Autodesk®
FBX® 2011

Autodesk FBX Converter Help

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Autodesk® FBX® 2011.1 Converter

Contents

What's New

1

This section lists changes and enhancements for this version of the FBX Converter.

Version support

Several FBX version options have been removed from this version of the FBX Converter and are no longer available as separate options. These versions have been combined into one version, FBX 2006, instead.

The following versions have been combined into FBX 2006:

- FBX 2005.08_MB70

- FBX200602_MB75

- FBX 200608

- FBX 6

These have been merged to version FBX 2006. You can now use FBX 2006 to process all of these conversions with no loss of support.

Embed media

You can now embed media with files converted to ASCII format if you convert to version FBX 2011.

Installation

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Introduction

The FBX Converter lets you convert files into different file formats and FBX versions. With the FBX Converter, you can convert files to and from FBX, 3DS, DXF, OBJ, & COLLADA file formats. This chapter describes how to install the FBX Converter on Microsoft® Windows®, Apple® Macintosh® OS X and Linux systems.

Windows installation

The FBX Converter is compatible with the following versions of Microsoft Windows:

- Windows 7 (32/64-bit)

- Windows Vista (32/64-bit)

- Windows XP (32/64-bit)

To install the FBX Converter:

1 Download the install file from the Autodesk web site (*http://www.Autodesk.com/fbx*).

2 Double-click the install file to launch the FBX Converter installer.

Software License Agreement window

3 Click I accept to accept the terms of the license agreement, and then click Next.

4 The next window shows the recommended installation location for the FBX Converter. If you want to specify another location, click Browse to launch the file browser. Click Next.
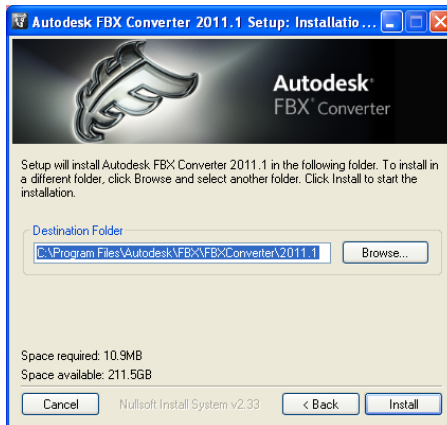
Installation Folder window

5 The next window shows the recommended installation location for the FBX Converter documentation. If you want to specify another location, click Browse to launch the file browser. Click Next.

6 A dialog box appears asking if you would like to view the FBX Converter documentation. Select Yes or No.

7 The installation completed window appears. Click Close to exit the installer.

NOTE To start the application, click Start > All Programs > Autodesk > Autodesk FBX Converter > FbxConverterUI. You can also access all FBX Converter files in the Program Files > Autodesk > FBX > FBXConverter > 2011.1 folder.

Macintosh installation

The FBX Converter is compatible with the following Macintosh OS:

■ Mac OS X 10.6

■ Mac OS X 10.5

■ Mac OS X 10.4

1 Download the .sit file from the Autodesk web site to your desktop (*http://www.Autodesk.com/fbx*).

2 Double-click the .sit file to extract the Installation disk image.

3 Double-click the package icon to start the installation. The Welcome pane appears.

Welcome pane

4 Click Continue to start the installation process. The Software License Agreement pane appears.

5 Read the License Agreement and click Continue. A dialog box appears asking if you accept the terms and continue with the installation.

> To continue installing the software, you must agree to the terms of the software license agreement.
>
> Click Agree to continue or click Disagree to cancel the installation.
>
> (Disagree)   (Agree)
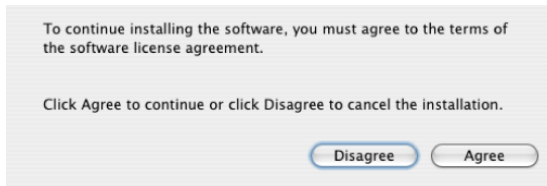
License agreement

6 Click Agree to accept. The Select a Destination pane appears. Select the destination disk where you want to install the FBX Converter and click Continue.

