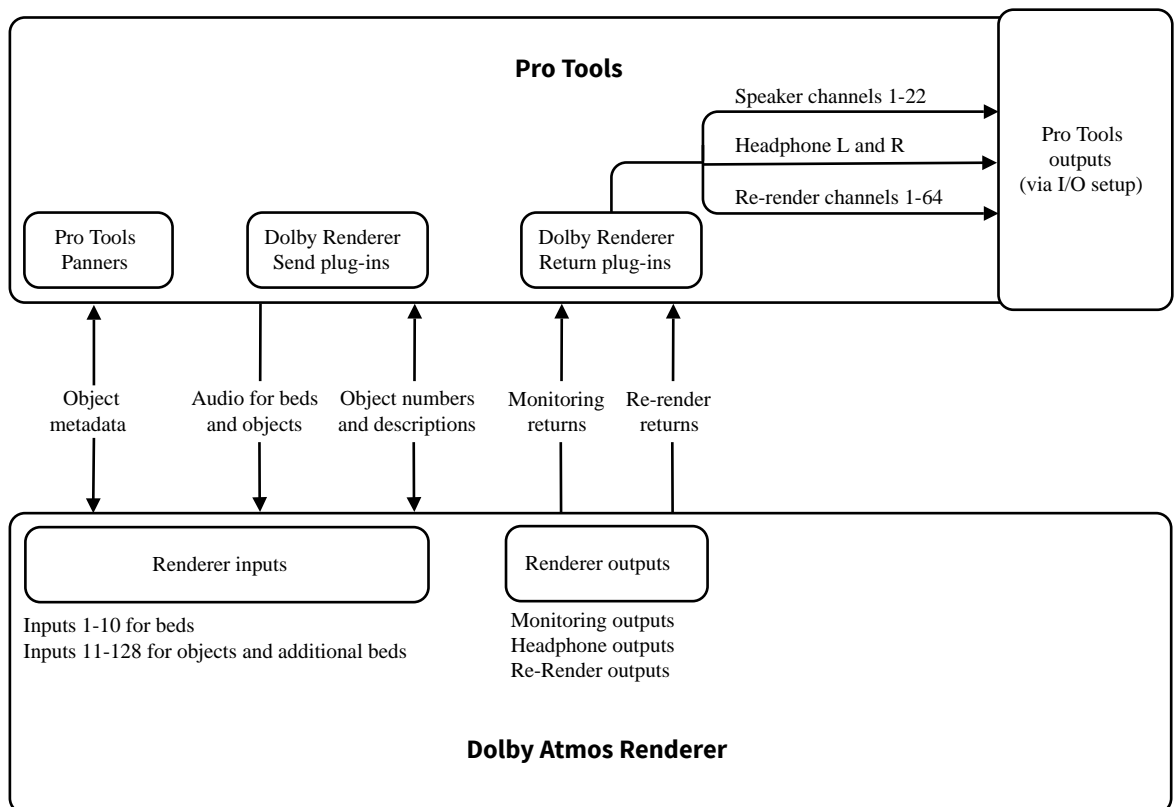
\* The Dolby Audio Bridge is not compatible with an Avid HDX system. When Pro Tools is running, the HDX system cannot be used as a Core Audio device. If you are running DAPS on an HDX system, use the Send/Return plug-ins driver.

† Supports sending up to 32 channels of audio (beds and objects) from Pro Tools to the Renderer

### 3.2 Installing the Renderer and Pro Tools on a Mac (using Send and Return plug-ins) overview

#### Prerequisites

Ensure that your system configuration meets the requirements.



The Dolby Atmos Renderer with a Dolby Atmos Production Suite license has been tested in these configurations.


Setup	CPU	Operating system	DAW
Renderer and Pro Tools on a Mac (using Send and Return plug-ins)	Mac Pro 6,1; 6-Core Intel Xeon E5, 32 GB RAM	macOS High Sierra (version 10.13.4)	Pro Tools 2018.3
	MacBook Pro 14,3; Intel Core i7 2.9 GHz, 16 GB RAM	macOS High Sierra (version 10.13.4)	
	MacBook Pro 11,5; Intel Core i7 2.8 GHz, 16 GB RAM	macOS Sierra (version 10.12.6)	

#### Procedure

1. Activate the Dolby Atmos Production Suite license for the Mac that is running your DAW.
2. Install Dolby Atmos Renderer components on the Mac.

