

HTTP API Command for Camera Control

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1 PTZ

Format:

[http://192.168.5.126/ajaxcom?szCmd={"SysCtrl":{"PtzCtrl":{"nChanel":0,"szPtzCmd":"left_start","byValue":50}}}](http://192.168.5.126/ajaxcom?szCmd={)

nChanel: 0

byValue: [0, 100], used to control the speed of ptz

szPtzCmd:

left_start: left start

left_stop: left stop

leftup_start: left up start

leftup_stop: left up stop

leftdown_start: left down start

leftdown_stop: left down stop

right_start: right start

right_stop: right stop

rightup_start: right up start

rightup_stop: right up stop

rightdown_start: right down start

rightdown_stop: right down stop

up_start: up start

up_stop: up stop

down_start: down start

down_stop: down stop

Note: After calling http api, if succeeded returns {"nRetVal":0, "szError":""}, failed returns {"nRetVal":-1879048185, "szError":""} and the param of nRetVal is less than zero, it applies to all apis.

It should take along this url "<http://192.168.5.126/ajaxcom?szCmd=>" with all the next apis.

Beyond that, every key can not take along white space, for example, this "key" is error, and this "key" is right.

2 Focus Mode

2.1 Focus Mode

```
{"SetEnv":{"VideoParam":[{"stAF":{"emAFMode":3,"nChannel":0}}]}
```

nChannel: 0

emAFMode:

2: Auto

3: Manul

4: OnePush

2.2 Zoom and Focus

```
{"SysCtrl":{"PtzCtrl":{"nChanel":0,"szPtzCmd":"zoomdec_start","byValue":0}}}
```

nChanel: 0

byValue: 0

szPtzCmd:

zoomadd_start: Zoom add start

zoomadd_stop: Zoom add stop

zoomdec_start: Zoom decrease start

zoomdec_stop: Zoom decrease stop

focusadd_start: Focus add start

focusadd_stop: Focus add stop

focusdec_start: Focus decrease start

focusdec_stop: Focus decrease stop

3. Preset

```
{"SysCtrl":{"PtzCtrl":{"nChanel":0,"szPtzCmd":"preset_set","byValue":0}}}
```

nChanel: 0

byValue: [0, 254]

szPtzCmd:

preset_set: Set preset

preset_call: Call preset

preset_clean: Clean preset

4. Audio Configure

4.1 Get audio configure

```
{"GetEnv":{"Audio":{}}}
```

4.2 Set audio configure

```
{"SetEnv":{"Audio":{"nSampleBits":16,"nAudioSmstMask":[33554888,33554888,33554433],  
"bEnable":0,"nInpVolume":4,"nBitRate":64,"nAEncType":7,"byAudioCodecList":[6,7,2],"nSam  
pleRate":44100,"nChannel":1}}}
```

4.2.1 Enable

```
{"SetEnv":{"Audio":{"bEnable":1}}}
```

bEnable:

0: off

1: on

4.2.2 Encode Type

```
{"SetEnv":{"Audio":{"nAEncType":7}}}
```

nAEncType:

6: MP3

7: AAC

2: G.711A

4.2.3 Sample Rate

```
{"SetEnv":{"Audio":{"nSampleRate":32000}}}
```

nSampleRate: Only supporting those samplersates and the encode type of gy11a can only be 8000.

16000

32000

44100

48000

4.2.4 Sample Bits

```
{"SetEnv":{"Audio":{"nSampleBits":16}}}
```

nSampleBits: 16

4.2.5 Bit Rate

```
{"SetEnv":{"Audio":{"nBitRate":96}}}
```

nBitRate: 32, 48, 64, 96, 128

4.2.6 Channel

```
{"SetEnv":{"Audio":{"nChannel":2}}}
```

nChannel:

- 1: Mono
- 2: Stereo

4.2.7 Input Volume

```
{"SetEnv":{"Audio":{"nInpVolume":5}}}
```

nInpVolume: range from 1 to 10. Exp:[1, 10]

