

# ANT-22xx API commands from v2.2.16\_20200514\_80\_1\_release - onvif 2.6.24

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## Document info

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|---------|----------|---------|---|
| 0.1     | 1-Dec-20 | David M | Initial draft based on "HDMI ENCODER http-api-v1.2.doc" |
| 1.0     | 2-Dec-20 | David M | Initial release   |
|         |          |         |   |

# ANT-2200 Encoder parameter settings HTTP interface description

The examples shown in this document are sent using the “cUrl for windows command line” executable, downloadable from <http://theback.space/curl-for-windows/>

The default IP address of 192.168.1.168 has been used for most of the examples.

## 1. Obtain encoder state and related parameters

For Specific meanings, please reference to the corresponding web page

### 1.1. Status

[http://192.168.1.168/get\\_ctl](http://192.168.1.168/get_ctl)

Using the URL to return XML describing the current state of the device.

#### 1.1.1. example

```
curl -s http://192.168.1.168/get_ctl
```

```
<?xml version="1.0" encoding="UTF-8"?>
<status>
<url>http://192.168.1.168:80/hdmi</url>
<ext_url>http://192.168.1.168:80/hdmi_ext</ext_url>
<onvif_enable>1</onvif_enable>
<lang>1</lang>
<video_info>
<size>1920*1080p</size>
<fps_in>60</fps_in>
<fps_cap>25</fps_cap>
</video_info>
<audio>
<channel>2</channel>
<sample>48000</sample>
<aenc_size>1126158336</aenc_size>
</audio>
<chn_stat>
<total>22072</total>
<lost>2</lost>
</chn_stat>
</status>
```

### 1.2. HDMI source present

[http://192.168.1.168/get\\_ctl?type=video](http://192.168.1.168/get_ctl?type=video)

Using the URL to return XML describing the current HDMI video state information of the device

#### 1.2.1. Example – HDMI connected

```
curl -s http://192.168.1.168/get_ctl?type=video
```

```
<?xml version="1.0" encoding="UTF-8"?>
<video_ver>
<no_video>0</no_video>
</video_ver>
```

**Note** the “0” meaning “no video” is not true

### 1.2.2. Example – HDMI not connected

```
curl -s http://192.168.1.168/get_ctl?type=video
```

```
<?xml version="1.0" encoding="UTF-8"?>
<video_ver>
<no_video>1</no_video>
</video_ver>
```

**Note** the “1” meaning “no video” is true

## 1.3. HDMI main current settings

[http://192.168.1.168/get\\_ctl?type=hdmi\\_main](http://192.168.1.168/get_ctl?type=hdmi_main)

Using the URL to return XML describing the current HDMI mainstream current information of the device.

Please note the returned values include all parameters. Some of these parameters can only be seen when in h.264, h.265, CVB, VBR and other modes are enabled.

### 1.3.1. example

```
curl -s http://192.168.1.168/get_ctl?type=hdmi_main
```

```
<?xml version="1.0" encoding="UTF-8"?>
<hdmi_main>
<VencMain>H264</VencMain>
<videoinput>HDMI</videoinput>
<chan_name>chan</chan_name>
<input>
<method>main profile</method>
<h264_fps>25</h264_fps>
<h265_fps>25</h265_fps>
<width>1920</width>
<height>1080</height>
<des_width>0</des_width>
<des_height>0</des_height>
</input>
<mirror>0</mirror>
<flip>0</flip>
<venc_gop>30</venc_gop>
<fluctuate_level>0</fluctuate_level>
<aspect_ratio>0</aspect_ratio>
<gop_mode>0</gop_mode>
<use_vlc_muxer>0</use_vlc_muxer>
<buffer_mode>7</buffer_mode>
<pmt_id>260</pmt_id>
<vid_id>264</vid_id>
<aud_id>280</aud_id>
```

```

<program_id>1</program_id>
<program_name>Service01</program_name>
<codec used="cbr">
<cbr>
<BitRate>3200</BitRate>
</cbr>
<vbr>
<MinQp>5</MinQp>
<MaxQp>32</MaxQp>
<MaxBitRate>3200</MaxBitRate>
</vbr>
<fixqp>
<IQp>5</IQp>
<PQp>32</PQp>
</fixqp>
</codec>
<ttl>16</ttl>
<singlecast>
<ip>192.168.1.200</ip>
<port>1234</port>
<enable>0</enable>
</singlecast>
<multicast>
<ttl>16</ttl>
<ip>238.0.0.1</ip>
<port>1234</port>
<enable>0</enable>
</multicast>
<rtmp>
<rtmp_mode>0</rtmp_mode>
<rtmp_enable>0</rtmp_enable>
<rtmp_method>0</rtmp_method>
<hdmurl>rtmp://</hdmurl>
<rtmp_mode>0</rtmp_mode>
<rtmp_user></rtmp_user>
<rtmp_pwd></rtmp_pwd>
<rtmp_server_port>1935</rtmp_server_port>
<rtmp_server_ip>192.168.1.123</rtmp_server_ip>
<rtmp_app_name>live</rtmp_app_name>
<rtmp_stream_name>hdmurl</rtmp_stream_name>
</rtmp>
<http>
<src>/hdmurl</src>
<port>80</port>
<open>1</open>
</http>
<rtsp>
<src>/hdmurl</src>
<port>554</port>
<open>0</open>
<mode>0</mode>
<g711>0</g711>
<tcp>0</tcp>

