

# QtWebKit

QtWebKit is a port of Apple's Webkit which utilizes the functionality of the Qt cross-platform application framework, while including the improvements Apple made from the original KHTML and KDE. The RDK platform uses Qt in other areas, such as the Receiver. The version of Webkit used in the RDK version of the browser is 537.21 (as reported by Javascript).

## Summary of supported features:

### HTML Support

#### Supported Features

- HTTPS
- Redirects
- HTTP Cookies (limited support, in-memory only)
- Javascript
- Clipboard (copy-paste)
- WebGL (experimental)
- HTML5 Canvas
- CSS3 (<http://css3test.com/> 48% score)
- CSS3 downloadable fonts
- Websockets
- audio tag (aac, mp3)
- video tag (h.264)
- Flash Player 11.1

#### Unsupported HTML Features

- uploading files: type=file of input tag
- downloading files
- popup windows

#### Limitations

There are no software codecs. Hardware support is limited in a number of processing units, which is one processing unit per a video stream and one processing unit per an audio stream.

#### Local/System Fonts

XFINITY Sans TT Cond  
XFINITY Sans TT Lgt  
XFINITY Sans TT Med  
XFINITY Sans TT Med Cond  
XFINITY Sans TT Reg  
DejaVu Serif

### Flash Plugin Support

#### Supported Features

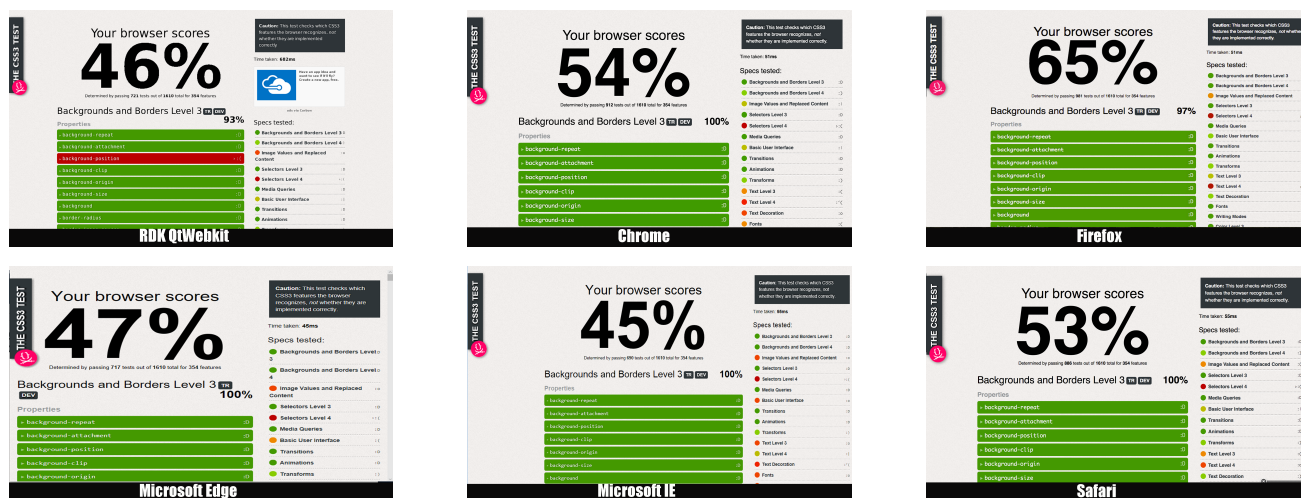
- Flash Plugin 11.1
- SWF (Flash 11.1)
- Video should be limited to H.264 due to presence of hardware decode and rendering support
  - HW decoded video is displayed in a hardware video plane behind the Flash content. Flash content can composite on top of the video. But flash content cannot be composited below video. There is no support for transparency within the video stream.
  - *Other Flash video formats are supported but may not perform adequately due to lack of hardware support.*
- Image file formats are Progressive JPEG, and PNG
- Supported audio codecs are MP3, ADPCM, Nellymoser, Speex and AAC.