Required components:

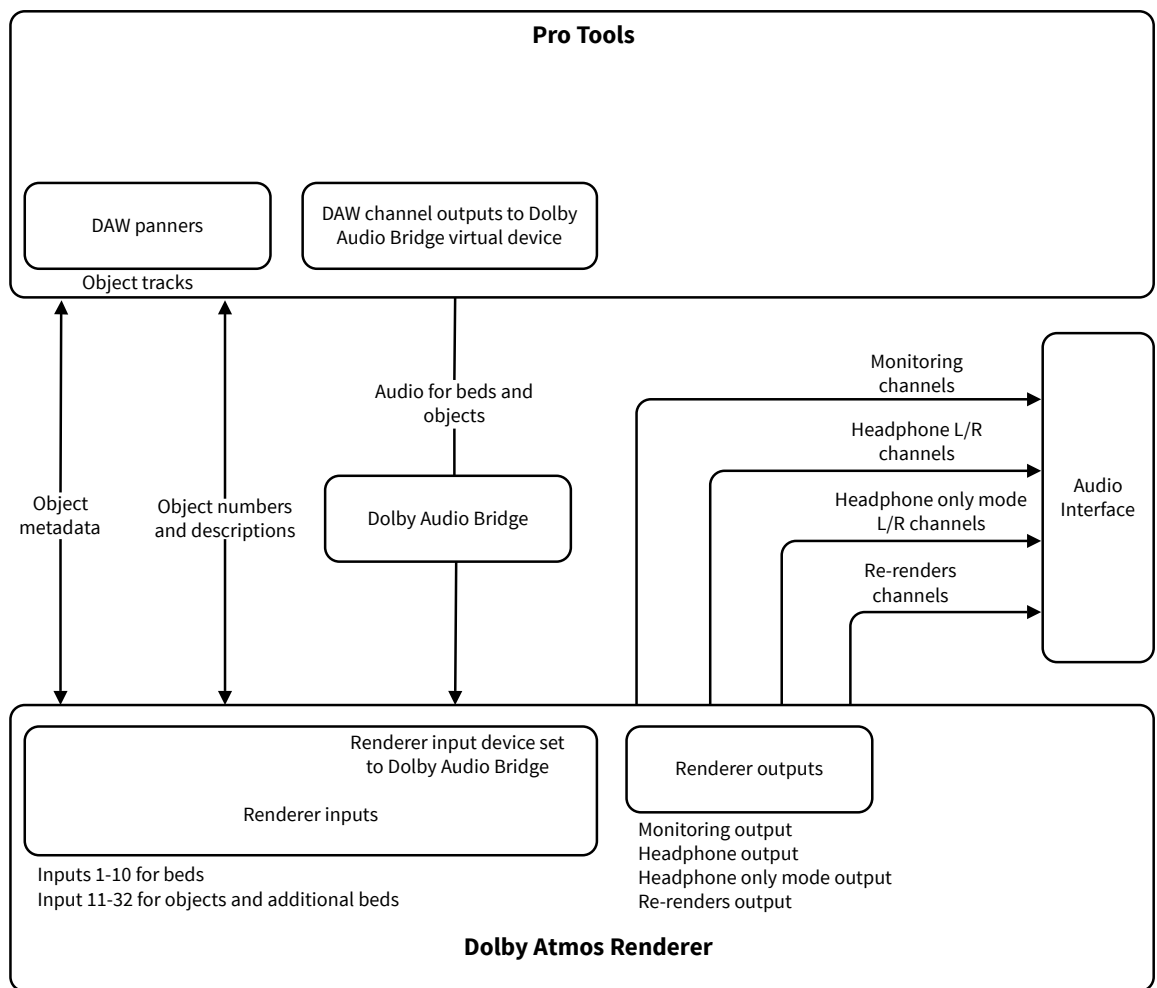
- Dolby Atmos Renderer

 **Note:** The Renderer install option also installs Dolby Renderer Send and Return plug-ins.

## 3.3 Installing the Renderer and Pro Tools on a Mac (using Dolby Audio Bridge) overview

#### Prerequisites

Ensure that your system configuration meets the requirements.



The Dolby Atmos Renderer with a Dolby Atmos Production Suite license has been tested in these configurations.

