Camera HTTP API
User Guide

Version 4

2019-9

Revision History	Description	Data
Version 1.0 Revision 1	Initial version	2016-06-01
Version 1.1 Revision 2	1. Add the interface of short connection accessing CGI. 2. Add rtmp port parameter to GetNetPort and SetNetPort interfaces. 3. Add hourFmt parameter to GetTime and SetTime interfaces. 4. Add streamType and interval parameters to GetFtp and SetFtp interfaces. 5. Add schedule parameter to GetEmail and SetEmail interfaces. 6. Add GetPush and SetPush interfaces. 7. Remove enable, action and schedule parameters to GetAlarm and SetAlarm interfaces. 8. Add emailSchedule, pushSchedule and hourFmt to GetAbility interface.	2016-11-07
Version 1.2 Revision 3	1. Add UpgradePrepare 2. Add Shutdown 3. Add GetAuth and SetAuth 4. Add GetCloud and SetCloud 5. Get3G and Set3G 6. GetP2p and SetP2p 7. Add Preview 8. Add rtmp=start and rtmp=stop and rtmp=auth for rtmp 9. Ptz add GetPtzSerial SetPtzSerial GetPtzTattern SetPtzTattern command 10. camera increace GetAutoFocus SetAutoFocus command of focus 11. LED increace GetIrLights SetIrLights GetPowerLed SetPowerLed command 12. Add GetAudioAlarm SetAudioAlarm 13. Add HeartBeat 14. Add GetCrop SetCrop 15. Add GetAutoUpgrade SetAutoUpgrade CheckFirmware UpgradeOnline UpgradeStatus in system mode	2019-4-26
Version 1.3	1. Ptz add GetPtzSerial SetPtzSerial	2019-9-30

Revision 4	GetPtzTattern SetPtzTattern command 2. System delete ImportCfg 3. Security delete GetAuth SetAuth 4. Alarm add SetAudioAlarm 5. Complete the responsed code	

Contents

1 Scope

The document defines a series of HTTP and HTTPS based application programming interface, covering the System, Security, Network, Video input, Enc, Record, PTZ, and Alarm modules.

2 HTTP & Json

2.1 Protocol

Support both HTTP and HTTPS.

And only support the POST method, get and set all through it.

```
POST /cgi-bin/api.cgi?cmd=xxx&token=20343295&paramxxx=xxx HTTP/1.1
```

The payload type is a JSON or file that is specified by Content-Type.

Content-Type = “application/octet-stream” or "application/json"

2.2 JSON

JSON (JavaScript Object Notation) is based on a subset of the JavaScript

Programming Language, Standard ECMA-262 3rd Edition - December 1999.

Request:

```
[
    {
        "cmd":string,
    "action":int,
        "param“:
        {
            "name": val,    // val = string or int
      ...
        },
    }
    ...
]
```

Response:

```
[
    {
        "cmd":string,
        "code“:int, // rsp code, 0:success, others: false
    "value": or "error" // "value" when code = 0, "error" when "code" = 1
        {
            "name": val,    //  val = string or int
      ...
        },
    }
    ...
]
```

2.3 token

Token is the only global certification of developers. Token is required whenever

developers are calling each port. Normally the lease for each token is 3600 seconds and you may regain it after it expires. Please refer to the Login command for the methods of requiring token.

2.4 Abbreviations

For the purposes of the present document, the following abbreviations apply:

M/O Mandatory/Optional

2.5 Definitions

For the purposes of the present document, the following definitions apply:

initial: The initial value of the configuration.
range: The data range of the configuration.
value: The current value of the configuration.
action : Obtain **initial**, **range** and **value** when the value is 1, obtain only the **value** when the value is 0.
channel : The channel number of the current device.

2.6 Example

2.6.1 Get token first

Request：

Post /cgi-bin/api.cgi?cmd=Login HTTP/1.1

Response：

HTTP/1.1 200 OK
Server: nginx/1.14.2
Date: Wed, 25 Sep 2019 06:34:59 GMT
Content-Type: text/html
Transfer-Encoding: chunked
Connection: keep-alive

Pragma: O-cache
Cache-Control: O-cache
Content-Type: application/json; charset=utf-8


```
[
  {
    "cmd" : "Login",
    "code" : 0,
    "value" : {
    "Token" : {
        "leaseTime" : 3600,
        "name" : "011465962723"
      }
    }
  }
]
```


2.6.2 Execute command GetUpnp

Request：

Post /cgi-bin/api.cgi?cmd=GetUpnp&token=011465962723 HTTP/1.1

Response：

HTTP/1.1 200 OK
Server: nginx/1.14.2
Date: Wed, 25 Sep 2019 06:50:49 GMT
Content-Type: text/html
Transfer-Encoding: chunked
Connection: keep-alive
Pragma: O-cache
Cache-Control: O-cache
Content-Type: application/json;charset=utf-8


```
[
  {
    "cmd" : "GetUpnp",
    "code" : 0,
    "initial" : {
      "Upnp" : {
```

```
        "enable" : 0
      }
    },
    "range" : {
      "Upnp" : {
        "enable" : "boolean"
      }
    },
    "value" : {
      "Upnp" : {
        "enable" : 0
      }
    }
  }
]
```

Note: Either cmd or token or both should be existed when requesting URL.

2.7 Preview

Protocol	RTMP
Request URL	rtmp://192.168.2.120/bcs/channel{channelId}_{streamName}.bcs?token=TOKEN&channel={channelId}&stream={streamType}
Field	Description
token	The only global certification of developers. Please refer to the Login command for the methods of requiring token.
channel	The channel number of the device (channel id)
stream	Stream type[0,1,2]
Note : The correspondences between the streamName and streamType in Request URL is shown as follow: Main Stream： streamName=main, streamType=0. Sub Stream： streamName=sub, streamType=1. Extern Stream： streamName=ext, streamType=2.	