```

```

</rtsp>
<rtsp>
<rtsp_enable>0</rtsp_enable>
<rtsp_server>192.168.1.123</rtsp_server>
<rtsp_port>6666</rtsp_port>
</rtsp>
<hls_enable>0</hls_enable>
<hls_type>0</hls_type>
<rtmp_url></rtmp_url>
<hls_url></hls_url>
<rtspmain_authenticate>0</rtspmain_authenticate>
<rtspmain_user>mainus</rtspmain_user>
<rtspmain_password>mainpw</rtspmain_password>
</hdmi_main>

```

## 1.4. HDMI secondary current settings

[http://192.168.1.168/get\\_ctl?type=hdmi\\_ext](http://192.168.1.168/get_ctl?type=hdmi_ext)

Using the URL to return XML describing the current HDMI secondary stream current information of the device.

Please note the returned values include all parameters. Some of these parameters can only be seen when in h.264, h.265, CVB, VBR and other modes are enabled.

### 1.4.1. example

```
curl -s http://192.168.1.168/get_ctl?type=hdmi_ext
```

```

<?xml version="1.0" encoding="UTF-8"?>
<hdmi_ext>
<VencExt>H264</VencExt>
<input>
<method>main profile</method>
<h264_fps>25</h264_fps>
<h265_fps>25</h265_fps>
<width>1280</width>
<height>720</height>
<des_width>704</des_width>
<des_height>576</des_height>
</input>
<fluctuate_level>0</fluctuate_level>
<aspect_ratio>0</aspect_ratio>
<gop_mode>0</gop_mode>
<buffer_mode>7</buffer_mode>
<pmt_id>260</pmt_id>
<vid_id>264</vid_id>
<aud_id>280</aud_id>
<program_id>2</program_id>
<program_name>Service02</program_name>
<codec used="cbr">
<cbr>
<BitRate>3200</BitRate>

```

```

</cbr>
<vbr>
<MinQp>5</MinQp>
<MaxQp>32</MaxQp>
<MaxBitRate>3200</MaxBitRate>
</vbr>
<fixqp>
<IQp>5</IQp>
<PQp>32</PQp>
</fixqp>
</codec>
<http>
<src>/hdmi_ext</src>
<port>80</port>
<open>1</open>
</http>
<rtsp>
<src>/hdmi_ext</src>
<port>554</port>
<open>0</open>
<mode>0</mode>
</rtsp>
<singlecast>
<ip>192.168.1.201</ip>
<port>1235</port>
<open>0</open>
</singlecast>
<multicast>
<ip>238.0.0.2</ip>
<port>1235</port>
<open>0</open>
</multicast>
<rtmp>
<rtmpExt_method>0</rtmpExt_method>
<hdmi_sub_url>rtmp://</hdmi_sub_url>
<rtmp_mode_ext>0</rtmp_mode_ext>
<rtmp_user_ext></rtmp_user_ext>
<rtmp_pwd_ext></rtmp_pwd_ext>
<rtmp_server_port_ext>1935</rtmp_server_port_ext>
<rtmp_server_ip_ext>192.168.1.123</rtmp_server_ip_ext>
<rtmp_app_name_ext>live</rtmp_app_name_ext>
<rtmp_stream_name_ext>hdmi_ext</rtmp_stream_name_ext>
<rtmp_second_enable>0</rtmp_second_enable>
</rtmp>
<rtp>
<rtp_second_enable>0</rtp_second_enable>
<rtp_server_ext>192.168.1.123</rtp_server_ext>
<rtp_port_ext>8888</rtp_port_ext>
</rtp>
<rtspsub_authenticate>0</rtspsub_authenticate>
<rtspsub_user>subuse</rtspsub_user>
<rtspsub_password>subpsw</rtspsub_password>
</hdmi_ext>