7 The Easy Install pane appears. Click Upgrade.

8 A dialog box appears asking you to enter your name and login password to continue the installation.

NOTE You must obtain administrator privileges to continue installation.

9 The installation begins. A progress bar indicates the time remaining of the installation. When the progress reaches 100%, the Finish Up pane appears.

10 Click Close to exit the installation program.

NOTE The FBX Converter installs to the following directory: <Macintosh Drive>/ Applications/Autodesk/FbxConverter.

Linux installation

The FBX Converter is compatible with the following Linux versions:

■ Fedora 11

■ Red Hat 5.3

To install the FBX Converter :

1 On a machine running Linux, download the install file from the Autodesk web site (*http://www.Autodesk.com/fbx*).

2 Find the distribution file of FBX Converter 2011.1 for Linux and download it to your computer.

   The distribution file is an executable. Make sure you have execution permission on that file:

   ```
   % 'chmod u+x fbx20111_converter_linux_enu'
   ```

3 Execute the installer and treat the installation target directory as an argument:

   ```
   % './fbx20111_converter_linux_enu /usr/MyPrograms'
   ```

4 Follow the on-screen instructions.

Converting Files

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The FBX Converter lets you convert 3DS, DXF, OBJ, or DAE (COLLADA) files to the FBX file format. You can also use it to convert FBX files to 3DS, DXF, OBJ or DAE (COLLADA) format, as well as convert FBX files to previous FBX versions.

Supported FBX conversion formats

Click the Destination format dropdown menu to select an FBX version.

The FBX Converter converts files to the following FBX formats:

Version	Description
FBX 2011	Select this FBX version to export a file that is compatible with Autodesk 2011 products, plug-ins, and MotionBuilder 2011 files. This is the default FBX version,
	NOTE The FBX 2011 version lets you save in ASCII, but you can also embed media with your file if you activate the Embed Media option.
FBX 2010	Select this FBX version to export a file that is compatible with Autodesk 2010 applications, 2010 FBX plug-ins, and MotionBuilder 2009.
FBX 2009	Select this FBX version to export a file that is compatible with the 2009.00 FBX plug-ins.
FBX 2006	Select this FBX version to export a file that is compatible with Autodesk 2006 FBX

Version	Description
	plug-ins and MotionBuilder versions 7.5, 7.0, and 6.0.

Converting files

You can convert an FBX file to FBX, 3DS, DXF, OBJ, or DAE (COLLADA) but you can only convert 3DS, DXF, OBJ, or DAE (COLLADA) to FBX format.

To convert files:

1 Drag a file into the Source Files area, or click the Add button to open a browser to locate files.
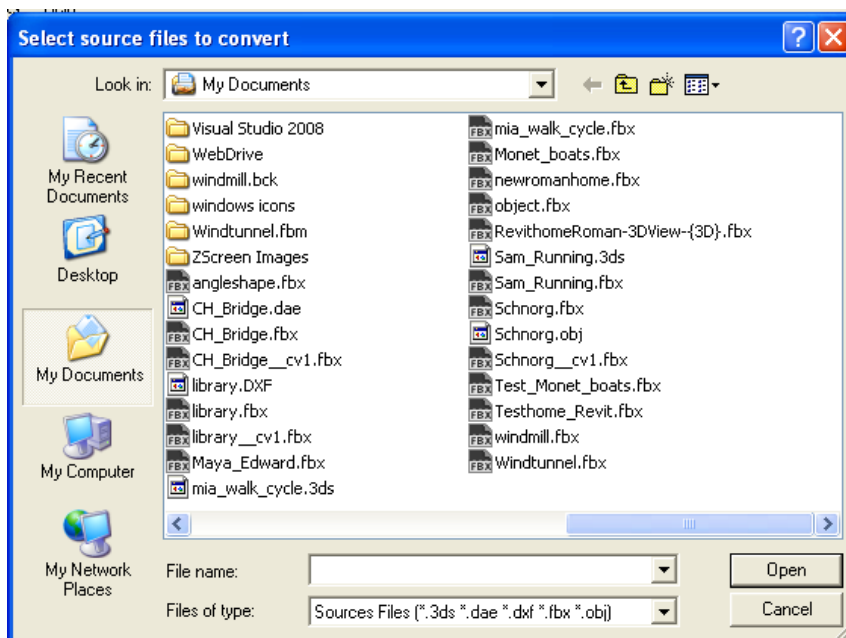
The file appears in the Destination files area to show you where converted file(s) will be saved. You can change the destination later.
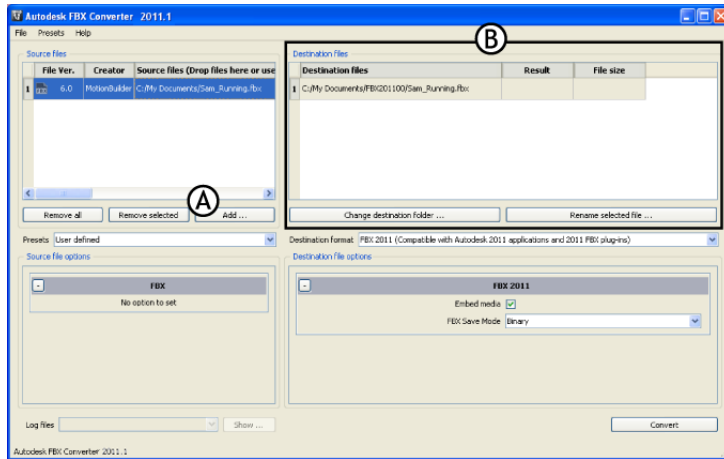
A. Add button B. Destination files area

