**MERX 4K/DVRMX HTTP API**

**Version 1.0.0**

# Preface

This document details the API of Raysharp video products. Programmers can access and configure Raysharp video products follows the API.

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# HTTP API Transaction

## 3.1Transaction

The HTTP API Transaction starts from a request from a client Application, usually a web browser. The request is processed by the web server on the Raysharp video products, then send the response back to the client application. The HTTP request is taken in GET form. If the request is successful, the Raysharp video product will return a HTTP header contains 200 OK. The HTTP Body will contain actual data or error message if an error occurs.

For describe convenience, we use some short words to instead the long expressions. The follows are several regulations:

1. The italics and bold will be replaced by the value behind the symbol “=”.
2. The URL must follow the standard way of writing a URL.(RFC\_3986:Uniform Resource Identifiers (URI) Generic Syntax);that is ,spaces and other reserved characters (“;”, “/”, “?”, “:”, “@”, “=”, “+”, “,” and “$”) within a <paramName> or a <paramValue> must be replaced with %<ASCII hex>.For example ,the blank must be instead with %20.
3. To describe the range of the configuration, we use some symbols such as “[]”, “{}” and so on. For example :”[0-100]” denotes a integer not less than 0 and not larger than 100. “{0,1,2,3}” denotes the valid value of a integer among 0,1,2 and 3.
4. In the request and response, we use “[]” to denote an array. The index is usually a integer and start form 0.
5. The parameter value has several types: string, integer, bool and float.Integer is 32 bits.The range of bool is “true” and “false”.

The below is an example of a transaction:

| **Request** | **GET** http://*<ip>*/action/getConfig?name=**VideoColor** |
| --- | --- |
| **Description** | Get VideoColor configuration. |
| **Response** | HTTP/1.1 200 OK  Content-Type:text/plain  Brightness=50  Contrast=50  Hue=50  Saturation=50 |
| **Comment** | ......  We can also request the single config.  For example:  **Request :**  **GET** http://10.7.2.4/action/getConfig?name=VideoColor.Brightness  **Response:**  HTTP/1.1 200 OK  Content-Type:text/plain  VideoColor.Brightness=50 |

## 3.2Authentication

The Raysharp video product supplies two authentication ways: basic authentication and digest authentication. If the http request does not have “Authorization” , the Raysharp video product returns 401, utill the http request has a legal authentication .

For example:

1. When basic authentication, the Raysharp video product response:

401 Unauthorized

WWW-Authenticate: Basic realm=”XXXXXX”

Then the client encode the username and password with base64, send the following request:

Authorization: Basic VXZVXZ.

2. When digest authentication, the Raysharp video product response:

WWW-Authenticate: Digest realm="raysharp.cn", nonce="7a86c864b7fadff5457f90ec803a9182", qop="auth";

The client calculates the digest using username, password, nonce, realm and URI with MD5, then send the following request:

Authorization: Digest username="admin", realm="raysharp.cn", nc=00000001,cnonce="c36a271f",qop="auth"

nonce="7a86c864b7fadff5457f90ec803a9182",uri="action/getConfig?name=VideoColor", response="909a78946ae1cf2395f9a1fd8fbeb38d"

# Camera

Camera API allows application to configure and view Raysharp video product settings.

## 4.1 Stream

### 4.1.1 GetStream

| **URL Syntax** | rtsp://*<ip>:<port>*/<*channelNo*>/<*typeNo*> |
| --- | --- |
| **Comment** | <*ip*> :the IP address of the Raysharp video product.  <*port* >:the default port is 554. It can be omitted.  <*channelNo*> :the channel number. It starts from ch00.  <*typeNo*> :the stream type. The <*typeNo*> of main stream is 0, sub stream is 1.  For example, we request the extra stream 1 of channel 1, the URL is:  rtsp://192.168.6.67:554/ch01/0. |

## 4.2 CameraCap

### 4.2.1 GetCameraConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**Camera** |
| --- | --- |
| **Description** | camera options contain Backlight, ExposureSpeed, DayNightColor, and so on. |
| **Response** | Camera.IRCutMode=0  Camera.IRCutDelay=3  Camera.IRCutSensitive=1  Camera.IRFuncType=0  Camera.Mirror=0  Camera.Flip=0  Camera.Rotate=0  Camera.BackLightMode=1  Camera.BackLightLevel=1  Camera.R3dnrMode=1  Camera.R3dnrThreshTarget=50  Camera.DISEnable=1  Camera.DefogMode=1  Camera.DefogStrength=128  Camera.DwdrMode=1  Camera.DwdrStrength=50  Camera.GainControlMode=2  Camera.WBMode=0  Camera.Rgain=50  Camera.Ggain=50  Camera.Bgain=50  Camera.ShutterMode=0  Camera.ShutterSpeed=25  Camera.FlickerCtrl=0 |
| **Comment** | *ChannelNo* = video channel index. Current default channel 0. |

### 4.2.2 SetCameraConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**Camera**&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...] |
| --- | --- |
| **Comment** | In below table, ***head*** =Camera[*ChannelNo*]  *ChannelNo* = video channel index. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Camera.IRCutMode | char | Range is {0, 1, 2, 3}  0 – auto.  1 – day.  2- night.  3 – video auto |
| Camera.IRCutDelay | char | Range is [0 ~ 36]. unit : second |
| Camera.IRCutSensitive | char | Range is {0, 1, 2}  0: High.  1: Middle.  2: Low. |
| Camera.IRFuncType | char | Infrared function switch. 0: close, 1: auto. |
| Camera.Mirror | char | Range is {0, 1}. Flip Horizontal  0: close.  1: open. |
| Camera.Flip | char | Range is {0, 1}. Flip vertical  0: close.  1: open. |
| Camera.Rotate | char | Range is {0, 1, 2, 3}  0: does not rotate.  1: 90° clockwise.  2: 180° clockwise.  3: 270° clockwise. |
| Camera.BackLightMode | char | Range is {0, 1}  0: disable.  1: enable. |
| Camera.BackLightLevel | char | Range is {0,1,2}  0: low  1: middle  2: high |
| Camera.R3dnrMode | char | Range is {0, 1, 2}  0: disable.  1: auto.  2: manual |
| Camera.R3dnrThreshTarget | unsigned char | Range is [0 ~ 0xff]  thresh value when manual. |
| Camera.DISEnable | char | Range is {0, 1}  0: disable.  1: enable. |
| Camera.DefogMode | char | Range is {0, 1, 2}  0 : disable.  1: auto.  2: manual. |
| Camera.DefogStrength | char | Range is [0 ~ 100]  Defog strength when used in manual mode. |
| Camera.DwdrMode | char | Range is {0, 1}  0: disable.  1: enable. |
| Camera.DwdrStrength | unsigned char | Range is [0 ~ 0xff]  Drdw value when enabled DrdwMode. |
| Camera.GainControlMode | char | Range is {0, 1, 2, 3}  0: off.  1: low.  2: middle.  3: high |
| Camera.WBMode | char | Range is {0, 1, 2}  0: auto.  1: manual.  2: indoor. |
| Camera.Rgain | unsigned char | Range is [0 ~ 0xff]. |
| Camera.Ggain | unsigned char | Range is [0 ~ 0xff]. |
| Camera.Bgain | unsigned char | Range is [0 ~ 0xff]. |
| Camera.ShutterMode | char | Range is {0, 1}.  0: auto.  1: manual. |
| Camera.ShutterSpeed | char | Range is [0 ~ 30]  ShutterUsecs value when manual.  Max 1/25 in 50HZ, or max 1/30 in 60HZ. |
| Camera.FlickerCtrl | char | Range is {0, 1, 2}.  0: 50HZ.  1: 60HZ.  2: disable. |

## 4.3 VideoColor

### 4.3.1 GetVideoColorConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**VideoColor** |
| --- | --- |
| **Response** | Color.Brightness=50  Color.Contrast=50  Color.Hue=50  Color.Saturation=50  Color.Sharpness=50 |
| **Comment** | *ChannelNo* = video channel index. Current default channel 0. |

### 4.3.2 SetVideoColorConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**VideoColor**&<***paramName***>=<***paramValue***>[&<***paramName***>=<***paramValue***>...] |
| --- | --- |
| **Response** | OK or ERROR |
| **Comment** | ChannelNo = video channel index. Current default channel 0. |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Color.Brightness | unsigned char | Brightness, range is [0 ~ 255] |
| Color.Contrast | unsigned char | Contrast, range is [0 ~ 255] |
| Color.Hue | unsigned char | Hue, range is [0 ~ 255] |
| Color.Saturation | unsigned char | Saturation, range is [0 ~ 255] |
| Color.Sharpness | unsigned char | Sharpness, range is [0 ~ 255] |

