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Developer Information

Blackmagicdesign 

REST API for Blackmagic Web Presenter



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Web Presenter Control REST API

If you are a software developer you can build custom applications or leverage ready to use tools such as curl or Postman to seamlessly control and interact with Web Presenter using the Web Presenter Control REST API. This API enables you to perform a wide range of operations, such as starting or stopping streaming, configuring custom streaming services, managing audio sources and much more. Whether you're developing a custom application tailored to your specific needs or utilizing existing tools, this API empowers you to unlock the full potential of your Blackmagic Web Presenter with ease. We look forward to seeing what you come up with!

Sending API Commands

To send an API command to your Web Presenter from a third party application such as Postman, add the path `/control/api/v1/` to the URL following the Web Presenter's IP address. For example, <http://192.168.1.10/control/api/v1/>

Downloading API Documentation

You can download REST API YAML documentation from your Web Presenter by adding the path `/control/documentation.html` to the URL following the Web Presenter's IP address. For example, <http://192.168.1.10/control/documentation.html>

Upload Streaming XML

To define custom streaming platforms, you can upload the contents of a Streaming XML file with the REST API. Once uploaded the custom platform will be available to select as a livestream platform.

Refer to the `Blackmagic Streaming XML Format` section in this manual for a description of the Stream XML file format.

For example, to create a new custom platform with the filename `Custom.xml`:

```
PUT http://192.168.1.10/control/api/v1/livestreams/customPlatforms/  
Custom.xml
```

- In the Body insert the Streaming XML contents. Remove any blank lines to be parsed correctly.
- If XML is correctly parsed, a "204 No Content" response is received from the Web Presenter.

To verify that the custom platform is loaded:

```
GET http://192.168.1.10/control/api/v1/livestreams/customPlatforms
```

- The Web Presenter will respond with "200 OK" and the following Body content.

```
[  
  "Custom.xml"  
]
```

To set the active platform with the custom platform:

```
PUT http://192.168.1.10/control/api/v1/livestreams/0/activePlatform
```

- In the Body, send a JSON object with key/value pairs as per the Stream XML definition. For example, using the minimal example from the `Blackmagic Streaming XML Format` section.

```
{
  "key": "",
  "platform": "My Streaming Service",
  "quality": "My Streaming Quality",
  "server": "My Streaming Server"
}
```

- On success, the Web Presenter will respond with "204 No Content".

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
events	array		
events[i]	string	List of events that can be subscribed to using the websocket API	/livestreams/0

Livestream Control API

API for controlling Livestreams on Blackmagic Design products.

GET /livestreams/0

Get the livestream's current status.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
status (required)	string	Possible values are: Idle, Connecting, Streaming, Flushing, Interrupted.	Idle
bitrate (required)	integer	Current bitrate (bps).	123456789
effectiveVideoFormat (required)	string	Effective video format for the livestream, serialised as a string.	1280x720p30
duration	integer	Current stream duration in seconds. Absent if livestream is idle.	1234
cache	integer	Current stream cache usage percentage.	7

GET /livestreams/0/start

Determine if the livestream is active.

Response

200 - OK

Name	Type	Description	Example
Response	boolean	True when the livestream is active.	True

PUT /livestreams/0/start

Start the livestream.

Response

204 - No Content

GET /livestreams/0/stop

Determine if the livestream is inactive.

Response

200 - OK

Name	Type	Description	Example
Response	boolean	True when the livestream is inactive.	True

PUT /livestreams/0/stop

Stop the livestream.

Response

204 - No Content

GET /livestreams/0/activePlatform

Get the currently selected platform configuration for the livestream.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
platform (required)	string	Platform name.	Youtube SRT (Beta)
server (required)	string	The platform's server name, or "Custom" when the URL is customizable.	Primary
key	string	Stream key.	ABCDEF-GHIJKL-MNOPQR
passphrase	string	Passphrase. Only included for SRT streams.	pp-abcd-efgh-ijkl-mnop
quality (required)	string	Quality level name.	Streaming High
url	string	Livestream destination. Only included when URL is customizable.	rtmp://192.168.0.1/app

PUT /livestreams/0/activePlatform

Set the currently selected platform configuration for the livestream.

Parameters

Name	Type	Description	Example
platform (required)	string	Platform name.	Youtube SRT (Beta)
server (required)	string	The platform's server name, or "Custom" when the URL is customizable.	Primary
key	string	Stream key.	ABCDEF-GHIJKL-MNOPQR
passphrase	string	Passphrase. Only included for SRT streams.	pp-abcd-efgh-ijkl-mnop
quality (required)	string	Quality level name.	Streaming High
url	string	Livestream destination. Only included when URL is customizable.	rtmp://192.168.0.1/app

Response

204 - No Content

400 - Bad Request

GET /livestreams/platforms

Get the list of available platforms.

Response

200 - OK

Name	Type	Description	Example
Response	array	List of available platforms names.	
Response[i]	string	Platform name.	Facebook

GET /livestreams/platforms/{platformName}

Get the service configuration for a platform.

Parameters

Name	Type	Description	Example
{platformName} (required)	string	Name of the platform.	Facebook

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
platform (required)	string	Corresponding platform name.	YouTube
key	string	Default stream key.	exampleKey123
servers (required)	array	List of server configurations.	
servers[i]	object	Server configuration.	

