

# HTTP API of Media

## Version 3.0.2

Release notes			
Version	Description	Date	Authors
V3.0.1		2023/07/25	Kuang
V3.0.2	Default use of Digest authentication	2024/12/21	Shawn

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# 1 Summary

This commands are used for video encode , video image, audio configure, osd, roi ,video mask, motion detection configuration. Capturing, video playback, and real-time preview operations are available, etc.

# 2 VIDEO ENCODE

## 2.1 Description

This command is used for video encoding.

## 2.2 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=video
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=video&data=<?xml version="1.0"
encoding="utf-8"?><root><video ch=0><venc xxx /></video></root>
```

Note: ch is video channel

## 2.3 Parameter

Parameter	Value	Description
<video>	none	
ch	index	Video channel
vi_height	practical	High in source resolution
vi_width	practical	Width in source resolution
system	practical	System. 1: NTSL, 2: PAL
rotate	practical	Rotate. 0: Rotate 0°, 1: Rotate 90°, 2: Rotate 180°, 3: Rotate 270°
mirror	practical	Mirroring. 0: Flip, 1: Horizontal Flip, 2: Vertical Flip, 3: Horizontal Vertical Flip
<venc>	none	

streamid	index	Current stream ID
keyinterval	practical	Key frame interval
bitrate	practical	Bitrate
maxreso	practical	Custom resolution size
qulity	index	Type of coding quality. 10:1, 20:2, 30:3, 40:4, 50:5, 60:6, 70:7, 80:8, 90:9
profiles	index	Configuration mode of the video. 1: low level, 2: medium level, 3: high level
br_type	index	Code rate type. 1: CBR,2: VBR
enc_type	index	Video encoding. 1: H.264, 2:MJPEG, 6: H.265
width	practical	High in resolution
height	practical	Width in resolution
fr_numerator	practical	Numerator of framerate
fr_denominator	practical	Denominator of framerate
crop_width	practical	Crop X Pixels, Range:0-256
crop_height	practical	Crop Y Pixels, Range:0-256

## 2.4 Example

### Get video encode parameter

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=video
```

#### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<root>
```



```
<version version='2' />

<video ch='0' vi_width='2592' vi_height='1944' system='2' rotate='0' mirror='0'>

<venc streamid='0' maxreso='0' qulity='40' br_type='2' enc_type='2' keyinterval='100'
width='2592' height='1944' bitrate='64' fr_numerator='5' fr_denominator='1' bpinterval='0'
profiles='0'/>

<venc streamid='1' maxreso='0' qulity='40' br_type='2' enc_type='6' keyinterval='100'
width='3072' height='2048' bitrate='4000' fr_numerator='25' fr_denominator='1'
bpinterval='0' profiles='2'/>

<venc streamid='2' maxreso='47187200' qulity='40' br_type='2' enc_type='6'
keyinterval='100' width='704' height='576' bitrate='1000' fr_numerator='25'
fr_denominator='1' bpinterval='0' profiles='2'/>

</video>

</root><venc streamid='2' maxreso='47187200' qulity='70' br_type='2' enc_type='1'
keyinterval='60' width='1280' height='720' bitrate='2048' fr_numerator='30'
fr_denominator='1' bpinterval='0' profiles='3'/>

</video>

</root>
```

## Get video encode parameter

Example: Modify the encoding type of stream 1 in channel 1 to H.264.

Tip: You must specify the channel and stream information.

### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=video&data=<?xml version="1.0"
encoding="utf-8"?><root><video ch=0 ><venc streamid=1  enc_type=1
/></video></root>
```

### RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<root>
```

```
<code>0</code>
```

```
<error>successful</error>
```

```
</root>
```

## 3 Video image setting

### 3.1 Description

This command is used for get/set video image setting.

### 3.2 IMG

#### 3.2.1 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=img
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=img&data=<?xml version='1.0'?><root><img ch=0  
xxx /></root>
```

Note: ch is video channel

#### 3.2.2 Parameter

Parameter	Value	Description
<img>	none	
ch	index	Img channel
profile	index	Image configuration mode. 0:Auto, 1:Day, 2:Night
icr_mode	practical	Switching day and night mode in automatic mode. 1:Active mode, 2:Passive mode, 3:Timing mode
sensitivity	practical	Sensitivity of switch day/night (0-100)
d2n_threshold	practical	Day to night threshold
n2d_threshold	practical	Night to day threshold

d2n_sec	practical	Time of day to night, value should be the seconds from 0:00, for example: we hold 18:00 enter night mode, so this value should be 64800
n2d_sec	practical	Time of night to day, value should be the seconds from 0:00
light_mode	index	Fill light mode. 0: pure infrared, 1: pure white light, 2: intelligent dual light
ir_bright	practical	Infrared light brightness
white_bright	practical	White light brightness