### 4.3.3 Resolution

| **Fixed Resolution Name** | **Size in PAL** | **Size in NTSC** |
| --- | --- | --- |
| "D1" | 704 x 576 | 704 x 480 |
| "HD1" | 352 x 576 | 352 x 480 |
| "BCIF" | 704 x 288 | 704 x 240 |
| "CIF" | 352 x 288 | 352 x 240 |
| "QCIF" | 176 x 144 | 176 x 120 |
| "VGA" | 640 x 480 | |
| "QVGA" | 320 x 240 | |
| "SVCD" | 480 x 480 | |
| "QQVGA" | 160 x 128 | |
| "SVGA" | 800 x 592 | |
| "XVGA" | 1024 x 768 | |
| "WXGA" | 1280 x 800 | |
| "SXGA" | 1280 x 1024 | |
| "WSXGA" | 1600 x 1024 | |
| "UXGA" | 1600 x 1200 | |
| "WUXGA" | 1920 x 1200 | |
| "ND1" | 240 x 192 | |
| "720" | 1280 x 720 | |
| "1080" | 1920 x 1080 | |
| "1280x960" | 1280 x 960 (1.3 Mega Pixels) | |
| "1872x1408" | 1872 x 1408 (2.5 Mega Pixels) | |
| "3744x1408" | 3744 x 1408 (5 Mega Pixels) | |
| "2048x1536" | 2048 x 1536 (3 Mega Pixels) | |
| "2432x2048" | 2432 x 2048 (5 Mega Pixels) | |
| "1216x1024" | 1216 x 1024 (1.2 Mega Pixels) | |
| "1408x1024" | 1408 x 1024 (1.5 Mega Pixels) | |
| "3296x2472" | 3296 x 2472 (8 Mega Pixels) | |
| "2560x1920" | 2560 x 1920 (5 Mega Pixels) | |
| "960H", | 960 x 576 | 960 x 480 |
| "DV720P" | 960 x 720 | |

# 5. Live

## 5.1 OSD

### 5.1.1 GetOSDConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**OSD** |
| --- | --- |
| **Comment** | ***OsdNo*** : index of OSD.  0 = osd 1  1 = osd 2  2 = osd 3  3 = osd 4 |
| **Response** | Osd[***OsdNo***].OSDSwitch=1  Osd[***OsdNo***].OSDType=0  Osd[***OsdNo***].Alpha=50  Osd[***OsdNo***].Content=raysharp-ipc  Osd[***OsdNo***].PosX=20  Osd[***OsdNo***].PosY=20 |

### 5.1.2 SetOSDConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**OSD**&<**paramName**>=<**paramValue**>[&<***paramName***>=<***paramValue***>...] |
| --- | --- |
| **Comment** | ***OsdNo*** : index of OSD.  0 = osd 1  1 = osd 2  2 = osd 3  3 = osd 4 |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Osd[***OsdNo***].OSDSwitch | char | Osd switch. 0: disable ; 1: enable. |
| Osd[***OsdNo***].OSDType | char | Osd type. 0: time; 1: channel. |
| Osd[***OsdNo***].Alpha | unsigned char | Transparency of overlaid osd, the smaller the value, the more transparent it will be.  Range is [0 ~ 128]. |
| Osd[***OsdNo***].Content | string | Content of overlaid osd. Max length: 64. |
| Osd[***OsdNo***].PosX | integer | Osd postion. Top left x coordinate. |
| Osd[***OsdNo***].PosY | integer | Osd postion. Top left y coordinate. |

## 5.2 VideoCover

### 5.2.1 GetVideoCoverConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**VideoCover** |
| --- | --- |
| **Description** | Video cover config. |
| **Response** | Cover.Switch=1  Cover[***CoReg*** ].Enable=1  Cover[***CoReg*** ].Rect.X=10  Cover[***CoReg*** ].Rect.Y=30  Cover[***CoReg*** ].Rect.Width=100  Cover[***CoReg*** ].Rect.Height=100 |
| **Comment** | ***CoReg*** : Cover Region.  Covers is an array which sustains multi- Cover regions  0 = region 1  1 = region 2  2 = region 3  3 = region 4  ***head***=Cover[*CoReg*] |

### 5.2.2 SetVideoCoverConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**VideoCover**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***CoReg*** : Cover region index  Covers is an array which contains multiple cover regions  0 = region 1  1 = region 2  2 = region 3  3 = region 4  ***head*** = Cover[*CoReg*] |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Cover.Switch | char | Video cover switch.  0: disable; 1: enable. |
| Cover[***CoReg*** ].Enable | char | Each cover area switch. 0: disable; 1: enable. |
| Cover[***CoReg*** ].Rect.X | integer | top left corner x coordinate (left) |
| Cover[***CoReg*** ].Rect.Y | integer | top left corner y coordinate (top) |
| Cover[***CoReg*** ].Rect.Width | integer | rect width. Range is [0 ~ 65535]. |
| Cover[***CoReg*** ].Rect.Height | integer | rect height. Range is [0 ~ 65535]. |

## 5.3 ROI

### 5.3.1 GetROIConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**ROI**&type**=<*StreamType*>** |
| --- | --- |
| **Description** | Stream ROI config. |
| **Response** | ROI[***RoiNo***].Index=5  ROI[***RoiNo***].Switch=1  ROI[***RoiNo***].IsAbsQp=1  ROI[***RoiNo***].Level=6  ROI[***RoiNo***].BgFrameRate=30  ROI[***RoiNo***].Rect.X=10  ROI[***RoiNo***].Rect.Y=30  ROI[***RoiNo***].Rect.Width=100  ROI[***RoiNo***].Rect.Height=100 |
| **Comment** | ***RoiNo*** : ROI index. Valid value range is [0 ~ 7].  ***head***=ROI[***RoiNo*** ]  ***StreamType* :** 0 -- mainstream; 1 -- substream; 2 -- mobilestream. |

### 5.3.2 SetROIConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**ROI**&type**=<*StreamType*>**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***RoiNo*** : ROI index. Valid value range is [0 ~ 7].  ***head***=ROI[***RoiNo*** ]  ***StreamType* :** 0 -- mainstream; 1 -- substream; 2 -- mobilestream. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| ROI[***RoiNo***].Index | char | Range is [0 ~ 7].  Roi index, same as priority.  The larger the index, the higher the priority. |
| ROI[***RoiNo***].Switch | char | 0: disable. 1: enable. |
| ROI[***RoiNo***].IsAbsQp | char | Range is {0, 1}.  Whether to use absolute image quality.  0: relative quality.  1: absolute quality. |
| ROI[***RoiNo***].ILevel | char | Range is [1 ~ 6].  Roi value. The larger the value, the better the image quality. |
| ROI[***RoiNo***].BgFrameRate | char | Range is [0 ~ 30]  Frame rate of non-ROI region. |
| ROI[***RoiNo***].Rect.X | integer | Range is [0 ~ 65535].  top left corner x coordinate (left). |
| ROI[***RoiNo***].Rect.Y | integer | Range is [0 ~ 65535].  top left corner y coordinate (top). |
| ROI[***RoiNo***].Rect.Width | integer | rect width. |
| ROI[***RoiNo***].Rect.Height | integer | rect height. |

# 6. Stream

### 6.1. GetStreamUri

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**StreamUri**&<paramName>=<paramValue>[&<paramName>=<paramValue>...] | | |
| --- | --- | --- | --- |
| **Response** | StreamUrl= rtsp://192.168.6.67:554/ch01/0 | | |
| **ParamName** | | **ParamValue type** | **Description** |
| Channel | | unsigned integer | channel |
| StreamType | | char | Range is {0, 1,2}.  0: main stream.  1: sub stream.  2:mobile stream. |

## 6.2 MainStream

### 6.2.1 GetMainStreamConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**MainStream** |
| --- | --- |
| **Response** | MainStream.VideoType=0  MainStream.BitrateType=0  MainStream.BitrateMode=0  MainStream.Fps=25  MainStream.CustomBitrate=4096  MainStream.Bitrate=3  MainStream.Resolution=1  MainStream.VideoQuality=4  MainStream.IFrameInterval=30  MainStream.LoadBalancing=0  MainStream.AudioSwitch=1  MainStream.ProfileLevel=1 |
| **Comment** | *Channel*: video channel index. Current default 0. |

### 6.2.2 SetMainStreamConfig

| URL Syntax | http://*<ip>*/action/setConfig?name=**MainStream**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | *Channel*: video channel index. Current default 0. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| MainStream.VideoType | char | Range is {0, 1}.  Video rate type.  0: H.264.  1: H.265. |
| MainStream.BitrateType | char | Range is {0, 1, 2}.  0: CBR.  1: VBR.  2. FIX QP |
| MainStream.BitrateMode | char | Range is {0, 1}.  Rate mode.  0: pre define.  1: self define. |
| MainStream.Fps | char | Range is [1 ~ 25 ]. PAL;  or [1 ~ 30] NTSC.  Frames per second. |
| MainStream.CustomBitrate | unsigned integer | Range is [1 ~ 16M].  Bitrate value that user can choose. |
| MainStream.Resolution | char | Range {0, 1, 2, 3, 4, 5}.  0: 300W.  1: 1080P.  2: 960P.  3: 720P.  4: VGA.  5: QVGA. |
| MainStream.VideoQuality | char | Range {0, 1, 2, 3, 4, 5}.  0: worst.  1: worse.  2: pool.  3: good.  4: better.  5: best. |
| MainStream.IFrameInterval | char | Range is [1 ~ 100]. unit is second.  I Frame interval. |
| MainStream.LoadBalancing | char | Range is {0, 1}.  Load balance.  0: real time  1: balanced. |
| MainStream.AudioSwitch | char | Audio switch.  0: off. 1: on. |
| ProfileLevel | char | Range is {0, 1, 2}.  Profile level.  0: Baseline.  1: Main Profile.  2: High Profile. |