```

## 1.5. Network current settings

[http://192.168.1.168/get\\_ctl?type=net](http://192.168.1.168/get_ctl?type=net)

Using the URL to return XML describing the current network information of the device.

Wi-Fi parameter will be returned, but these are not available as this device has no Wi-Fi functionality.

### 1.5.1. example

```
curl -s http://192.168.1.168/get_ctl?type=net
```

```
<?xml version="1.0" encoding="UTF-8"?>
<net_stat>
<ip>192.168.1.168</ip>
<mask>255.255.255.0</mask>
<gateway>192.168.1.1</gateway>
<dns1>223.5.5.5</dns1>
<dns2>114.114.114.114</dns2>
<mac>80:3A:74:27:00:01</mac>
<dhcp>0</dhcp>
<wifi_exist>0</wifi_exist>
<wifi_ip>192.168.5.168</wifi_ip>
<wifi_netmask>255.255.255.0</wifi_netmask>
<wifi_gateway>192.168.5.1</wifi_gateway>
<wifi_dhcp>1</wifi_dhcp>
<wifi_type>1</wifi_type>
<wifi_essid>super</wifi_essid>
<wifi_psk>00000000</wifi_psk>
</net_stat>
```

The Wi-fi parameters are not available

## 1.6. HDMI main OSD information

[http://192.168.1.168/get\\_ctl?type=osd0](http://192.168.1.168/get_ctl?type=osd0)

Using the URL to return XML describing the current HDMI mainstream OSD information of the device.

### 1.6.1. example

```
curl -s http://192.168.1.168/get_ctl?type=osd0
```

```
<?xml version="1.0" encoding="UTF-8"?>
<osd0>
<imagestate>0</imagestate>
<image_x>100</image_x>
<image_y>170</image_y>
<x>100</x>
<y>100</y>
<size>32</size>
<alpha>100</alpha>
<font_color>0xFFFFFFFF</font_color>
<txt></txt>
```



```
<scroll>0</scroll>
</osd0>
```

## 1.7. HDMI secondary OSD information

[http://192.168.1.168/get\\_ctl?type=osd1](http://192.168.1.168/get_ctl?type=osd1)

Using the URL to return XML describing the current HDMI secondary OSD information of the device.

### 1.7.1. example

```
curl -s http://192.168.1.168/get_ctl?type=osd1
```

```
<?xml version="1.0" encoding="UTF-8"?>
<osd1>
<imagestate>0</imagestate>
<image_x>100</image_x>
<image_y>170</image_y>
<x>100</x>
<y>100</y>
<size>32</size>
<alpha>100</alpha>
<font_color>0xFFFFFFFF</font_color>
<txt></txt>
</osd1>
```

## 1.8. Audio current settings

[http://192.168.1.168/get\\_ctl?type=audio](http://192.168.1.168/get_ctl?type=audio)

Using the URL to return XML describing the current audio encoding information of the device.

### 1.8.1. example

```
curl -s http://192.168.1.168/get_ctl?type=audio
```

```
<?xml version="1.0" encoding="UTF-8"?>
<audio_venc>
<a0_input>0</a0_input>
<a0_agc>0</a0_agc>
<a0_aac_bitrate>128000</a0_aac_bitrate>
<a0_leftright>0</a0_leftright>
<a0_out_resample>0</a0_out_resample>
<audio_type>1</audio_type>
<aac_type>LC-AAC</aac_type>
<g711>0</g711>
</audio_venc>
```

## 1.9. Color Setting current setting

[http://192.168.1.168/get\\_ctl?type=graphic](http://192.168.1.168/get_ctl?type=graphic)

Using the URL to return XML describing the Color Setting information of the device.