### 3.2.3 Example

#### Get IMG parameter

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=img
```

#### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<root>
```

```
<version version='2' />
```

```
<img ch='0' profile='0' icr_mode='1' sensitivity='30' d2n_threshold='70' n2d_threshold='30'
d2n_sec='66600' n2d_sec='23400' light_mode='2' ir_bright='100' white_bright='100'>
```

```
</img>
```

```
</root>
```

## Set IMG parameters

Example: Modify the sensitivity to 55 in channel 1.

Tip: must specify the channel information.

### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=img&data=<?xml version='1.0'?><root><img ch=0
sensitivity=55 /></root>
```

### RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

## 3.3 ISP

### 3.3.1 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=isp
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=isp&data=<?xml version='1.0'?><root><isp ch=0
xxx /></root>
```

Note: ch is video channel

### 3.3.2 Parameter

Parameter	Value	Description
<isp>	none	
ch	index	Isp channel
id	index	Day and night mode.0:day, 1:night
brightness	practical	Image brightness
saturation	practical	Image saturation
contrast	practical	Image contrast
noise	practical	Image denoise
sharpness	practical	Image sharpness
color_mode	practical	Color. 1:color, 2:black and white
img_stabilize	practical	Image stability
wdr_mode	practical	Wide dynamic level. 3:low, 2:high
wdr_type	practical	Wide dynamic mode. 0: off, 1: digital, 2: two-frame composite
auto_iris	practical	Iris mode, 0:auto 1>manual
iris_speed	practical	Iris speed (0~100)
defog	practical	Defog strength (0~100)
gamma_mode	practical	Gamma mode
dis	practical	Electronic anti-shake
ldc	practical	Lens distortion correction
ldc_strength	practical	Lens distortion correction strength
digital_zoom	practical	Digital Zoom

### 3.2.3 Example

#### Get ISP parameter

##### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=isp
```

##### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<version version='0' />
<isp ch='0' id='0' color_mode='1' noise='50' img_stabilize='0' wdr_mode='3' wdr_type='0'
brightness='50' saturation='50' contrast='50' sharpness='50' auto_iris='0' iris_speed='30'
defog='0' gamma_mode='0' dis='0' ldc='0' ldc_strength='50' digital_zoom='0'/>
<isp ch='0' id='1' color_mode='2' noise='50' img_stabilize='0' wdr_mode='3' wdr_type='0'
brightness='50' saturation='50' contrast='50' sharpness='50' auto_iris='0' iris_speed='30'
defog='0' gamma_mode='0' dis='0' ldc='0' ldc_strength='50' digital_zoom='0'/>
</root>
```

#### Set ISP parameter

Example: Modify the brightness of daytime mode in channel 1 to 70, saturation to 50, contrast to 10, sharpness to 20, and noise reduction intensity to 40.

Tip: You must specify the channel information.

##### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=isp&data=<?xml version='1.0'?><root><isp ch='0'
id='0' color_mode='1' noise='40' brightness='70' saturation='50' contrast='10'
sharpness='20' /></root>
```

## RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain;charset=utf-8

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

## 3.4 AWB

### 3.4.1 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=awb
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=awb&data=<?xml version='1.0'?><root><awb ch=0
xxx /></root>
```

Note: ch is video channel

### 3.4.2 Parameter

Parameter	Value	Description
<awb>	none	
ch	index	Awb channel
id	index	Day and night mode. 0: Day, 1: Night
mode	practical	White balance mode. 0: Auto, 1: Manual
rgb	practical	RGB color mode



bgain	practical	Should be set when awb mode is manual
gbgain	practical	Should be set when awb mode is manual
grgain	practical	Should be set when awb mode is manual
rgain	practical	Should be set when awb mode is manual

### 3.4.3 Example

#### Get AWB parameter

##### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=awb
```

##### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<version version='0' />
<awb ch='0' id='0' mode='1' rgb='255' rgain='15' grgain='10' gbgain='7' bgain='12'/>
<awb ch='0' id='1' mode='1' rgb='255' rgain='15' grgain='10' gbgain='7' bgain='12'/>
</root>
```

#### Set AWB parameter

Example: Modify the white balance in the daytime mode of channel 1 in manual mode  
RG gain to 333, BR gain to 222, GB gain to 555, BG gain to 666.