## 6.3 Sub Stream

### 6.3.1 GetSubStreamConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**SubStream** |
| --- | --- |
| **Response** | SubStream.VideoType=0  SubStream.BitrateType=0  SubStream.BitrateMode=0  SubStream.Fps=15  SubStream.CustomBitrate=2048  SubStream.Bitrate=3  SubStream.Resolution=1  SubStream.VideoQuality=4  SubStream.IFrameInterval=30  SubStream.LoadBalancing=0  SubStream.AudioSwitch=1  ProfileLevel=1 |
| **Comment** | *Channel*: video channel index. Current default 0. |

### 6.3.2 SetSubStreamConfig

| URL Syntax | http://*<ip>*/action/setConfig?name=**SubStream**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | *Channel*: video channel index. Current default 0. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| SubStream.VideoType | char | Range is {0, 1}.  Video rate type.  0: H.264.  1: H.265. |
| SubStream.BitrateType | char | Range is {0, 1, 2}.  0: CBR.  1: VBR.  2. FIX QP |
| SubStream.BitrateMode | char | Range is {0, 1}.  Rate mode.  0: pre define.  1: self define. |
| SubStream.Fps | char | Range is [1 ~ 25 ]. PAL;  or [1 ~ 30] . NTSC.  Frames per second. |
| SubStream.CustomBitrate | unsigned integer | Range is [1 ~ 16M].  Bitrate value that user can choose. |
| SubStream.Resolution | char | Range {0, 1, 2, 3, 4, 5}.  0: 300W.  1: 1080P.  2: 960P.  3: 720P.  4: VGA.  5: QVGA. |
| SubStream.VideoQuality | char | Range {0, 1, 2, 3, 4, 5}.  0: worst.  1: worse.  2: pool.  3: good.  4: better.  5: best. |
| SubStream.IFrameInterval | char | Range is [1 ~ 100]. unit is second.  I Frame interval. |
| SubStream.LoadBalancing | char | Range is {0, 1}.  Load balance.  0: real time  1: balanced. |
| SubStream.AudioSwitch | char | Audio switch.  0: off. 1: on. |
| SubStream.ProfileLevel | char | Range is {0, 1, 2}.  Profile level.  0: Baseline.  1: Main Profile.  2: High Profile. |

## 6.4 Mobile Stream

### 6.4.1 GetMobileStreamConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**MobileStream** |
| --- | --- |
| **Response** | MobileStream.VideoSwitch=1  MobileStream.VideoType=0  MobileStream.BitrateType=0  MobileStream.BitrateMode=0  MobileStream.Fps=10  MobileStream.CustomBitrate=512  MobileStream.Bitrate=5  MobileStream.Resolution=1  MobileStream.VideoQuality=4  MobileStream.IFrameInterval=30  MobileStream.LoadBalancing=0  MobileStream.AudioSwitch=1  MobileStream.ProfileLevel=1 |
| **Comment** | *Channel*: video channel index. Current default 0. |

### 6.4.2 SetMobileStreamConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**MobileStream**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | *Channel*: video channel index. Current default 0. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| MobileStream.VideoSwitch | char | Video switch.  0: disabled. 1: enabled. |
| MobileStream.VideoType | char | Range is {0, 1}.  Video rate type.  0: H.264.  1: H.265. |
| MobileStream.BitrateType | char | Range is {0, 1, 2}.  0: CBR.  1: VBR.  2. FIX QP |
| MobileStream.BitrateMode | char | Range is {0, 1}.  Rate mode.  0: pre define.  1: self define. |
| MobileStream.Fps | char | Range is [1 ~ 25 ]. PAL;  or [1 ~ 30] . NTSC.  Frames per second. |
| MobileStream.CustomBitrate | unsigned integer | Range is [1 ~ 16M].  Bitrate value that user can choose. |
| MobileStream.Resolution | char | Range {0, 1, 2, 3, 4, 5}.  0: 300W.  1: 1080P.  2: 960P.  3: 720P.  4: VGA.  5: QVGA. |
| MobileStream.VideoQuality | char | Range {0, 1, 2, 3, 4, 5}.  0: worst.  1: worse.  2: pool.  3: good.  4: better.  5: best. |
| MobileStream.IFrameInterval | char | Range is [1 ~ 100]. unit is second.  I Frame interval. |
| MobileStream.LoadBalancing | char | Range is {0, 1}.  Load balance.  0: real time  1: balanced. |
| MobileStream.AudioSwitch | char | Audio switch.  0: off. 1: on. |
| MobileStream.ProfileLevel | char | Range is {0, 1, 2}.  Profile level.  0: Baseline.  1: Main Profile.  2: High Profile. |

## 6.5 Audio

### 6.5.1 GetAudioConfig

| **URL Syntax** | http://*<ip>*/action/getSysConfig?name=**Audio** |
| --- | --- |
| **Response** | Audio.Switch=1  Audio.Type=0  Audio.Bitrate=0  Audio.MicInVolume=5  Audio.LineOutVolume=6 |
| **Comment** | *Channel*: video channel index. Current default 0. |

### 6.5.2 SetAudioConfig

| **URL Syntax** | http://*<ip>*/action/setSysConfig?name=**Audio**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | *Channel*: video channel index. Current default 0. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Audio.Switch | unsigned char | Audio switch.  0: off. 1: on. |
| Audio.Type | char | Range is {0, 1, 2, 3}.  Audio type.  0: G711A; 1: G711U.  2: G726; 3: ADPCM. |
| Audio.Bitrate | unsigned char | Current set to 0 which means 64k. |
| Audio.MicInVolume | unsigned char | Range is [0 ~ 10].  In volume value. |
| Audio.LineOutVolume | unsigned char | Range is [0 ~ 10].  Out volume value. |

# 7. NetWork

## 7.1 BasicConfig

### 7.1.1 GetBasicConfig

| **URL Syntax** | http://*<ip>*/action/getNetConfig?name=**NetBase** |
| --- | --- |
| **Comment** | Basic config contains basic network parameters (Default interface, domain name, host name), and configuration of each network interface. |
| **Response** | NetBase.IPAddress=192.168.1.240  NetBase.Netmask=255.255.255.0  NetBase.Gateway=192.168.1.1  NetBase.Dns1=8.8.8.8  NetBase.Dns2=221.96.128.86  NetBase.PPPOEuser=raysharp  NetBase.Password=519070  NetBase.NetworkMode=2  NetBase.ClientPort=9001  NetBase.WebPort=80  NetBase.MobilePort=18040  NetBase.UseUPNP=0 |

### 7.1.2 SetBasicConfig

| **URL Syntax** | http://*<ip>*/action/setNetConfig?name=**NetBase**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| NetBase.IPAddress | string | Interface IP address. Max length: 32. |
| NetBase.Netmask | string | Network mask string:  In the form of x.x.x.x, range of x is [0-255]  Example:  255.255.255.0 |
| NetBase.Gateway | string | Gateway address. |
| NetBase.Dns1 | string | IP address of first DNS server. |
| NetBase.Dns2 | string | IP address of second DNS server. |
| NetBase.PPPOEuser | string | PPPoE User name. Max length: 32. |
| NetBase.Password | string | PPPoE User password. Max length: 32. |
| NetBase.NetworkMode | char | Range is {0, 1, 2}.  Networking mode.  0: DHCP.  1: PPPOE.  2: manual. |
| NetBase.ClientPort | unsigned short | Client port. |
| NetBase.WebPort | unsigned short | Web port. |
| NetBase.MobilePort | unsigned short | Mobile port. |
| NetBase.UseUPNP | char | Enable / disable UPnP.  0: disable. 1: enable. |

## 7.2 DDNS

### 7.2.1 GetDDNSConfig

| **URL Syntax** | http://*<ip>*/action/getNetConfig?name=**DDNS** |
| --- | --- |
| **Comment** |  |
| **Response** | DDNS.HostName=raysharp  DDNS.ServerAddr=anlian.co  DDNS.UserName=raysharp  DDNS.Password=519070  DDNS.UseFlag=1  DDNS.Switch=1  DDNS.UpdateInterval=3 |

