# HTML5 video API, pros and cons

## pros:

*native audio-video content

*no need for third party plugins

*easy to use (when complete)

*accessible content

*big control with API

## cons:

*browsers inconsistencies in format support

*no data protection

*still incomplete

*still tricky for support and formats

*we will work mainly with video as its API is widely supported, audio and video APIs are quite similar though.

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# HTML5 video API, support tables

# Video element - Working Draft

Method of playing videos on webpages (without requiring a plug-in)

| *Usage stats: | Global |
|---|---|
| Support: | 72.04% |
| Partial support: | 0.66% |
| Total: | 72.7% |

Show all versions

| | IE | Firefox | Chrome | Safari | Opera | iOS Safari | Opera Mini | Opera Mobile | Android Browser |
|---|---|---|---|---|---|---|---|---|---|
| | | 3.6 | | | | | | 10.0 | 2.1 |
| | 6.0 | 9.0 | | | | 3.2 | | 11.0 | 2.2 |
| | 7.0 | 10.0 | 17.0 | | | 4.0-4.1 | | 11.1 | 2.3 |
| | 8.0 | 11.0 | 18.0 | 5.0 | | 4.2-4.3 | | 11.5 | 3.0 |
| Current | 9.0 | 12.0 | 19.0 | 5.1 | 11.6 | 5.0 | 5.0-6.0 | 12.0 | 4.0 |
| Near future | 10.0 | 13.0 | 20.0 | 5.2 | 12.0 | | | | |
| Farther future | | 14.0 | 21.0 | | | | | | |

Sub-features:  WebM/VP8 video format   MPEG-4/H.264 video format   Ogg/Theora video format

| Notes | Known issues (0) | Resources (5) | Feedback |

Different browsers have support for different video formats, see sub-features for details. The Android browser (before 2.3) requires specific handling to run the video element.

*YELLOW LIGHT: widely supported, but still in working draft

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# HTML5 video API, support tables



*YELLOW LIGHT: widely supported, but still in working draft

# HTML5 video API, support tables



*RED LIGHT: still in working draft, poorly supported*

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# HTML5 video tag, sample

```html
<video id="vid" poster="assets/imgs/vidPoster.jpg" controls width="480" height="360">
    <!-- put mp4 (h.264) first for iphone -->
    <source src="video.mp4" type='video/mp4; codecs="avc1.42E01E, mp4a.40.2" '>
    <!-- put ogg here for firefox -->
    <source src="video.ogv" type='video/ogg; codecs="theora, vorbis" '>
    <source src="video.webm" type='video/webm; codecs="vp8, vorbis" ' >
    <!-- if you do not know codecs params, just put MIME type -->
    <!-- notice double quotes nested in single quotes for type attribute -->
    <p>
        Sorry, your browser does not support video tag,
        you can download the video
        <a href="video.mp4">here</a>.
    </p>
    <object>embed flash video here</object>
</video>
```

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# HTML5 video  tag, attributes

**\<video\> attributes:**

*controls    :    displays controls (full keyboard control in opera only)

*autoplay    :    starts automatically

*poster    :    displays a pic instead of the first frame of the video

*loop    :    loops the video

*preload    :    [none / meta]