### 1.9.1. example

```
curl -s http://192.168.1.168/get_ctl?type=graphic
```

```
<?xml version="1.0" encoding="UTF-8"?>
<graphic_att>
<LumaVal>50</LumaVal>
<ContrVal>50</ContrVal>
<HueVal>50</HueVal>
<SatuVal>50</SatuVal>
</graphic_att>
```

## 1.10. Version of firmware and ONVIF

[http://192.168.1.168/get\\_ctl?type=version](http://192.168.1.168/get_ctl?type=version)

Using the URL to return XML describing the current encoder software version information of the device.

### 1.10.1. example

```
curl -s http://192.168.1.168/get_ctl?type=version
```

```
<?xml version="1.0" encoding="UTF-8"?>
<sys_ver>
<version>v2.2.16_20200514_80_1_release</version>
<onvif>version 2.6.24</onvif>
<passwd>admin</passwd>
</sys_ver>
```

## 2. Encoder parameter setting

### 2.1. HDMI main – main stream

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=hdmi_main?<parameter>=<value>
```

The parameter descriptions are shown in Table 1.

*Table 1 : HDMI main Parameters*

| Parameter    | Description                                      | Value  |
|--------------|--|--|
| venc         | Indicates the selection of H264 or H265 encoding | H264 or H265   |
| input_method | Coding algorithm                                 | baseline profile, main profile, high profile, also see note #1 below |
| chan_name    | Channel name setting                             | default chan   |
| h264_fps     | H264 encoding frame rate                         | range [0-30]   |
| h265_fps     | H265 encoding frame rate                         | range [0-60]   |

| Parameter        | Description   | Value                      |
|------------------|---|----------------------------|
| used             | Encoding mode constant or variable bit rate         | cbr or vbr                 |
| cbr_BitRate      | cbr encoding rate                                   | range [16-12000]           |
| vbr_MaxBitRate   | vbr the max frame rate                              | range [16-12000]           |
| vbr_MinQp        | vbr the minimum frame rate Qp                       | range [1-51]               |
| vbr_MaxQp        | vbr the max Qp                                      | range [MinQp-51]           |
| venc_gop         | Key frame interval                                  | range [5-200]              |
| fluctuate        | Fluctuation class                                   | 0 = auto, then range 1 - 5 |
| des_width        | coded width   | See note #2 below          |
| des_height       | coded length  | See note #2 below          |
| buffer_mode      | udp buffer mode indicates A mode,1 indicates B mode |                            |
| use_vlc_muxer    |   | 0=ffmpeg, 1=vlc            |
| ts_pid_id        | mpegts transport stream id                          | range [1-65535]            |
| ts_vid_id        | mpegts pmt start PID                                | range [256-3840]           |
| ts_aud_id        | mpegts start PID                                    | range [256-3840]           |
| http_src         | http IP address                                     | default is /hdmi           |
| http_port        | http port   | range [1-65535]            |
| http_open        | http enable or disable                              | 0=on ,1=off                |
| rtsp_src         | rtsp IP address                                     | default is /hdmi           |
| rtsp_port        | rtsp port   | range [1-65535]            |
| rtsp_open        | rtsp enable or disable                              | 0=closed,1=open            |
| rtsp_tcp         | rtsp transmission mode                              | 0=UDP,1=TCP                |
| sing_ip          | Unicast IP address                                  | default is 200.0.0.1       |
| sing_port        | Unicast port  | range [1-65535]            |
| sing_open        | Unicast on/off                                      | 0=on ,1=off                |
| multi_ip         | Multicast IP address                                | default is 238.0.0.1       |
| multi_port       | Multicast por                                       | range [1-65535]            |
| multi_open       | Multicast on/off                                    | 0=on ,1=off                |
| accessshm        | rtmp Authorized IP address                          |                            |
| accessshm_enable | Authorized IP address on/off                        | 0=on ,1=off                |
| rtmp_enable      | rtmp on/off   | 0=on ,1=off                |
| rtmp_server_port | rtmp port   | range [1-65535]            |
| rtmp_server_ip   | rtmp IP address                                     |                            |
| rtmp_app_name    | rtmp app name                                       | default: live              |
| rtmp_node        | rtmp node name                                      | default: hdmi              |
| rtmp_user        | rtmp verify user name                               |                            |
| rtmp_pwd         | rtmp verify password                                |                            |
| onvif_open       | onvif switch  | 0=on ,1=off                |

#1 if the setting is H265, input\_method must be set to main profile. Using the cUrl tool the space between the words is be replates with %20, as shown in "2.1.1.2 setting H.264 Profile".

#2 Encoding sizes are:

1920x1080  
 1680x1056  
 1280x720  
 1024x576  
 960x540  
 850x480

720x576, 720x540, 720x480, 720x404, 704x576  
640x480, 640x360

### 2.1.1. Examples

#### 2.1.1.1. Set enable RTSP

