

Overview

As of v 1.3.0 MediaPortal installs [LAV Filters](#) which will play most of your media files 'out of the box'. However, this guide explains codecs if you are using previous versions of MediaPortal.

Introduction to Codecs and Movie Formats

The word codec is shorthand for coder-decoder. That is, a codec enables a program to understand a specific movie format. In Windows codecs are called DirectShowFilters. These filters enable your movie program, in this case MediaPortal, to play all the different movie formats.

In the digital world, there are many ways to make a movie file. Each method has its own format. You probably already know a number of them, Quicktime and Real are two of them. These kinds of movies require their own program in order for you to be able to watch them.

There are actually hundreds of different formats for audio and video to choose from, so it can be very difficult to find out what movie is in what format and what codecs are required for playback. It would be unpractical to use hundreds of different programs to play all those formats.

What Codecs Do You Need with MediaPortal?

That depends what version of Windows you use and what files you wish to play.

You need to have codecs to get video files and TV, including recorded TV, to play. If you're able to watch live TV then you should be able to watch the recordings created by MediaPortal's TV-Server (.ts files).

You may already have codecs installed on your system as many applications install codecs. There are many free codecs available as well as codec packs (see below). However, codecs/packs can interfere with each other. Hence this guide!

Windows 7 already comes with codecs to play most of your video and TV files. See the section below on Windows 7 DirectShowFilters. The notable exception is h.264 video (HD)

If you are not using Windows 7, then read the instructions below on DirectShow, and follow the Guides for other file formats.

DirectShow



Codecs Guide

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Configuring codecs is not easy, because there is a huge number of options and because one perfect solution simply does not exist. However, the following guides will help you configure your codecs properly!

Containers

- [.mov files](#)
- [.mkv files](#)
- [.flv files](#)
- [.rar files](#)

Codecs

- [MPEG-2 videos](#)
- [H.264/x264 \(HD\) videos](#)
- [DivX/Xvid videos](#)
- [M-JPEG videos](#)

Other Guides

- [Post Processing Guide](#), by FlipGer, focusing on noise reduction and resizing using ffdshow.

General

Installing different DirectShowFilters will give you the ability to play almost any movie or audio format. However, there are so many different DirectShowFilters some of them can work against each other. That is why codec packs are generally **not recommended** because they usually install too many different DirectShowFilters.

How does it work?

Every time you play a video or watch TV, then a *DirectShowGraph* is built. This sounds very complex and techie, but it is very simple actually.

Let's say you want to play a video you recorded with MediaPortal i.e. "Toy Story.ts". Then this file is one big *Container* which includes all sorts of different data. Such as the video, maybe multiple audio streams in different languages and even subtitles.

What you now need is a DirectShow filter, to open this file and split it into its individual contents, to make them separately available. That's why this filter is also called a *Splitter*.

Now Video and Audio filters (*also called Codecs*) are able to take the video and audio streams, process them, and send them to video and audio renderers so you can ultimately watch the video or Live TV and recordings (.ts files)



This procedure is the same for all kinds of containers such as .mkv, .avi, .mpg, .mp4, to name a few. For all these containers, different splitters are required.

Codec Packs

There are many codec packs around which claim to allow the user to play anything. While this might work for a few users, you should be aware that some of these codec packs are not only highly illegal, or contain trojans - but also they are known to completely break the entire media playback of your PC.

It is more work to manually install only the codecs you need, but in the end you will have a more stable system.

Windows 7 DirectShowFilters

Windows 7 already includes DirectShow Filters which allow you to play x264, MPEG-2, listen to [ATSC](#) and [DTS](#). These video codecs also use hardware decoding, where your graphics card processes the video, rather than the CPU. Of course, hardware acceleration must be supported by your graphics card.

Windows 7 also contains the required filters for DVD playback. You will be able to play the most common video formats out of the box.

However, even Windows 7 will not play all your files, especially those streamed from the web, without additional codecs. See the following Guides for details.

Selecting Codecs to use in MediaPortal

Once you have installed the codecs you need to play all your media, you can select which codecs to use in Configuration > [Codecs and Renderer](#).