2.8 Short Connection

The short connection interface is for users to skip the process of logging in to the IP Camera to get token. In this way, users just need the user name and password to access the IP Camera easily. Here is how short connection works.

e.g. Previewing:

rtmp://192.168.2.128/bcs/channel0_main.bcs?
channel=0&stream=0&user=admin&password=123456
e.g. Snapping picture:

http://192.168.2.128/cgi-bin/api.cgi?
cmd=Snap&channel=0&rs=Get&user=admin&password=123456

3 commands

3.1 System

3.1.1 GetAbility

- **Interface Description**

It is used to get system ability of appointed user.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetAbility&token=TOKEN

- **Post Data**

Data example
[{

```
  "cmd":"GetAbility",
  "param":{
   "User":{
    "userName":"admin"
   }
    }
 }
]
```

Field description

Field	Description	M/O
userName	User name, it should be consisted of less than 32 characters, if the user name is NULL, then it would get current user ability.	M

- **Return data description**

Return data correctly

Each domain is corresponding to a functional module. The permit field marks access right, validating in least significant three bits: the most significant bit indicates execution permission, the first bit indicates revision permission, and the second bit indicates read/write permission. The ver field indicates the version number. 0 means the feature is not supported in that version, nonzero means the feature is supported. Different version numbers indicate those certain functional modules support different functional options.

```
[
  {
    "cmd" : "GetAbility",
    "code" : 0,
    "value" : {
      "Ability" : {
        "3g" : {
          "permit" : 0,
          "ver" : 0
        },
        "abilityChn" : [
          {
            "alarmIoIn" : {
              "permit" : 0,
              "ver" : 0
            },
```

```
"alarmIoOut" : {
  "permit" : 0,
  "ver" : 0
},
"alarmMd" : {
  "permit" : 6,
  "ver" : 1
},
"alarmRf" : {
  "permit" : 0,
  "ver" : 0
},
"cameraMode" : {
  "permit" : 0,
  "ver" : 1
},
"enc" : {
  "permit" : 6,
  "ver" : 1
},
"ftp" : {
  "permit" : 6,
  "ver" : 2
},
"image" : {
  "permit" : 6,
  "ver" : 1
},
"isp" : {
  "permit" : 6,
  "ver" : 1
},
"live" : {
  "permit" : 4,
  "ver" : 1
},
"mask" : {
  "permit" : 6,
  "ver" : 1
},
"osd" : {
  "permit" : 6,
  "ver" : 1
```

```
            },
            "ptzCtrl" : {
              "permit" : 1,
              "ver" : 1
            },
            "ptzPatrol" : {
              "permit" : 7,
              "ver" : 1
            },
            "ptzPreset" : {
              "permit" : 7,
              "ver" : 1
            },
            "ptzTattern" : {
              "permit" : 7,
              "ver" : 0
            },
            "ptzType" : {
              "permit" : 0,
              "ver" : 2
            },
            "recCfg" : {
              "permit" : 6,
              "ver" : 1
            },
            "recDownload" : {
              "permit" : 6,
              "ver" : 1
            },
            "recReplay" : {
              "permit" : 6,
              "ver" : 1
            },
            "recSchedule" : {
              "permit" : 6,
              "ver" : 1
            },
            "snap" : {
              "permit" : 6,
              "ver" : 0
            }
          }
        ],
```

```
        "alarmDisconnet" : {
          "permit" : 6,
          "ver" : 1
        },
        "alarmHddErr" : {
          "permit" : 6,
          "ver" : 1
        },
        "alarmHddFull" : {
          "permit" : 6,
          "ver" : 1
        },
        "alarmIpConflict" : {
          "permit" : 6,
          "ver" : 1
        },
        "auth" : {
          "permit" : 6,
          "ver" : 1
        },
        "autoMaint" : {
          "permit" : 6,
          "ver" : 1
        },
        "ddns" : {
          "permit" : 6,
          "ver" : 6
        },
        "devInfo" : {
          "permit" : 4,
          "ver" : 1
        },
        "disk" : {
          "permit" : 0,
          "ver" : 0
        },
        "display" : {
          "permit" : 6,
          "ver" : 1
        },
        "email" : {
          "permit" : 6,
          "ver" : 2
```

```
    },
    "emailSchedule" : {
      "permit" : 6,
      "ver" : 1
    },
    "exportCfg" : {
      "permit" : 4,
      "ver" : 1
    },
    "hourFmt" : {
      "permit" : 6,
      "ver" : 1
    },
    "http" : {
      "permit" : 6,
      "ver" : 1
    },
    "https" : {
      "permit" : 6,
      "ver" : 1
    },
    "importCfg" : {
      "permit" : 2,
      "ver" : 1
    },
    "ipcManager" : {
      "permit" : 6,
      "ver" : 1
    },
    "localLink" : {
      "permit" : 6,
      "ver" : 1
    },
    "log" : {
      "permit" : 6,
      "ver" : 1
    },
    "mediaPort" : {
      "permit" : 6,
      "ver" : 1
    },
    "ntp" : {
      "permit" : 6,
```

```
    "ver" : 1
  },
  "online" : {
    "permit" : 6,
    "ver" : 1
  },
  "onvif" : {
    "permit" : 6,
    "ver" : 1
  },
  "p2p" : {
    "permit" : 0,
    "ver" : 0
  },
  "performance" : {
    "permit" : 4,
    "ver" : 1
  },
  "pppoe" : {
    "permit" : 6,
    "ver" : 1
  },
  "push" : {
    "permit" : 6,
    "ver" : 1
  },
  "pushSchedule" : {
    "permit" : 6,
    "ver" : 1
  },
  "reboot" : {
    "permit" : 1,
    "ver" : 1
  },
  "restore" : {
    "permit" : 1,
    "ver" : 1
  },
  "rtmp" : {
    "permit" : 6,
    "ver" : 1
  },
  "rtsp" : {
```

```
            "permit" : 6,
            "ver" : 1
          },
          "sdCard" : {
            "permit" : 6,
            "ver" : 1
          },
          "talk" : {
            "permit" : 0,
            "ver" : 0
          },
          "time" : {
            "permit" : 6,
            "ver" : 1
          },
          "tvSystem" : {
            "permit" : 6,
            "ver" : 1
          },
          "upgrade" : {
            "permit" : 1,
            "ver" : 1
          },
          "upnp" : {
            "permit" : 6,
            "ver" : 1
          },
          "user" : {
            "permit" : 6,
            "ver" : 1
          },
          "wifi" : {
            "permit" : 6,
            "ver" : 3
          }
        }
      }
    }
]
```