```
curl -s http://192.168.1.168/set_ctl?type=hdmi_main?rtsp_open=1
succeed
```

#### 2.1.1.2. setting H.264 Profile

```
curl -s http://192.168.1.168/set_ctl?type=hdmi_main?input_method=baseline%20profile
succeed
```

## 2.2. HDMI Secondary stream

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=hdmi_ext?<parameter>=<value>
```

The parameter descriptions are shown in Table 2.

*Table 2 : HDMI Secondary Parameters*

| Parameter        | Description                                 | Values   |
|------------------|---|--|
| Venc             | Codec type                                  | H264, H265   |
| method           | Coding algorithm                            | main stream and secondary stream encoder profile is the same and set via HDMI main |
| h264_fps         | H264 encoding frame rate                    | setting range [0-30]   |
| h265_fps         | H265 encoding frame rate                    | setting range [0-60]   |
| used             | Encoding mode constant or variable bit rate | cbr, vbr   |
| cbr_BitRate      | cbr encoding rate                           | setting range [16-12000]   |
| vbr_MaxBitRate   | vbr the max encoding rate                   | setting range [16-12000]   |
| vbr_MinQp        | vbr the minimum Qp                          |  |
| vbr_MaxQp        | vbr the max Qp                              |  |
| fluctuate        | Fluctuation class                           | 0 = auto, then range 1 - 5   |
| des_width        | Coded width                                 | See note #1 below  |
| des_height       | Coded length                                | See note #1 below  |
| buffer_mode      | udp buffer mode                             | 1 – 7 indicating 188x1 to 188x7  |
| ts_pid_id        | mpegts transport stream id                  | range [1-65535]  |
| ts_vid_id        | mpegts pmt start pid                        | range [256-3840]   |
| ts_aud_id        | mpegts start pid                            | range [256-3840]   |
| sing_ip          | Unicast IP address                          |  |
| sing_port        | Unicast port                                |  |
| sing_open        | Unicast on/off state                        | 0=on, 1=off  |
| multi_ip         | Multicast IP address                        |  |
| multi_port       | Multicast port                              |  |
| multi_open       | Multicast on/off state                      | 0=on, 1=off  |
| rtmp_enable      | rtmp on/off status                          | 0=on, 1=off  |
| rtmp_server_port | rtmp port                                   |  |
| rtmp_server_ip   | rtmp IP                                     |  |
| rtmp_app_name    | rtmp app name                               |  |

| Parameter | Description    | Values |
|-----------|----------------|--------|
| rtmp_node | rtmp node name |        |
| rtmp_user | rtmp username  |        |
| rtmp_pwd  | rtmp password  |        |

#1 Encoding sizes are:

1280x720,  
 960x540,  
 800x450,  
 720x576, 720x540, 720x408, 720x404  
 704x576  
 640x480, 640x360,  
 384x216  
 352x288  
 320x240, 320x180