NOTE To remove files from the Source Files list, select the files and click Remove Selected. Click Remove All to clear the list.

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2 Select a preset from the Presets drop-down menu, if applicable. See Creating a conversion preset on page 14.

■ To save your converted file to another location, click Change Destination Folder to open a file browser where you can specify a location.

NOTE When you perform an FBX to FBX conversion, the files are stored in a folder named for the FBX version you specified.

■ To save your converted file with a different name from the original, click Rename Selected File.

3 Select a conversion format from the Destination Format menu.
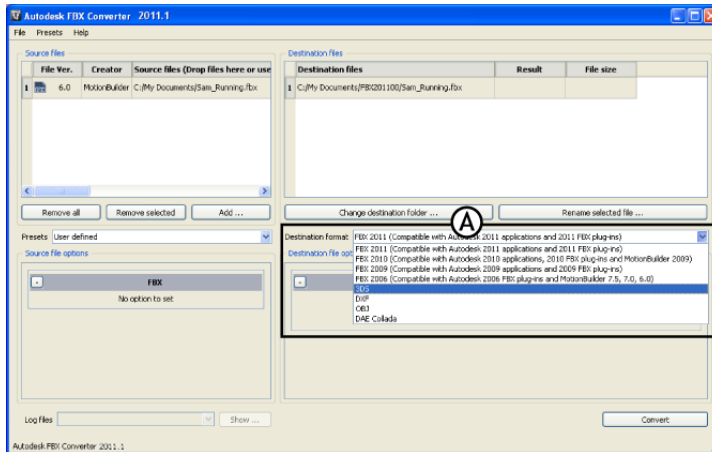
Expand the Destination format menu (A) to view a list of available conversion formats.

4 Activate or disable any conversion options from the Source File Options menu (if applicable). See Conversion options on page 17 for a list of available options.
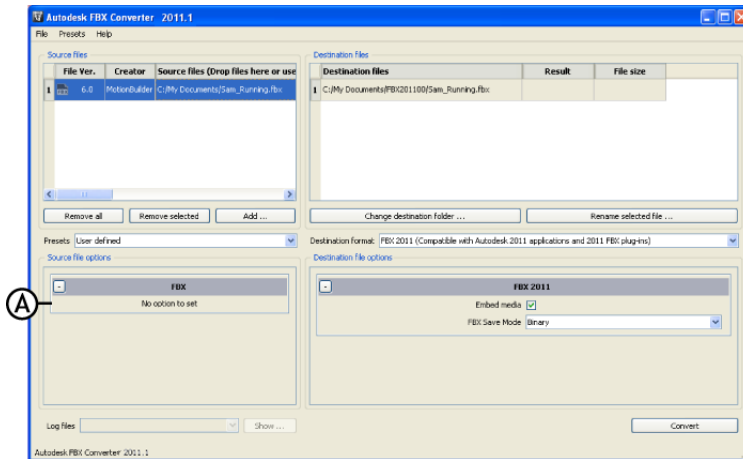
FBX Converter A. Source file options. In this case, no options are offered.

