



Dolby Atmos VR Transcoder Guide

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1 Introduction to the Dolby Atmos VR Transcoder

The Dolby Atmos VR Transcoder enables you to encode Dolby Atmos content to Dolby Digital Plus (.ec3, .ec3 in .mp4 container) and B-format (Furse-Malham [FuMa], AmbiX) output formats.

- [About this guide](#)
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1.1 About this guide

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

1.2 Channel abbreviations

This table lists the channel notations used in this document

Abbreviation	Channel
L	Left
R	Right
C	Center
LFE	Low-Frequency Effects
Ls	Left Surround
Rs	Right Surround

1.3 Contacting Dolby

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

If you have technical questions about this product, please contact vrcontent@dolby.com.

If you have comments or feedback about this documentation, send us an email at documentation@dolby.com.

2 Installing the Dolby Atmos VR Transcoder

Use the Dolby Atmos Production Suite installer package to install the VR Transcoder.

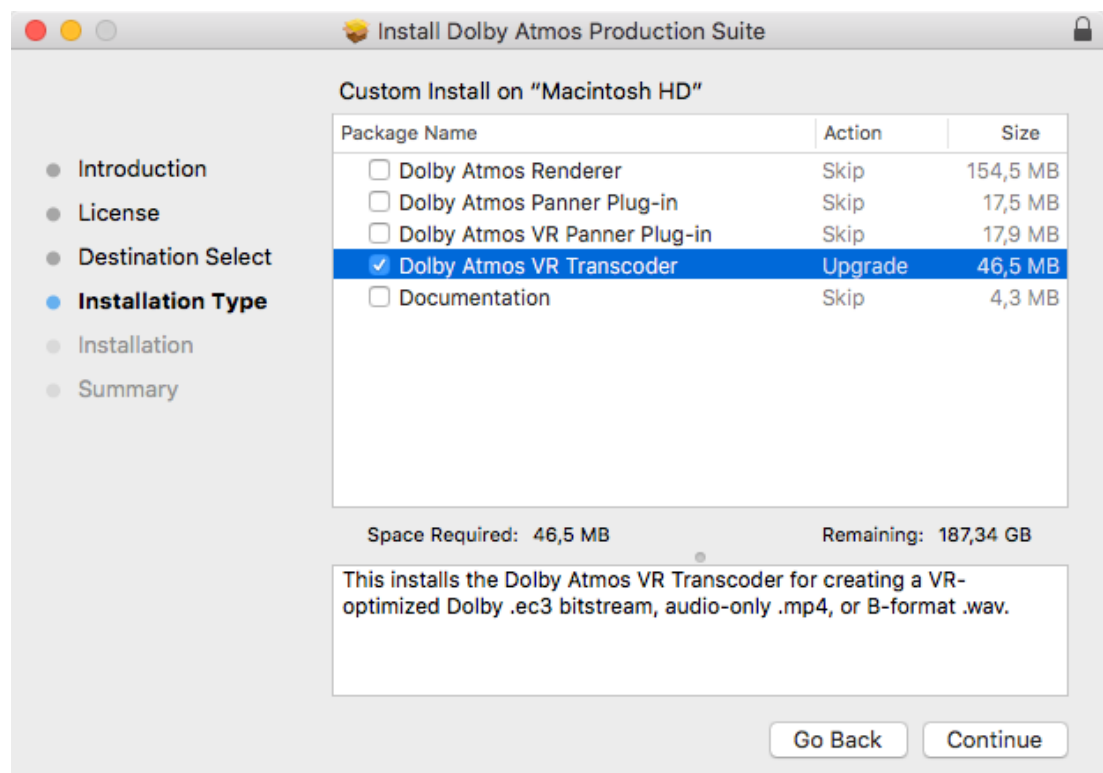
Prerequisites

Ensure that your computer meets the requirements.

System component	Requirement
Operating system	Mac OS X 10.9 or later
Processor	2.6 GHz Intel Core i5
Memory	8 GB RAM

Procedure

1. If updating the Dolby Atmos VR Transcoder, ensure that the Transcoder is not running.
2. Double-click the Dolby Atmos Production Suite installer package (DolbyAtmosProductionSuite.pkg).
3. Follow the onscreen instructions.
4. In the **Installation Type** section, unselect other components and leave only the **Dolby Atmos VR Transcoder** checked.