### 2.2.1. Example

#### 2.2.1.1. Set Codec type

```
curl -s http://192.168.1.168/set_ctl?type=hdmi_ext?venc=H265
succeed
```

#### 2.2.1.2. Set Encoding mode

```
curl -s http://192.168.1.168/set_ctl?type=hdmi_ext?used=vbr
succeed
```

## 2.3. Setting network device parameters

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=net?<parameter>=<value>
```

The parameter descriptions are shown in Table 3.

*Table 3 : Network Parameters*

| Parameter | Description                | Values   |
|-----------|----------------------------|--|
| ip        | IP address of the device   | Default is 192.168.1.168   |
| mask      | subnet mask for the device | Due to limitation is recommend to use a subnet mask of 255.255.255.0 |
| gateway   | gateway for the device     | Default is 192.168.1.1   |
| dns1      | DNS IP address 1           | 223.5.5.5  |
| dns2      | DNS IP address 2           | 114.114.114.114  |
| dhcp      | DHCP disable or enabled    | 1 indicates enable DHCP ,0 static IP (Default)                       |

**Some or all of these parameters require a reboot for them to be established within the device.**

### 2.3.1. example

#### 2.3.1.1. set IP address

```
curl -s http://192.168.1.168/set_net?ip=192.168.1.169
succeed
```

```
curl -s http://192.168.1.168/set_ctl?type=reboot
succeed
```

```
curl -s http://192.168.1.169/get_ctl
```

```
<?xml version="1.0" encoding="UTF-8"?>
<status>
<url>rtsp://192.168.1.169:554/hdmi</url>
<ext_url>http://192.168.1.169:80/hdmi_ext</ext_url>
<onvif_enable>1</onvif_enable>
<lang>1</lang>
<video_info>
<size>1920*1080p</size>
<fps_in>60</fps_in>
<fps_cap>25</fps_cap>
</video_info>
<audio>
<channel>2</channel>
<sample>48000</sample>
<aenc_size>3082240</aenc_size>
</audio>
<chn_stat>
<total>1925</total>
<lost>2</lost>
</chn_stat>
</status>
```

### 2.3.1.1. set DNS 1 & DNS 2 IP addresses

#### read of current parameters

```
curl -s http://192.168.1.168/get_ctl?type=net | grep -i dns
<dns1>223.5.5.5</dns1>
<dns2>114.114.114.114</dns2>
```

#### Set new parameters

```
curl -s http://192.168.1.168/set_ctl?type=net?dns1=8.8.8.8
succeed
curl -s http://192.168.1.168/set_ctl?type=net?dns2=78.78.78.78
succeed
```

#### read of new parameters

```
curl -s http://192.168.1.168/get_ctl?type=net | grep -i dns
<dns1>8.8.8.8</dns1>
<dns2>78.78.78.78</dns2>
```

## 2.4. setting Audio parameters

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=audio?<parameter>=<value>
```

The parameter descriptions are shown in Table 4.

*Table 4 : Audio Parameters*

| Parameter    | Description                      | Values   |
|--------------|----------------------------------|--|
| input        | HDMI or external                 | 0= HDMI (default), 1= external                                   |
| agc          | Audio gain settings              | -4 = -20dB, -2 = -10dB, 0 is off, 1 = +5dB, 2 = +10dB            |
| leftright    | Audio encoding channel selection | 0 = left + right, 1 = left, 2 = right                            |
| out_resample | Resampling                       | 0 = disable, 32000, 44100  |
| aac_bitrate  | Audio encoding bitrate           | 24000, 32000, 44100, 48000, 64000, 96000, 128000, 192000, 256000 |
| audio_type   | Audio type,                      | 1 = AAC, 2 = MP3   |
| aac_type     | AAC mode                         | LC-AAC or HE-AAC   |
| rtsp_g711    | rtsp g711 on/off                 | 0=on,1=off   |

## Note

#1 audio\_type=1 (AAC) and aac\_type=LC-AAC - aac\_bitrate value range should be 48000, 64000, 96000, 128000, 192000 or 256000.

#2 audio\_type=1 (AAC) and aac\_type=HE-AAC - aac\_bitrate value range should be 48000, 64000, 96000, 128000, 192000 or 256000.