Setup	CPU	Operating system	DAW
Renderer and Pro Tools on a Mac (using Dolby Audio Bridge) *	MacBook Pro 14,3; Intel Core i7 2.9 GHz, 16 GB RAM	macOS High Sierra (version 10.13.4)	Pro Tools 2018.3 <sup>†</sup>
	MacBook Pro 11,5; Intel Core i7 2.8 GHz, 16 GB RAM	macOS Sierra (version 10.12.6)	

\* The Dolby Audio Bridge is not compatible with an Avid HDX system. When Pro Tools is running, the HDX system cannot be used as a Core Audio device. If you are running DAPS on an HDX system, use the Send/Return plug-ins driver.

<sup>†</sup> Supports sending up to 32 channels of audio (beds and objects) from Pro Tools to the Renderer

## Procedure

1. Activate the Dolby Atmos Production Suite license for the Mac that is running your DAW.
2. Install Dolby Atmos Renderer components on the Mac.

Required components:

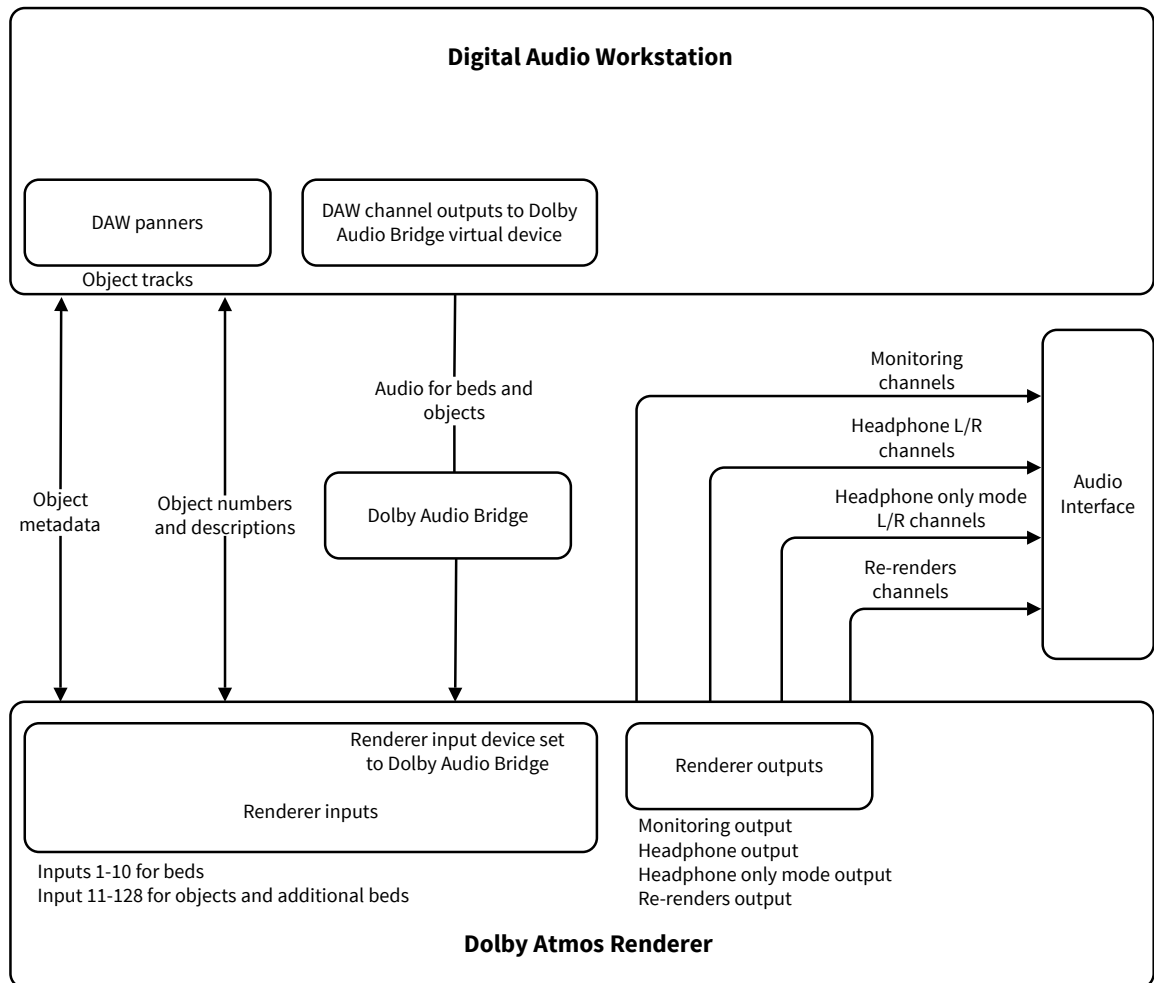
- Dolby Atmos Renderer

- Dolby Audio Bridge

## 3.4 Installing the Renderer and Nuendo on a Mac (using Dolby Audio Bridge) overview

### Prerequisites

Ensure that your system configuration meets the requirements.



