Video Clarity

Tools for Video Analysis

Real-Time Monitor - REST Application Programming Interface

Summary

The RTM systems and software may be controlled a number of ways. This document outlines a developer REST interface for a managed RTMonitor application. The interface is a simple HTTP wrapper around RTMonitor's low-level, socket-based interface.
Version 1.0

HTTP Request/Response

The following unsecured HTTP 1.1 request-response methods are used over port 80:

GET, POST

Using one of these HTTP methods, the developer's client issues a request to a URL serviced by the RTM Manager and expects a server response. For simplicity, request parameters are encoded completely within the URL.

The GET response contains a body containing the requested information, typically in JSON format ("application/json").

The POST response contains an empty body.

HTTPS is currently not supported and the API version 1 does not accommodate authentication keys.

Regular Expression Variables

These metasyntactic variables are referenced by the REST service endpoints descriptions. Their value sets are listed here using regular expressions.

n = \d+, e.g., 4, 1920
ipfile = ip|file
module = broadcast|none
input_type = ip|file|sdi|sequence
action = enable|disable
path = [\w\s\W]+, e.g., f:/testlib/001
rtm_query_state = available|monitored
rtm = [\w\s\W]+, e.g., RTM%201 (encoding for "RTM 1"), LAB2-RTM3
hwaccel = none|dx9|dx11|qsync
broadcast_video = [\w\s\W]+, e.g., 1080i 59.94 Hz.
  See RTMonitor's available Target Video Formats
  when the Target Output Module is set to Broadcast
no_output_video_format = [\w\s\W]+, e.g., 3840 x 2160 60.00 Hz.
  See RTMonitor's available Target Video Formats
  when the Target Output Module is set to No Video Output
video_format = :broadcast_video_format|:no_output_video_format
rate_convert_method = skip-odd-frames|skip-even-frames|4:1-decimation
broadcast_scaling_type = nearest-neighbor|linear|cubic|super
scaling_type = fast-bilinear|bilinear|bicubic|experimental|
        neighbor|area|bicublin|gauss|sinc|lanczos|spline
session = [\w\s\W]+, e.g., 4K-50-test
ipaddr = IP4 address, e.g., 127.0.0.1, localhost, 192.168.1.40
uri = http://:ipaddr

sequence = [\w\s\W]+, e.g., test-001,
multicast = [\w\W]+?localip=:ipaddr,
e.g., 233.3.3.3:3333?localip=192.168.1.148
control = align-video|align-audio|preview|start|stop|realign|
clear-impairments|clear-logs|clear-recordings
prefix = :uri/api/v1/rtms/:rtm, e.g. http://127.0.0.1/api/v1/rtms/myrtm

These variables are referenced in the service endpoint with a prepended colon (':'), e.g., :path

High-level Service Endpoints

Get API versions

Method: GET
URL: :ipaddr/api/versions
Example: curl -X GET http://127.0.0.1/api/versions
Returns: {"versions": ["1"]}

Get a list of version 1 service endpoints

Method: GET
URL: :ipaddr/api/v1
Example: curl -X GET http://127.0.0.1/api/v1
Returns: ^api/v1/rtms/(?P<rtm_name>[\w\s\W]+)/alignment/fail-codes
...
Python regular expressions describe internal field names and value sets. Listed URIs assume an IP address prefix, which is not included for brevity.

The following endpoint queries the RTM Manager for a list of names of local and remote RTMonitor instances. A optional query state qualifier can be used to subset instances. Unless qualified, the list includes all units known to the manager. "Monitored" units are those being monitored for status and availabilty. "Available" units are those actively responding.

Method: GET
URL: :ipaddr/api/v1/rtms[?state=:query_state]
Examples: 192.168.1.22/api/v1/rtms
192.168.1.22/api/v1/rtms?state=monitored
192.168.1.22/api/v1/rtms?state=available
Returns: {"rtms": ["LAB1-RTM1", "LAB2-RTM1"]}

Low-level Service Endpoints

The remaining service endpoints are modeled after a low-level, socket-based RTMonitor interface, documented elsewhere. Unlike "1-to-many" interfaces used within the RTM Manager to control and monitor multiple RTM instances in parallel, the endpoints summarized here are a simple 1-to-1 interface. For brevity, a common metavariable prefix (":prefix"), described above, is used.