5. Click **Continue**, and follow the onscreen instructions to complete the installation.

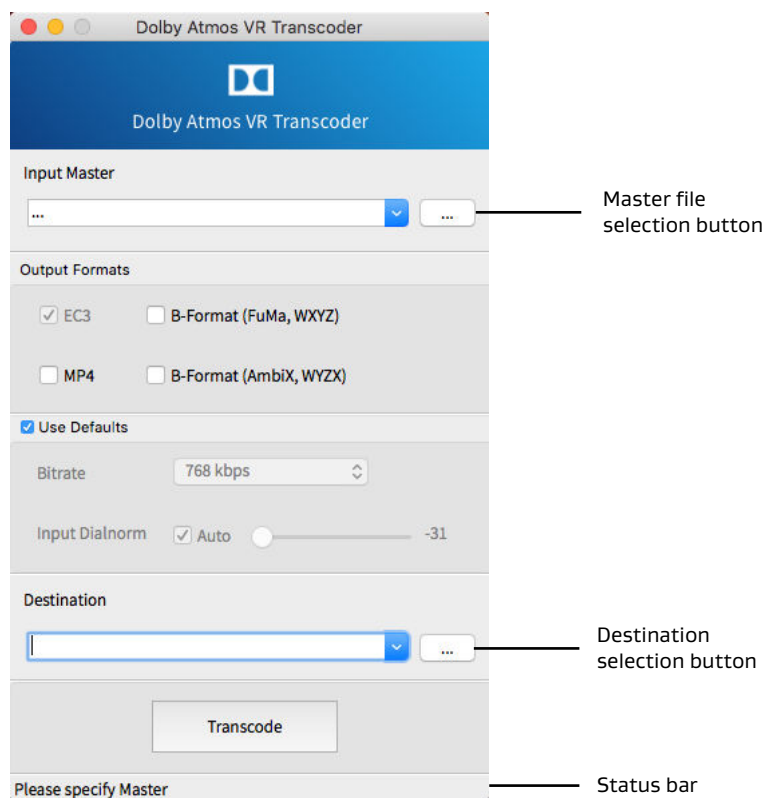
Results

The Dolby Atmos VR Transcoder is ready to use.

3 Transcoder user interface

The Dolby Atmos VR Transcoder screen consists of several sections.

Figure 1: Dolby Atmos VR Transcoder screen




Input Master section

This section provides a field and browser button to select a master file for transcoding.

Output Formats section

This section lets select the file types that will be generated from the input master. The Transcoder generates a master file for each format selected.

- **EC3**

 **Note:** By default, **EC3** is checked, and cannot be changed. The Transcoder always generates an EC3 output.

- **MP4**

- **B-Format (FuMa, WXYZ)**

- **B-Format (AmbiX, WYZX)**

Use Defaults section

This section provides settings for bitrate and dialogue normalization value. By default, it is disabled and the Transcoder calculates a dialogue normalization value (dialnorm) automatically.

To change the dialnorm settings, deselect both the **Use Defaults** and the **Auto** box, then use the **Input Dialnorm** slider to set the value.

Destination section

This section provides a field and browser button to set the destination folder for the transcoded file.

Status bar

The status bar at the bottom of the Transcoder application window provides information about errors, and prompts the next step when using the application.

4 Transcoding .atmos master files

The Transcoder reads Dolby Atmos masters, processes them, and generates encoded output. Use the Transcoder to encode Dolby Atmos content to desired Dolby Digital Plus (.ec3, .ec3 in .mp4 container) and B-format (Furse-Malham [FuMa], AmbiX) output formats.

- [Input files](#)
- [Output files](#)
- [Advanced settings](#)
- [Default settings](#)
- [Debug messages](#)

Prerequisites

Ensure that your system meets the requirements, and complete the required installation steps.

Procedure

1. Launch the Dolby Atmos VR Transcoder application by clicking the icon.




2. Select an input file by performing one of these steps:
 - Click the **Master File Selection** button, and choose an .atmos file.
 - Paste the complete path in the **Input Master** field.

When selecting the input through the **Master File Selection** button, only .atmos files can be selected. All other files are grayed out.

3. Select the output formats by checking one or more formats:
 - .ec3: This format is checked by default, and it is always generated.
 - .mp4
 - B-format for FuMa normalization
 - B-format for AmbiX normalization

4. Optional: Clear the **Use Defaults** check box to specify additional features:

 **Note:** If the **Use Defaults** check box is selected, then the recommended values are used.

- a) Set the target audio bit rate.
 - b) Specify the dialogue normalization value.
5. Select the **Destination** folder by performing one of these steps:
 - Click the **File Selection** button, and select a folder.