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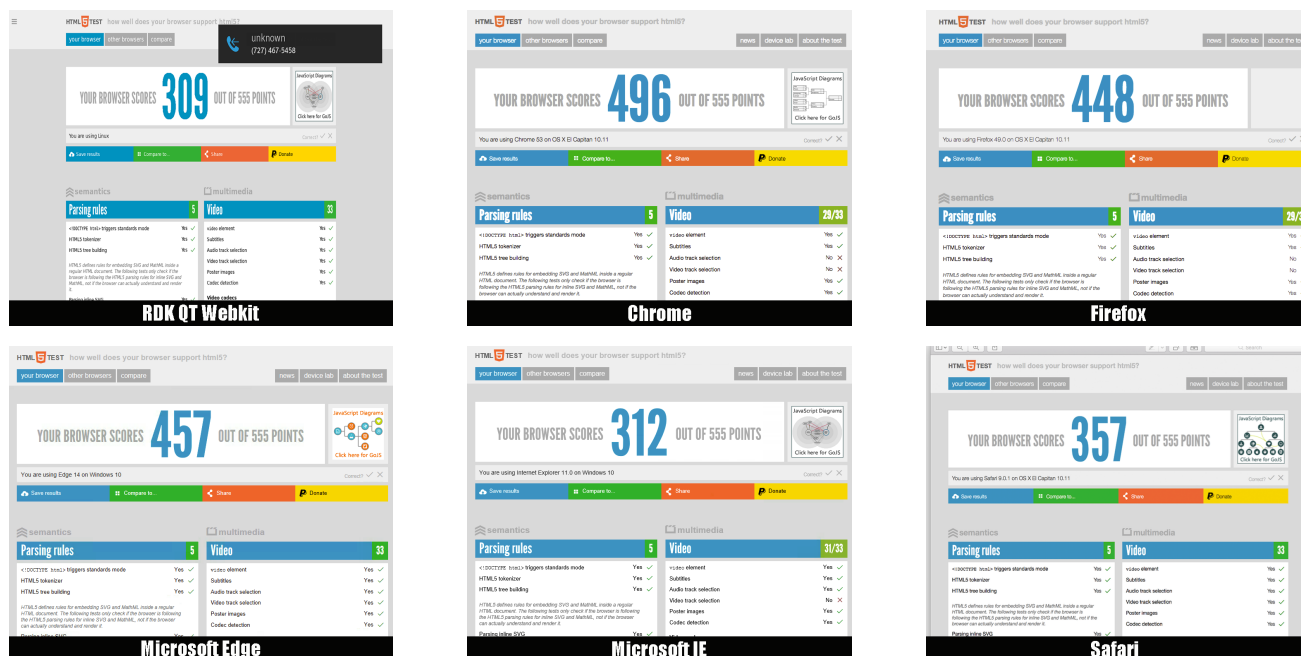
## Comparison of QTWebkit CSS Features to other browsers

The following is a comparison of the CSS features offered by some of the standard browsers, and the RDK QtWebkit. With the exception of Firefox and IE, the rest of the browsers are all based off of Webkit. A breakdown of the actual features missing can be found in the appendices. These tests are based on the site: <http://css3test.com/>



## Comparison of RDK QTWebkit HTML5 features to other browsers

The following is a comparison of the HTML features offered by some of the standard browsers, and the RDK QtWebkit. With the exception of Firefox and IE, the rest of the browsers are all based off of Webkit. A breakdown of the actual features missing can be found in the appendices. These tests are based on the site: <https://html5test.com/>



## Video playback, MSE and EME

RDK QTWebkit supports Media Source Extensions (MSE) and Encrypted Media Extensions (EME).

The version of MSE supported is: **MSE Spec Version: 10 December 2013**

Google MSE conformance test used:

<http://yt-dash-mse-test.commondatastorage.googleapis.com/unit-tests/2016.html?enablewebm=off&timestamp=1480519673236>

Currently only **EME version 0.1b** is supported. Playready is currently the only DRM supported.

## DRMs supported by RDK QtWebkit EME

DRM	SUPPORTED
Playready	YES
Widevine	NO
ClearKey	NO
Axinom	NO
AES-128	Not natively, may be supported by a specific player

## Codecs supported by RDK QTWebkit

Mime Type / Codec	Description
video/mp4;codecs="avc1.42E01E, mp4a.40.2"	H.264 Simple baseline profile video (main and extended video compatible) level 3 and Low-Complexity AAC audio in MP4 container
video/mp4;codecs="avc1.58A01E, mp4a.40.2"	H.264 Extended profile video (baseline-compatible) level 3 and Low-Complexity AAC audio in MP4 container
video/mp4;codecs="avc1.4D401E, mp4a.40.2"	H.264 Main profile video level 3 and Low-Complexity AAC audio in MP4 container
video/mp4;codecs="avc1.64001E, mp4a.40.2"	H.264 'High' profile video (incompatible with main, baseline, or extended profiles) level 3 and Low-Complexity AAC audio in MP4 container
video/ogg;codecs="theora, vorbis"	Theora video and Vorbis audio in Ogg container
audio/ogg;codecs=vorbis	Vorbis audio alone in Ogg container
video/mp4; codecs="avc1.42E01E"	H.264 baseline in MPEG-4 container
audio/mp4; codecs="mp4a.40.2"	AAC low-complexity in MPEG-4 container
audio/mpeg;codecs="mp3"	Audio mp3
video/webm; codecs="vorbis, vp8"	WebM with VP8 video and Vorbis

## Codecs NOT supported by RDK QTWebkit

Mime Type / Codec	Description
application/x-mpegurl	HLS x-mpegurl
application/vnd.apple.mpegurl	HLS vnd.apple.mpegurl
video/mp4;codecs="mp4v.20.8, mp4a.40.2"	MPEG-4 Visual Simple Profile Level 0 video and Low-Complexity AAC audio in MP4 container
video/mp4;codecs="mp4v.20.240, mp4a.40.2"	MPEG-4 Advanced Simple Profile Level 0 video and Low-Complexity AAC audio in MP4 container
video/3gpp;codecs="mp4v.20.8, samr"	MPEG-4 Visual Simple Profile Level 0 video and AMR audio in 3GPP container
video/ogg;codecs="theora, speex"	Theora video and Speex audio in Ogg container
audio/ogg;codecs=speex	Speex audio alone in Ogg container
audio/ogg;codecs=flac	FLAC audio alone in Ogg container
video/ogg;codecs="dirac, vorbis"	Dirac video and Vorbis audio in Ogg container
video/x-matroska;codecs="theora, vorbis"	Theora video and Vorbis audio in Matroska container