### 7.2.2 SetDDNSConfig

| **URL Syntax** | http://*<ip>*/action/setNetConfig?name=**DDNS**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| DDNS.HostName | string | Host name of this device. Max length: 32. |
| DDNS.ServerAddr | string | DDNS server IP address or name. Max length: 32. |
| DDNS.UserName | string | DDNS user name. Max length: 32. |
| DDNS.Password | string | DDNS user password. Max length: 32. |
| DDNS.UseFlag | unsigned integer | DDNS use flag.  Each bit correspond to a type of DDNS. |
| DDNS.Switch | unsigned char | DDSN switch.  0: disable. 1: enable. |
| DDNS.UpdateInterval | unsigned char | Range is [0 ~ 255].  DDNS update interval. |

## 7.3 Email

### 7.3.1 GetEmailConfig

| **URL Syntax** | http://*<ip>*/action/getNetConfig?name=**Email** |
| --- | --- |
| **Comment** |  |
| **Response** | Email.Address=www.163.com  Email.Sender=www.raysharp.cn  Email.Password=123456  Email.Receivers[0]=x@raysharp.cn  Email.Receivers[1]=y@raysharp.cn  Email.Receivers[2]=z@raysharp.cn  Email.Port=26  Email.SSLSwitch=1  Email.Switch=1  Email.Intervaltime=180 |

### 7.3.2 SetEmailConfig

| **URL Syntax** | http://*<ip>*/action/setNetConfig?name=**Email**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Email.Address | string | SMTP server IP address or name.  Max length: 32. |
| Email.Sender | string | Sender address. Max length: 32. |
| Email.Password | string | Sender password. Max length: 32. |
| Email.Receivers[0] | string | Email addresses of 3 receivers.  Max length: 32. |
| Email.Receivers[1] |
| Email.Receivers[2] |
| Email.Port | unsigned short | Range is [1-65535]. |
| Email.SSLSwitch | char | 1: enable SSL email. |
| Email.EmailSwitch | char | 0: disable. 1: enable email. |
| Email.Intervaltime | short | Range is {180, 300, 600}.  unit is second. |

## 7.4 P2P

### 7.4.1 GetP2PConfig

| **URL Syntax** | http://*<ip>*/action/getNetConfig?name=**P2P** |
| --- | --- |
| **Comment** |  |
| **Response** | P2P.Uid=rs123456  P2P.UserName=raysharp  P2P.Password=519070  P2P.State=1 |

### 7.4.2 SetP2PConfig

| **URL Syntax** | http://*<ip>*/action/setNetConfig?name=**P2P**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| P2P.Uid | string | P2P id. Max length: 32. |
| P2P.UserName | string | P2P user name. Max length: 32. |
| P2P.Password | string | P2P user password. Max length: 32. |
| P2P.State | char | P2P connect status. |

## 7.5 RTSP

### 7.5.1 GetRTSPConfig

| **URL Syntax** | http://*<ip>*/action/getNetConfig?name=**RTSP** |
| --- | --- |
| **Comment** |  |
| **Response** | RTSP.UserName=raysharp  RTSP.Password=519070  RTSP.Port=554  RTSP.CheckFlag=1  RTSP.Switch=1  RTSP.AuthType=1 |

### 7.5.2 SetRTSPConfig

| **URL Syntax** | http://*<ip>*/action=setNetConfig?name=**RTSP**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| RTSP.UserName | string | RTSP user name. Max length: 32. |
| RTSP.Password | string | RTSP user password. Max length: 32. |
| RTSP.Port | integer | Range is [1-65535].  Port of RTSP server. |
| RTSP.CheckFlag | char | 0: disable. 1: enable |
| RTSP.Switch | char | 0: disable. 1: enable. |
| RTSP.AuthType | char | Range is {0, 1, 2}.  0: none.  1: basic.  2. digest. |

## 7.6 FTP

### 7.6.1 GetFTPConfig

| **URL Syntax** | http://*<ip>*/action/getNetConfig?name=**FTP** |
| --- | --- |
| **Comment** | Return FTP server config. |
| **Response** | FTP.IPAddress=192.168.1.120  FTP.UserName=anonymity  FTP.Password=123456  FTP.Port =21  FTP.Switch=1  FTP.TimeInterval = 3  FTP.ReqTypeMask =2  FTP.RecType =1  FTP.FilePath=share |

### 7.6.2 SetFTPConfig

| **URL Syntax** | http://*<ip>*/action/setNetConfig?name=**FTP**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| FTP.IPAddress | string | FTP IP address. Max length: 32. |
| FTP.UserName | string | Login user name. Max length: 32. |
| FTP.Password | string | Login user password. Max length: 32. |
| FTP.Port | integer | FTP port. |
| FTP.Switch | char | 0: off. 1: on. |
| FTP.TimeInterval | char | Range is [0 ~ 128].  Period of time to upload video. |
| FTP.ReqTypeMask | char | Req type mask .Bitwise representation.  0 bit: close.  2bit: image.  3bit: video |
| FTP.RecType | char | Range is {1, 2, 3}.  1: normal record.  2: alarm record.  3: all record. |
| FTP.FilePath | string | FTP file path. Max length: 96.  Directory name. |

# 8. Alarm

## 8.1 IO Alarm

### 8.1.1 GetIOAlarmConfig

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**IOAlarm** |
| --- | --- |
| **Comment** |  |
| **Response** | IOAlarm.AlarmSet=1  IOAlarm.AlarmOutTime=10  IOAlarm.RecordDelayTime=30  IOAlarm.AlarmOutManager=1  IOAlarm.EmailLink=0  IOAlarm.RecordSwitch=1  IOAlarm.FtpUploadSwitch=0  IOAlarm.CloudSwitch=0  IOAlarm.PushSwitch=0 |

### 8.1.2 SetIOAlarmConfig

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**IOAlarm**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| IOAlarm.AlarmSet | char | Range is {0, 1, 2}.  IO status alarm.  0: normal open.  1: normal close.  2: closed. |
| IOAlarm.AlarmOutTime | char | Range is 10, 20, 40, 60, 30s, 1min , 2min. |
| IOAlarm.RecordDelayTime | char | Range is 10, 30, 1min, 2min, 5mins. |
| IOAlarm.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| IOAlarm.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| IOAlarm.RecordSwitch | char | 0: disable. 1: enable. |
| IOAlarm.FtpUploadSwitch | char | 0: disable. 1: enable. |
| IOAlarm.CloudSwitch | char | 0: disable. 1: enable. |
| IOAlarm.PushSwitch | char | 0: disable. 1: enable. |

## 8.2 MotionDetect

### 8.2.1 GetMotionDetectConfig

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**Motion** |
| --- | --- |
| **Comment** | MotionDetect config of a video channel contains Enable, Level, Region and so on. |
| **Response** | Motion.Switch=1  Motion.Sensitivity=4  Motion.AlarmOutTime=10  Motion.RecordDelayTime=30  Motion.AlarmOutManager=1  Motion.EmailLink=0  Motion.RecordSwitch=1  Motion.FtpUploadSwitch=0  Motion.CloudSwitch=0  Motion.PushSwitch=0  Motion.Region[0]=03-CD-5E-7F-12-6A-49-FB-6C-10-2D  ...  ...  Motion.Region[17]=4B-AF-71-CE-38-90-A6-CA-DF-33-5C |

### 8.2.2 SetMotionDetectConfig

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**Motion**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | Channel: video channel index  ***LineNum***  Index of region, region is divided into lines and each line has several blocks, a line is divided into 44 bit , a bit for a block..  0=Line 1  1=Line 2  …  …  17= Line 18 |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Motion.Switch | char | Enable/Disable motion detect feature in a channel. |
| Motion.Sensitivity | char | Range is [1-8].  Sensitivity of motion detection.  1: lowest sensitivity.  8: highest sensitivity. |
| Motion.Region[***LineNum***] | integer | Currently, region is divided into 36 lines and 44 blocks/line.  A bit describes a block in the line.  Bit = 1: motion in this block is monitored..  Example:  Region[0] = (FF-FF-FF-FF-FF-F0-00-00-00-00-00):: motion in channel 0 line 0’s 44 blocks is monitored. Line 1’s 44 blocks not monitored. |
| Motion.AlarmOutTime | char | Range is 10, 20, 40, 60, 30s, 1min , 2min. |
| Motion.RecordDelayTime | char | Range is 10, 30, 1min, 2min, 5mins. |
| Motion.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| Motion.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| Motion.RecordSwitch | char | 0: disable. 1: enable. |
| Motion.FtpUploadSwitch | char | 0: disable. 1: enable. |
| Motion.CloudSwitch | char | 0: disable. 1: enable. |
| Motion.PushSwitch | char | 0: disable. 1: enable. |