Tip: You must specify the channel information.

##### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=awb&data=<?xml version='1.0'?><root><awb
ch='0' id='0' mode='1' rgb='255' rgain='333' grgain='222' gbgain='555' bgain='666'
```

```
/></root>
```

## RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

## 3.5 AE

### 3.5.1 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=ae
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=ae&data=<?xml version='1.0'?><root><ae ch=0 xxx
/></root>
```

Note: ch is video channel

### 3.5.2 Parameter

Parameter	Value	Description
<ae>	none	
ch	index	Ae channel
id	index	Day and night mode. 0: Day, 1: Night
mode	practical	Shutter mode. 1: Automatic, 2: Manual

meter	practical	Light source control type. 0: equalization, 1: central weighting, 2: glare suppression, 3: customization
antiflicker	practical	Anti-flicker
fixgain_flag	practical	
max_shutter	practical	Indicates the maximum shutter speed, valid only when the shutter mode is Auto.  1: 1/10, 2: 1/12, 3: 1/15, 4: 1/20, 5: 1/25, 6: 1/30, 7: 1/50, 8: 1/60, 9: 1/100, 10: 1/120, 11: 1/150, 12: 1/180, 13: 1/200, 14: 1/250, 15: 1/500, 16: 1/1000, 17 : 1/2000, 18: 1/4000, 19: 1/8000
nuc_mode	practical	Non-uniformity correction operating mode
bic	practical	Backlight compensation
hl	practical	High light suppression
nuc_interval	practical	Non-uniformity correction interval
smooth_interval	practical	Image smoothing interval
fix_again	practical	Internal use, can be ignored
fix_dgain	practical	Fixed digital gain
fix_ispgain	practical	Internal use, can be ignored
fix_gain	practical	Fixed gain, range (0~100)
fix_shutter	practical	Fixed shutter speed, valid only when the shutter mode is manual.1: 1/10, 2: 1/12, 3: 1/15, 4: 1/20, 5: 1/25, 6: 1/30, 7: 1/50, 8: 1/60, 9: 1/100, 10: 1/120, 11: 1/150, 12: 1/180, 13: 1/200, 14: 1/250, 15: 1/500, 16: 1/1000, 17 : 1/2000, 18: 1/4000, 19: 1/8000
max_gain	practical	Maximum gain, range (0~100)
slow_shutter	practical	Slow motion shutter speed, for internal use, can be ignored

### 3.5.3 Example

## Get AE parameter

## REQUEST

http://192.168.2.172/cgi/media.cgi?get=ae

## RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain;charset=utf-8

[illegible]



# 4 Video ROI Configuration

## 4.1 Description

This command is used for configure video roi area.

## 4.2 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=roi
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=roi&ch=0&data=<?xml version="1.0"
encoding="utf-8"?><root><roi ch=0 xxx><area xxx /></roi></root>
```

Note: ch is video channel

## 4.3 Parameter

Parameter	Value	Description
<roi>	none	
ch	index	Roi channel
stream	index	Stream index
on	practical	ROI Switch.0 Close; 1 Open
x	practical	ROI area left top x coordinate, (0-100)
y	practical	ROI area left top y coordinate, (0-100)
width	practical	ROI area width, (0-100)
height	practical	ROI area height, (0-100)

## 4.4 Example

### Get ROI parameter

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=roi
```

#### RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
  <roi ch='0' stream='0' on='0'>
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
  </roi>
  <roi ch='0' stream='1' on='1'>
    <area x='27' y='46' width='33' height='37' />
    <area x='62' y='32' width='5' height='18' />
    <area x='0' y='0' width='100' height='100' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
    <area x='0' y='0' width='0' height='0' />
  </roi>
</root>
```

```
<area x='46' y='55' width='31' height='34' />
</roi>
<roi ch='0' stream='2' on='0'>
<area x='57' y='37' width='16' height='35' />
<area x='0' y='0' width='0' height='0' />
<area x='0' y='0' width='0' height='0' />
<area x='61' y='34' width='23' height='44' />
<area x='0' y='0' width='0' height='0' />
<area x='0' y='0' width='0' height='0' />
<area x='0' y='0' width='0' height='0' />
<area x='0' y='0' width='0' height='0' />
</roi>
</root>
```

## Set ROI parameter

Example: Modify the starting x-axis coordinates of the ROI region in the ROI parameter of stream 1 in channel 1 to 1.

Tip: must specify the channel information and stream information.

### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=roi&data=<?xml version="1.0"
encoding="utf-8"?><root><roi ch=0 stream=1><area x=1 /></roi></root>
```

### RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain; charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
```



</root>

# 5 Video MASK

## 5.1 Description

This command is used for get/set video mask paramters.

## 5.2 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=mask
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=mask&data=<?xml version="1.0"
encoding="utf-8"?><root><mask ch=0 on=1><area xxx /></mask></root>
```

Note: ch is video mask index

## 5.3 Parameter

Parameter	Value	Description
<mask>	none	
ch	index	Mask channel
on	practical	Privacy masking switch.0 Close; 1 Open
x	practical	Top left coordinate 0-100
y	practical	Top left coordinate 0-100
width	practical	Area width 0-100
height	practical	Area height 0-100
pan	practical	Pan
tilt	practical	Tilt
zoom	practical	Zoom

## 5.4 Example

### Get video mask parameter

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=mask
```

#### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<version version='0' />
<mask ch='0' on='0'>
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
<area x='0' y='0' width='0' height='0' pan='0' tilt='0' zoom='0' />
</mask>
</root>
```

### Set video mask parameter

Example: Modify the starting x-axis coordinates of the privacy masking area in the privacy masking parameter of channel 1 to 1.

Tip: must specify the channel information.

## REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=mask&data=<?xml version="1.0"
encoding="utf-8"?><root><mask ch=0 on=1><area x=1 /></mask></root>
```

## RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

# 6 AUDIO ENCODE

## 6.1 Description

This command is used for get/set audio encode parameters.

## 6.2 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=audio
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=audio&data=<?xml version="1.0"
encoding="utf-8"?><root><audio ch=0 on=1 xxx /></root>
```

## 6.3 Parameter

Parameter	Value	Description
<audio>	none	
ch	index	Audio channel
on	practical	Audio input switch.0:Close ; 1:Open
packet_len	practical	Audio Package Length
channel_num	practical	Number of channels of images
ao_packet_len	practical	Internal use, can be ignored
ao_channel_num	practical	Internal use, can be ignored
enable_aec	practical	Echo Cancellation Switch.0:Close ; 1:Open
enable_anr	practical	Voice Noise Reduction Switch.0:Close ; 1:Open
sample_rate	practical	Sampling rate
bit	practical	Sampling accuracy

capture_volume	practical	Capture volume (0~255)
channel_num	practical	Sound Channel Type.1:Mono; 2:Stereo
encode_type	practical	Audio encoding type. 3:G117A, 4:G711U, 7:AAC
input_type	practical	Audio input type. 1:MIC, 2:Line
playback_volume	practical	Playback volume (0~255)
aec_intensity	practical	Echo cancellation intensity (1~100)
anr_intensity	practical	Voice noise reduction intensity (1~100)

## 6.4 Example

### Get audio encode parameter

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=audio
```

#### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<version version='1' />
<audio ch='0' on='1' input_type='1' encode_type='3' bit='16' sample_rate='8000'
capture_volume='200' playback_volume='200' packet_len='640' channel_num='1'
ao_packet_len='160' ao_channel_num='2' enable_aec='0' enable_anr='1'
aec_intensity='20' anr_intensity='60'>
</audio>
</root>
```

## Set audio encode parameter

Example: Modify the audio encoding type to AAC in the audio parameters of channel

1.

Tip: channel information must be specified.

### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=audio&data=<?xml version="1.0"
encoding="utf-8"?><root><audio ch=0 on=1 encode_type=7 /></root>
```

### RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

# 7 Snap shot

## 7.1 Description

This command is used for get one picture.

## 7.2 Grammar

Get a snap :

```
http://<Device IP>/cgi/media.cgi?act=snapshot
```

## 7.3 Example

### Get one picture

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?act=snapshot
```

#### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<Snapshots>
```



# 8 Stitch

## 8.1 Description

This command will allow you to get or set the parameters of the stitch module.

## 8.2 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=stitch
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=stitch&data=<?xml version="1.0"
encoding="utf-8"?><root><stitch distance='4000' /></root>
```

## 8.3 Parameter

Parameter	Value	Description
<stitch>	none	
mode	practical	Stitch mode:0-stitch mode, 1-non stich mode(inactive)
distance	practical	Indicates the optimal stitch distance(1-50000)mm

## 8.4 Example

### Get stitch configuration parameter

REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=stitch
```

## RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<version version='2' />
<stitch distance='4000' mode='0' />
</root>
```

## Set stitch configuration parameter

Example: Modify the optimal stitch distance to 5000mm

## REQUEST

```
http://192.168.2.122/cgi/media.cgi?set=stitch&data=<?xml version="1.0"
encoding="utf-8"?><root><stitch distance='5000' /></root>
```

## RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain;charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

# 9 OSD Configuration

## 9.1 Description

This command is used for get/set OSD parameters.