Get alignment fail code

Based on: GetAlignmentFailCode
Method: GET
URL: :prefix/alignment/fail-codes

Example: curl -X GET :prefix/alignment/fail-codes
Returns: {"alignment_fail_code": "23"}

Set audio channel enable/disable
Based on: SetAudioChannel
Method: POST
URL: :prefix/audio/channels/:n/:action
Example: curl -X POST :prefix/audio/channels/1/enable

Get audio channel enable/disable
Based on: GetAudioChannel
Method: GET
URL: :prefix/audio/channels/:n
Example: curl -X GET :prefix/audio/channels/1
Returns: {"channel": "2", "action": "enable"}

Get audio channel average
Based on: GetAudioAvg
Method: GET
URL: :prefix/audio/channels/:n/average
Example: curl -X GET :prefix/audio/channels/1/average
Returns: {"average": "0.0000", "audio_channel": "2"}

Get audio channel maximum
Based on: GetAudioMax
Method: GET
URL: :prefix/audio/channels/:n/maximum
Example: curl -X GET :prefix/audio/channels/1/maximum
Returns: {"maximum": "5.0000", "audio_channel": "2"}

Get audio channel minimum
Based on: GetAudioMin
Method: GET
URL: :prefix/audio/channels/:n/minimum
Example: curl -X GET :prefix/audio/channels/1/minimum
Returns: {"minimum": "5.0000", "audio_channel": "2"}

Get audio channel standard deviation
Based on: GetAudioStdDev
Method: GET
URL: :prefix/audio/channels/:n/standard-deviation
Example: curl -X GET :prefix/audio/channels/1/standard-deviation
Returns: {"standard_deviation": "0.0000", "audio_channel": "2"}

Set audio channel duration
Based on: SetAudioDuration
Method: POST
URL: :prefix/audio/channels/:n/durations/:n
Example: curl -X POST :prefix/audio/channels/1/durations/100

Get audio channel duration
Based on: GetAudioDuration
Method: GET
URL: :prefix/audio/channels/:n/durations
Example: curl -X GET :prefix/audio/channels/1/durations
Returns: {"duration": "100"}

Set audio threshold
Based on: SetAudioThreshold
Method: POST
URL: :prefix/audio/thresholds/:n

Example: curl -X POST :prefix/audio/thresholds/50

Get audio threshold
Based on: GetAudioThreshold
Method: GET
URL: :prefix/audio/thresholds
Example: curl -X GET :prefix/audio/thresholds
Returns: {"audio_threshold": "50"}

Get number of audio channels enabled
Based on: GetAudioChannelsEnabled
Method: GET
URL: :prefix/audio/enabled-channel-count
Example: curl -X GET :prefix/audio/enabled-channel-count
Returns: {"enabled_channel_count": "3"}

Get number of audio impairments with the date and time of the most recent
Based on: GetAudioImpairments
Method: GET
URL: :prefix/audio/impairments
Example: curl -X GET :prefix/audio/impairments
Returns: {"audio_impairments": "0", "date_time": "00/00/00 00:00:00"}

Save configuration to a file in the RTM instance
Based on: SaveConfig path
Method: POST
URL: :prefix/config/save/:path
Example: curl -X POST :prefix/config/save/c:/config-snapshot-20191130

Restore configuration from file in the RTM instance
Based on: RestoreConfig
Method: POST
URL: :prefix/config/restore/:path
Example: curl -X POST :prefix/config/restore/c:/config-snapshot-20191130

Control the RTM instance
Based on: Stop, Start, Preview, Realign, ...
Method: POST
URL: :prefix/control/:control
Example: curl -X POST :prefix/control/start

Set dynamic alignment frame range enable/disable
Based on: SetDynamicAlign
Method: POST
URL: :prefix/dynamic-align/ranges/:n/:action
Example: curl -X POST :prefix/dynamic-align/ranges/40/enable

Get dynamic alignment frame range enable/disable
Based on: GetDynamicAlign
Method: GET
URL: :prefix/dynamic-align
Example: curl -X GET :prefix/dynamic-align
Returns: {"frame_range": "40", "action": "enable"}

Get error code
Based on: GetRtmErrorCode
Method: GET
URL: :prefix/dynamic-align

Example: curl -X GET :prefix/error-codes
Returns: {"rtm_error_code": "1"}

Set full alignment configuration
Based on: SetFullAlign
Method: POST
URL: :prefix/full-alignments/capture-seconds/:n/
thresholds/:n/minimum-offsets/:n/:action
Example: curl -X POST :prefix/full-alignments/capture-seconds/300/
thresholds/20/minimum-offsets/0/disable"