The Dolby Atmos Renderer with a Dolby Atmos Production Suite (or Dolby Atmos Mastering Suite) license has been tested in these configurations.

Setup	CPU	Operating system	DAW
Renderer and Nuendo on a Mac	Mac Pro 6,1; 6-Core Intel Xeon E5, 32 GB RAM	macOS High Sierra (version 10.13.4)	Nuendo 8.0
	MacBook Pro 14,3; Intel Core i7 2.9 GHz, 16 GB RAM	macOS High Sierra (version 10.13.4)	
	MacBook Pro 11,5; Intel Core i7 2.8 GHz, 16 GB RAM	macOS Sierra (version 10.12.6)	

### Procedure

1. Activate the Dolby Atmos Production Suite license for the Mac that is running your DAW.
2. Install Dolby Atmos Renderer components on the Mac.

Required components:

- Dolby Atmos Renderer
- Dolby Audio Bridge

## 3.5 Installation tasks

Complete the installation tasks for your system configuration.

### 3.5.1 Activating a Dolby software license

On a supported computer or iLok, activate the license that enables your software. We recommend that you activate the license before you install the software.

#### Prerequisites

- Download the iLok License Manager from [www.ilok.com](http://www.ilok.com).
- Ensure that you have iLok authorization for the license.

#### About this task

This task is performed in the iLok License Manager.

#### Procedure

1. Launch the **iLok License Manager**.
2. In the **iLok License Manager** window, sign in to your account, and then click (highlight) your account name in the navigation bar.  
Your account name is shown in the upper-left panel. Your host machine and iLok Universal Serial Bus (USB) devices are shown as icons in the panel below your account information.
3. Click the **Available** tab in the **iLok License Manager** header.



If you do not see the **Available** tab, widen the application window until the tab is visible in the header.

The available licenses are shown under the tabs.

4. Locate the license for your software, and then drag and drop it to your host machine icon or to the iLok device icon on the left.
5. Follow any additional onscreen instructions.
6. In the **iLok License Manager** window, repeat these steps if you are installing additional licenses to other machines or iLoks.

### 3.5.2 Installing the Dolby Atmos Renderer on Mac

Depending on your system setup, install the Dolby Atmos Renderer components on the Mac that is running your DAW, on a Mac rendering and mastering workstation, or both.

#### Prerequisites

- Ensure that the machine meets system requirements, including any required software.
- Ensure that you have activated the license for your software.