5. Video Configure

5.1 Video Encode

5.1.1 Get video encode params

```
{"GetEnv":{"VideoEncode":{"nChannel":-1}}}
```


5.1.2 Set video encode params

```
{"SetEnv":{"VideoEncode":[{"stSlave":{"byIFrameMinQP":20,"byImageQuality":1,"szStreamName":"live/av1","dwVideoCodecMask":160,"emBitRateCtrl":0,"byImageSizeList":[26,7,9,27,4,5],"dwMaxBitRate":40960,"nFrameRate":25,"nMaxFrameRate":30,"emVideoCodec":5,"nIFrameInterval":75,"emImageSize":27,"nBitRate":512,"byProfile":2},"stMaster":{"byIFrameMinQP":20,"byImageQuality":0,"szStreamName":"live/av0","dwVideoCodecMask":160,"emBitRateCtrl":0,"byImageSizeList":[5,4,9],"dwMaxBitRate":40960,"nFrameRate":25,"nMaxFrameRate":60,"emVideoCodec":5,"nIFrameInterval":75,"emImageSize":5,"nBitRate":4096,"byProfile":2,"nChannel":0}}]}
```

5.1.2.1 Compressed Format

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"emVideoCodec":5,"nChannel":0}}]}  
emVideoCodec:  
5: H.264  
7: H.265 (Profile 只支持 BP 配置)
```

5.1.2.2 Profile

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"byProfile":0,"nChannel":0}}]}  
byProfile:  
0: BP  
1: MP  
2: HP  
byImageSizeList: This lists all image size, the different products have different  
image size, you can call the command of  
{"GetEnv":{"VideoEncode":{"nChannel":-1}}} and receive its returning value.  
Compared to webpage and this you can know the different value meaning  
different image size.
```

5.1.2.3 Image Size

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"emImageSize":4,"nChannel":0}}]}  
emImageSize:  
5: 1920*1080  
4: 1280*720  
9: 640*480  
27: 320*180  
26: 640*360
```

5.1.2.4 Rate Control

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"emBitRateCtrl":1,"nChannel":0}}]}
```

emBitRateCtrl:

- 0: CBR
- 1: VBR

5.1.2.5 Image Quality

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"byImageQuality":5,"nChannel":0}}]}
```

byImageQuality:

[0, 5]: 0 : worst quality, 5 : best quality, 1,2,3,4 between

5.1.2.6 Bit Rate (kb/s)

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"dwMaxBitRate":200,"nChannel":0}}]}
```

dwMaxBitRate:

[64, 40960]

5.1.2.7 Frame Rate (F/S)

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"nFrameRate":25,"nChannel":0}}]}
```

nFrameRate:

[5, 60]

5.1.2.8 I Frame interval

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"nIFrameInterval":70,"nChannel":0}}]}
```

nIFrameInterval:

[1, 300]

5.1.2.9 I Frame Min QP

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"byIFrameMinQP":70,"nChannel":0}}]}
```

byIFrameMinQP:

[10, 51]

5.1.2.10 Stream Name

```
{"SetEnv":{"VideoEncode":[{"stMaster":{"szStreamName":"live/av01"},"nChannel":0}}}
```

szStreamName: user-defined

6. Stream Publish

6.1 Get stream publish params

```
{"GetEnv":{"StreamPublish":{"nChannel":-1}}}
```

6.2 Set stream publish params

```
{"SetEnv":{"StreamPublish":[{"stSlave":{"wHostPort":1935,"szHostUrl":"192.168.5.11","nProtoType":0,"szStreamName":"live/av1","bEnable":0,"nAbProtoIMask":1,"szUserName":"","szPassword":""},"stMaster":{"wHostPort":1935,"szHostUrl":"192.168.5.17","nProtoType":0,"szStreamName":"live/123","bEnable":0,"nAbProtoIMask":1,"szUserName":"","szPassword":"","nChannel":0}}]}
```

Note: When modifying one param, you should take along wHostPort, otherwise, the host port will be zero.

6.2.1 Enable

