xmoovStream Video Player 1.0 Documentation

http://stream.xmoov.com

Table Of Contents

1. The xmoovStream Video Player **3**

1.1 Features 3

2. The User Interface **4**

2.1 Player Controls 4

3. Video Files **5**

3.1 Compatible Video Formats 5

3.2 Http Pseudo Streaming 5

4. Configuration **6**

4.1 Flashvars 7

4.2 Configuring How the Player Starts 8

4.3 Fullscreen 8

4.4 Scale Modes 9

4.5 Configuring Http Pseudo Streaming 10

4.6 Configuring Query Strings 10

4.7 Quality Settings 11

4.7.1 Smoothing 12

4.7.2 Deblocking 12

5. Troubleshooting **13**

6. Terms and Resources **14**

1. The xmoovStream Video Player

The xmoovStream Video Player is a closed source, simple and light weight Flash video player with just enough functionality to cover the basic needs of online video publishers. It was designed to be uncomplicated and easy to configure for you, as well as easy to use for your viewers.

The video playback engine is very reliable and ultra robust. It is based on the same actionscript 3 engine used by xmoov.com to create high-end customized video solutions for major internet content publishers. We will continue to add more functionality as we discover more about the basic and mutual needs of online video publishers. Feel free to contact us if you need more functionality or a customized video solution for your website.

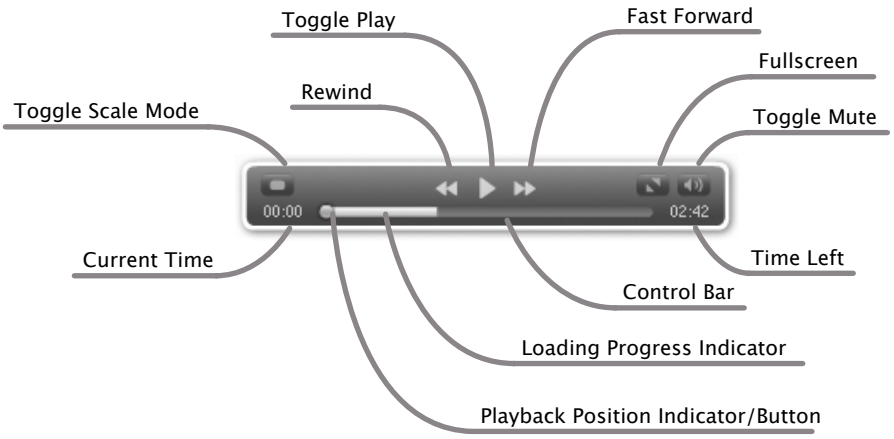
1.1 Features

- Lightweight (under 20k)
- Easy to use interface
- Real fast forward and rewind
- Auto hiding interface and mouse cursor
- Full screen support
- Multiple scale modes
- User selectable quality control
- Thumbnail support
- Compatible with most http pseudo streaming systems
- Easily configurable via flashvars

2. The User Interface

The xmoovStream Video Players user interface is comfortable and intuitive. The rewind and fast forward functions operate as you would expect from an industry standard DVD player. The scale modes offer enough options to allow a true full screen video experience for your viewers. If the users mouse has no contact with the controls, it will slide down and disappear after a few seconds of mouse inactivity. It immediately slides back up when the user moves the mouse or when the video ends.

2.1 Player Controls



- **Toggle Play:** Starts and stops playback
- **Rewind/Fast Forward:** Real fast forward and rewinding of the video
- **Control Bar:** Controls the playback position of the video
- **Loading Progress Indicator:** Indicates loading progress
- **Playback Position Indicator/Button:** Indicates/determines the current playback position
- **Toggle Mute:** Deactivates and activates the sound
- **Toggle scale Mode:** Changes how the video screen is scaled
- **Fullscreen:** Activates full screen video playback
- **Current Time:** Shows the actual playback position of the video
- **Time Left:** Shows the remaining playback time

3. Video Files

3.1 Compatible Video Formats

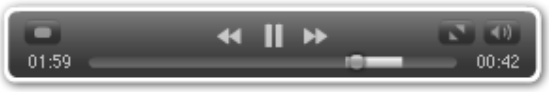
In order for you to play videos with the xmoovStream Video Player, they must first be encoded into an Adobe Flash Player compatible format. Compatible video formats are as follows:

- Flash FLV Video
- MPEG-4 Video

You can find a list of video encoders at http://stream.xmoov.com/support/encoders.