Get full alignment configuration
Based on: GetFullAlign
Method: GET
URL: :prefix/full-alignments
Example: curl -X GET :prefix/full-alignments
Returns: {
"action": "enable",
"threshold": "20",
"capture_seconds": "300",
"minimum_offset": "0"
}

Set output library in the RTM instance
Based on: SetOutputLibrary
Method: POST
URL: :prefix/inputs/:n/output-libraries/:path
Example: curl -X POST :prefix/inputs/:n/output-libraries/f:/Input1

Get output library in the RTM instance
Based on: GetOutputLibrary
Method: GET
URL: :prefix/inputs/:n/output-libraries
Example: curl -X GET :prefix/inputs/:n/output-libraries
Returns: {"input": "0", "output_library": "f:/Input1"}

Get input video format
Based on: GetInputVideoFormat
Method: GET
URL: :prefix/inputs/:n/video/formats
Example: curl -x GET :prefix/inputs/1/video/formats
Returns: {
"input": "1",
"frame_rate": "29.97",
"width": "1920",
"height": "1080"
}

Select audio id
Based on: Set{Ip|File}AudioID
Method: POST
URL: :prefix/inputs/:n/:ipfile/audio/ids/:n
Example: curl -x POST :prefix/inputs/1/ip/audio/ids/420

Get selected audio id
Based on: Get{Ip|File}AudioID
Method: GET
URL: :prefix/inputs/:n/:ipfile/audio/ids

Example: curl -x GET :prefix/inputs/1/ip/audio/ids
Returns: {"id": "420"}

Set deinterlace enable/disable
Based on: Set{Ip|File}Deinterlace
Method: POST
URL: :prefix/inputs/:n/:ipfile/deinterlace/:action
Example: curl -x POST :prefix/inputs/1/file/deinterlace/enable

Get deinterlace enable/disable
Based on: Get{Ip|File}Deinterlace
Method: GET
URL: :prefix/inputs/:n/:ipfile/deinterlace
Example: curl -x GET :prefix/inputs/1/file/deinterlace
Returns: {"action": "disable"}

Set dolby downmix enable/disable
Based on: Set{Ip|File}DolbyDownmix
Method: POST
URL: :prefix/inputs/:n/:ipfile/dolby/downmix/:action
Example: curl -x POST :prefix/inputs/1/ip/dolby/downmix/disable

Get dolby downmix enable/disable
Based on: Get{Ip|File}DolbyDownmix
Method: GET
URL: :prefix/inputs/:n/:ipfile/dolby/downmix
Example: curl -x GET :prefix/inputs/1/ip/dolby/downmix
Returns: {"action": "disable"}

Set hardware acceleration configuration
Based on: Set{Ip|File}HWAccel
Method: POST
URL: :prefix/inputs/:n/:ipfile/hwaccel/:hwaccel
Example: curl -x POST :prefix/inputs/1/file/dolby/hwaccel/none

Get hardware acceleration configuration
Based on: Get{Ip|File}HWAccel
Method: GET
URL: :prefix/inputs/:n/:ipfile/hwaccel
Example: curl -x GET :prefix/inputs/1/file/hwaccel
Returns: {"hwaccel": "none"}

Select program id
Based on: Set{Ip|File}ProgramID
Method: POST
URL: :prefix/inputs/:n/:ipfile/program/ids/:n
Example: curl -x POST :prefix/inputs/1/file/program/ids/1

Get selected program id
Based on: Get{Ip|File}ProgramID
Method: GET
URL: :prefix/inputs/:n/:ipfile/program/ids
Example: curl -x GET :prefix/inputs/1/file/program/ids
Returns: {"id": "1"}

Set scaling enable/disable
Based on: Set{Ip|File}Scaling
Method: POST

URL: :prefix/inputs/:n/:ipfile/scaling/:action
Example: curl -x POST :prefix/inputs/1/ip/scaling/disable

Get scaling enable/disable
Based on: Get{Ip|File}Scaling
Method: GET
URL: :prefix/inputs/:n/:ipfile/scaling
Example: curl -x GET :prefix/inputs/1/ip/scaling
Returns: {"action": "disable"}

Set scaling type
Based on: Set{Ip|File}ScalingType
Method: POST
URL: :prefix/inputs/:n/:ipfile/scaling/types/:scaling_type
Example: curl -x POST :prefix/inputs/1/ip/scaling/types/bicubic

Get scaling type
Based on: Get{Ip|File}ScalingType
Method: GET
URL: :prefix/inputs/:n/:ipfile/scaling/types
Example: curl -x GET :prefix/inputs/1/ip/scaling/types
Returns: {"scaling_type": "bicubic"}