Field description	
Field	**Corresponding commands**
3g	"Get3G" " Set3G"
autoMaint	"GetAutoMaint" " SetAutoMaint"

ddns	"GetDdns" "SetDdns"
devInfo	"GetDevInfo"
email	"GetEmail" "SetEmail" "TestEmail"
exportCfg	"ExportCfg"
importCfg	"ImportCfg"
localLink	"GetLocalLink" "SetLocalLink"
mediaPort	"GetNetPort" "SetNetPort"
ntp	"GetNtp" "SetNtp"
online	"GetOnline" "Disconnect"
p2p	"GetP2p" "SetP2p"
performance	"GetPerformance"
reboot	"Reboot"
restore	"Restore"
rtmp	"rtmp=start" "rtmp=stop" "rtmp=auth"
sdCard	"GetHddInfo" "Format"
time	"GetTime" "SetTime"
tvSystem	"GetNorm" "SetNorm"
upgrade	"Upgrade"
upnp	"GetUpnp" "SetUpnp"
user	"GetUser" "AddUser" "DelUser" "ModifyUser"
alarmMd	"GetAlarm" "SetAlarm"
enc	"SetEnc" "GetEnc"
ftp	"SetFtp" "TestFtp"
image	"GetImage" "SetImage"
isp	"GetIsp" "SetIsp"
mask	"GetMask" "SetMask"
osd	"GetOsd" "SetOsd"
ptzCtrl	"PtzCtrl"
ptzPatrol	"GetPtzPatrol" "SetPtzPatrol"
ptzPreset	"GetPtzPreset" "SetPtzPreset"
recCfg	"SetRec" "GetRec"
recDownload	"Search" "Download"
snap	" Snap"

3.1.2 GetDevInfo

- **Interface Description**

It is used to get device information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetDevInfo&token=TOKEN

- **Post Data**

Data example		

[
{
"cmd":"GetDevInfo"
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "GetDevInfo",
"code" : 0,
"value" : {
"DevInfo" : {
"B485" : 0,
"IOInputNum" : 0,
"IOOutputNum" : 0,
"buildDay" : "build 16052755",
"cfgVer" : "v2.0.0.0",
"channelNum" : 1,
"detail" : "IPC_3816M110000000100000",
"diskNum" : 1,
"firmVer" : "66_16052755_v1.0.0.30",
"hardVer" : "IPC_3816M",
"model" : "RLC-423S",
"name" : "Camera1",
"serial" : "00000000000000",

<table>
<tr><td>"type" : "IPC",
"wifi" : 1
}
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	description
IOInputNum	The number of IO input port.
IOOutputNum	The number of IO output port.
buildDay	The establish date.
cfgVer	The version number of configuration information.
channelNum	The channel number.
detail	The details of device information.
diskNum	The number of USB disk or SD card.
firmVer	The version number of the firmware.
hardVer	The version number of the hardware.
name	Device name.
type	Device type.
wifi	Whether Wi-Fi is supported.

3.1.3 GetTime

- **Interface Description**

It is used to get time from device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetTime&token=TOKEN

- **Post Data**

Data example

[
{
"cmd":"GetTime",
"action":1
}

]		
Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : "GetTime",
    "code" : 0,
    "initial" : {
      "Dst" : {
        "enable" : 0,
        "endHour" : 2,
        "endMin" : 0,
        "endMon" : 10,
        "endSec" : 0,
        "endWeek" : 5,
        "endWeekday" : 0,
        "offset" : 1,
        "startHour" : 2,
        "startMin" : 0,
        "startMon" : 3,
        "startSec" : 0,
        "startWeek" : 2,
        "startWeekday" : 0
      },
      "Time" : {
        "day" : 1,
        "hour" : 0,
        "min" : 0,
        "mon" : 0,
        "sec" : 0,
        "timeFmt" : "DD/MM/YYYY",
        "timeZone" : 28800,
        "year" : 0,
        "hourFmt" : 0
      }
    },
```

```
"range" : {
  "Dst" : {
    "enable" : "boolean",
    "endHour" : {
      "max" : 23,
      "min" : 0
    },
    "endMin" : {
      "max" : 59,
      "min" : 0
    },
    "endMon" : {
      "max" : 12,
      "min" : 1
    },
    "endSec" : {
      "max" : 59,
      "min" : 0
    },
    "endWeek" : {
      "max" : 5,
      "min" : 1
    },
    "endWeekday" : {
      "max" : 6,
      "min" : 0
    },
    "offset" : {
      "max" : 2,
      "min" : 1
    },
    "startHour" : {
      "max" : 23,
      "min" : 0
    },
    "startMin" : {
      "max" : 59,
      "min" : 0
    },
    "startMon" : {
      "max" : 12,
      "min" : 1
    },
```

```
    "startSec" : {
      "max" : 59,
      "min" : 0
    },
    "startWeek" : {
      "max" : 5,
      "min" : 1
    },
    "startWeekday" : {
      "max" : 6,
      "min" : 0
    }
  },
  "Time" : {
    "day" : {
      "max" : 31,
      "min" : 1
    },
    "hour" : {
      "max" : 23,
      "min" : 0
    },
    "min" : {
      "max" : 59,
      "min" : 0
    },
    "mon" : {
      "max" : 12,
      "min" : 1
    },
    "sec" : {
      "max" : 59,
      "min" : 0
    },
    "timeFmt" : [ "MM/DD/YYYY", "YYYY/MM/DD", "DD/MM/YYYY" ],
    "timeZone" : {
      "max" : 43200,
      "min" : -46800
    },
    "year" : {
      "max" : 2100,
      "min" : 1900
    },
```