## About this task

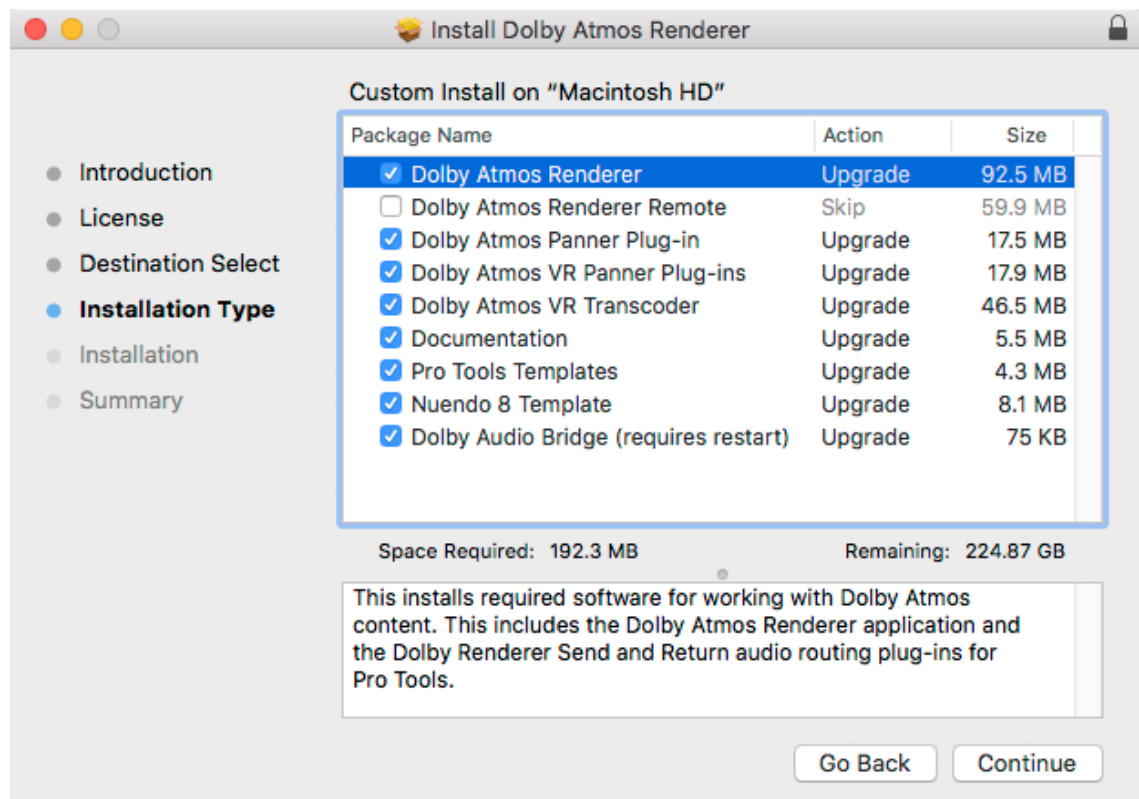
When selecting which components to install, select the components that are required for your system configuration.

The installer also includes optional components (such as the Dolby Audio Bridge, documentation, and templates). Choose optional components based on your Dolby Atmos Renderer configuration and needs.

When the Dolby Audio Bridge option is selected, installation includes a restart of the Mac OS.

## Procedure

1. If updating Dolby Atmos Renderer and supporting software, ensure that the Dolby Atmos Renderer is not running.
2. Double-click the Dolby Atmos Renderer .dmg file (Dolby\_Atmos\_Renderer-3.0.0-xxxxxx.dmg).  
This provides access to the installer and documentation. Refer to documentation for what is new in this version, release notes (including known issues), and additional information.
3. Double-click the Dolby Atmos Renderer installer package (DolbyAtmosRenderer.pkg).
4. Follow the onscreen instructions.
5. When prompted to select which components to install, select the components required for your system configuration.



6. Complete installation.

## Results

All items selected for installation are installed.



### 3.5.3 Launching the Dolby Atmos Renderer and supporting software

After Dolby Atmos Renderer software is installed, you can launch the Renderer and DAW.

#### Procedure

1. Locate the Dolby Atmos Renderer application name or icon.

The Dolby Atmos Renderer application is in the Applications/Dolby/Dolby Atmos Renderer folder.