Set source
Based on: SetIpOrFileSource
Method: POST
URL: :prefix/inputs/:n/:ipfile/sources
Examples: curl -x POST :prefix/inputs/1/file/sources/
f:/test_inputs/t011.mpg
curl -x POST :prefix/inputs/1/ip/sources/
233.3.3.3:3333?localip=10.0.0.3

Get source
Based on: GetIpOrFileSource
Method: GET
URL: :prefix/inputs/:n/:ipfile/sources
Example: curl -x GET :prefix/inputs/1/file/sources
Returns: {"source": "f:/test_inputs/t011.mpg"}

Set target output module
Based on: Set{Ip|File}TargetOutputModule
Method: POST
URL: :prefix/inputs/:n/:ipfile/target-output-modules/:module
Example: curl -x POST :prefix/inputs/1/ip/target-output-modules/broadcast

Get target output module
Based on: Get{Ip|File}TargetOutputModule
Method: GET
URL: :prefix/inputs/:n/:ipfile/target-output-modules
Example: curl -x GET :prefix/inputs/1/ip/target-output-modules
Returns: {"module": "broadcast"}

Set target video format
Based on: Set{Ip|File}TargetVideoFormat
Method: POST
URL: :prefix/inputs/:n/:ipfile/
target-video-format/:video_format
Example: curl -x POST :prefix/inputs/1/ip/

target-video-format/1080i-59.94-Hz.

Get target video format
Based on: Get{Ip|File}TargetVideoFormat
Method: GET
URL: :prefix/inputs/:n/:ipfile/target-video-format
Example: curl -x GET :prefix/inputs/1/ip/target-video-format
Returns: {"video_format": "1080i 59.94 Hz."}

Select video id
Based on: Set{Ip|File}VideoID
Method: POST
URL: :prefix/inputs/:n/:ipfile/video/ids/:n
Example: curl -x POST :prefix/inputs/1/ip/video/ids/421

Get selected video id
Based on: Get{Ip|File}VideoID
Method: GET
URL: :prefix/inputs/:n/:ipfile/video/ids
Example: curl -x GET :prefix/inputs/1/ip/video/ids
Returns: {"id": "421"}

Set broadcast dolby enable/disable
Based on: SetBroadcastDolby
Method: POST
URL: :prefix/inputs/:n/broadcast/dolby/:action
Example: curl -x POST :prefix/inputs/1/broadcast/dolby/disable

Get dolby downmix enable/disable
Based on: GetBroadcastDolby
Method: GET
URL: :prefix/inputs/:n/broadcast/dolby
Example: curl -x GET :prefix/inputs/1/broadcast/dolby
Returns: {"action": "disable"}

Set broadcast rate convert configuration
Based on: SetRateConvert
Method: POST
URL: :prefix/inputs/:n/broadcast/
rate-convert/:rate_convert_method/:action
Example: curl -x POST :prefix/inputs/1/broadcast/
rate-convert/skip-odd-frames/enable

Get broadcast rate convert configuration
Based on: GetRateConvert
Method: GET
URL: :prefix/inputs/:n/broadcast/rate-convert
Example: curl -x GET :prefix/inputs/1/broadcast/rate-convert
Returns: {
"action": "disable",
"method": "skip odd frames",
"input": "1"
}

Set broadcast scaling type
Based on: SetBroadcastScalingType
Method: POST
URL: :prefix/inputs/:n/broadcast/scaling/types/:broadcast_scaling_type

Example: curl -x POST :prefix/inputs/1/broadcast/scaling/types/linear

Get broadcast scaling type
Based on: GetBroadcastScalingType
Method: GET
URL: :prefix/inputs/:n/broadcast/scaling/types
Example: curl -x GET :prefix/inputs/1/broadcast/scaling/types
Returns: {"type": "linear"}

Set broadcast scaling configuration
Based on: SetBroadcastScaling
Method: POST
URL: :prefix/inputs/:n/broadcast/scaling/
width/:n/height/:n/
output-width/:n/output-height/:n/:action
Example: curl -x POST :prefix/inputs/1/broadcast/scaling/
width/1920/height/1080/
output-width/720/output-height/486/disable

Get broadcast scaling configuration
Based on: GetBroadcastScaling
Method: GET
URL: :prefix/inputs/:n/broadcast/scaling
Example: curl -x GET :prefix/inputs/1/broadcast/scaling
Returns: {
"width": "1920",
"height": "1080",
"output_width": "720",
"output_height": "486",
"action": "disable"
}