```
        "hourFmt" : {
          "max" : 1,
          "min" : 0
        }
      }
    },
    "value" : {
      "Dst" : {
        "enable" : 1,
        "endHour" : 2,
        "endMin" : 0,
        "endMon" : 10,
        "endSec" : 0,
        "endWeek" : 5,
        "endWeekday" : 0,
        "offset" : 1,
        "startHour" : 2,
        "startMin" : 0,
        "startMon" : 3,
        "startSec" : 0,
        "startWeek" : 2,
        "startWeekday" : 0
      },
      "Time" : {
        "day" : 16,
        "hour" : 15,
        "min" : 24,
        "mon" : 6,
        "sec" : 47,
        "timeFmt" : "MM/DD/YYYY",
        "timeZone" : -28800,
        "year" : 2016,
        "hourFmt" : 0
      }
    }
  }
]
```


Field description

Field	description
Dst	Daylight Savings Time
enable	Enable Daylight Savings Time
endHour	The end of Daylight Savings Time(Hour)
endMin	The end of Daylight Savings Time(Minute)

endMon	The end of Daylight Savings Time(Month)
endSec	The end of Daylight Savings Time(Second)
endWeek	The end of Daylight Savings Time(Week)
endWeekday	The end of Daylight Savings Time(Day)
offset	Time offset
startHour	Daylight Savings Time starting time(Hour)
startMin	Daylight Savings Time starting time(Minute)
startMon	Daylight Savings Time starting time(Month)
startSec	Daylight Savings Time starting time(Second)
startWeek	Daylight Savings Time starting time(Week)
startWeekday	Daylight Savings Time starting time(Day)
Time	System time
year	Year
mon	Month
day	Day
hour	Hour
min	Minute
sec	Second
timeFmt	Time format
timeZone	Time zone
hourFmt	Hour format,0 is for 24 hour clock， 1 is for 12 hour clock

3.1.4 SetTime

- **Interface Description**

It is used to set time of the device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetTime&token=TOKEN

- **Post Data**

Data example

[
{
"cmd":"SetTime",
"param" : {

```
      "Dst" : {
        "enable" : 0,
        "endHour" : 2,
        "endMin" : 0,
        "endMon" : 10,
        "endSec" : 0,
        "endWeek" : 5,
        "endWeekday" : 0,
        "offset" : 1,
        "startHour" : 2,
        "startMin" : 0,
        "startMon" : 3,
        "startSec" : 0,
        "startWeek" : 2,
        "startWeekday" : 0
      },
      "Time" : {
        "day" : 6,
        "hour" : 20,
        "min" : 9,
        "mon" : 6,
        "sec" : 32,
        "timeFmt" : "DD/MM/YYYY",
        "timeZone" : -28800,
        "year" : 2016,
        "hourFmt" : 0
      }
    }
  }
]
```


Field description

Field	Description	M/O
Dst	See also GetTime	O
enable	See also GetTime	O
endHour	See also GetTime	O
endMin	See also GetTime	O
endMon	See also GetTime	O
endSec	See also GetTime	O
endWeek	See also GetTime	O
endWeekday	See also GetTime	O
offset	See also GetTime	O
startHour	See also GetTime	O
startMin	See also GetTime	O

startMon	See also GetTime	O
startSec	See also GetTime	O
startWeek	See also GetTime	O
startWeekday	See also GetTime	O
year	See also GetTime	O
mon	See also GetTime	O
day	See also GetTime	O
hour	See also GetTime	O
min	See also GetTime	O
sec	See also GetTime	O
timeFmt	See also GetTime	O
timeZone	See also GetTime	O
hourFmt	See also GetTime	O

- **Return data description**

Return data correctly	

[
{
"cmd" : "SetTime",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**

3.1.5 GetAutoMaint

- **Interface Description**

It is used to get device automatic maintenance information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetAutoMaint&token=TOKEN

- **Post Data**

Data example

[
{
"cmd":"GetAutoMaint",
"action":1
}
]

Field description

Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "GetAutoMaint",
"code" : 0,
"initial" : {
"AutoMaint" : {
"enable" : 1,
"hour" : 2,
"min" : 0,
"sec" : 0,
"weekDay" : "Sunday"
}
},
"range" : {
"AutoMaint" : {
"enable" : "boolean",
"hour" : {
"max" : 23,
"min" : 0
},
"min" : {

```
          "max" : 59,
          "min" : 0
        },
        "sec" : {
          "max" : 59,
          "min" : 0
        },
        "weekDay" : [
          "Everyday",
          "Sunday",
          "Monday",
          "Tuesday",
          "Wednesday",
          "Thursday",
          "Friday",
          "Saturday"
        ]
      }
    },
    "value" : {
      "AutoMaint" : {
        "enable" : 1,
        "hour" : 0,
        "min" : 0,
        "sec" : 1,
        "weekDay" : "Thursday"
      }
    }
  }
]
```


Field description

Field	description
enable	Auto maintenance of enable/disable switch
hour	Hour
min	Minute
sec	Second
weekDay	The day of the week

3.1.6 SetAutoMaint

- **Interface Description**

It is used to set device automatic maintenance information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetAutoMaint&token=TOKEN

- **Post Data**

Data example