```
{"SetEnv":{"StreamPublish":{"stMaster":{"wHostPort":1935,"bEnable":1},"nChannel":0}}}
```

bEnable:

- 0: off
- 1: on

6.2.2 Protol Type (Only support rtmp publish)

nProtoType:

- 0: rtmp

6.2.3 Host Address

```
{"SetEnv":{"StreamPublish":{"stMaster":{"wHostPort":1935,  
"szHostUrl":"192.168.5.12"},"nChannel":0}}}  
szHostUrl: user-defined
```

6.2.4 Host Port

```
{"SetEnv":{"StreamPublish":{"stMaster":{"wHostPort":19355,"nChannel":0}}}  
wHostPort: [0, 65535]
```

6.2.5 Stream Name

```
{"SetEnv":{"StreamPublish":{"stMaster":{"wHostPort":19355,  
"szStreamName":"live/1213"},"nChannel":0}}}  
szStreamName: user-defined
```

6.2.6 User Name

```
{"SetEnv":{"StreamPublish":{"stMaster":{"wHostPort":19355,  
"szUserName":"123"},"nChannel":0}}}  
szUserName: user-defined
```

6.2.7 Password

```
{"SetEnv":{"StreamPublish":{"stMaster":{"wHostPort":19355,  
"szPassword":"123"},"nChannel":0}}}  
szPassword: user-defined
```

7. RTP Multicast

7.1 Get rtp multicast params

```
{"GetEnv":{"StreamRTPMulticast":{"nChannel":-1}}}
```

7.2 Set rtp multicast params

```
{"SetEnv":{"StreamRTPMulticast":[{"stSlave":{"nProtoType":0,"bEnable":0,"wMultiCastPort":4002,"szMultiCastUrl":"224.1.2.3"},"stMaster":{"nProtoType":1,"bEnable":0,"wMultiCastPort":4000,"szMultiCastUrl":"224.1.2.3"},"nChannel":0}]}}
```

Note: When modifying one param you should take along bEnable and wMultiCastPort, otherwise it will be set to 0.
Suggesting that when setting env, you can distinguish the stMaster and stSlave.

7.2.1 Enable

```
{"SetEnv":{"StreamRTPMulticast":[{"stMaster":{"bEnable":1,"wMultiCastPort":4004},"nChannel":0}]}}
```

bEnable:

- 0: off
- 1: on

7.2.2 Protol Type

```
{"SetEnv":{"StreamRTPMulticast":[{"stMaster":{"bEnable":1,"nProtoType":1,"wMultiCastPort":4004},"nChannel":0}]}}
```

nProtoType:

- 0: RTP
- 1: TS

7.2.3 Multicast Address

```
{"SetEnv":{"StreamRTPMulticast":[{"stMaster":{"bEnable":0,"szMultiCastUrl":"224.1.2.23","wMultiCastPort":4004},"nChannel":0}]}}
```

SzMultiCastUrl:

224.0.0.0~ 255.255.255.0

7.2.4 Multicast Port (Even [0, 65535])

```
{"SetEnv":{"StreamRTPMulticast":[{"stMaster":{"bEnable":1,"wMultiCastPort":4004},"nChannel":0}]}}
wMultiCastPort:
```

8. Video Parameters

8.1 Get video parameters

```
{"GetEnv":{"VideoParam":{"nChannel":-1}}}
```

8.2 Set video parameters

8.2.1 Focus

8.2.1.1 Focus Mode

```
{"SetEnv":{"VideoParam":[{"stAF":{"emAFMode":2},"nChannel":0}]}}
emAFMode:
  2: Auto
  3: Manul
  4: OnePush
```

8.2.1.2 AF-Zone

```
{"SetEnv":{"VideoParam":[{"stAF":{"emAFZone":1},"nChannel":0}]}}
emAFZone:
  0: Top
  1: Center
  2: Bottom
  3: All
```

8.2.1.3 AF-Sensitivity