Set ts record enable/disable
Based on: SetIpTSRecord
Method: POST
URL: :prefix/inputs/:n/ip/ts-record/:action
Example: curl -x POST :prefix/inputs/1/ip/ts-record/disable

Get ts record enable/disable
Based on: GetIpTSRecord
Method: GET
URL: :prefix/inputs/:n/ip/ts-record
Example: curl -x GET :prefix/inputs/1/ip/ts-record
Returns: {"action": "disable"}

Set ts record duration
Based on: SetIpTsRecordDuration
Method: POST
URL: :prefix/inputs/:n/ip/ts-record/durations/:n
Example: curl -x POST :prefix/inputs/1/ip/ts-record/durations/10

Get ts record duration
Based on: GetIpTsRecordDuration
Method: GET
URL: :prefix/inputs/:n/ip/ts-record/durations
Example: curl -x GET :prefix/inputs/1/ip/ts-record/durations
Returns: {"duration": "10"}

Set SDI input
Based on: SetSdiInput
Method: POST
URL: curl -x POST :prefix/inputs/:n/sdi/ports/:n
Example: :prefix/inputs/1/sdi/ports/1

Get SDI input
Based on: GetSdiInput
Method: GET
URL: :prefix/inputs/:n/sdi/ports
Example: curl -x GET :prefix/inputs/1/sdi/ports
Returns: {"port": "0"}

Set SDI dual link enable/disable
Based on: SetDualLink
Method: POST
URL: curl -x POST :prefix/inputs/:n/sdi/dual/:action
Example: :prefix/inputs/1/sdi/dual/disable

Get SDI dual link enable/disable
Based on: GetDualLink
Method: GET
URL: :prefix/inputs/:n/sdi/dual
Example: curl -x GET :prefix/inputs/1/sdi/dual
Returns: {"input": "1", "action": "disable"}

Set SDI quad link enable/disable
Based on: SetQuadLink
Method: POST
URL: curl -x POST :prefix/inputs/:n/sdi/quad/:action
Example: :prefix/inputs/1/sdi/quad/disable

Get SDI quad link enable/disable
Based on: GetQuadLink
Method: GET
URL: :prefix/inputs/:n/sdi/quad
Example: curl -x GET :prefix/inputs/1/sdi/quad
Returns: {"input": "1", "action": "disable"}

Set TSI input enable/disable
Based on: SetTsi
Method: POST
URL: :prefix/inputs/:n/sdi/tsi/:action
Example: curl -x POST :prefix/inputs/1/sdi/tsi/disable

Get TSI input enable/disable
Based on: GetTsi
Method: GET
URL: :prefix/inputs/:n/sdi/tsi
Example: curl -x get :prefix/inputs/1/sdi/tsi
Returns: {"input": "1", "action": "disable"}

Set sequence configuration
Based on: SetSequence
Method: POST
URL: :prefix/inputs/:n/sequences/:sequence/library/:path
Example: curl -x POST :prefix/inputs/1/
sequences/test-100/library/f:/mylib001

Get sequence configuration
Based on: GetSequence
Method: GET
URL: :prefix/inputs/:n/sequences
Example: curl -x GET :prefix/inputs/1/sequences
Returns: {
"input": "1",
"sequence": "test-100",
"library": "f:/mylib001"
}

Set input type
Based on: SetInput
Method: POST
URL: :prefix/inputs/:n/types/:input_types
Example: curl -x POST :prefix/inputs/1/types/ip

Get input type
Based on: GetInput
Method: GET
URL: :prefix/inputs/:n/types
Example: curl -x GET :prefix/inputs/1/types
Returns: {"type": "ip"}

Set lipsync configuration
Based on: SetLipSync
Method: POST
URL: :prefix/lipsync/channels/:n/
minimum/:n/maximum/:n/periods/:n
Example: curl -x POST :prefix/lipsync/channels/1/
minimum/2/maximum/3/periods/4"

Get lipsync configuration
Based on: GetLipSync
Method: GET
URL: :prefix/lipsync
Example: curl -x POST :prefix/lipsync
Returns: {
"channel": "1",
"minimum": "2",
"maximum": "3",
"period": "10"
}

Get lipsync errors
Based on: GetLipSyncErrors
Method: GET
URL: :prefix/lipsync/errors
Example: curl -x GET :prefix/lipsync
Returns: {"lipsync_errors": "0", "date_time": "00/00/00 00:00:00"}