- Paste the complete path in the **Destination** field.

The output file name uses the name of the input file by default. For example, if the .atmos file name is movieSurround.atmos, then the output for an .ec3 file is movieSurround.ec3, and is movieSurround.mp4 for an .mp4.

6. Click the **Transcode** button to encode the file.

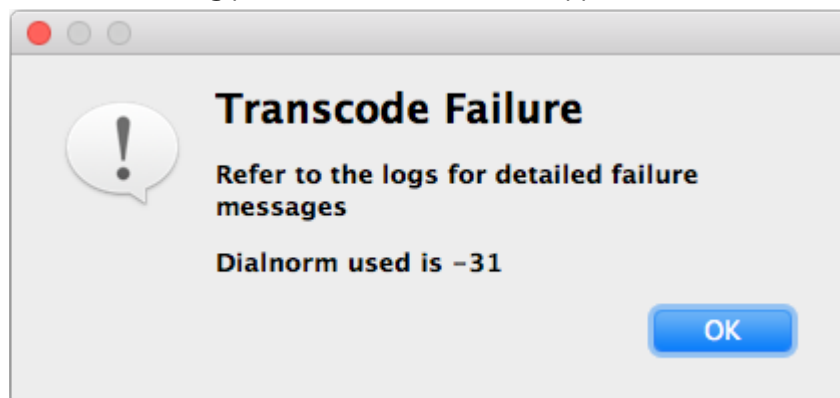
Results


When the transcoding process completes, the Transcoder reports whether the transcode is successful or has failed. In either case, the value of an automatically computed or a manually set dialnorm parameter is shown.

If the transcoding process is successful, this window appears.



If the transcoding process fails, this window appears.



 **Note:** In case of failure, we recommend that you read the debug file for information on how to correct the errors, or contact Dolby for more information.

4.1 Input files

The Transcoder application accepts only .atmos files.

4.2 Output files

The Transcoder can generate several output formats from a single master. You can select one or more output formats to be encoded simultaneously.

The Transcoder can generate these outputs:

- A B-format .wav file. This output is provided for backward compatibility with devices that do not support Dolby Atmos playback technologies. The following B-format data exchange formats are supported:
 - FuMa: Zeroth and first-order ambisonics with WXYZ channel order and FuMa normalization
 - AmbiX: Zeroth and first-order ambisonics with WYXZ channel order and Schmidt seminormalization (SN3D)
- A Dolby Digital Plus (Enhanced AC-3) elementary stream (.ec3) with joint object coding content that is backward compatible with all Dolby Digital Plus decoders.
- A Dolby Digital Plus (Enhanced AC-3) elementary stream with joint object coding content in an MPEG-4 (.mp4) container.

4.3 Advanced settings

Use the **Bitrate** and **Input Dialnorm** settings to customize the .ec3 and .mp4 output.

Bitrate

Sets the target audio bit rate (in kbps).

Input Dialnorm

Specifies the dialogue normalization value for the input audio stream in the range from -31 to -1.



Note: If set to **Auto** in the application UI, the Transcoder automatically computes the dialogue normalization value when processing a master file.

4.4 Default settings

The Transcoder application uses certain default settings when transcoding an .atmos master to .ec3 or .mp4 format.

By default, the Transcoder uses these settings:

- **Bitrate: 768 kbps**
- **Input Dialnorm: Auto**

4.5 Debug messages

The debug information is stored in the Transcoder_log.txt file.

To access the log file, go to the Dolby Atmos VR Transcoder menu bar and select **Session > View Log**. In the **Logs** window, click **Show in Finder** and open the Transcoder_log.txt file.

Glossary

B-format

A speaker-independent representation of a soundfield.

dialnorm

Dialogue normalization value.

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.

E-AC-3

Enhanced AC-3. A Dolby Digital Plus bitstream. The file extension for an E-AC-3 file is .ec3.

MPEG-4

An MPEG standard (ISO/IEC 14496) for a group of audio and video coding formats and related technologies.

transcoding

The digital-to-digital conversion of one encoding format to another; this is usually done in a two-step process in which the original file is decoded to an intermediate, uncompressed format (such as PCM for audio), and then encoded into the target format (for example, a Dolby Digital Plus bitstream).