```
[
 {
  "cmd":"SetAutoMaint",
  "param":{
   "AutoMaint":{
    "enable":1,
    "weekDay":"Everyday",
    "hour":3,
    "min":52,
    "sec":4
   }
  }
 }
]
```

Field description

Field	Description	M/O
enable	See also GetAutoMaint	O
hour	See also GetAutoMaint	O
min	See also GetAutoMaint	O
sec	See also GetAutoMaint	O
weekDay	See also GetAutoMaint	O

- **Return data description**

Return data correctly

[
  {
  "cmd" : "SetAutoMaint",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description	
Field	**description**

3.1.7 GetPerformance

- **Interface Description**

It is used to get device performance.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPerformance&token=TOKEN

- **Post Data**

Data example

[
  {
  "cmd":"GetPerformance"
  }
]

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
  {
  "cmd" : "GetPerformance",
  "code" : 0,
  "value" : {
  "Performance" : {
  "codecRate" : 812593,
  "cpuUsed" : 29,
  "netThroughput" : 76
  }
  }
  }
]

Field description	
Field	**description**
codecRate	Bit rate
cpuUsed	CPU load
netThroughput	Ethernet port throughput

3.1.8 GetHddInfo

- **Interface Description**

It is used to get hard disks or SD-Card information of device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetHddInfo&token=TOKEN

- **Post Data**

Data example

[
  {
  "cmd":"GetHddInfo"
  }
]

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
  {
  "cmd" : "GetHddInfo",
  "code" : 0,
  "value" : {
  "HddInfo" : [
  {
  "capacity" : 30571,
  "format" : 1,
  "id" : 0,
  "mount" : 1,
  "size" : 8949
  }
  ]
  }
  }
]

Field description	
Field	**description**
capacity	The capacity of HDD or SD card(Mb)
format	Whether it is formatted or not
id	Index for HDD or SD card
mount	Whether it is mounted or not
size	The remaining capacity (Mb)

3.1.9 Format

- **Interface Description**

It is used to format hard disks or SD-Card.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Format&token=TOKEN

- **Post Data**

Data example

```
[
 {
  "cmd":"Format",
  "param":{
   "HddInfo":{
    " id":[
      0
    ]
   }
  }
 }
]
```

Field description

Field	Description	M/O
id	Index of the hard disk or SD-Card that you want to format.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "Format",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description

3.1.10 Upgrade

- **Interface Description**

It is used to upgrade the firmware of the device. Must send cmd UpgradePrepare first

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Upgrade&clearConfig=%d&token=TOKEN

- **Request parameter description**

Parameter	M/O	Description
clearConfig	M	Whether to clear the configuration mark

- **Post Data**

Data example		
Content-Type: multipart/form-data; boundary=----WebKitFormBoundaryYkwJBwvTHAd3Nukl Referer: http://192.168.2.232/?1466148584152 Accept-Encoding: gzip, deflate Accept-Language: zh-CN,zh;q=0.8 ------WebKitFormBoundaryYkwJBwvTHAd3Nukl Content-Disposition: form-data; name="upgrade-package"; filename="xxx.pak" Content-Type: application/octet-stream xxxxxxxxxx.....(File content) ------WebKitFormBoundaryYkwJBwvTHAd3Nukl--		
Field description		
Field	**Description**	**M/O**
boundary	Delimiter	M
filename	The name of the update file	M
name	Bound to be "upgrade-package"	M

- **Return data description**

Return data correctly

[
  {
  "cmd" : "Upgrade",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description
Field | **description**

3.1.11 ExportCfg

- **Interface Description**

It is used to export configuration files of the device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=ExportCfg&token=TOKEN

- **Return data description**

Return data correctly
CONTENT_TYPE=application/oct-stream: Content-Disposition: attachment;filename="config.tgz" +xxxxxxxxxxx.....(File content)

Field description	
Field	**description**
filename	The name of the exported file

3.1.12 Restore

- **Interface Description**

It is used to reset all configurations of the device to the factory default.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Restore&token=TOKEN

- **Post Data**

Data example

[
{
"cmd":"Restore"
}
]

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "Restore",
"code" : 0,
"value" : {
"rspCode" : 200
}
}

]	
Field description	
Field	**description**

3.1.13 Reboot

- **Interface Description**

It is used to reboot the device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Reboot&token=TOKEN

- **Post Data**

Data example		

[
{
"cmd":"Reboot"
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "Reboot",
"code" : 0,
"value" : {
"rspCode" : 200
}
}

]	
Field description	
Field	**description**

3.1.14 UpgradePrepare

- **Interface Description**

It is used to check that the upgrade file is legal or not. Combined use with cmd upgrade

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=UpgradePrepare&token=TOKEN

- **Post Data**

Data example

```
[
    {
        "cmd":"UpgradePrepare",
        "action":1,
        "param":
        {
            "restoreCfg":0,
            "fileName":"XXX.pak"
        }
    }
]
```

Field description

Field	Description	M/O
restoreCfg	Whether to clear the configuration mark	**M**
fileName	The file name of the upgrade file	**M**

- **Return data description**

Return data correctly

[
  {
  "cmd" : " UpgratePrepare ",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description	
Field	**description**

3.1.15 Shutdown

- **Interface Description**

Discard

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Shutdown&token=TOKEN

- **Post Data**

Data example

[
  {
  "cmd":"Shutdown",
  }
]

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
  {
  "cmd" : " Shutdown",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description

Field	**description**

3.1.16 HeartBeat

- **Interface Description**

Discard

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=HeartBeat&token=TOKEN

- **Post Data**

Data example

[
  {
  "cmd":"HeartBeat",
  }
]

Field description

Field	**Description**	**M/O**

- **Return data description**

Return data correctly	

[
{
"cmd" : " HeartBeat",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**

3.1.17 GetAutoUpgrade

- **Interface Description**

It is used to get device automatic upgrade information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetAutoUpgrade&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":" GetAutoUpgrade"
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd": "GetAutoUpgrade",
"code": 0,
"value": {
"AutoUpgrade": {
"enable": 0
}
},
"initial": {
"AutoUpgrade": {
"enable": 0
}
},
"range": {
"AutoUpgrade": {
"enable": "boolean"
}
}
}
]]

Field description	
Field	**description**
rspCode	Response code

3.1.18 SetAutoUpgrade

- **Interface Description**

It is used to set device automatic upgrade information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetAutoUpgrade&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "SetAutoUpgrade",
"param": {
"AutoUpgrade": {
"enable": 0
}
}
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly	

[
{
"cmd" : " SetAutoUpgrade ",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.1.19 CheckFirmware

- **Interface Description**

It is used to check for new upgrade file of online upgrades

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=CheckFirmware&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":" CheckFirmware"
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly	

[
{
"cmd" : " CheckFirmware",
"code" : 0,
"value" : {
"newFirmware" : 00
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.1.20 UpgradeOnline

- **Interface Description**

It is used to start online upgrade when check for a new version

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=UpgradeOnline&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":" UpgradeOnline ",
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd" : " UpgradeOnline ",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description

Field	description
rspCode	Response code

3.1.21 UpgradeStatus

- **Interface Description**

It is used to Check file download progress during online upgrade

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=UpgradeStatus&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":" UpgradeStatus "
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd": "UpgradeStatus",
"code": 0,
"value": {
" Status ": {
"Persent": 0,
"code": 0
}

} }]
Field description

Field	**description**
rspCode	Response code

3.1.22 GetLog

- **Interface Description**

It is used to get NVR system log

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetLog&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":" GetLog",
}
]

Field description

Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd" : " GetLog",
"code" : 0,
"value" : {

"rspCode" : 200 } }]
Field description

Field	**description**
rspCode	Response code

3.1.23 DelLog

- **Interface Description**

It is used to delete NVR system log

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=DelLog&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":" DelLog"
}
]

Field description

Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly
[{ "cmd" : " DelLog ", "code" : 0,

<table>
<tr><td>