3.2 Http Pseudo Streaming

Http pseudo streaming allows viewers to skip to parts of a video that have not yet loaded. A viewer can click anywhere on the control bar and the video will begin loading from that position. The xmoovStream Video Player comes preconfigured with the proper settings required for use with the xmoovStream Server, but can also be configured to operate with other http streaming systems.



In order to use this function, FLV video files must be injected with the proper **MetaData**. This is accomplished using **MetaData** injector software. You can find a list of open source **MetaData** injectors at http://stream.xmoov.com/support/metadata-injectors

4. Configuration

The xmoovStream Video Player is configurable using flashvars, which are defined in the code you use to embed the player in your website. There are two ways to define flashvars. You can append the swf url using a query string or use the flashvars parameter in your embed code. The following is an example of how to use flashvars with the minimum code required to embed flash content in an html document.

```
<object width="550" height="400">
  <param name="movie" value="player.swf">
  <param name="flashvars" value="video=myvideo.flv&streamer=true">
  <embed src="player.swf?video=myvideo.flv&streamer=true" width="550" height="400">
  </embed>
</object>
```

Flashvars must always be urlencoded. You can do this using the PHP **urlencode(String)** function or by simply replacing the following characters with their corresponding urlencoded equivalent.

? → **%3F**
= → **%3D**
& → **%26**

The following code demonstrates how to correctly urlencode flashvars.

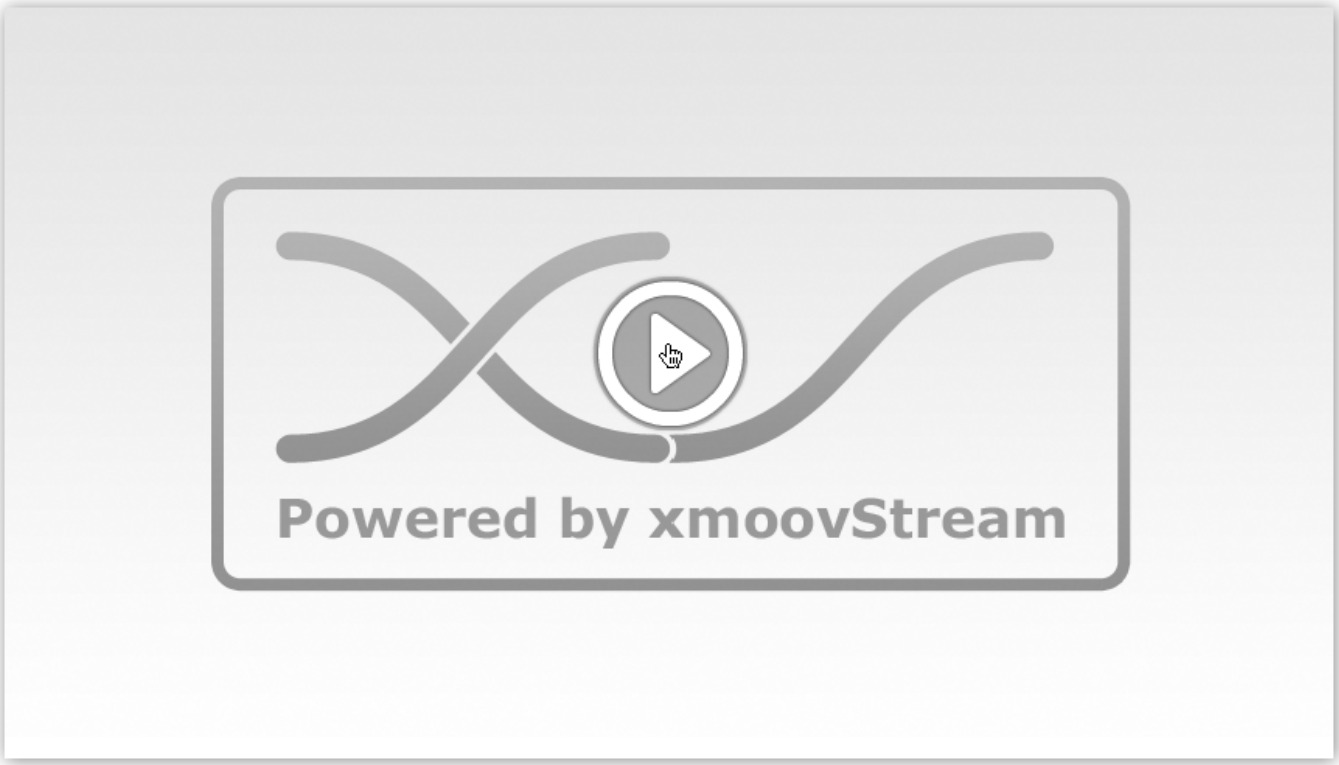
```
"video=myvideo.flv&streamer=script.php&fileKey=%3Ffile%3D&positionKey=%26start%3D"
```