```
{"SetEnv":{"VideoParam":[{"stAF":{"nSensitivity":1},"nChannel":0}]}}
```

nSensitivity:

- 1: High
- 2: Middle
- 3: Low

8.2.2 Exposure

Mode

```
{"SetEnv":{"VideoParam":{"stExp":  
{"stExpMode":{"emExpMode":0},"nChannel":0}}}}
```

emExpMode:

- 0: Auto
- 3: Manual
- 10: SAE
- 11: AAE
- 13: Bright

8.2.2.1 Auto

1. EV

```
{"SetEnv":{"VideoParam":{"stExp":  
{"expcomp_mode":2},"nChannel":0}}}}
```

expcomp_mode:

- 2: ON
- 3: OFF

2. EV Level

```
{"SetEnv":{"VideoParam":{"stExp":  
{"expcomp":8},"nChannel":0}}}}
```

Expcomp: [0, 14]

3. BLC

```
{"SetEnv":{"VideoParam":{"stExp":  
{"backlight":2},"nChannel":0}}}}
```

backlight:

- 2: ON
- 3: OFF

4. Flicker

```
{"SetEnv":{"VideoParam":  
  [{"stExp":{"antiflicker":0},"nChannel":0}]}}
```

antiflicker:

- 0: OFF
- 1: 50HZ
- 2: 60HZ

5. G.Limit

```
{"SetEnv":{"VideoParam":[{"stExp":  
  {"gainLimit":5},"nChannel":0}]}}
```

gainLimit: [0, 15]

6. DRC

```
{"SetEnv":{"VideoParam": [{"stExp": {"drc":6},"nChannel":0}]}}
```

drc: [0, 8]

8.2.2.2 Manual

1. Shutter

```
{"SetEnv":{"VideoParam":[{"stExp":{"stShutter":  
  {"nShutter":16},"nChannel":0}]}}
```

nShutter: [0, 16]

2. Iris

```
{"SetEnv":{"VideoParam":[{"stExp":{"stIris":  
  {"nIris":12},"nChannel":0}]}}
```

nIris: [0, 12]

3. DRC

```
{"SetEnv":{"VideoParam": [{"stExp": {"drc":8},"nChannel":0}]}}
```

drc: [0, 8]

8.2.2.3 SAE

1. Shutter

```
{"SetEnv":{"VideoParam":{"stExp":{"stShutter":  
{"nShutter":16},"nChannel":0}}}}
```

nShutter: [0, 16]

2. DRC

```
{"SetEnv":{"VideoParam":{"stExp":{"drc":7},"nChannel":0}}}}
```

drc: [0, 8]

8.2.2.4 AAE

1. Flicker

```
{"SetEnv":{"VideoParam":  
{"stExp":{"antiflicker":0},"nChannel":0}}}}
```

antiflicker:

0: OFF

1: 50HZ

2: 60HZ

2. G.Limit

```
{"SetEnv":{"VideoParam":{"stExp":  
{"gainLimit":5},"nChannel":0}}}}
```

gainLimit: [0, 15]

3. Iris

```
{"SetEnv":{"VideoParam":{"stExp":{"stIris":  
{"nIris":12},"nChannel":0}}}}
```

nIris: [0, 12]

4. DRC

```
{"SetEnv":{"VideoParam":{"stExp":{"drc":6},"nChannel":0}}}}
```

drc: [0, 8]

8.2.2.5 Bright

1. Bright

```
{"SetEnv":{"VideoParam":[{"stExp":  
{"bright":0,"nChannel":0}]}}
```


bright: [0, 23]
2. Flicker
3. G.Limit
4. DRC

You can find the same configure at AAE.

8.2.3 Color

8.2.3.1 WB Mode