NOTE When you convert more than 1 file, your conversion options are limited based on the format of the files you are converting. To expand your options, convert files in batches by format, such as all 3DS or all FBX.

5 Activate or disable any conversion options from the Destination file options (if applicable). See on page 17 for a list of available options.

FBX Converter A. Destination file options

6 Click Convert.
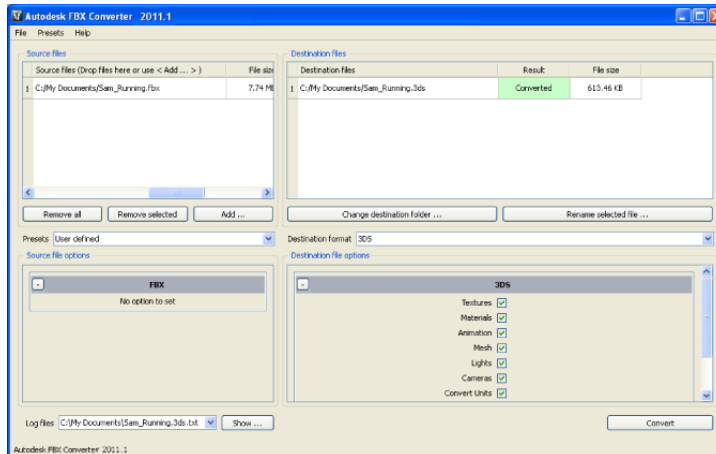
Completed conversion

If the files already exist in the destination folder, a dialog box appears asking you to Overwrite, Skip, or Rename the file. You can also abort the conversion process which would cancel the remainder of the conversions.

Conversion errors

If any conversion errors occurred, they are displayed in the Destination file Result column and an error log is created. View this file in the FBX Converter's Log file menu.

	Destination files	Result		File size
1	C:/My Documents/library.fbx	Skipped		
2	C:/My Documents/Schnorg.fbx	Converted	FBX	31.28 KB
3	C:/My Documents/CH_Bridge.fbx	Converted	FBX	3.27 MB
4	C:/My Documents/Sam_Running.fbx		FBX	7.74 MB

Conversion errors appear in the Result column.

If a file converts successfully, the result column turns greena and the word "Converted" appears. If the conversion is unsuccessful, the corresponding cell becomes red. Skipped files are shown as "Skipped".

Creating a conversion preset

You can create a preset that you can apply when you wish to use the same conversion options repeatedly.

To create a conversion preset:

1. From the main FBX Converter menu, select Presets.

2. Select Edit.

3. A list of all applicable options for import and export appears.
   Select any desired options to uses these as your preset settings.

4. Select Preset > Save. An FBX Converter Preset Name window appears for you to enter the name of your preset.
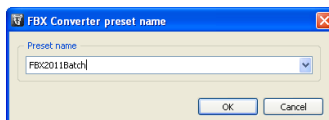
FBX Converter Preset name window

To edit a preset, select Edit from the Presets menu, make your changes and click Save.

Preset locations

The FBX Converter presets are saved in the following locations:

Preset	Location
Windows default	C:\Program Files\Autodesk\FBX\FBXConverter\2011.1\presets
Windows Custom (User)	C:\My Documents\FBX Converter\presets
Macintosh default	/Applications/Autodesk/FbxConverter/FBXConverterUI.app/Contents/MacOS/presets
Macintosh Custom (User)	Users/admin/FBX Converter/presets
Linux default	/root/(Install Directory)/FBXConverter/presets
Linux Custom (User)	/root/FBX Converter/presets

Conversion options

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Introduction

The following section describes each conversion option and their related settings. This section also contains a special section on naming conventions for FBX files that are converted into other FBX versions. We recommend leaving the default conversion options as they are, except in special cases. For example, if your scene is large and you do not need textures or materials imported, you would alter the default conversion settings.