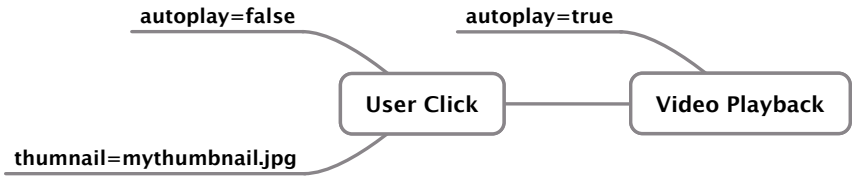
4.1 Flashvars

Flashvar {Default} : (Options) Description
video {undefined} : Video url The url of the video file.
buffer {4}: Time in seconds The number of seconds to preload a video before it starts playing.
autoplay {true}: true, false Determines whether or not to start playing the video as soon as the player loads. This options is ignored if you set a **thumbnail**.
scaleMode {stretch}: fit, crop, original, stretch Determines the initial scale mode of the video screen the first time a viewer loads the player. The player will remember the last setting the viewer used if they change it in the user interface.
streamer {false}: false, true, script url Determines whether or not the video is to be pseudo streamed. You can define the url to a streaming script or set the value to **true** whereby the player will use the **video** url.
fileKey {undefined}: Query string prefix Determines the query string parameter required by the streaming script to determine the video file. This setting is empty by default for compatibility with an optimal xmoovStream Server installation.
positionKey {?start=}: Query string prefix Determines the query string parameter required by the streaming script to determine the start byte position.
quality {high}: high, low Determines which quality setting to use the first time a viewer loads the player. The player will remember the last setting the viewer used if they change it using the right-click context menu.
hqSmoothing {true}: true, false Determines whether or not to activate video smoothing for the **"high"** **quality** setting.
hqDeblocking {0}: 0 auto**, 1** off**, 2** Sorenson**, 3** On2**, 4** On2 (fast deringing)**, 5** On2 (better deringing) Tells the player which deblocking filter to use for the **"high"** **quality** setting.
lqSmoothing {false}: true, false Tells the player whether or not to activate video smoothing for the **"low"** **quality** setting.
lqDeblocking {1}: 0 auto**, 1** off**, 2** Sorenson**, 3** On2**, 4** On2 (fast deringing)**, 5** On2 (better deringing) Tells the player which deblocking filter to use for the **"low"** **quality** setting.
thumbnail {undefined} : Thumbnail url The url of the thumbnail to load as a startup screen before a video.
scaleThumb {true} : true, false Determines whether or not to scale the thumbnail to fit the player dimensions.

4.2 Configuring How the Player Starts

There are two ways you can configure how the xmoovStream Video Player starts once it loads on a page. You can configure it to start playing the video as soon as it loads or wait for the viewer to click the on screen play button. If you define a thumbnail, the viewer must first click the onscreen play button to begin video playback.