## 8.3 PerimeterLine

### 8.3.1 GetPerimeterLineConfig

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**PerimLine** |
| --- | --- |
| **Comment** | ***LineNo*** below is the perimeter line index. Valid value range is [0 ~ 31]. |
| **Response** | PerimLine.ChnSwitch=1  PerimLine.AlarmOutTime=10  PerimLine.RecordDelayTime=30  PerimLine.AlarmOutManager=1  PerimLine.EmailLink=0  PerimLine.RecordSwitch=1  PerimLine.FtpUploadSwitch=0  PerimLine.CloudSwitch=0  PerimLine.PushSwitch=0  PerimLine.RuleSwitch=1  PerimLine.RuleType=1  PerimLine.LineTwoWay=1  PerimLine.Scene=1  PerimLine.Sensitive=3  PerimLine.RuleLine[***LineNo*** ].StartX=10  PerimLine.RuleLine[***LineNo*** ].StartY=10  PerimLine.RuleLine[***LineNo*** ].EndX=20  PerimLine.RuleLine[***LineNo*** ].EndY=30 |

### 8.3.2 SetPerimeterLineConfig

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**PerimLine**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***LineNo*** below is the perimeter line index. Valid value range is [0 ~ 31].  Each channel has at most 64 points coordinates. ie 32 lines. First line will be used if it’s satellite, if it’s perimeter, 8 lines will be connected together to form a closed figure. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| PerimLine.ChnSwitch | char | 0: close. 1: open. |
| PerimLine.AlarmOutTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| PerimLine.RecordDelayTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| PerimLine.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| PerimLine.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| PerimLine.RecordSwitch | char | 0: disable. 1: enable. |
| PerimLine.FtpUploadSwitch | char | 0: disable. 1: enable. |
| PerimLine.CloudSwitch | char | 0: disable. 1: enable. |
| PerimLine.PushSwitch | char | 0: disable. 1: enable. |
| PerimLine.RuleSwitch | char | Each channel use one byte to represent at most 4 rules. 0 - close; 1 - in use. |
| PerimLine.RuleType | char | Each channel use one byte to represent at most 4 rules type.  0 - satellite line; 1 - perimeter line. |
| PerimLine.LineTwoWay | char | Each channel use one byte to represent at most 4 satellite type.  0 - not two way; 1 - two way. |
| PerimLine.Scene | char | Scene. 0: indoor, 1: outdoor. |
| PerimLine.Sensitive | char | Sensitive. Range is {0, 1, 2, 3}. |
| PerimLine.RuleLine[***LineNo*** ].StartX | short | Start x coordinate of perimeter line. |
| PerimLine.RuleLine[***LineNo*** ].StartY | short | Start y coordinate of perimeter line. |
| PerimLine.RuleLine[***LineNo*** ].EndX | short | End x coordinate of perimeter line. |
| PerimLine.RuleLine[***LineNo*** ].EndY | short | End y coordinate of perimeter line. |

## 8.4 Perimeter

### 8.4.1 GetPerimeterConfig

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**Perimeter** |
| --- | --- |
| **Comment** | ***LineNo*** below is the perimeter index. Valid value range is [0 ~ 31]. |
| **Response** | Perimeter.ChnSwitch=1  Perimeter.AlarmOutTime=10  Perimeter.RecordDelayTime=30  Perimeter.AlarmOutManager=1  Perimeter EmailLink=0  Perimeter.RecordSwitch=1  Perimeter.FtpUploadSwitch=0  Perimeter.CloudSwitch=0  Perimeter PushSwitch=0  Perimeter.RuleSwitch=1  Perimeter.RuleType=1  Perimeter LineTwoWay=1  Perimeter.Scene=1  Perimeter.Sensitive=3  Perimeter.RuleLine[***LineNo*** ].StartX=10  Perimeter RuleLine[***LineNo*** ].StartY=10  Perimeter.RuleLine[***LineNo*** ].EndX=20  Perimeter.RuleLine[***LineNo*** ].EndY=30 |

### 8.4.2 SetPerimeterConfig

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**Perimeter**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***LineNo*** below is the perimeter index. Valid value range is [0 ~ 31].  Each channel has at most 64 points coordinates. ie 32 lines. First line will be used if it’s satellite, if it’s perimeter, 8 lines will be connected together to form a closed figure. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Perimeter ChnSwitch | char | 0: close. 1: open. |
| Perimeter.AlarmOutTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| Perimeter.RecordDelayTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| Perimeter.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| Perimeter.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| Perimeter.RecordSwitch | char | 0: disable. 1: enable. |
| Perimeter.FtpUploadSwitch | char | 0: disable. 1: enable. |
| Perimeter.CloudSwitch | char | 0: disable. 1: enable. |
| Perimeter PushSwitch | char | 0: disable. 1: enable. |
| Perimeter.RuleSwitch | char | Each channel use one byte to represent at most 4 rules. 0 - close; 1 - in use. |
| Perimeter.RuleType | char | Each channel use one byte to represent at most 4 rules type.  0 - satellite line; 1 - perimeter line. |
| Perimeter.LineTwoWay | char | Each channel use one byte to represent at most 4 satellite type.  0 - not two way; 1 - two way. |
| Perimeter.Scene | char | Scene. 0: indoor, 1: outdoor. |
| Perimeter.Sensitive | char | Sensitive. Range is {0, 1, 2, 3}. |
| Perimeter RuleLine[***LineNo*** ].StartX | short | Start x coordinate of perimeter line. |
| Perimeter.RuleLine[***LineNo*** ].StartY | short | Start y coordinate of perimeter line. |
| Perimeter.RuleLine[***LineNo*** ].EndX | short | End x coordinate of perimeter line. |
| Perimeter.RuleLine[***LineNo*** ].EndY | short | End y coordinate of perimeter line. |

## 8.5 SODAlarm

### 8.5.1 GetSODAlarm

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**SODAlarm** |
| --- | --- |
| **Comment** | ***RectNo*** below is the OSC rect index. Valid value range is [0 ~ 15]. |
| **Response** | SODAlarm.ChnSwitch=1  SODAlarm.AlarmOutTime=10  SODAlarm.RecordDelayTime=30  SODAlarm.AlarmOutManager=1  SODAlarm.EmailLink=0  SODAlarm.RecordSwitch=1  SODAlarm.FtpUploadSwitch=0  SODAlarm.CloudSwitch=0  SODAlarm.PushSwitch=0  SODAlarm.RuleSwitch=1  SODAlarm.RuleType=1  SODAlarm.RuleRectEnable[0]=1  SODAlarm.RuleRectEnable[1]=1  SODAlarm.RuleRectEnable[2]=1  SODAlarm.RuleRectEnable[3]=1  SODAlarm.Scene=1  SODAlarm.Sensitive=2  SODAlarm.Rect[***RectNo*** ].X=10  SODAlarm.Rect[***RectNo*** ].Y=10  SODAlarm.Rect[***RectNo*** ].Width=50  SODAlarm.Rect[***RectNo*** ].Height=50 |

### 8.5.2 SetSODAlarm

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=S**ODAlarm** |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | result=2 |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| SODAlarm.ChnSwitch | char | 0: close. 1: open. |
| SODAlarm.AlarmOutTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| SODAlarm.RecordDelayTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| SODAlarm.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| SODAlarm.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| SODAlarm.RecordSwitch | char | 0: disable. 1: enable. |
| SODAlarm.FtpUploadSwitch | char | 0: disable. 1: enable. |
| SODAlarm.CloudSwitch | char | 0: disable. 1: enable. |
| SODAlarm.PushSwitch | char | 0: disable. 1: enable. |
| SODAlarm.RuleSwitch | char | Each channel use one byte to represent at most 4 rules. 0 - close; 1 - in use. |
| SODAlarm.RuleType | char | Each channel use one byte to represent at most 4 rules type.  0 - left; 1 - lost. |
| SODAlarm.RuleRectEnable[0] | char | Each channel has at most 4 rules, each rule has at most 4 regions, each bit represent a status of a region. 0 - disable; 1 - enable. |
| SODAlarm.RuleRectEnable[1] |
| SODAlarm.RuleRectEnable[2] |
| SODAlarm.RuleRectEnable[3] |
| SODAlarm.Scene | char | Scene. 0: indoor, 1: outdoor. |
| SODAlarm.Sensitive | char | Sensitive. Range is {0, 1, 2, 3}. |
| SODAlarm.RuleLine[***LineNo*** ].StartX | short | Start x coordinate of rule line. |
| SODAlarm.RuleLine[***LineNo*** ].StartY | short | Start y coordinate of rule line.. |
| SODAlarm. .RuleLine[***LineNo*** ].EnX | short | End x coordinate of rule line.. |
| SODAlarm. .RuleLine[***LineNo*** ].EnY | short | End y coordinate of rule line. |

## 8.6 PDAlarm

### 8.6.1 GetPDAlarm

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**PDAlarm** |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | PD.ChnSwitch=1  PD.AlarmOutTime=10  PD.RecordDelayTime=30  PD .AlarmOutManager=1  PD.EmailLink=0  PD.RecordSwitch=1  PD .FtpUploadSwitch=0  PD.CloudSwitch=0  PD.PushSwitch=0  PD.RuleSwitch=1  PD RuleType=1  PD.Scene=1  PD.Sensitive=3  PD RuleLine[***LineNo*** ].StartX=10  PD RuleLine[***LineNo*** ].StartY=10  PD RuleLine[***LineNo*** ].EndX=20  PD.RuleLine[***LineNo*** ].EndY=30 |