```
    "value" : {
      "rspCode" : 200
    }
  }
]
```

</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	description
rspCode	Response code

3.2 Security

3.2.1 Login

- **Interface Description**

It is used to get Token.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Login

- **POST Data**

<table>
<tr><td>Data example</td></tr>
<tr><td>

```
[
 {
  "cmd":"Login",
  "param":{
   "User":{
    "userName":"admin",
    "password":""
   }
  }
 }
]
```

</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	Description	M/O
userName	Account name, limit 1~31 characters.	M

password	Account password, limit 1~31 characters.	O

- **Return data description**

Return data correctly

[
  {
  "cmd" : "Login",
  "code" : 0,
  "value" : {
  "Token" : {
  "leaseTime" : 3600,
  "name" : "031465962723"
  }
  }
  }
]

Field description	
Field	**description**
leaseTime	Lease ttime by second.
name	Token string, length should be less than 32 characters.

3.2.2 Logout

- **Interface Description**

It is used to release Token.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Logout&token=TOKEN

- **POST Data**

Data example
[

{
"cmd":"Logout",
"param":{
}
}
]

Field description

Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "Logout",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description

Field	**description**
rspCode	Response code

3.2.3 GetUser

- **Interface Description**

It is used to get all users' information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetUser&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"GetUser",
    "action":1
  }
]
```

Field description

Field	Description	M/O

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "GetUser",
    "code" : 0,
    "initial" : {
      "User" : {
        "level" : "guest"
      }
    },
    "range" : {
      "User" : {
        "level" : [ "guest", "admin" ],
        "password" : {
          "maxLen" : 16,
          "minLen" : 6
        },
        "userName" : {
          "maxLen" : 31,
          "minLen" : 1
        }
      }
    },
    "value" : {
      "User" : [
        {
          "level" : "admin",
```

<table>
<tr><td>"userName" : "admin"
}
],
... // There may be multiple users
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	description
level	User competence
userName	User name

3.2.4 AddUser

- **Interface Description**

It is used to set configuration of user.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=AddUser&token=TOKEN

- **POST Data**

<table>
<tr><td>Data example</td></tr>
<tr><td>[
{
"cmd":"AddUser",
"param":{
"User":{
"userName":"GuestUser",
"password":"123456",
"level":"guest"
}
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	Description	M/O

userName	Account name.	M
password	Account password.	M
level	User competence	M
Note : Can add up to 20 users		

- **Return data description**

Return data correctly	

[
{
"cmd" : "AddUser",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.2.5 DelUser

- **Interface Description**

It is used to del configuration of user.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=DelUser&token=TOKEN

- **POST Data**

Data example
[{

```
    "cmd":"DelUser",
    "param":{
      "User":{
        "userName":"TestUser"
      }
    }
  }
]
```

Field description

Field	Description	M/O
userName	Account name, limit 1~31 characters.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "DelUser",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description
rspCode	Response code

3.2.6 ModifyUser

- **Interface Description**

It is used to modify configuration of user.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=ModifyUser&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"ModifyUser",
    "param":{
      "User":{
        "userName":"TestUser",
        "password":"123456"
      }
    }
  }
]
```

Field description

Field	Description	M/O
userName	Account name.	M
password	Account password.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "ModifyUser",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description
rspCode	Response code

3.2.7 GetOnline

- **Interface Description**

It is used to get all online users' information.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetOnline&token=TOKEN

- **Return data description**

Return data correctly

```
[
  {
    "cmd":"GetOnline",
    "code":0,
    "value":{
      "User":[
        {
          "canbeDisconn":0,
          "ip":"192.168.2.166",
          "level":"admin",
          "sessionId":1000,
          "userName":"admin"
        },
        ... // There may be multiple online users.
      ]
    }
  }
]
```

Field description

Field	**description**
canbeDisconn	When the field value is 1, the online user can be forced to disconnect. When the value is 0, the reverse is the case.
ip	The IP address of the online user.
level	User competence for online users
sessionId	Session id distributed to online users by the system, it is used

	to force the user to go offline.
userName	The online user's login account.