4.3 Fullscreen

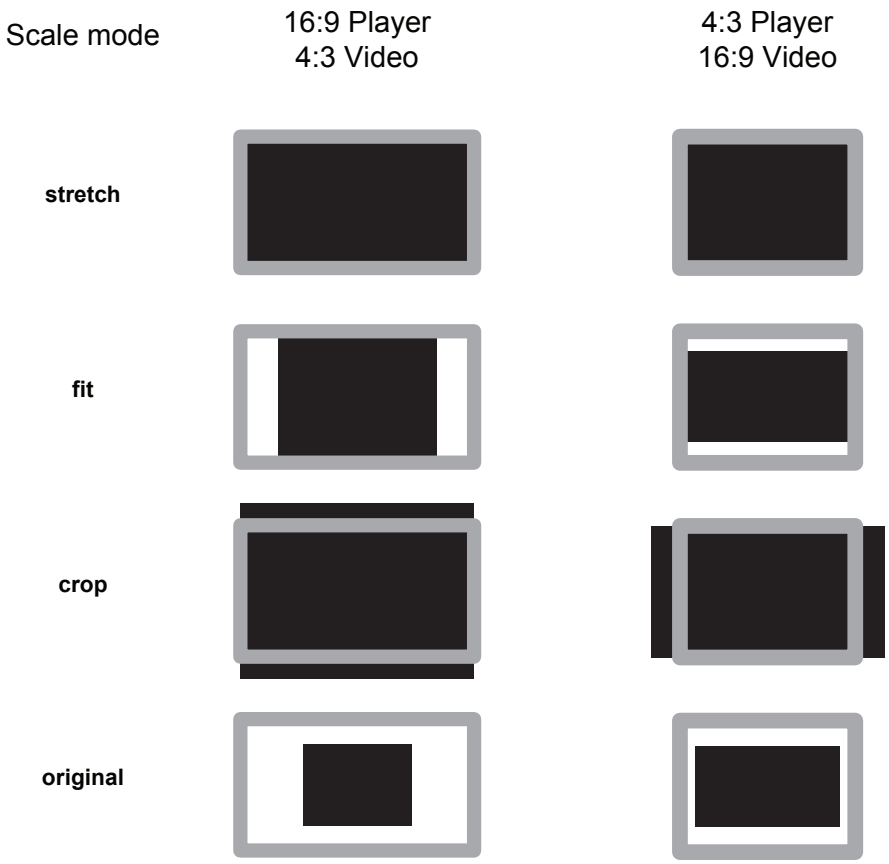
The xmoovStream video player has the ability to play videos full screen. To enable fullscreen video playback, you must define the parameter **"allowfullscreen"** in the embed code as follows:

```
<param name="allowfullscreen" value="true">
```

4.4 Scale Modes

The xmoovStream Video Player has four scale modes to choose from: **stretch**, **fit**, **crop** and **original**. The **scaleMode** flashvar tells the player how to scale the video screen the first time it is loaded. The viewer can toggle the scale mode in the user interface described in chapter **2.1**. The player will always load using the last setting the viewer chose.

- **stretch:** scales the video to fit the exact player dimensions
- **fit:** scales the video to fit completely inside the player
- **crop:** scales the video to compleatly fill the player while retaining its aspect ratio
- **original:** displays the video in its original size without scaling



4.5 Configuring Http Pseudo Streaming

The xmoovStream Video Player forms the url it uses to communicate with http streaming systems using the following flashvars.

streamer + **video** + **fileKey** + **positionKey**

The **streamer** flashvar tells the player whether or not the video is to be pseudo streamed. If you set the value to **true,** you must define the complete video url in the **video** flashvar. You can also use the **streamer** flashvar to define a streaming script url. In this case you must only define a video file in the **video** flashvar.

4.6 Configuring Query Strings

Http streaming systems usually require query strings to communicate the video file to be streamed and the byte position to start from. The xmoovStream Video Player comes preconfigured with the flashvars required for use with an optimal xmoovStream Server installation, which requires no query string for the file. If you are using a different streaming script, you can also define other query strings for file and start byte position using the **fileKey** and **positionKey** flashvars. The following are some examples of how to configure flashvars for use with different http streaming systems.