```
{"SetEnv":{"VideoParam":[{"stColor":  
{"stWbMode":{"emWbMode":0},"nChannel":0}]}}
```

emWbMode:

0:	Auto
1:	3000K
7:	3500K
2:	4000K
8:	4500K
4:	5000K
9:	5500K
10:	6000K
6:	6500K
11:	7000K
5:	Manual
3:	OnePush

8.2.3.2 RG Tuning

```
{"SetEnv":{"VideoParam":[{"stColor":{"rgaintuning":0},"nChannel":0}]}}
```

rgaintuning: [0, 20]

8.2.3.3 BG Tuning

```
{"SetEnv":{"VideoParam":[{"stColor":{"bgaintuning":20},"nChannel":0}]}}
```

bgaintuning: [0, 20]

8.2.3.4 Saturation

```
{"SetEnv":{"VideoParam": [{"stColor": {"saturation":0}, "nChannel":0}]}}
```

saturation: [0, 14]

8.2.3.5 Hue

```
{"SetEnv":{"VideoParam": [{"stColor": {"hue":14}, "nChannel":0}]}}
```

hue: [0, 14]

8.2.3.6 AWB Sensitivity

```
{"SetEnv":{"VideoParam": [{"stColor": {"awbsens":0}, "nChannel":0}]}}
```

awbsens:

- 0: Low
- 1: Middle
- 2: High

8.2.4 Image

8.2.4.1 Bright

```
{"SetEnv":{"VideoParam": [{"stImg": {"luminance":0}, "nChannel":0}]}}
```

luminance: [0, 14]

8.2.4.2 Contrast

```
{"SetEnv":{"VideoParam": [{"stImg": {"contrast":0}, "nChannel":0}]}}
```

contrast: [0, 14]

8.2.4.3 Sharpness

```
{"SetEnv":{"VideoParam": [{"stImg": {"sharpness":1}, "nChannel":0}]}}
```

sharpness: [0, 15]

8.2.4.4 Camma

```
{"SetEnv":{"VideoParam": [{"stImg": {"gamma":0}, "nChannel":0}]}}
```

gamma: [0, 4]

- 0: Default
- 1: 0.45
- 2: 0.50
- 3: 0.55
- 4: 0.63

8.2.4.5 DCI

```
{"SetEnv":{"VideoParam": [{"stImg": {"dci":0,"nChannel":0}}]}
```

dci: [0, 8] 0: OFF

8.2.4.6 B&W Mode

```
{"SetEnv":{"VideoParam": [{"stImg": {"nBWMode":0,"nChannel":0}}]}
```

nBWMode:

- 0: Color
- 4: B & W

8.2.4.7 Flip-H

```
{"SetEnv":{"VideoParam": [{"stImg":{"nFlipH":3,"nChannel":0}}]}
```

nFlipH:

- 2: ON
- 3: OFF

8.2.4.8 Flip-V

```
{"SetEnv":{"VideoParam": [{"stImg":{"nFlipV":2,"nChannel":0}}]}
```

nFlipV:

- 2: ON
- 3: OFF

8.2.4.9 DZoom

```
{"SetEnv":{"VideoParam": [{"stImg":{"nEZoom":3,"nChannel":0}}]}
```

nEZoom:

- 2: ON
- 3: OFF

8.2.5 NR

8.2.5.1 NR-2D

```
{"SetEnv":{"VideoParam": [{"stNR": {"noise2D":0,"nChannel":0}}]}
```

noise2D: [0, 8]
0: OFF
8: Auto

8.2.5.2 NR-3D

```
{"SetEnv":{"VideoParam": [{"stNR": {"noise3D":0,"nChannel":0}}]}
```

noise3D: [0, 8]
0: OFF, 8: Auto

8.2.5.3 Dynamic Hot Pixel

```
{"SetEnv":{"VideoParam": [{"stNR": {"dhotpixel":3,"nChannel":0}}]}
```

dhotpixel: [0, 5]
0: OFF

8.2.6 Style