3.2.8 Disconnect

- **Interface Description**

It is used to disconnect configuration of user.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Disconnect&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"Disconnect",
"param":{
"User":{
"userName":"userName",
"sessionId":1001
}
}
}
]		

Field description		
Field	**Description**	**M/O**
userName	The online user's login account.	M
sessionId	The session ID which System assigned to the online user.	M

- **Return data description**

Return data correctly
[

<table>
<tr><td><pre>
  {
    "cmd" : "Disconnect",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
    }
]
</pre></td></tr>
<tr><td>Field description</td></tr>
</table>

Field	**description**
rspCode	Response code

3.3 Network

3.3.1 GetLocalLink

- **Interface Description**

It is used to get configuration of Local Link.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetLocalLink&token=TOKEN

- **POST Data**

<table>
<tr><td>Data example</td></tr>
<tr><td><pre>
[
  {
    "cmd":"GetLocalLink",
    "action":1
  }
]
</pre></td></tr>
<tr><td>Field description</td></tr>
</table>

Field	**Description**	**M/O**

- **Return data description**

Return data correctly


```
[
  {
    "cmd": "GetLocalLink",
    "code": 0,
    "initial": {
      "LocalLink": {
        "activeLink": "LAN",
        "dns": {
          "auto": 1,
          "dns1": "192.168.2.1",
          "dns2": "114.114.114.114"
        },
        "mac": "EC:71:DB:1A:73:F5",
        "static": {
          "gateway": "192.168.2.1",
          "ip": "192.168.0.217",
          "mask": "255.255.252.0"
        },
        "type": "DHCP"
      }
    },
    "range": {
      "LocalLink": {
        "dns": {
          "auto": "boolean",
          "dns1": {
            "maxLen": 15
          },
          "dns2": {
            "maxLen": 15
          }
        },
        "static": {
          "gateway": {
            "maxLen": 15
          },
          "ip": {
            "maxLen": 15
```

```
            },
            "mask": {
               "maxLen": 15
            }
         },
         "type": [
            "DHCP",
            "Static"
         ]
      }
   },
   "value": {
      "LocalLink": {
         "activeLink": "LAN",
         "dns": {
            "auto": 1,
            "dns1": "192.168.2.1",
            "dns2": "114.114.114.114"
         },
         "mac": "EC:71:DB:1A:73:F5",
         "static": {
            "gateway": "192.168.2.1",
            "ip": "192.168.0.217",
            "mask": "255.255.252.0"
         },
         "type": "DHCP"
      }
   }
}
]
```


Field description

Field	**description**
activeLink	Network connection type [LAN, Wi-Fi]
mac	Network card’s hardware address
type	Network IP’s distributing way, [DHCP, Static]
Static->ip	Ip address
Static->gateway	Gateway address
Static->mask	Subnet mask
Dns->auto	Whether auto get DNS or not
Dns->dns1	Preferred DNS Server.
Dns->dns2	Alternate DNS server.

3.3.2 SetLocalLink

- **Interface Description**

It is used to set configuration of LocalLink.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetLocalLink&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetLocalLink",
    "action":0,
    "param":{
      "LocalLink":{
        "type":"Static",
        "static":{
          "ip":"192.168.2.122",
          "mask":"255.255.255.0",
          "gateway":"192.168.2.1"
        },
        "dns":{
          "auto":0,
          "dns1":"202.96.128.166",
          "dns2":"202.96.134.133"
        }
      }
    }
  }
]
```

Field description

Field	Description	M/O
type	Network IP's distributing way, [DHCP, Static]	O
Static->ip	Ip address	O
Static->gateway	Gateway address	O
Static->mask	Subnet mask	O
Dns->auto	Whether auto get DNS or not [0, 1]	O

Dns->dns1	Preferred DNS Server.	O
Dns->dns2	Alternate DNS server.	O

- **Return data description**

Return data correctly	

[
{
"cmd" : "SetLocalLink",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.3.3 GetDdns

- **Interface Description**

It is used to get configuration of Ddns.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetDdns&token=TOKEN

- **POST Data**

Data example
[{ "cmd":"GetDdns", "action":1

```
  }
]
```

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "GetDdns",
    "code" : 0,
    "initial" : {
      "Ddns" : {
        "domain" : "",
        "enable" : 0,
        "password" : "",
        "type" : "3322",
        "userName" : ""
      }
    },
    "range" : {
      "Ddns" : {
        "domain" : {
          "maxLen" : 127
        },
        "enable" : "boolean",
        "password" : {
          "maxLen" : 31
        },
        "type" : [ "3322", "Dyndns" ],
        "userName" : {
          "maxLen" : 127
        }
      }
    },
    "value" : {
      "Ddns" : {
        "domain" : "domain",
        "enable" : 1,
```

<table>
<tr><td>"password" : "password",
"type" : "Dyndns",
"userName" : "username"
}
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	description
domain	The domain which you set.
enable	Ddns enable switch.
type	Ddns Server type. Range of value is ["3322", "Dyndns"].
userName	Ddns userName.
password	Ddns password.

3.3.4 SetDdns

- **Interface Description**

It is used to set configuration of DDNS.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetDdns&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetDdns",
    "param":{
      "Ddns":{
        "enable":1,
        "type":"dyndns",
        "userName":"username",
        "password":"password",
        "domain":"domain"
      }
    }
  }
```

]		
Field description		
Field	**Description**	**M/O**
domain	The domain which you set.	O
enable	Ddns enable switch.	O
type	Ddns Server type. Range of value is ["3322", "Dyndns"].	O
userName	Ddns userName.	O
password	Ddns password.	O

- **Return data description**

Return data correctly

[
{
"cmd" : " SetDdns",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description	
Field	**description**
rspCode	Response code

3.3.5 GetEmail

- **Interface Description**

It is used to get configuration of Email.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetEmail&token=TOKEN

- **POST Data**

Data example		

[
  {
    "cmd":"GetEmail",
    "action":1
  }
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : "GetEmail",
    "code" : 0,
    "initial" : {
      "Email" : {
        "addr1" : "",
        "addr2" : "",
        "addr3" : "",
        "attachment" : "picture",
        "interval" : "30 Seconds",
        "password" : "",
        "smtpPort" : 465,
        "smtpServer" : "smtp.gmail.com",
        "ssl" : 1,
        "userName" : "",
        "schedule" : {
          "enable" : 1,
          "table" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
        }
      }
    },
```

```
    "range" : {
      "Email" : {
        "addr1" : {
          "maxLen" : 127
        },
        "addr2" : {
          "maxLen" : 127
        },
        "addr3" : {
          "maxLen" : 127
        },
        "attachment" : [ "O", "picture", "video", "onlyPicture" ],
        "interval" : [ "30 Seconds", "1 Minute", "5 Minutes", "10 Minutes" ],
        "password" : {
          "maxLen" : 31
        },
        "smtpPort" : {
          "max" : 65535,
          "min" : 1
        },
        "smtpServer" : {
          "maxLen" : 127
        },
        "ssl" : "boolean",
        "userName" : {
          "maxLen" : 127
        },
        "schedule" : {
          "enable" : "boolean",
          "table" : {
            "maxLen" : 168,
            "minLen" : 168
          }
        }
      }
    },
    "value" : {
      "Email" : {
        "addr1" : "xxx@sz-bcs.com.cn",
        "addr2" : "",
        "addr3" : "",
        "attachment" : "video",
        "interval" : "5 Minutes",
```

```
        "password" : "xxxxxx",
        "smtpPort" : 25,
        "smtpServer" : "smtp.exmail.qq.com",
        "ssl" : 0,
        "userName" : "xxx@sz-bcs.com.cn",
        "schedule" : {
          "enable" : 1,
          "table" :
"111111111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111"
        }
      }
    }
  }
]
```