Name	Type	Description	Example
servers[i].server (required)	string	Server name.	Primary
servers[i].url (required)	string	Livestream destination.	srt://a.srt.youtube.com:2010
servers[i].srtExtensions	array	Miscellaneous tags used for SRT livestreams.	
servers[i].srtExtensions[i]	object	Dictionary object mapping SRT tag strings to values.	{'copy': '1'}
servers[i].srtExtensions[i][key]	string	SRT tag value.	
servers[i].group	string	Logical grouping of the server.	Primary
profiles (required)	array	List of profile configurations.	
profiles[i]	object	Quality configuration.	
profiles[i].profile (required)	string	Quality level name.	Streaming High
profiles[i].configs (required)	array	List of video format configurations.	
profiles[i].configs[i]	object	Video format configuration for profiles.	
profiles[i].configs[i].resolution (required)	string	Video format serialised as a string.	1080p
profiles[i].configs[i].fps (required)	string	Frames per second.	60
profiles[i].configs[i].bitrate (required)	integer	Pixel bitrate (bps).	9000000
profiles[i].configs[i].audioBitrate	integer	Audio bitrate (bps).	128000
profiles[i].configs[i].keyFrameInterval	integer	How often a key frame is sent, in seconds.	2
profiles[i].configs[i].videoCodecs	array	Supported video encoding algorithm/s.	
profiles[i].configs[i].videoCodecs[i]	string	Video encoding algorithm. Possible values are: H264, H265.	H264
profiles[i].lowLatency (required)	boolean	If true, fewer frames will be buffered in the livestream.	
defaultProfile	string	Quality level name.	Streaming High
credentials	object	Credentials used for RTMP streams.	
credentials.username (required)	string	The username part of the credentials. Only used for RTMP streams.	myusername
credentials.password (required)	string	Used for RTMP streams, also used as Passphrase for SRT streams.	mypassword
customizableUrlEnabled	boolean	True when the server URL is customizable.	False

400 - Bad Request

GET /livestreams/customPlatforms

Get a list of custom platform files.

Response

200 - OK

Name	Type	Description	Example
Response	array	List of custom platform file names.	
Response[i]	string	Custom platform file name.	Custom.xml

DELETE /livestreams/customPlatforms

Remove all custom configuration files.

Response

204 - No Content

GET /livestreams/customPlatforms/{filename}

Get a custom platform file.

Parameters

Name	Type	Description	Example
{filename} (required)	string	Name of the file to get.	Custom.xml

Response

200 - OK

Name	Type	Description	Example
Response	object	Blackmagic streaming XML file format.	

404 - Not Found

PUT /livestreams/customPlatforms/{filename}

Update a custom platform file if it exists, if not, create a new file with the given file name.

Parameters

Name	Type	Description	Example
{filename} (required)	string	Name of the file to update/create.	Custom.xml

Response

204 - No Content

400 - Bad Request

DELETE /livestreams/customPlatforms/{filename}

Remove the given custom platform file.

Parameters

Name	Type	Description	Example
{filename} (required)	string	Name of the file to be removed.	Custom.xml

Response

204 - No Content

404 - Not Found

Monitor Output Control API

API for controlling Monitor Output Settings on Blackmagic Design products.

GET /monitorOutput/audioSources

List monitor output's available audio sources.

Response

200 - OK

Name	Type	Description	Example
Response	array	List of available audio sources.	
Response[i]	string	Possible values are: Auto, SDI Input, Remote Source.	SDI Input

GET /monitorOutput/audioSources/active

Get active monitor output audio source.

Response

200 - OK

Name	Type	Description	Example
Response	string	Possible values are: Auto, SDI Input, Remote Source.	SDI Input

PUT /monitorOutput/audioSources/active

Set active monitor output audio source.

Parameters

Name	Type	Description	Example
audioSource (required)	string	Possible values are: Auto, SDI Input, Remote Source.	SDI Input

Response

204 - No Content

400 - Bad Request

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
videoFormat	object	Video format configuration.	
videoFormat.name (required)	string	Video format serialised as a string, or 'Auto' to detect the SDI Input video format.	1920x1080p29.97
videoFormat.frameRate	string	Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60	29.97
videoFormat.height	number	Height dimension of video format.	1080
videoFormat.width	number	Width dimension of video format.	1920
videoFormat.interlaced	boolean	Is the display format interlaced?	False

501 - This functionality is not implemented for the device in use.

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
deviceName	string	Name of device as displayed in Setup.	None
productName	string	Device's product name.	Blackmagic Web Presenter HD
softwareVersion	string	Software version running on device.	3.4

501 - This functionality is not implemented for the device in use.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
name (required)	string	Video format serialised as a string, or 'Auto' to detect the SDI Input video format.	1920x1080p29.97
frameRate	string	Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60	29.97
height	number	Height dimension of video format.	1080
width	number	Width dimension of video format.	1920
interlaced	boolean	Is the display format interlaced?	False

501 - This functionality is not implemented for the device in use.

PUT /system/videoFormat

Set the video format.

Parameters

This parameter can be one of the following types:

Name	Type	Description	Example
frameRate	string	Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60	29.97
height	number	Height dimension of video format.	1080
width	number	Width dimension of video format.	1920
interlaced	boolean	Is the display format interlaced?	False

Name	Type	Description	Example
name (required)	string	Video format serialised as a string, or 'Auto' to detect the SDI Input video format.	1920x1080p29.97

Response

204 - No Content

501 - This functionality is not implemented for the device in use.

GET /system/supportedVideoFormats

Get the list of supported video formats for the current system state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description	Example
formats	array	List of video formats.	
formats[i]	object	Video format configuration.	
formats[i].name (required)	string	Video format serialised as a string, or 'Auto' to detect the SDI Input video format.	1920x1080p29.97
formats[i].frameRate	string	Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60	29.97
formats[i].height	number	Height dimension of video format.	1080
formats[i].width	number	Width dimension of video format.	1920
formats[i].interlaced	boolean	Is the display format interlaced?	False

501 - This functionality is not implemented for the device in use.