### 8.6.2 SetPDAlarm

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**PDAlarm**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| PD Alarm.ChnSwitch | char | 0: close. 1: open. |
| PDAlarm.AlarmOutTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| PDAlarm.RecordDelayTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| PDAlarm.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| PDAlarm.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| PDAlarm.RecordSwitch | char | 0: disable. 1: enable. |
| PDAlarm FtpUploadSwitch | char | 0: disable. 1: enable. |
| PDAlarm.CloudSwitch | char | 0: disable. 1: enable. |
| PDarm.PushSwitch | char | 0: disable. 1: enable. |
| PDAlarm.RuleSwitch | char | Each channel use one byte to represent at most 4 rules. 0 - close; 1 - in use. |
| PDAlarm.RuleType | char | Each channel use one byte to represent at most 4 rules type.  0 - general mode; 1 - visit mode. |
| PDAlarm.Scene | char | Scene. 0: indoor, 1: outdoor. |
| PDAlarm.Sensitive | char | Sensitive. Range is {0, 1, 2, 3}. |
| PDAlarm.RuleLine[***LineNo*** ].StartX | short | Start x coordinate of rule line. |
| PDAlarm.RuleLine[***LineNo*** ].StartY | short | Start y coordinate of rule line. |
| PDAlarm.RuleLine[***LineNo*** ].EndX | short | End x coordinate of rule line. |
| PDAlarm.RuleLine[***LineNo*** ].EndY | short | End y coordinate of rule line. |

## 8.7 FDAlarm

### 8.7.1 GetFDAlarm

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=FDAlarm |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | FD.ChnSwitch=1  FD.AlarmOutTime=10  FD.RecordDelayTime=30  FD .AlarmOutManager=1  FD.EmailLink=0  FD.RecordSwitch=1  FD.FtpUploadSwitch=0  FD.CloudSwitch=0  FD.PushSwitch=0  FD.RuleSwitch=1  FD RuleType=1  FD.Scene=1  FD.Sensitive=3  FDRuleLine[***LineNo*** ].StartX=10  FDRuleLine[***LineNo*** ].StartY=10  FDRuleLine[***LineNo*** ].EndX=20  FDRuleLine[***LineNo*** ].EndY=30 |

### 8.7.2 SetFDAlarm

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**FDAlarm**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| FDAlarm.ChnSwitch | char | 0: close. 1: open. |
| FDAlarm.AlarmOutTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| FDAlarm.RecordDelayTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| FDAlarm.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| FDAlarm.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| FDAlarm.RecordSwitch | char | 0: disable. 1: enable. |
| FDAlarm FtpUploadSwitch | char | 0: disable. 1: enable. |
| FDAlarm.CloudSwitch | char | 0: disable. 1: enable. |
| FDarm.PushSwitch | char | 0: disable. 1: enable. |
| FDAlarm.RuleSwitch | char | Each channel use one byte to represent at most 4 rules. 0 - close; 1 - in use. |
| FDAlarm.RuleType | char | Each channel use one byte to represent at most 4 rules type.  0 - general mode; 1 - visit mode. |
| FDAlarm.Scene | char | Scene. 0: indoor, 1: outdoor. |
| FDAlarm.Sensitive | char | Sensitive. Range is {0, 1, 2, 3}. |
| FDAlarm.RuleLine[***LineNo*** ].StartX | short | Start x coordinate of rule line. |
| FDAlarm.RuleLine[***LineNo*** ].StartY | short | Start y coordinate of rule line. |
| FDAlarm.RuleLine[***LineNo*** ].EndX | short | End x coordinate of rule line. |
| FDAlarm.RuleLine[***LineNo*** ].EndY | short | End y coordinate of rule line. |

## 8.8 CCAlarm

### 8.8.1 GetCCAlarm

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=CCAlarm |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | CC.ChnSwitch=1  CC.AlarmOutTime=10  CC.RecordDelayTime=30  CC.AlarmOutManager=1  CC.EmailLink=0  CC.RecordSwitch=1  CC.FtpUploadSwitch=0  CC.CloudSwitch=0  CC.PushSwitch=0  CC.RuleSwitch=1  CC RuleType=1  CC.Scene=1  CC.Sensitive=3  CC RuleLine[***LineNo*** ].StartX=10  CC RuleLine[***LineNo*** ].StartY=10  CC RuleLine[***LineNo*** ].EndX=20  CC RuleLine[***LineNo*** ].EndY=30 |

### 8.8.2 SetCCAlarm

| **URL Syntax** | http://*<ip>*/action/setAlarmConfig?name=**CCAlarm**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***LineNo*** below is the rule line index. Valid value range is [0 ~ 31]. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| CCAlarm.ChnSwitch | char | 0: close. 1: open. |
| CCAlarm.AlarmOutTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| CCAlarm.RecordDelayTime | char | Range is {0, 1, 2, 3, 4}.  Successively represent : 0, 10, 20, 40, 60. |
| CCAlarm.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| CCAlarm.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| CCAlarm.RecordSwitch | char | 0: disable. 1: enable. |
| CCAlarm FtpUploadSwitch | char | 0: disable. 1: enable. |
| CCAlarm.CloudSwitch | char | 0: disable. 1: enable. |
| CCarm.PushSwitch | char | 0: disable. 1: enable. |
| CCAlarm.RuleSwitch | char | Each channel use one byte to represent at most 4 rules. 0 - close; 1 - in use. |
| CCAlarm.RuleType | char | Each channel use one byte to represent at most 4 rules type.  0 - general mode; 1 - visit mode. |
| CCAlarm.Scene | char | Scene. 0: indoor, 1: outdoor. |
| CCAlarm.Sensitive | char | Sensitive. Range is {0, 1, 2, 3}. |
| CCAlarm.RuleLine[***LineNo*** ].StartX | short | Start x coordinate of rule line. |
| CCAlarm.RuleLine[***LineNo*** ].StartY | short | Start y coordinate of rule line. |
| CCAlarm.RuleLine[***LineNo*** ].EndX | short | End x coordinate of rule line. |
| CCAlarm.RuleLine[***LineNo*** ].EndY | short | End y coordinate of rule line. |

## 8.9 ODAlarm

### 8.9.1 GetODAlarm

| **URL Syntax** | http://*<ip>*/action/getAlarmConfig?name=**ODAlarm** |
| --- | --- |
| **Comment** |  |
| **Response** | ODAlarm.Switch=1  ODAlarm.Sensitivity=3  ODAlarm.AlarmOutTime=10  ODAlarm.RecordDelayTime=30  ODAlarm.AlarmOutManager=1  ODAlarm.EmailLink=0  ODAlarm.RecordSwitch=1  ODAlarm.FtpUploadSwitch=0  ODAlarm.CloudSwitch=0  ODAlarm.PushSwitch=0 |

### 8.9.2 SetODAlarm

| URL Syntax | http://*<ip>*/action/setAlarmConfig?name=**ODAlarm** |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| ODAlarm.Switch | char | 0: disable. 1: enable. |
| ODAlarm.Sensitivity | char | Range is [1 ~ 6].  Sensitivity of OD.  1: lowest sensitivity.  6: highest sensitivity. |
| ODAlarm.AlarmOutTime | char | Range is 10, 20, 40, 60, 30s, 1min , 2min. |
| ODAlarm.RecordDelayTime | char | Range is 10, 30, 1min, 2min, 5mins. |
| ODAlarm.AlarmOutManager | char | Alarm out switch. If only one alarm out, just use AlarmOutManager[0]. Four alarm out supported. |
| ODAlarm.EmailLink | char | Email link switch.  0: disable. 1: enable. |
| ODAlarm.RecordSwitch | char | 0: disable. 1: enable. |
| ODAlarm.FtpUploadSwitch | char | 0: disable. 1: enable. |
| ODAlarm.CloudSwitch | char | 0: disable. 1: enable. |
| ODAlarm.PushSwitch | char | 0: disable. 1: enable. |

# 9. Record & Snap

## 9.1 General Record

### 9.1.1 GetGeneralRecConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**GeneralRec** |
| --- | --- |
| **Comment** | Current not support. |
| **Response** | Record.ChnSwitch=1  Record.PreRecSwitch=1  Record.State=1  Record.Mode=1  Record.StreamMode=0 |

### 9.1.2 SetGeneralRecConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**GeneralRec**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | Current not support. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Record.ChnSwitch | char | 0: close. 1: open. |
| Record.PreRecSwitch | char | 0: close. 1: open. |
| Record.State | char | Record automatically restored when power off restart. |
| Record.Mode | char | 0: Timer recording.  1: Boot recording. |
| Record.StreamMode | char | 0: mainstream. 1: substream. |