```
{"SetEnv":{"VideoParam": [{"stColor": {"nStyleInx":0,"nChannel":0}}]}
```

nStyleInx: [0, 4]
0: Default
1: Normal
2: Clarity
3: Bright
4: Soft

9. Video OSD

9.1 Get video osd params

```
{"GetEnv":{"VideoOsd":{"nChannel":-1}}}
```

9.2 Set video osd params

```
{"SetEnv":{"VideoOsd":{"stTime":{"bEnable":1,"nIndex":0,"nXPos":0,"szText":"","nYPos":10000,"stFtColor":{"byAlpha":128,"byRed":255,"byGreen":255,"byBlue":255},"stBkColor":{"byAlpha":0,"byRed":0,"byGreen":0,"byBlue":0},"stTitle":{"bEnable":0,"nIndex":0,"nXPos":0,"szText":"","nYPos":0,"stFtColor":{"byAlpha":128,"byRed":255,"byGreen":255,"byBlue":255},"stBkColor":{"byAlpha":0,"byRed":0,"byGreen":0,"byBlue":0},"nChannel":0}}}}
```

All params can be saved by this command and also you can set one param alone.

9.2.1 Show Time

```
{"SetEnv":{"VideoOsd":{"stTime":{"bEnable":1,"nChannel":0}}}}
```

bEnable:

0: Not show

1: Show

9.2.2 Show Title

```
{"SetEnv":{"VideoOsd":{"stTitle":{"bEnable":1,"nChannel":0}}}}
```

bEnable:

0: Not show

1: Show

9.2.3 Time Font Color

```
{"SetEnv":{"VideoOsd":{"stTime":{"stFtColor":{"byAlpha":128,"byRed":255,"byGreen":255,"byBlue":0},"nChannel":0}}}}
```

byAlpha: 128

white: rgb (255,255,255)

black: rgb (0,0,0)

yellow: rgb (255,255,0)

red: rgb (255,0,0)

blue: rgb (0,0,255)

9.2.4 Title Font Color

```
{"SetEnv":{"VideoOsd":{"stTitle":{"stFtColor":{"byAlpha":128,"byRed":255,"byGreen":255,"byBlue":0},"nChannel":0}}}}
```

byAlpha: 128

white: rgb (255,255,255)

black: rgb (0,0,0)
yellow: rgb (255,255,0)
red: rgb (255,0,0)
blue: rgb (0,0,255)

9.2.5 OSD Offset

1. x pos

Time: {"SetEnv":{"VideoOsd": [{"stTime ": {"nXPos": 9200}, "nChannel": 0}]}}
Title: {"SetEnv":{"VideoOsd": [{"stTitle": {"nXPos": 9200}, "nChannel": 0}]}}
nXPos: [0, 10000]

2. y pos

Time: {"SetEnv":{"VideoOsd": [{"stTime ": {"nYPos": 1200}, "nChannel": 0}]}}
Title: {"SetEnv":{"VideoOsd": [{"stTitle": {"nYPos": 1200}, "nChannel": 0}]}}
nYPos: [0, 10000]

10. OSD Font Size

10.1 Get osd font size params

{"GetEnv":{"TTFFontSize":{"nChannel":-1}}}

10.2 Set osd font size params

{"SetEnv":{"TTFFontSize":{"nFontSize": [48, 48], "bAutoSize": 1}}}
bAutoSize:
0: off, 1: on
nFontSize: [8, 200]

11 Video Out

11.1 Get video out params

```
{"GetEnv":{"VideoOut":{"nChannel":-1}}
```

11.2 Set video out params

```
{"SetEnv":{"VideoOut":{"nNetMode":2,"emVoutFormat":9,"byFormatList":[10,9,4,3,8,7,6,5,26,25,20,21,22,23,24]}}
```

nNetMode: default value 2, do not modify it

0 – HD output, 1 – HD output + SD network, 2 – SD output + HD network

emVoutFormat: Setting the current video out format.

10: 1080P60

9: 1080P50

4: 1080P30

3: 1080P25

8: 1080I60

7: 1080I50

6: 720P60

5: 720P50

26: 720P30

25: 720P25

20: 1080P59.94

21: 1080I59.94

22: 1080P29.97

23: 720P59.94

24: 720P29.97

12 NetWork Configure

12 Network Port

12.1 Get network port params