# HTML5 video   - codecs support

**video codecs:**

*FIREFOX*      *:*        *Vorbis and Theora, VP8*

*OPERA*       *:*        *Vorbis and Theora, Vp8*

*IE9*             *:*        *H.264 and mp3*
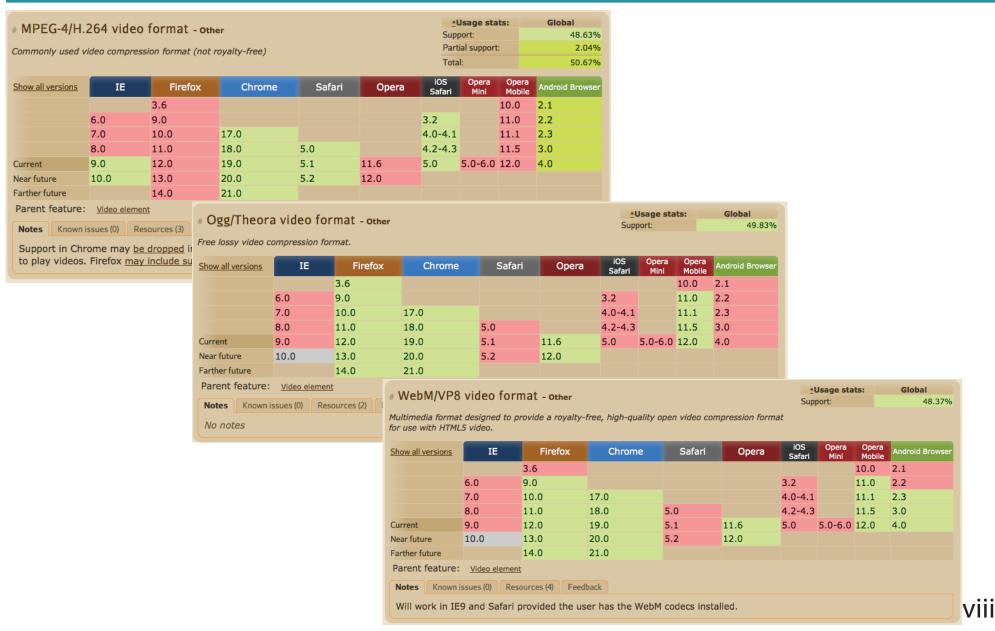
*SAFARI*       *:*        *H.264 and mp3*

*CHROME*    *:*        *Theora, H.264, Vorbis, mp3, VP8*

*WebM container: VP8 for video, Vorbis for audio*

# HTML5 video - codecs support tables

## # MPEG-4/H.264 video format - Other

| Usage stats: | Global |
|---|---|
| Support: | 48.63% |
| Partial support: | 2.04% |
| Total: | 50.67% |

*Commonly used video compression format (not royalty-free)*

| Show all versions | IE | Firefox | Chrome | Safari | Opera | iOS Safari | Opera Mini | Opera Mobile | Android Browser |
|---|---|---|---|---|---|---|---|---|---|
| | | 3.6 | | | | | | 10.0 | 2.1 |
| | 6.0 | 9.0 | | | | 3.2 | | 11.0 | 2.2 |
| | 7.0 | 10.0 | 17.0 | | | 4.0-4.1 | | 11.1 | 2.3 |
| | 8.0 | 11.0 | 18.0 | 5.0 | | 4.2-4.3 | | 11.5 | 3.0 |
| Current | 9.0 | 12.0 | 19.0 | 5.1 | 11.6 | 5.0 | 5.0-6.0 | 12.0 | 4.0 |
| Near future | 10.0 | 13.0 | 20.0 | 5.2 | 12.0 | | | | |
| Farther future | | 14.0 | 21.0 | | | | | | |

Parent feature:   Video element

| Notes | Known issues (0) | Resources (3) |

Support in Chrome may be dropped i
to play videos. Firefox may include su

## # Ogg/Theora video format - Other

| Usage stats: | Global |
|---|---|
| Support: | 49.83% |

*Free lossy video compression format.*

| Show all versions | IE | Firefox | Chrome | Safari | Opera | iOS Safari | Opera Mini | Opera Mobile | Android Browser |
|---|---|---|---|---|---|---|---|---|---|
| | | 3.6 | | | | | | 10.0 | 2.1 |
| | 6.0 | 9.0 | | | | 3.2 | | 11.0 | 2.2 |
| | 7.0 | 10.0 | 17.0 | | | 4.0-4.1 | | 11.1 | 2.3 |
| | 8.0 | 11.0 | 18.0 | 5.0 | | 4.2-4.3 | | 11.5 | 3.0 |
| Current | 9.0 | 12.0 | 19.0 | 5.1 | 11.6 | 5.0 | 5.0-6.0 | 12.0 | 4.0 |
| Near future | 10.0 | 13.0 | 20.0 | 5.2 | 12.0 | | | | |
| Farther future | | 14.0 | 21.0 | | | | | | |