## 9.2 Schedule

### 9.2.1 GetScheduleConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**Schedule** |
| --- | --- |
| **Comment** | ***Channel*** in below table is video channel number, ***weekday*** range is [0-6] (Sunday - Saturday). |
| **Response** | Schedule[0]=111111111111111111111111111111111111111111111111  Schedule[1]= 000000000000000000000000000000000000000000000000  Schedule[1] =111111111111111111111111111111111111111111111111  ...  Schedule[6]=111111111111111111111111111111111111111111111111  RecordSchedule[0]=111111111111111111111111111111111111111111111111  RecordSchedule[1]= 000000000000000000000000000000000000000000000000  RecordSchedule[1] =111111111111111111111111111111111111111111111111  ...  RecordSchedule[6]=111111111111111111111111111111111111111111111111  EmailSchedule[0]=111111111111111111111111111111111111111111111111  EmailSchedule[1]= 000000000000000000000000000000000000000000000000  EmailSchedule[1] =111111111111111111111111111111111111111111111111  ...  EmailSchedule[6]=111111111111111111111111111111111111111111111111 |

### 9.2.2 SetScheduleConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**Schedule**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | In below table: ***ch*** = channel index, ***wd*** = week day index, ***ts*** = time section index. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Schedule[***wd***]  RecordSchedule[***wd***]  EmailSchedule[***wd***] | Char  Char  char | ***wd*** (week day) range is [0 ~ 6] (Sunday - Staurday)  Bit 1: normal record schedule.  Bit 2: motion record schedule.  Bit 3: IO alarm record schedule.  Bit 4: OSC record schedule.  Bit 5: LCD record schedule.  Bit 6:PID record schedule.  1 schedule，0:no schedule.  ***wd*** (week day) range is [0 ~ 6] (Sunday - Staurday)  Bit 1: normal record schedule.  Bit 2: motion record schedule.  Bit 3: IO alarm record schedule.  Bit 4: OSC record schedule.  Bit 5: LCD record schedule.  Bit 6:PID record schedule.  Bit:1 schedule，0:no schedule.  ***wd*** (week day) range is [0 ~ 6] (Sunday - Staurday)  Bit 1: normal email schedule.  Bit 2: motion email schedule.  Bit 3: IO alarm email schedule.  Bit 4: OSC email schedule.  Bit 5: LCD email schedule.  Bit 6:PID email schedule.  Bit:1 schedule，0:no schedule. |

## 9.3 Schedule

### 9.3.1 GetScheduleConfig

| **URL Syntax** | http://*<ip>*/action/getConfig?name=**Schedule** |
| --- | --- |
| **Comment** | ***Channel*** in below table is video channel number, ***weekday*** range is [0-6] (Sunday - Saturday). |
| **Response** | Schedule[0]=111111111111111111111111111111111111111111111111  Schedule[1]= 000000000000000000000000000000000000000000000000  Schedule[1] =111111111111111111111111111111111111111111111111  ...  Schedule[6]=111111111111111111111111111111111111111111111111  RecordSchedule[0]=111111111111111111111111111111111111111111111111  RecordSchedule[1]= 000000000000000000000000000000000000000000000000  RecordSchedule[1] =111111111111111111111111111111111111111111111111  ...  RecordSchedule[6]=111111111111111111111111111111111111111111111111  EmailSchedule[0]=111111111111111111111111111111111111111111111111  EmailSchedule[1]= 000000000000000000000000000000000000000000000000  EmailSchedule[1] =111111111111111111111111111111111111111111111111  ...  EmailSchedule[6]=111111111111111111111111111111111111111111111111 |

### 9.3.2 SetScheduleConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**Schedule**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | In below table: ***ch*** = channel index, ***wd*** = week day index, ***ts*** = time section index. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Schedule[***wd***]  RecordSchedule[***wd***]  EmailSchedule[***wd***] | Char  Char  char | ***wd*** (week day) range is [0 ~ 6] (Sunday - Staurday)  Bit 1: normal record schedule.  Bit 2: motion record schedule.  Bit 3: IO alarm record schedule.  Bit 4: OSC record schedule.  Bit 5: LCD record schedule.  Bit 6:PID record schedule.  1 schedule，0:no schedule.  ***wd*** (week day) range is [0 ~ 6] (Sunday - Staurday)  Bit 1: normal record schedule.  Bit 2: motion record schedule.  Bit 3: IO alarm record schedule.  Bit 4: OSC record schedule.  Bit 5: LCD record schedule.  Bit 6:PID record schedule.  Bit:1 schedule，0:no schedule.  ***wd*** (week day) range is [0 ~ 6] (Sunday - Staurday)  Bit 1: normal email schedule.  Bit 2: motion email schedule.  Bit 3: IO alarm email schedule.  Bit 4: OSC email schedule.  Bit 5: LCD email schedule.  Bit 6:PID email schedule.  Bit:1 schedule，0:no schedule. |

## 9.4 snapshot

| **URL Syntax** | http://<IP>/action/snapshot |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

# 10. System

## 10.1 General

### 10.1.1 GetSysGeneralConfig

| **URL Syntax** | http://*<ip>*/action/ getSysConfig?name=**SystemInfo** |
| --- | --- |
| **Comment** |  |
| **Response** | System.LangUseFlag=1  System.CurrentLang=1  System.VideoFormat=1  System.DateMode=0  System.TimeMode=0  System.Time=2015-06-18\_15:03:00  System.MaintainSwitch=1  System.MaintainPeriod1=0  System.MaintainPeriod2=1  System.MaintainTime=03:00 |

### 10.1.2 SetSysGeneralConfig

| **URL Syntax** | http://*<ip>*/action/setSysConfig?name=**SystemInfo**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| System.LangUseFlag | integer | Language flag of current usage, one bit represent a kind of language. |
| System.CurrentLang | char | Current system language. |
| System.VideoFormat | char | 0 - TS\_PAL, 1 - TS\_NTSC |
| System.DateMode | char | Date mode |
| System.TimeMode | char | Time mode.  0: 24 hours mode.  1: 12 hours mode. |
| System.Time | string | System time .  Format: Year-month-Day\_Hour:minute:Second . |
| System.MaintainSwitch | char | 0: close. 1: open. |
| System.MaintainPeriod1 | char | 0: every day.  1: every week.  2: every month. |
| System.MaintainPeriod2 | char | Some day in a week or some day in a month. |
| System.MaintainTime | string | Maintain time .  Format: Hour:minute . |

## 10.2 User

### 10.2.1 GetUserInfo

| **URL Syntax** | http://*<ip>*/action/ getSysConfig?name=**UserInfo**&index=<***UserNo***> |
| --- | --- |
| **Comment** | ***UserNo:*** user list index. Valid value range is [0 ~ 6]. 0 : admin |
| **Response** | User[***UserNo***].UserName=raysharp  User[***UserNo***].Password=519070  User[***UserNo***].PwdConfirm=519070  User[***UserNo***].SetRight=1  User[***UserNo***].PreviewChannel=1  User[***UserNo***].PlayBackChannel=1  User[***UserNo***].BackupChannel=1  User[***UserNo***].PlayBack=1  User[***UserNo***].Backup=1  User[***UserNo***].Preview=1  User[***UserNo***].Switch=1  User[***UserNo***].PwdSwitch=0  User[***UserNo***].IsLive=1 |

## 10.3 NTP

### 10.3.1 GetNTPConfig

| **URL Syntax** | http://*<ip>*/action/ getSysConfig?name=**NTP** |
| --- | --- |
| **Comment** |  |
| **Response** | NTP.Switch=1  NTP.Server=3  NTP.Port=12  NTP.SyncPeriod=31  NTP.TimeZone=8 |

### 10.3.2 SetNTPConfig

| **URL Syntax** | http://*<ip>*/action/setSysConfig?name=**NTP**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| NTP.Switch | char | Enable/Disable NTP server. |
| NTP.Server | char | NTP server flag. |
| NTP.Port | short | Range is [1-65535].  Port of NTP server. |
| NTP.SyncPeriod | short | Range is [0-65535], unit is minutes |
| NTP.TimeZone | char | Range is [0-32].  0: "GMT+00:00"  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"  8: "GMT+05:30"  9: "GMT+05:45"  10: "GMT+06:00"  11: "GMT+06:30"  12: "GMT+07:00"  13: "GMT+08:00"  14: "GMT+09:00"  15: "GMT+09:30"  16: "GMT+10:00"  17: "GMT+11:00"  18: "GMT+12:00"  19: "GMT+13:00"  20: "GMT-01:00"  21: "GMT-02:00"  22: "GMT-03:00"  23: "GMT-03:30"  24: "GMT-04:00"  25: "GMT-05:00"  26: "GMT-06:00"  27: "GMT-07:00"  28: "GMT-08:00"  29: "GMT-09:00"  30: "GMT-10:00"  31: "GMT-11:00"  32: "GMT-12:00" |