FBX to FBX conversion options

The following option is available if you are converting FBX files to another FBX format:

Option	Behavior
Embed Media	Activate this option to include (or embed,) all media associated with your scene in the FBX file.
	NOTE You can embed media with files converted to ASCII if you convert to the FBX 2011 version. The FBX Converter has no other conversion types that let you embed media with ASCII files.
FBX Save Mode	Select Binary to save the FBX file in the standard format. Select ASCII to save the FBX file in ASCII format.

3DS conversion options

The following are the options for converting files to and from the 3DS file format.

NOTE You can only export to FBX format when converting from 3DS format.

3DS to FBX Source File options

The following options are available if you are converting 3ds Max 3DS files to the FBX format:

Option	Behavior
Textures	Activate this option to include texture mapping with the file conversion.
Materials	Activate this option to include materials with the file conversion. If you disable this option, the texture option is ignored.
Animation	Activate this option to include animation with the file conversion.
Mesh	Activate this option to include geometry with the file conversion. If you disable this option, mesh geometry is converted into Null or dummy objects, but the animation and hierarchy are preserved.
Lights	Activate this option to include lights with the file conversion.
Cameras	Activate this option to include cameras with the file conversion.
Convert Units	Activate this option to convert file units to centimeters. If you disable this option, the source application scale might not match once it is converted to or from the FBX file format.
Ambient Light	Activate this option to retain Ambient light settings with the file conversion.

Option	Behavior
Split Normals	Activate this option to split geometry Normals based on their edge continuity. This option splits per-vertex Normals and should be used only in specific workflows where you want to ensure visual fidelity of surface continuity in applications that do not support Smoothing Group conversion.
Apply Constant Key Reducer	Activate this option to apply the Constant Key Reducer filter to animation curves. This reduces the number of redundant key-frames.
Add Root Node	Activate this option to add a root node to all elements of your scene in the file conversion. Doing this adds a null or dummy object at the top of the hierarchy.

3DS to FBX Destination file options

The following options are available if you are converting 3ds Max 3DS files to the FBX format:

Option	Behavior
FBX Save Mode	Select Binary to save the FBX file in the standard format. Select ASCII to save the FBX file in ASCII format.

FBX to 3DS

The following options are available in the Destination file options if you are converting FBX files to the 3ds Max 3DS format:

Option	Purpose
Texture	Activate this option to include texture mapping with the file conversion.
Material	Activate this option to include materials with the file conversion. If you disable this option, the texture option is ignored.

Option	Purpose
Animation	Activate this option to include animation with the file conversion.
Mesh	Activate this option to include geometry with the file conversion. If you disable this option, mesh geometry is converted into Null or dummy objects, but the animation and hierarchy are preserved.
Lights	Activate this option to include lights with the file conversion.
Cameras	Activate this option to include cameras with the file conversion.
Convert Units	Activate this option to convert file units to centimeters. If you disable this option, the source application scale might not match once it is converted to or from the FBX file format.
Ambient light	Activate this option to retain Ambient light settings with the file conversion.
Split Normals	Activate this option to split geometry Normals based on their edge continuity. This option splits per-vertex Normals and should be used only in specific workflows where you want to ensure visual fidelity of surface continuity in applications that do not support Smoothing Group conversion.
Add Root Node	Activate this option to add a root node to all elements of your scene in the file conversion. Doing this adds a null or dummy object at the top of the hierarchy.
UV by Poly	Activate this option to retain the exact UV texture coordinates of the model if your UV textured models are defined by polygon vertices. If you activate this option,

Option	Purpose
	Smoothing groups are lost. If you disable this option when UV texture of a model is defined by polygon vertices, the Smoothing groups are retained.

DXF conversion options

The following are the options for converting files to and from the AutoCAD DXF file format.

NOTE You can only export to FBX format when converting from DXF format.