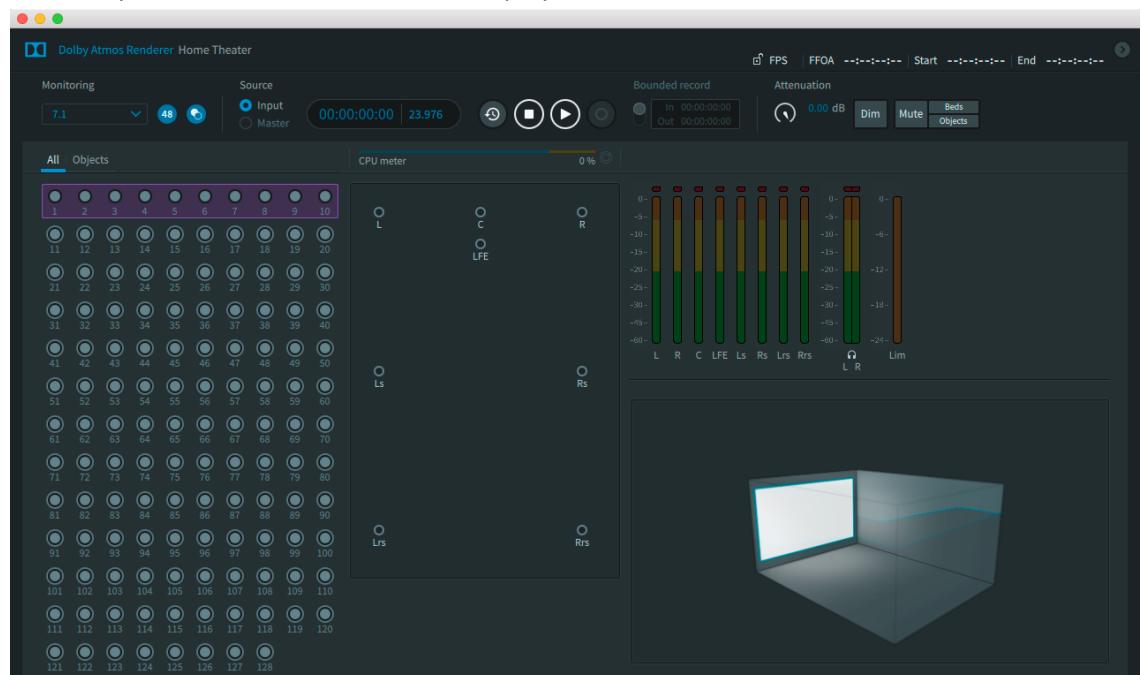
*Figure 1: Dolby Atmos Renderer icon*



Dolby Atmos  
Renderer

2. Click the Dolby Atmos Renderer application name or icon.

The Dolby Atmos Renderer window is displayed.



3. Launch the DAW.

#### What to do next

Configure the settings in your Dolby Atmos Renderer and DAW as needed, to support your system configuration.

For additional configuration steps, see the *Dolby Atmos Renderer Guide*.

## 4 Known issues

This release has some known issues, for which we provide workarounds, comments, and solutions.

- When using Remote Desktop to manage installation of the Renderer on a Mac rendering and mastering workstation, the Dolby Audio Bridge will not successfully install on the workstation. As a workaround, install the Dolby Audio Bridge directly on the workstation. [DACT-7721]
- When localhost is used as the IP address to connect to a Renderer, a double colon (::) is displayed in the **Network information** page of the **Preferences** window. As a workaround, use a valid IP address. [DACT-7996]
- If the Dolby Atmos Renderer Remote application is launched before the Dolby Atmos Renderer, the remote will not auto-connect to the Renderer. As a workaround, connect the Renderer Remote to the rendering and mastering workstation using the IP address drop-down menu or launch the Remote after launching the Renderer. [DACT-8012]
- In Windows, the Renderer will fail to initialize if you open the Renderer with a previously loaded master from an encrypted drive that has not been unlocked. As a workaround, make sure the drive has been unlocked before launching the Renderer. Alternatively, close the master before closing the Renderer to avoid reloading the master upon launch. [DACT-8099]
- If the Core Audio input device or Core Audio output device is set to **None** when Core Audio is the active audio driver for the Renderer, an **Audio driver error** message is displayed and the Renderer is not fully operational. Set the devices to available choices other than **None** to make the Renderer fully operational. [DACT-6301]
- Connecting an audio device to your system while the Renderer is running may change the device audio settings in your system. This can result in audio drops due to an invalid system setup, and produce a log error (ERROR RendererExecutive audio device processor overload). If this occurs, check the settings for the **Audio Driver Configuration** in the Renderer and the Mac Audio MIDI Setup. If the settings are not correct, update them. [DACT-6280]
- Connecting or disconnecting headphones while the Renderer is running and using the Core Audio Built-in output causes an audio driver error. This occurs because the Mac OS system changes the device audio configuration. As a workaround, re-initialize the Renderer to reconfigures the Core Audio driver. For example, choose **Dolby Atmos Renderer > Preferences**, and then click **Accept**. [DACT-7902]
- Pro Tools Aggregate and Built-in output audio devices can intermittently, and without warning, change the sampling rate to 44.1 kHz (typically, after a CPU overload). This sample rate change causes rendered audio to be jittery. As a workaround, open the Mac OS X Audio MIDI Setup application and select the 48 kHz sample rate. If 48 kHz is already selected, unselect it, and then reselect it. [DACT-5484]
- When importing Dolby Atmos system settings from another computer, Core Audio input and output device settings are not included. After importing system settings, an **Audio driver error** message lets you know that the devices have not been accessed. As a workaround, navigate to **Driver** preferences and add the input and output devices. [DACT-7227]
- Removing speakers in the physical room configuration (in the **Speaker setup** page of the **Room setup** window) results in loss of calibration settings for those speakers. [DACT-8000]
- Dolby Atmos system configurations support only one Pro Tools recorder system at a time. For example, if you enable Recorder mode on two Pro Tools systems, and then disable Recorder mode on one of them, trying to record on the system still in Recorder mode results

in no recorded automation. To restore Recorder mode on this system, toggle Recorder mode off and on. [DACT-2215]