## 9.2 Grammar

Get:

```
http://<Device IP>/cgi/media.cgi?get=osd
```

Set:

```
http://<Device IP>/cgi/media.cgi?set=osd&data=<?xml version="1.0"
encoding="utf-8"?><root><osd ch='0' xxx><date xxx /><title xxx /><custom1 xxx
/><custom2 xxx /><alarm xxx /></osd></root>
```

## 9.3 Parameter

Parameter	Value	Description
<osd>	none	
ch	index	Osd channel
key	practical	Internal use, ignore
date_type	practical	Internal use, ignore
font_size	practical	Font size. 0:Medium, 1:Large, 2:Small,3-X-large
transparency	practical	Font transparency
transparencybg	practical	Background transparency
rotate	practical	Image rotation
<date>	none	Data channel
<title>	none	Title channel

<custom1>	none	Custom1 channel
<custom2>	none	Custom2 channel
<alarm>	none	Alarm channel
on	index	Osd Switch
bmp	practical	Standard image file formats
x	practical	The starting x-axis coordinates of the region, with a maximum value of 100
y	practical	The starting y-axis coordinates of the region, with a maximum value of 100
width	practical	The width of the start and end coordinates of the area
height	practical	Height of the start and end coordinates of the area
color	practical	Color

## 9.4 Example

### Get OSD configuration parameter

#### REQUEST

```
http://192.168.2.172/cgi/media.cgi?get=osd
```

#### RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<version version='0' />
<osd ch='0' key='0' date_type='1' font_size='0' transparency='0' transparencybg='100'
rotate='0'>
<date on='1' bmp='0' x='75' y='90' width='0' height='0' color='8'></date>
```

```
<title on='1' bmp='0' x='1' y='1' width='0' height='0' color='8'>Camera</title>
<custom1 on='0' bmp='0' x='5' y='50' width='0' height='0' color='8'></custom1>
<custom2 on='0' bmp='0' x='5' y='50' width='0' height='0' color='8'></custom2>
<alarm on='1' bmp='0' x='5' y='90' width='0' height='0' color='2'></alarm>
</osd>
</root>
```

## Set OSD configuration parameter

Example: Modify the font transparency to 50% in the OSD parameter of channel 1.

Tip: The channel information must be specified.

### REQUEST

```
http://192.168.2.172/cgi/media.cgi?set=osd&data=<?xml version="1.0"
encoding="utf-8"?><root><osd ch='0' transparency='50' ></osd></root>
```

### RESPONSE

*HTTP/1.0 200 OK*

*Content-type: text/plain; charset=utf-8*

```
<?xml version="1.0" encoding="utf-8"?>
<root>
<code>0</code>
<error>successful</error>
</root>
```

# Appendix

## a. Packet format

Stream header	Stream Data
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## b. Stream header

Byte order	0	1	2	3	4	5	6	7
Key	Flag		Type		Frame Number			

Byte order	8	9	10	11	12	13	14	15
Key	Timestamp				Wallclock			

Byte order	16	17	18	19	20	21	22	23
Key	Videoinfo or Audio info							

Byte order	24	25	26	27
Key	FrameSize			

- Flag: Magic value, must be 0x7468
- Type: Video frame type, when it is 0x0, it means audio frame.

When value is 0x1、0x2、0x3 时, it means I frame、P frame、B frame, package is video frame.

When value is 0xFF, it means motion detection block info.。

- Timestamp: local time, unit is micro second.
- Video info、audio info: When it is audio package, it is structure of audio info.

When it is video package, it is structure of video info.

- FrameSize: video / audio data size.

**c. Audio info format**

Byte order	0	1	2	3	4	5	6	7
Key	Encode type		channel	Bits width	Sampling frequency			

- Encode type: refer to [Encode Type](#)
- Channel: 1:Mono 2:Stereo

**d. Video info format**

Byte order	0	1	2	3	4	5	6	7
Key	Encode type		Image width		Image Height		Frame rate	Rsvd