Parent feature:   Video element

| Notes | Known issues (0) | Resources (2) |

No notes

## # WebM/VP8 video format - Other

| Usage stats: | Global |
|---|---|
| Support: | 48.37% |

*Multimedia format designed to provide a royalty-free, high-quality open video compression format for use with HTML5 video.*

| Show all versions | IE | Firefox | Chrome | Safari | Opera | iOS Safari | Opera Mini | Opera Mobile | Android Browser |
|---|---|---|---|---|---|---|---|---|---|
| | | 3.6 | | | | | | 10.0 | 2.1 |
| | 6.0 | 9.0 | | | | | 3.2 | 11.0 | 2.2 |
| | 7.0 | 10.0 | 17.0 | | | 4.0-4.1 | | 11.1 | 2.3 |
| | 8.0 | 11.0 | 18.0 | 5.0 | | 4.2-4.3 | | 11.5 | 3.0 |
| Current | 9.0 | 12.0 | 19.0 | 5.1 | 11.6 | 5.0 | 5.0-6.0 | 12.0 | 4.0 |
| Near future | 10.0 | 13.0 | 20.0 | 5.2 | 12.0 | | | | |
| Farther future | | 14.0 | 21.0 | | | | | | |

Parent feature:   Video element

| Notes | Known issues (0) | Resources (4) | Feedback |

Will work in IE9 and Safari provided the user has the WebM codecs installed.

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If everything is alright (markup, MIME types, codecs), but your video still does not work, it may be that your server is not configured properly, and video files are served as "text/plain"

Add this code in httpd.conf (if you have access) or create a .htaccess file in the directory where video files are stored with same code:

```
///////////////////////////////////
// APACHE TRICK                   //
// in .htaccess or in httpd.conf: //
//                                //
// AddType video/ogg  .ogv        //
// AddType audio/ogg  .oga        //
// AddType video/mp4  .mp4        //
// AddType video/webm .webm       //
///////////////////////////////////
```

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**free video converters:**

*http://www.mirovideoconverter.com/ (MAC, WIN)*

*http://handbrake.fr/ (MAC, WIN, LINUX)*

*http://easyhtml5video.com/ (MAC, WIN)*

**video generator:**

*http://sandbox.thewikies.com/vfe-generator/*

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| methods: |
| :---: |
| play() |
| pause() |
| load() |
| canPlayType() |

-> *begins or continues the video*

-> *pauses the video*

-> *fetches a new media resource*

-> *determines probability*
   *of browser's support for*
   *parsed video type*

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**events:**

| | |
|---|---|
| *play* | -> *fires when the video starts* |
| *pause* | -> *fires when video is paused* |
| *ended* | -> *fires when video ends* |
| *progress* | -> *fires when media has been retrieved* |
| *canplay* | -> *media has been fully loaded, ready to be played* |

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**properties:**

*duration*
*currentTime*
*autoplay*
*poster*
*paused*
*ended*

-> *length of media*
-> *current position*
-> *bool, true if media was set to autostart*
-> *complete path to poster*
-> *boolean, indicates if in pause*
-> *boolean, indicates if media was completed*

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## with raw js:

```js
var supportsMedia = (function() {
    //!! will force a value to boolean type
    return !!('canPlayType' in document.createElement('video'));
})();

//usage
if ( supportsMedia ) { //supported }
```

## with Modernizr:

```js
if ( Modernizr.video ) { //supported }
if ( Modernizr.audio ) { //supported }
```

**VIDEO:**
```js
// browser supports video
Modernizr.video
// browser supports the WebM format
Modernizr.video.webm
// browser supports the H.264 format
Modernizr.video.h264
```

**AUDIO:**
```js
Modernizr.audio.mp3
Modernizr.audio.ogg
Modernizr.audio.wav
Modernizr.audio.m4a
```

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