- Do not use Dolby Atmos panners and Pro Tools object panners in the same session. For example, if a Pro Tools track has an assigned Object Output Path and a Dolby Atmos panner plug-in inserted, the Dolby Atmos panner object metadata will not be sent to the Renderer. The Pro Tools panner metadata will change and overwrite the Dolby Atmos panner plug-in metadata. This can cause unwanted recorded data. [DACT-7167].
- The Pro Tools scrubber tool is not supported when monitoring a Dolby Atmos master file. DACT-5859
- Pro Tools offline bounce is not supported with the Dolby Atmos Production Suite. Attempting an offline bounce on Pro Tools HDX systems can cause a crash. Attempting an offline bounce on a Pro Tools native system can cause significant metadata loss. [DACT-6053], [DACT-5743]
- If a Dolby Atmos Pro Tools session connected to a Renderer using the **Send/Return plug-ins** audio driver is closed, the associated input channels in the Renderer remain active. To clear the meters, re-initialize the Renderer (for example, by closing the Renderer and relaunching it). [DACT-5821]
- When using the **Send/Return plug-ins** audio driver, ensure that the Pro Tools transport stops after the recording end time. This ensures that the final master does not have any missing samples at the end time. [DACT-7998]

When using the **Send/Return plug-ins** driver, the Pro Tools pre-roll feature does not work. Instead, the Renderer will start chasing LTC when the pre-roll period has ended. [DACT-8026]

- The Dolby Atmos Renderer does not support upper case master file extensions (such as .ATMOS) in its input fields. Files with upper case file extensions fail to load. Change extensions manually to lower case to load them into the Renderer. [DACT-5983]
- Playing back a master file from an external optical drive can result in undesired artifacts or glitches when monitoring. As a workaround, open the master file from a fast SSD drive or from the internal drive of the Renderer machine. [DACT-7969]
- When playing back larger ADM BWF files and chasing an external LTC source, attempting to re-initialize the Renderer can result in intermittent muting of the output. As a workaround, press the play button to pause playback, and then press the play button again to normal playback. [DACT-7966]
- Do not lock a new master before recording any content. Doing so results in a **Master file error** dialog, which reports that the master was not found. When you close the error dialog, the master closes. [DACT-8023]
- If master file content is present at the offset start time, playback without pre-roll may result in the loss of the first buffer. To avoid this, always start playback with at least one frame of pre-roll. For optimum performance, Dolby recommends pre-roll and post-roll of greater than two frames for playback and recording. [DACT-6963]
- Before beginning the workflow to record a master using set in and out points, ensure that the DAW session is open. If you set up the Renderer for recording, and then open a DAW session that has an input configuration conflict with the Renderer, the Renderer will disarm the master when the In point is reached and not provide any warning that this has occurred. [DACT-7132]
- Recording a master from a Pro Tools session that has a Dolby Atmos Panner and a Dolby Atmos VR panner assigned to the same input object can result in an unexpected and corrupted master file. Do not use Dolby Atmos Panners and Dolby Atmos VR panners in the same session. [DACT-5863]

- When two machines are connected to the Renderer and the Renderer is recording audio and metadata from a Pro Tools session on the first machine, opening a Dolby Atmos Pro Tools session on the second machine that has object panners enabled on Object IDs that are being recorded to by the Renderer will send metadata to the Renderer and overwrite metadata in the session on the first machine. This can produce unwanted recorded data. [DACT-7380]
- During a punch in and out of a master recording at set points workflow, the master file audio mutes after you press the record button and start playback, and then unmutes when the out point is reached. This is because the Renderer toggles to Input mode when you press the record button. [DACT-5972]
- Pro Tools uses channel ordering when importing a 7.1 offline re-render. As a workaround, manually change the labeling in Pro Tools from LRc to LRsr and from LRs to LRss, and then drag the re-rendered audio to a 7.1 multichannel track in Pro Tools. [DACT-5907]
- When exporting re-renders to an external drive, if the drive is unplugged during the export, the export will continue and report a successful operation even if the re-renders were not successfully written to the drive. As a workaround, do not unplug the destination drive when exporting re-renders. [DACT-8006]
- Attempting to use a read-only directory to export re-renders, export an ADM BWF, or create a new master does not provide a descriptive error to the Dolby Atmos Renderer Remote application. Instead, the error simply notes that the file was not written. As a workaround, choose a destination directory that is not read only. [DACT-7568]

# Glossary

**AC**

Alternating current.