Get loudness errors
Based on: GetLoudnessErrors
Method: GET
URL: :prefix/loudness/errors
Example: curl -x GET :prefix/loudness/errors
Returns: {

```
            "count1": "0",
            "date_time1": "00/00/00 00:00:00",
            "count2": "0",
            "date_time2": "00/00/00 00:00:00"
        }
```

Set loudness configuration
Based on: SetLoudness
Method: POST
URL: :prefix/loudness/minimum/:n/maximum/:n
Example: curl -x POST :prefix/loudness/minimum/2/maximum/3"

Get loudness configuration
Based on: GetLoudness
Method: GET
URL: :prefix/loudness
Example: curl -x GET :prefix/loudness
Returns: {"minimum": "2", "maximum": "3"}

Get board/module temperature
Based on: GetBoardTemp
Method: GET
URL: :prefix/modules/:n/temperatures
Example: curl -x GET :prefix/modules/0/temperatures
Returns: {"temperature" = "50.01"}

Set multicast configuration
Based on: SetMulticast
Method: POST
URL: :prefix/multicasts/periods/:n/in-frames/:n/source/:multicast
Example: curl -X POST :prefix/multicasts/periods/60/in-frames/1/
source/233.3.3.3:3333?localip=192.168.1.148

Get multicast configuration
Based on: GetMulticast
Method: GET
URL: :prefix/multicasts
Example: curl -X POST :prefix/multicasts
Returns: {

```
            "period": "60",
            "in_frames": "1",
            "source": "233.3.3.3:3333?localip=192.168.1.148"
        }
```

Set new folder
Based on: SetNewFolder
Method: POST
URL: :prefix/new-folders/:path
Example: curl -X POST :prefix/new-folders/subdir1

Get new folder
Based on: GetNewFolder
Method: GET
URL: :prefix/new-folders
Example: curl -X GET :prefix/new-folders
Returns: {"new_folder" : f:/RTMLogs/subdir1

Set preview enable/disable

Based on: SetPreviews
Method: POST
URL: :prefix/previews/:action
Example: curl -X POST :prefix/previews/enable

Get preview enable/disable
Based on: GetPreviews
Method: GET
URL: :prefix/previews
Example: curl -X GET :prefix/previews
Returns: {"action": "enabled"}

Set RTM logs path
Based on: SetRtmLogFileName
Method: POST
URL: :prefix/rtmlog-filenames/:path
Example: curl -X POST :prefix/rtmlog-filenames/f:/RTMLogs/RTMLog.log

Get RTM logs path
Based on: GetRtmLogFileName
Method: GET
URL: :prefix/rtmlog-filenames
Example: curl -X GET :prefix/rtmlog-filenames
Returns: {"rtmlog_path": "f:/RTMLog/RTMLog.log"}

Get run time
Based on: GetRunTime
Method: GET
URL: :prefix/run-time
Example: curl -X GET :prefix/run-time
Returns: {"run_time_seconds": "0"}

Set session name
Based on: SetSession
Method: POST
URL: :prefix/sessions/:session
Example: curl -X POST :prefix/sessions/test-uhd

Get session name
Based on: GetSession
Method: GET
URL: :prefix/sessions
Example: curl -X POST :prefix/sessions
Returns: {"session_name": "test-uhd"}

Set spatial range configuration
Based on: SetSpatialRange
Method: POST
URL: :prefix/spatial-ranges/x/:n/y/:n/:action
Example: curl -X POST :prefix/spatial-ranges/x/0/y/100/enable

Get spatial range configuration
Based on: GetSpatialRange
Method: GET
URL: :prefix/spatial-ranges
Example: curl -X GET :prefix/spatial-ranges
Returns: {
"x": "0",

```
            "y": "100",
            "action": "enable",
          }
```


Get start date and time

Based on: GetStartTime
Method: GET
URL: :prefix/start-time
Example: curl -X GET :prefix/start-time
Returns: {"start_time": "00/00/00 00:00:00"}

Get alignment status

Based on: GetAlignmentStatus
Method: GET
URL: :prefix/status/alignment
Example: curl -X GET :prefix/status/alignment
Returns:


```
          {
            "video_offset": "0",
            "audio_offset_msec": "0",
            "audio_offset_samples": "0",
            "audio_offset_frames": "0"
          }
```