#3 audio\_type=2 (MP3) - aac\_bitrate value range should be 24000, 32000, 48000, 64000, 96000, 128000, 192000, 256000 or 320000

### 2.4.1. Example

#### 2.4.1.1. Set audio source

```
curl -s http://192.168.1.168/set_ctl?type=audio?input=0
succeed
```

#### 2.4.1.2. Set AAC bitrate

```
curl -s http://192.168.1.168/set_ctl?type=audio?aac_bitrate=192000
succeed
```

## 2.5. Setting main OSD parameters

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=osd0?<parameter>=<value>
```

The parameter descriptions are shown in Table 5.

*Table 5 : main OSD Parameters*

| Parameter  | Description                            | Value                          |
|------------|--|--------------------------------|
| imagestate | Main OSD image enable / disable        | 0=off, 1=on, see note #1 below |
| image_x    | Initial X coordinate of main OSD image | [0-1920]                       |
| image_y    | Initial y coordinate of main OSD image | [0-1080]                       |

| Parameter       | Description                           | Value                                   |
|-----------------|---------------------------------------|---|
| osd0_x          | Initial X coordinate of main OSD font | [0-1920]                                |
| osd0_y          | Initial y coordinate of main OSD font | [0-1080]                                |
| osd0_txt        | Main OSD text                         | up to 255 characters, see note #2 below |
| osd0_size       | Main OSD font size                    | range [8-72]                            |
| osd0_alpha      | Main OSD font transparency            | range [0-128]                           |
| osd0_font_color | The color of the main OSD font        | range [0-0xFFFFFFFF], see note #3 below |

Note #1 – The logo image has to be loaded via the web interface. The OSD image can be turned on and off via the HTTP commands

Note #2 – spaces within the text be added using the HTTP commands by using %20 as the space character

Note #3 - Example of colour : Red = 0xFF0000 Green = 0x00FF00 Blue = 0x0000FF

### 2.5.1. Examples

#### 2.5.1.1. Set OSD text

```
curl -s http://192.168.1.168/set_ctl?type=osd0?osd0_txt=ABCDabcd_0123
succeed
```

#### 2.5.1.1. Set OSD text with space – using %20

```
curl -s http://192.168.1.168/set_ctl?type=osd0?osd0_txt=0x123%2045678
succeed
```

actual OSD text is “0x123 45678”

#### 2.5.1.2. Setting font size

```
curl -s http://192.168.1.168/set_ctl?type=osd0?osd0_size=72
succeed
```

## 2.6. Setting Secondary OSD parameters

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=osd1?<parameter>=<value>
```

The parameter descriptions are shown in Table 6.

Table 6 : secondary OSD Parameters

| Parameter  | Description  | Value                          |
|------------|--|--------------------------------|
| imagestate | Secondary stream OSD image enable / disable          | 0=off, 1=on, see note #1 below |
| image_x    | Initial x coordinate of secondary stream OSD image   | [0-1920]                       |
| image_y    | Initial y coordinate of s secondary stream OSD image | [0-1080]                       |



Note #1 – The logo image has to be loaded via the web interface. The OSD image can be turned on and off via the HTTP commands

## 2.6.1. Examples

### 2.6.1.1. Turn OSD image on

```
curl -s http://192.168.1.168/set_ctl?type=osd1?imagestate=1
succeed
```

## 2.7. Colour image information

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=graphic?<parameter>=<value>
```

The parameter descriptions are shown in Table 7Table 5.

*Table 7 : Color setting Parameters*

| Parameter | Description | Value   |
|-----------|-------------|---------|
| LumaVal   | Brightness  | [0-100] |
| ContrVal  | Contrast    | [0-100] |
| HueVal    | Tone        | [0-100] |
| SatuVal   | saturation  | [0-100] |

### 2.7.1. Example

#### 2.7.1.1. Setting brightness

```
curl -s http://192.168.1.168/set_ctl?type=graphic?LumaVal=80
succeed
```

## 2.8. Language option

The syntax of the command is . . .

```
http://192.168.1.168/ set_ctl? type=language&lang=x
```

X=1 Express in English  
X=0 Express in Chinese

## 2.9. Restart the device

The syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=reboot
```

### 2.9.1. example:

```
curl -s http://192.168.1.168/set_ctl?type=reboot
succeed
```

## 2.10. Resetting device

This will reset **all** value back to defaults, the syntax of the command is . . .

```
http://192.168.1.168/set_ctl?type=reset
```

#### **2.10.1. example:**

```
curl -s http://192.168.1.168/set_ctl?type=reset  
succeed
```

## **3. Setting multiple parameters**

Multiple parameters within the same group can be set at the same time.

### **3.1. Example**

#### **3.1.1. Brightness and Contrast**

```
curl -s http://192.168.1.168/set_ctl?type=graphic?LumaVal=20?ContrVal=20  
succeed
```