**ADM**

Audio Definition Model. A metadata specification for describing channel-based, object-based, or scene-based audio.

**ASCII**

American Standard Code for Information Interchange.

**ASIO**

Audio Stream Input/Output. A soundcard driver protocol from Steinberg Media Technologies GmbH that allows musicians and sound engineers to access PC soundcards directly without going through Microsoft Windows.

**BWF**

Broadcast Wave Format. An extension of the Microsoft Waveform Audio Format (WAV) file format to include metadata important to broadcast applications. This format is specified in EBU Tech 3285.

**B-format**

A speaker-independent representation of a soundfield.

**CAF**

Core Audio Format. A file format that was developed by Apple for storing and transporting digital audio. A .caf file can store large amounts of data and is not limited to 4 GB, as was the case with older file formats.

**channel configuration**

A standard for describing a sound system with front, surround, and overhead channels. The first numeral represents the number of front channels, the second represents the number of surround channels, and the third represents the number of height channels. For example, 3/2/2 indicates that there are three front channels, two surround channels, and two height channels.

**container**

A formatted file (such as an MP4 file) comprising one or more multiplexed elementary streams and including format-specific metadata.

**CPU**

Central processing unit.

**DAW**

Digital audio workstation. An electronic device or computer software application used to record, edit, and produce audio files.

**dBFS**

Decibels full scale. The amplitude of a signal relative to a digital full-scale signal.

**Dolby Digital Plus**

An advanced perceptual audio-coding system that expands and improves Dolby Digital coding technology, with higher bandwidth efficiencies, support for additional channels, and enhanced metadata capabilities.

**Dolby RMU**

Dolby Rendering and Mastering Unit.

**DSP**

Digital signal processor. A specialized microprocessor optimized for digital signal processing.

**EQ**

Equalization. The adjustment of audio frequency responses for practical or aesthetic reasons.

**FFOA**

First frame of action. The point on a film reel or corresponding file at which the program content begins.

**fps**

Frames per second. The number of unique consecutive images (frames) an imaging device produces in one second.

**frame**

In audio, a series of PCM samples or encoded audio data representing the same time interval for all channels in the configuration. Metadata pertaining to the frame can be carried within the frame or separately, depending on context.

**HD**

High definition.

**I/O**

Input/output. The communication between a system and an entity outside the system, such as another system or a human being.

**immersive stereo**

A technology that delivers a virtualized immersive experience to headphones or stereo speakers through a Dolby AC-4 bitstream with appropriate stereo content and metadata that converts the stereo signal into the virtualized experience.

**IP address**

Internet Protocol address. A numerical identifier assigned to a device that is a member of a network that uses the IP for communication.

**LFE**

Low-Frequency Effects. A band-limited channel specifically intended for deep, low-pitched sounds.

**LTC**

Linear timecode. A timecode developed by the Society of Motion Picture and Television Engineers (SMPTE) that provides a time reference for editing, synchronization, and identification.

**MADI**

Multichannel Audio Digital Interface. A communications protocol for an interface that carries multiple channels of digital audio, defined by the Audio Engineering Society. Also known as AES10.

**object**

An audio signal plus associated object audio metadata.

**PC**

Personal computer.

**PCM**

Pulse code modulation. A method that is used to convert analog signals into digital, binary, coded pulses by sampling the analog signal, quantizing each sample independently, and converting the resulting quantized values into a digital signal.

**playlist**

An extended .m3u8 file that contains one or more uniform resource identifiers (URIs). A URI can point to another playlist or to a media file.

**rendering**

Processing of audio content to adapt it to specific speaker layouts, such as 5.1- and 7.1-speaker feeds, or headphones and sound bars.

**RMU**

Rendering and Mastering Unit.

**UI**

User interface.

**USB**

Universal Serial Bus. A standard that defines the cables, connectors, and communications protocols used in connections between computers and electronic devices.

**WAV**

Waveform Audio Format. An audio bitstream file format.