```
{"GetEnv":{"NetWork":{"nChannel":-1}}
```


12.2 Set network port params

```
{"SetEnv":{"NetWork":{"stNetPort":{"wPortSoap":1936,"wPortData":3000,"wPortWeb":80,"wPortRtsp":554,"wPortVisca":1259,"wPortOnvif":2000,"wPortRtmp":1935}}}}
```

Also you can set one of them like this:

```
{"SetEnv":{"NetWork":{"stNetPort":{"wPortSoap":1936}}}}
```

Port Data: wPortData

Port Web: wPortWeb

Port Onvif: wPortOnvif

Port Soap: wPortSoap

Port Rtmp: wPortRtmp

Port Rtsp: wPortRtsp

Port Visca: wPortVisca

All ports range from 0 to 65535. [0, 65535]

13 Ethernet

13.1 Get ethernet params

```
{"GetEnv":{"NetWork":{"nChannel":-1}}}
```

13.2 Set Ethernet params

```
{"SetEnv":{"NetWork":{"stEth":{"byValid":5,"szIPAddr":"192.168.5.126","szSubMask":"255.255.255.0","szMacAddr":"E4:77:D4:01:8A:49","szGateway":"192.168.5.1","bDefault":1}}}}}
```

13.2.1 DHCP

```
{"SetEnv":{"NetWork":{"stEth":{"byValid":5}}}}
```

byValid:

5: off

7: on

13.2.2 IP Address

```
{"SetEnv":{"NetWork":{"stEth":{"szIPAddr":"192.168.5.127"}}}}
```

13.2.3 Subnet Mask

```
{"SetEnv":{"NetWork":{"stEth":{"szSubMask":"255.255.255.0"}}}}
```

13.2.4 Default Gateway

```
{"SetEnv":{"NetWork":{"stEth":{"szGateway":"192.168.5.1"}}}}
```

14 DNS

14.1 Get dns params

```
{"GetEnv":{"NetWork":{"nChannel":-1}}}
```

14.2 Set dns params

```
{"SetEnv":{"NetWork":{"stDns":{"szDns1":"8.8.8.8","szDns2":"0.0.0.0"}}}}
```

1. Preferred DNS Server

```
{"SetEnv":{"NetWork":{"stDns":{"szDns1":"8.8.8.8"}}}}
```

2. Alternative DNS Server

```
{"SetEnv":{"NetWork":{"stDns":{"szDns2":"8.8.8.8"}}}}
```

15 System Configure

15 SysAttr

15.1 Get sysattr params

```
{"GetEnv":{"SysAttr":{"nChannel":-1}}}
```

15.2 Set sysattr params

```
{"SetEnv":{"SysAttr":{"nLanguage":0,"szDeviceID":"1","emVideoStandard":1,"szDevName":"testname"}}
```

1. Device Name
szDevName: used-define, can not use white space
2. Device ID
szDeviceID: can not modify
3. Language
nLanguage
0: Simplified Chinese
2: English

16 SD Card Store

16.1 Get SD card store params

```
{"QueryState":{"GetDisk":{}}}
```

16.2 Set SD card store params

```
{"SetEnv":{"RecStore":{"nStoreStream":0,"nPacketTime":30,"nPackType":5}}}
```

nStoreStream

0: Master

1: Slave

1. Packet Type
nPackType
2: TS
5: MP4
2. Packet Time (M)
nPacketTime: [1,240]

17 SysTime

17.1 Get system time params