Default flashvars work with an optimal xmoovStream Server installation and lighttpd:
streamer: true
video: http://mysite.com/videos/video.flv
fileKey: (empty)
positionKey: ?start= (urlencoded: **%3Fstart%3D**)

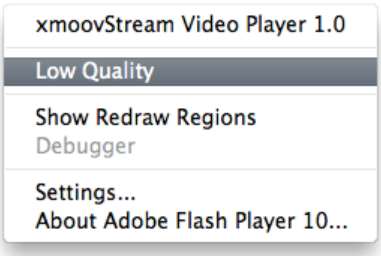
Resulting url: http://mysite.com /videos/video.flv?start=0

Required flashvars for use with xmoov-php or other php streaming scripts:
streamer: http://mysite.com/xmoov.php
video: video.flv
fileKey: ?file= (urlencoded: **%3Ffile%3D**)
positionKey: &position= (urlencoded: **%26start%3D**)

Resulting url: http://mysite.com/xmoov.php?file=video.flv&position=0

4.7 Quality Settings

The quality settings effect the visual quality of the video and the playback performance of the player itself. The xmoovStream Video Player is preconfigured with the recommended settings for an optimal balance between quality and performance. The **quality** flashvar tells the player which quality setting to use the first time it is loaded. The viewer can switch between **low** and **high** quality using the right-click context menu. The player will always load using the last setting the viewer chose.



You can fine tune how the **quality** settings effect the player using the following flashvars:

Flashvars for **high** **quality**	Flashvars for **low** **quality**
hqSmoothing	**lqSmoothing**
hqDeblocking	**lqDeblocking**

4.7 Quality Settings

4.7.1 Smoothing

Smoothing interpolates the video reducing the pixelation caused by scaling. Activating smoothing may effect playback performance on older computers.

4.7.2 Deblocking

Deblocking is a post-processing filter used by the player to reduce blocking and ringing artifacts caused by video compression during the encoding process. **Blocking** refers to visible imperfections between the boundaries of the blocks that compose each video frame. **Ringing** refers to distorted edges around elements within a video image. Deblocking filters may effect playback performance on older computers.

Deblocking Setting : Description
0 : Lets the video compressor apply the deblocking filter as needed
1 : Deactivates the deblocking filter
2 : Activates the Sorenson deblocking filter
3 : Activates the On2 deblocking filter without the deringing filter
4 : Activates the On2 deblocking and deringing filter
5 : Activates the On2 deblocking and a higher-performance On2 deringing filter

5. Troubleshooting

In some cases, you may encounter situations where the player will not seem to function properly or fail to load thumbnails or videos. This is often caused by incorrectly configured flashvars, which can cause the video or thumbnail url to be incorrect.

We strongly recommend using Firebug to aid you in error analysis. Firebug is an extension for Mozilla Firefox, which allows the debugging, editing, and monitoring of CSS, HTML, DOM, and JavaScript live in any webpage. Firebug will allow you to see exactly how the player is communicating with a web server.

6. Terms and Resources

Embedding Flash	http://www.w3schools.com/flash/flash_inhtml.asp
Pseudo Streaming	http://stream.xmoov.com/support/faq/pseudo-streaming
Random Access	http://stream.xmoov.com/support/faq/pseudo-streaming
MP4	http://en.wikipedia.org/wiki/MPEG-4
FLV	http://en.wikipedia.org/wiki/Flash_Video
Encoders	http://stream.xmoov.com/support/encoders
MetaData Injectors	http://stream.xmoov.com/support/metadata-injectors
FireBug	http://getfirebug.com

xmoovStream Video Player 1.0 Documentation (revision 1)

Updated January, 3 2010. http://stream.xmoov.com/
Created by Eric Lorenzo Benjamin jr. (xmoov.com), Edited by Sarina Bagby (xmoov.com).

This Documentation was created using Free and Open Source software

MindNode http://www.mindnode.com

Bean http://bean-osx.com