DXF to FBX Source Files options

The following options are available if you are converting AutoCAD DXF files to the FBX format:

Option	Behavior
Add Root	Activate this option to add a root node to all elements of your scene in the file conversion. Doing this adds a null or dummy object at the top of the hierarchy.
Weld Vertices	Activate this option to compare and merge vertices if they are found to be of equal value.
Derive Primitives	Activate Layer to derive one object from each layer. Activate Block to group all entities into one single object. Only block imports are considered separate objects. Activate Entity to derive one object from each entity in the file.

Option	Behavior
Embed Media	Activate this option to include (or embed,) all media associated with your scene in the FBX file.
	NOTE You can embed media with ASCII if you convert to the FBX 2011 version. The FBX Converter offers no other conversion versions that let you embed media with ASCII files.

DXF to FBX Destination Files options

The following options are available if you are converting AutoCAD DXF files to the FBX format:

Option	Behavior
Embed Media	Activate this option to include (or embed,) all media associated with your scene in the FBX file.
	NOTE You can embed media with ASCII if you convert to the FBX 2011 version. The FBX Converter offers no other conversion versions that let you embed media with ASCII files.
FBX Save Mode	Select Binary to save the FBX file in the standard format. Select ASCII to save the FBX file in ASCII format.

FBX to DXF Destination Files options

The following options are available if you are converting FBX files to AutoCAD DXF format:

Option	Behavior
Triangulate	Activate this option to force the conversion of quads to triangles. The FBX converter always triangulates NURBS and Patch geometries, regardless of how you set this option. The FBX Converter approximates

Option	Behavior
	NURBS and Patch geometry using a polygon mesh made of triangles since the DXF format does not support NURBS or Patch geometry.
Bake Deformations	Activate this option to "bake" (or Plot) link and shape deformations on the resulting geometry.

OBJ conversion options

The following are the options for converting files to and from the OBJ file format.

NOTE You can only export to FBX format when converting from 3DS format.

OBJ to FBX Source files options

The following options are available if you are converting OBJ files to the FBX format:

Option	Behavior
Add Root Node	Activate this option to add a root node to all elements of your scene in the file conversion. Doing this adds a null or dummy object at the top of the hierarchy.

OBJ to FBX Destination files options

The following options are available if you are converting OBJ files to the FBX format:

Option	Behavior
Embed Media	Activate this option to include (or embed,) all media associated with your scene in the FBX file.
	NOTE You can embed media with ASCII if you convert to the FBX 2011 version. The FBX Converter offers no other conversion versions that let you embed media with ASCII files.
FBX Save Mode	Select Binary to save the FBX file in the standard format. Select ASCII to save the FBX file in ASCII format.

FBX to OBJ

The following options are available if you are converting FBX files to the OBJ format:

Option	Behavior
Triangulate	Activate this option to force the conversion of quads to triangles. The FBX converter always triangulates NURBS and Patch geometries, regardless of how you set this option. The FBX Converter approximates NURBS and Patch geometry using a polygon mesh made of triangles since the DXF format does not support NURBS or Patch geometry.
Bake Deformations	Activate this option to "bake" (or Plot) link and shape deformations on the resulting geometry.

COLLADA conversion notes

COLLADA (DAE) files converted to the FBX format are limited to what the FBX format supports. The conversion process loses anything that is not supported by the current FBX version, even if it was previously supported by the DAE format before conversion.

COLLADA conversion can export meshes, bones, skin and morph controllers, as well as basic assets, materials, light and cameras with transforms animation (without shearing). It can re-import what has been exported. Only a Y-up axis is supported.

NOTE You can only export to FBX format when converting from DAE format.

What's not supported by COLLADA

The following is a list of elements that DAE (COLLADA) do not support on export or import.

- Triangles, polylist, and polygons. The FBX Converter exports polygons without holes, and imports them without holes and triangles.

- Bake & single matrices

- Variable sampling rates.

- Absolute Paths (when invalid)

- Instances

- Skew

- Non-standard Materials and maps for different parameters

- Orthographic cameras

- Normals (for skin and shape)

- Light parameters

- Vertex animation

- Material parameters animations

- Effects specialized profiles

- COLLADA physics

NOTE Export or import to DAE (COLLADA) can destroy or produce unpredictable results for some elements.

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