```
{"QueryState":{"QuerySysTime":{}}}
```

17.2 Set system time params

```
{"SetEnv":{"SysTime":{"nDateSprtr":2,"nDateFormat":0,"nZone":1,"nHourType":0,"stNtp":{"bEnable":1,"nHostPort":123,"nUpdateInterval":2,"szHostUrl":"ntp4.aliyun.com"}}}}
```

17.2.1 Date Format

```
{"SetEnv":{"SysTime":{"nDateFormat":0}}}
```

nDateFormat

- 0: YYYY-MM-DD
- 1: MM-DD-YYYY
- 2: DD-MM-YYYY

17.2.2 Date Sprtr

```
{"SetEnv":{"SysTime":{"nDateSprtr":0}}}
```

nDateSprtr

- 0: .
- 1: -
- 2: /

17.2.3 Zone

```
{"SetEnv":{"SysTime":{"nZone":0}}}
```

nZone: [0, 32]

- 0: GMT
- 1: GMT+01:00
- 2: GMT+02:00
- 3: GMT+03:00
- 4: GMT+03:30
- 5: GMT+04:00
- 6: GMT+04:30
- 7: GMT+05:00
- 13: GMT+08:00
- 20: GMT-01:00
- 31: GMT-11:00
- 32: GMT-12:00

17.2.4 Hour Type

```
{"SetEnv":{"SysTime":{"nHourType":0}}}
```

nHourType

- 0: 24 Hours
- 1: 12 Hours

17.2.5 NTP Enable

```
{"SetEnv":{"SysTime":{"stNtp":{"bEnable":1}}}}
```

bEnable

- 0: off
- 1: on

17.2.6 Update Interval

```
{"SetEnv":{"SysTime":{"stNtp":{"nUpdateInterval":2}}}}
```

nUpdateInterval: [1,10]

17.2.7 Host Url

```
{"SetEnv":{"SysTime":{"stNtp":{"szHostUrl":"time.nist.gov"}}}}
```

szHostUrl: user-defined, ntp server address

17.2.8 Host Port

```
{"SetEnv":{"SysTime":{"stNtp":{"nHostPort":123}}}}
```

nHostPort: user-defined, [0, 65535]

17.2.9 Time Settings (Synchronize with computer time or set manually)

```
{"SysCtrl":{"SetTime":{"bTimeType":1,"nZone":19,"stDateTime":{"dwYear":2018,"byHour":15,"byMinute":38,"byDay":1,"byMonth":11,"bySecond":2}}}}
```

17.2.10 Synchronize with NTP Server

```
{"SysCtrl":{"SyncNtp":""}}
```

18 SysUser

18.1 Get sysuser params

```
{"GetEnv":{"SysUser":{}}}
```

18.2 Set sysuser params

```
{"SetEnv":{"SysUser":{"stUsers":[{"nUserType":0,"szUserName":"admin","szPassword":"admin"}, {"nUserType":1,"szUserName":"user1","szPassword":"user1"}, {"nUserType":1,"szUserName":"user2","szPassword":"user2"}]}}
```

nUserType

0: admin

1: user1 or user2

szUserName: user-define, do not use white space

szPassword: user-define, do not use white sapce

Note: This command must set three users at the same time.

19 Update

19.1 Get update params

```
{"QueryState":{"QueryVersion":{}}}
```

Get the return value and split it like this:

```
szText.Format("%d.%d.%d  %d-%d-%d",  
    (stVersion.dwCamVersion >> 16) & 0xFF,  
    (stVersion.dwCamVersion >> 8) & 0xFF, (stVersion.dwCamVersion & 0xFF),  
    (stVersion.dwCamDate >> 16) & 0xFFFF,  
    (stVersion.dwCamDate >> 8) & 0xFF,  
    (stVersion.dwCamDate & 0xFF));
```

19.2 Set update params

Not support update with api, you can do this through webpage.

20 Default

```
{"SysCtrl":{"Default":{}}}
```

21 Reboot

```
{"SysCtrl":{"Reboot":{}}}
```

Note: The url supports to set all params at one time and also can set one of them through split url into one other command. Different commands can be find at different settings.