Get extended status

Based on: GetManagerStatus
Method: GET
URL: :prefix/status/extended
Example: curl -X GET :prefix/status/extended
Returns:


```
          {
            "continuity_counter_error_input2_count": "0",
            "video_duration": "5",
            "invalid_input1": "0",
            "audio_offset_samples": "N/A",
            "valid_input_count": "1",
            "input1": "<none>",
            "loudness_error_input1_count": "0",
            "operational_state": "Stopped",
            "invalid_input1_time": "2019/12/02 12:08:44",
            "video_threshold": "0.0000",
            "session": "test-mpg",
            "video_metric": "PSNR",
            "continuity_counter_error_input1_count": "0",
            "video_impairment_count": "0",
            "metric_max": "0.0000",
            "vanc_error_count": "0",
            "audio_offset_frames": "N/A",
            "invalid_input2_time": "2019/12/02 12:08:47",
            "board_temperature_input1": "0.00",
            "audio_impairment_count": "0",
            "invalid_input2": "0",
            "audio_offset_msec": "N/A",
            "runtime": "00:00:00:00",
            "metric_min": "0.0000",
            "loudness_error_input1_time": "00/00/00 00:00:00",
            "loudness_error_input2_time": "00/00/00 00:00:00",
            "vanc_error_time": "00/00/00 00:00:00",
            "loudness_error_input2_count": "0",
            "lipsync_error_time": "00/00/00 00:00:00",
```

```
    "rtmonitor_version": "4.0.665.0",
    "input2": "<none>",
    "metric": "0.0000",
    "audio_impairment_time": "00/00/00 00:00:00",
    "lipsync_error_count": "0",
    "board_temperature_input2": "0.00",
    "libcvi_version": "20191025-923:936M",
    "video_offset_frames": "0",
    "video_impairment_time": "00/00/00 00:00:00",
    "dropped_frame_input1_count": "0",
    "metric_time": "2019-12-02 22:06:40",
    "dropped_frame_input2_count": "0"
}
```


Get input signal status
- Based on: GetInputSignalStatus
- Method: GET
- URL: :prefix/status/input-signals
- Example: curl -X GET :prefix/status/input-signals
- Returns: {"input_signal_status": "Valid"}

Get invalid signal status
- Based on: GetInvalidSignalStatus
- Method: GET
- URL: :prefix/status/invalid-signals
- Example: curl -X GET :prefix/status/invalid-signals
- Returns:


```
{
    "date_time": "2019/12/02 12:08:44",
    "count": "0",
    "input": "0"
}
```


Get operational status
- Based on: GetOperationalStatus
- Method: GET
- URL: :prefix/status/operational
- Example: curl -X GET :prefix/status/operational
- Returns: {"operational_status": "Stopped"}

Get VANC errors
- Based on: GetVancErrors
- Method: GET
- URL: :prefix/status/vanc/errors
- Example: curl -X GET :prefix/vanc/errors
- Returns: {"date_time": "00/00/00 00:00:00", "vanc_errors": "0"}

Set VANC line enable/disable
- Based on: SetVancLine
- Method: POST
- URL: :prefix/vanc/lines/:n/:action
- Example: curl -X POST :prefix/vanc/lines/1/disable

Get VANC line enable/disable
- Based on: GetVancLine
- Method: GET
- URL: :prefix/vanc/lines/:n
- Example: curl -X GET :prefix/vanc/lines/1
- Returns: {"action": "disable", "vanc_line": "2"}

Get VANC line average
Based on: GetVancAvg
Method: GET
URL: :prefix/vanc/lines/:n/average
Example: curl -X GET :prefix/vanc/lines/1/average
Returns: {"average": "0.0000", "vanc_line": "2"}

Get VANC line maximum
Based on: GetVancMax
Method: GET
URL: :prefix/vanc/lines/:n/maximum
Example: curl -X GET :prefix/vanc/lines/1/maximum
Returns: {"maximum": "0.0000", "vanc_line": "2"}

Get VANC line minimum
Based on: GetVancMin
Method: GET
URL: :prefix/vanc/lines/:n/minimum
Example: curl -X GET :prefix/vanc/lines/1/minimum
Returns: {"minimum": "0.0000", "vanc_line": "2"}

Get VANC line standard deviation
Based on: GetVancStdDev
Method: GET
URL: :prefix/vanc/lines/:n/standard-deviation
Example: curl -X GET :prefix/vanc/lines/1/standard-deviation
Returns: {"standard_deviation": "0.0000", "vanc_line": "2"}

Get RTMonitor version date
Based on: GetVersionDate
Method: GET
URL: :prefix/versions/date
Example: curl -X GET :prefix/versions/dates
Returns: {"version_date": "2019/11/27"}

Get RTMonitor version
Based on: GetVersion
Method: GET
URL: :prefix/versions
Example: curl -X GET :prefix/versions/dates
Returns: {"version": "4.0.665.0"}