## 10.4 DST

### 10.4.1 GetDSTConfig

| **URL Syntax** | http://*<ip>*/action/getSysConfig?name=**DST** |
| --- | --- |
| **Comment** |  |
| **Response** | DST.StartHour=00:00:00  DST.EndHour=23:59:59  DST.StartDate=2015-04-12  DST.EndDate=2015-04-12  DST.StartMonth=1  DST.EndMonth=2  DST.StartWeek=0  DST.EndWeek=1  DST.StartWeekDay=1  DST.EndWeekDay=2  DST.Switch=0  DST.Mode=0  DST.HaveDstTime=1  DST.Offset=0 |

### 10.4.2 SetDSTConfig

| **URL Syntax** | http://*<ip>*/action/setSysConfig?name=**DST**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| DST.StartHour | string | Dst start time. Format : hour:minute:second. |
| DST.EndHour | string | Dst end time. Format : hour:minute:second. |
| DST.StartDate | string | Dst start date. Format: year-month-day. |
| DST.EndDate | string | Dst end date. Format: year-month-day. |
| DST.StartMonth | char | Range is [0 ~ 11]. |

| DST.EndMonth | char | Range is [0 ~ 11]. |
| --- | --- | --- |
| DST.StartWeek | char | Range is {0, 1, 2, 3, 4}.  0: the first week, 1: the second week... |
| DSY.EndWeek | char | Range is {0, 1, 2, 3, 4}.  0: the first week, 1: the second week... |
| DST.StartWeekDay | char | Which day start from.  0-Sun, 1-Mon, ... 6-Sat |
| DST.EndWeekDay | char | Which day end of.  0-Sun, 1-Mon, ... 6-Sat |
| DST.Switch | char | Enable/Disable DST (daylight saving time) |
| DST.Mode | char | 0: Week.  1: Date. |
| DST.HaveDstTime | char | 0: not DST. 1: is DST. |
| DST.Offset |  | Dst offset value.  0: 1hour.  1: 2hour. |

## 10.5 Device

### 10.5.1 GetDeviceConfig

| **URL Syntax** | http://*<ip>*/action/getSysConfig?name=**DeviceInfo** |
| --- | --- |
| **Comment** |  |
| **Response** | Device.Name=CH292H3\_16M  Device.ID=000000  Device.Type=IP CAMERA  Device.HardwareVersion=RS\_CM\_127B  Device.SoftwareVersion=V2.1.2.1\_161010  Device.IEClientVersion=V1.0.3.20\_160923  Device.MACAddress=D5-53-04-00-00-80 |

### 10.5.2 SetDeviceConfig

| **URL Syntax** | http://*<ip>*/action/setSysConfig?name=**DeviceInfo**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Device.Name | string | Device name |
| Device.ID | Unsigned int | Device ID |
| Device.Type | string | Device type. |
| Device.HardwareVersion | string | Hardware version. |
| Device.SoftwareVersion | string | Software version |
| Device.IEClientVersion | string | IEClient version |
| Device.MACAddress | string | MAC address |

# 11. Storage

## 11.1 Device Storage

### 11.1.1 GetDevStorageConfig

| **URL Syntax** | http://*<ip>*/action/getSysConfig?name=**DevStorage** |
| --- | --- |
| **Comment** |  |
| **Response** | Device.Redundancy=1  Device.OverWriteSwitch=1  Device.OverWritePeriod=6  Device.OverWriteMode=1 |

### 11.1.2 SetDevStorageConfig

| **URL Syntax** | http://*<ip>*/action/setSysConfig?name=**DevStorage**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or Error |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Device.Redundancy | integer | Each bit represent a disk attribute.  0: main disk, 1: sub disk. |
| Device.OverWriteSwitch | char | 0:close, 1: open. |
| Device.OverWritePeriod | char | Overwrite period. unit is hour. |
| Device.OverWriteMode | char | Overwrite mode.  0: by hour, 1: by day. |

# 12. Advance

## 12.1 IP Filter

### 12.1.1 GetIPFilterConfig

| **URL Syntax** | http://*<ip>*/action/getSysConfig?name=**IPFilter** |
| --- | --- |
| **Comment** | ***FilterNo*** below is the banned IP list index. Valid value range is [0 ~ 15]. |
| **Response** | IPFilter.Switch=1  IPFilter.Filtered[***FilterNo*** ].IPAddress=192.168.1.111  IPFilter.Filtered[***FilterNo*** ].Enable=1 |

### 12.1.2 SetIPFilterConfig

| **URL Syntax** | http://*<ip>*/action/setConfig?name=**IPFilter**&<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** | ***FilterNo***  is the banned IP list index. Valid value range is [0 ~ 15]. |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| IPFilter.Switch | char | Enable/Disable access filter function. |
| IPFilter.Filtered[***FilterNo*** ].IPAddress | string | Filtered IP address. Max length: 32. |
| IPFilter.Filtered[***FilterNo*** ].Enable | char | Filtered IP address switch.  0: disable, 1: enable. |

## 12.2 ParamDefault

### 12.2.1 ColorDefault

| **URL Syntax** | http://*<ip>*/action/colorDefault? |
| --- | --- |
| **Comment** |  |
| **Response** | Color.Brightness=128  Color.Contrast=128  Color.Hue=128  Color.Saturation=128  Color.Sharpness=128 |

### 12.2.2 ImageDefault

| **URL Syntax** | http://*<ip>*/action/imageDefault? |
| --- | --- |
| **Comment** |  |
| **Response** | Camera.IRCutMode=0  Camera.IRCutDelay=2  Camera.IRCutSensitive=1  Camera.Mirror=0  Camera.Flip=0  Camera.Rotate=0  Camera.BackLightMode=1  Camera.BackLightLevel=1  Camera.R3dnrMode=1  Camera.R3dnrThreshTarget=128  Camera.DISEnable=1  Camera.DefogMode=1  Camera.DefogStrength=128  Camera.DwdrMode=1  Camera.DwdrStrength=128  Camera.GainControlMode=2  Camera.WBMode=0  Camera.Rgain=128  Camera.Ggain=128  Camera.Bgain=128  Camera.ShutterMode=0  Camera.ShutterSpeed=25  Camera.FlickerCtrl=0 |

## 12.3 System Operation

### 12.3.1 Reboot

| **URL Syntax** | http://*<ip>*/action/reboot? |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

### 12.3.2 LoadDefault

| **URL Syntax** | http://*<ip>*/action/loadDefault?<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Default.DisplayFlag | char | Display page default flag. 0 :disable; 1 : enable. |
| Default.RecordFlag | char | Record page default flag. 0 :disable; 1: enable. |
| Default.NetworkFlag | char | Network page default flag. 0 :disable; 1 : except network setting parameter; 2 : enable all. |
| Default.AlarmFlag | char | Alarm page default flag. 0 :disable; 1 : enable. |
| Default.DeviceFlag | char | Device page default flag. 0 :disable; 1 : enable. |
| Default.SystemFlag | char | System page default flag. 0 : disable; 1 :enable. |
| Default.AdvanceFlag | char | Advance page default flag. 0 : disable; 1 : enable. |

# 13. Events

## 13.1 EventHandler

### 13.1.1 SubscribeEvent

| **URL Syntax** | http://*<ip>*/action/eventManage?name=**Subscribe&subscribe.ip= &subscribe.port=** |
| --- | --- |
| **Comment** | EventType value range is [1 ~ 5].  1 : motion detect  2 : IO alarm  3: Video loss  4 : OD alarm  5: storage abnormal  6:net abnormal  7: line crossing  8: Perimeter Intrusion  9: stationary object  10: Pedestrian Detection  11: Face Detection  12: cross counting  Status value range is {0, 1}.  1 : event start  0 : event stop |
| **Response head** | POST http://172.18.12.93:80/action/eventManage HTTP/1.1  Host: 172.18.12.93  DATE: Thu, 28 Jul 2016 18:25:10 GMT  Content-Type: text/html; charset=utf-8  Content-Length: 67 |
| **Response body** | EventType=1  Status=1  Channel=0  TriggerTime=2016-06-24 16:57:24 |

### 13.1.2 UnSubscribeEvent

| **URL Syntax** | http://*<ip>*/action/eventManage?name=**unSubscribe&subscribe.ip= &subscribe.port=** |
| --- | --- |
| **Comment** | OK means stop receive event data. |
| **Response** | OK or ERROR |

# 14. Ptz

### 14.1 ptz

| **URL Syntax** | http://*<ip>*/action/ptz?<**paramName**>=<**paramValue**>[&<**paramName**>=<**paramValue**>...] |
| --- | --- |
| **Comment** |  |
| **Response** | OK or ERROR |

| **ParamName** | **ParamValue type** | **Description** |
| --- | --- | --- |
| Ptz.Action | char | 0:start,1:stop |
| Ptz.Cmd | char | 9:ZOOM\_IN ,  10: ZOOM\_OUT  11: FOCUS\_NEAR  12: FOCUS\_FAR |
| Ptz.Speed | char | Range[1-8] |