Set video boarder value
Based on: SetBorderValue
Method: POST
URL: :prefix/video/border-value/:n
Example: curl -X POST :prefix/border-value/0

Get video boarder value
Based on: GetBorderValue
Method: GET
URL: :prefix/video/border-values
Example: curl -X GET :prefix/border-values
Returns: {"border_value": "0"}

Set video component enable/disable
Based on: SetVideoComponent

Method: POST
URL: :prefix/video/components/:n/:action
Example: curl -X GET :prefix/video/components/0/enable

Get video component enable/disable
Based on: GetVideoComponent
Method: GET
URL: :prefix/video/components/:n
Example: curl -X GET :prefix/video/components/0
Returns: {"action": "enable", "video_component": "0"}

Get video component average
Based on: GetVideoAvg
Method: GET
URL: :prefix/video/components/:n/average
Example: curl -X GET :prefix/vanc/lines/0/average
Returns: {"average": "0.0000", "video_component": "0"}

Get video component maximum
Based on: GetVideoMax
Method: GET
URL: :prefix/video/components/:n/maximum
Example: curl -X GET :prefix/video/components/0/maximum
Returns: {"maximum": "0.0000", "video_component": "0"}

Get video component minimum
Based on: GetVideoMin
Method: GET
URL: :prefix/video/components/:n/minimum
Example: curl -X GET :prefix/video/components/0/minimum
Returns: {"minimum": "0.0000", "video_component": "0"}

Get video component standard deviation
Based on: GetVideoStdDev
Method: GET
URL: :prefix/video/components/:n/standard-deviation
Example: curl -X GET :prefix/video/components/0/standard-deviation
Returns: {"standard_deviation": "0.0000", "video_component": "0"}

Set video component threshold
Based on: SetVideoThreshold
Method: POST
URL: :prefix/video/components/:n/threshold/:n/./:n
Example: curl -X POST :prefix/video/components/0/threshold/1.00

Get video component threshold
Based on: GetVideoThreshold
Method: GET
URL: :prefix/video/components/:n/threshold
Example: curl -X GET :prefix/video/components/0/threshold
Returns: {"threshold": "1.00", "component": "0"}

Set video duration
Based on: SetVideoDuration
Method: POST
URL: :prefix/video/duration/:n
Example: curl -X POST :prefix/video/duration/5

Get video duration
Based on: GetVideoDuration
Method: GET
URL: :prefix/video/duration
Example: curl -X GET :prefix/video/duration
Returns: {"duration": "5"}

Get video impairments
Based on: GetVideoImpairments
Method: GET
URL: :prefix/video/impairments
Example: curl -X GET :prefix/video/impairments
Returns: {"date_time": "00/00/00 00:00:00", "video_impairments": "0"}

Set video log averaging period
Based on: SetVideoAveraging
Method: POST
URL: :prefix/video/log-averaging-periods/:n/in-frames/:n
Example: curl -X POST :prefix/video/log-averaging-periods/60/in-frames/0

Get video log averaging period
Based on: GetVideoAveraging
Method: GET
URL: :prefix/video/log-averaging-periods
Example: curl -X GET :prefix/video/log-averaging-periods
Returns: {"period": "60", "in_frames": "0"}

Set video metric window
Based on: SetMetricWindow
Method: POST
URL: :prefix/video/metric-windows/
x/:n/y/:n/width/:n/height/:n
Example: curl -X POST :prefix/video/metric-windows/
x/0/y/10/width/720/height/480

Get video metric window
Based on: GetMetricWindow
Method: GET
URL: :prefix/video/metric-windows
Example: curl -X GET :prefix/video/metric-windows
Returns: {
"x": "0",
"y": "0",
"width": "1920",
"height": "1080"
}

Set video offset
Based on: SetVideoOffset
Method: POST
URL: :prefix/video/offset/:n
Example: curl -X POST :prefix/video/offset/0

Get video offset
Based on: GetVideoOffset
Method: GET
URL: :prefix/video/offset
Example: curl -X GET :prefix/video/offset

Returns: {"video_offset": "0"}

Set video averaging period
Based on: SetVideoStatusAveraging
Method: POST
URL: :prefix/video/status-averaging-periods/:n
Example: curl -X POST :prefix/video/status-averaging-periods/60

Set video averaging period
Based on: GetVideoStatusAveraging
Method: GET
URL: :prefix/video/status-averaging-periods
Example: curl -X GET :prefix/video/status-averaging-periods
Returns: {"period": "60"}