Field description	
Field	**description**
smtpServer	Email server of sender, at most 127 characters.
smtpPort	Port of Email server, limit 1~65535.
userName	Sender address, at most 127 characters.
password	Sender password, at most 31 characters.
attachment	The type of email attachment.
ssl	Whether to open the encryption mode,the type of ssl is Boolean.
interval	Send mail interval.
addr1	Receiver address1, at most 127 characters.
addr2	Receiver address2, at most 127 characters.
addr3	Receiver address3, at most 127 characters.
schedule->enable	Whether email receive the alarm information
schedule->table	The schedule about when email receives the alarm information

3.3.6 SetEmail

- **Interface Description**

It is used to set configuration of Email.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetEmail&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetEmail",
    "param":{
      "Email":{
        "smtpServer":"smtp.exmail.qq.com",
        "smtpPort":25,
        "userName":"xxx@sz-bcs.com.cn",
        "password":"xxxxxx",
        "attachment":"video",
        "ssl":0,
        "interval":"5 Minutes",
        "addr1":"xxx@sz-bcs.com.cn",
        "addr2":"xxx@sz-bcs.com.cn",
                "addr3":"xxx@sz-bcs.com.cn",
        "schedule" : {
          "enable" : 1,
          "table" :
"11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111"
        }
      }
    }
  }
]
```

Field description

Field	**Description**	**M/O**
smtpServer	Email server of sender, at most 127 characters.	O
smtpPort	Port of Email server, limit 1~65535.	O
userName	Sender address, at most 127 characters.	O
password	Sender password, at most 31 characters.	O
attachment	The type of email attachment. Range of value is ["O", "picture", "video", "onlyPicture"].	O
ssl	Whether to open the encryption mode, the type of ssl	O

	is Boolean.	
interval	Send mail interval. Range of value is ["30 Seconds", "1 Minute", "5 Minutes", "10 Minutes"].	O
addr1	Receiver address1,at most 127 characters.	O
addr2	Receiver address2,at most 127 characters.	O
addr3	Receiver address3,at most 127 characters.	O
schedule->enable	Whether email receive the alarm information [0, 1]	O
schedule->table	The schedule about when email receives the alarm information	O

- **Return data description**

Return data correctly	

[
{
"cmd" : "SetEmail",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.3.7 TestEmail

- **Interface Description**

It is used to set configuration of TestEmail.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=TestEmail&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"TestEmail",
    "param":{
      "Email":{
        "smtpServer":"smtp.exmail.qq.com",
        "smtpPort":25,
        "userName":"xxx@sz-bcs.com.cn",
        "password":"xxxxxx",
        "attachment":"video",
        "ssl":0,
        "interval":"5 Minutes",
        "addr1":"xxx@sz-bcs.com.cn",
        "addr2":"xxx@sz-bcs.com.cn",
                "addr3":"xxx@sz-bcs.com.cn"
      }
    }
  }
]
```

Field description

Field	Description	M/O
smtpServer	Email server of sender, at most 127 characters.	M
smtpPort	Port of Email server, limit 1~65535.	M
userName	Sender address, at most 127 characters.	M
password	Sender password, at most 31 characters.	O
ssl	Whether to open the encryption mode, the type of ssl is Boolean.	M
addr1	Receiver address1, at most 127 characters.	O
addr2	Receiver address2, at most 127 characters.	O
addr3	Receiver address3, at most 127 characters.	O
Note: At least one of the three addresses (addr1,addr2,addr3) is completed.		

- **Return data description**

Return data correctly

```
[
  {
```

"cmd" : "TestEmail",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description

Field	**description**
rspCode	Response code

3.3.8 GetFtp

- **Interface Description**

It is used to get configuration of Ftp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetFtp&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"GetFtp",
"action":1
}
]

Field description

Field	**Description**	**M/O**

- **Return data description**

Return data correctly
[

```
  {
    "cmd" : "GetFtp",
    "code" : 0,
    "initial" : {
      "Ftp" : {
        "anonymous" : 0,
        "maxSize" : 100,
        "password" : "",
        "port" : 21,
        "remoteDir" : "",
        "schedule" : {
          "enable" : 1,
          "table" :
"111111111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111"
        },
        "server" : "",
        "userName" : "",
        "streamType":0,
        "interval":30
      }
    },
    "range" : {
      "Ftp" : {
        "anonymous" : "boolean",
        "maxSize" : {
          "max" : 1024,
          "min" : 10
        },
        "password" : {
          "maxLen" : 31
        },
        "port" : {
          "max" : 65535,
          "min" : 1
        },
        "remoteDir" : {
          "maxLen" : 255
        },
        "schedule" : {
          "enable" : "boolean",
          "table" : {
```

```
            "maxLen" : 168,
            "minLen" : 168
          }
        },
        "server" : {
          "maxLen" : 127
        },
        "userName" : {
          "maxLen" : 31
        },
        "streamType" : {
          "max" : 1,
          "min" : 0
        },
        "interval" : {
          "max" : 3600,
          "min" : 1
        }
      }
    },
    "value" : {
      "Ftp" : {
        "anonymous" : 0,
        "maxSize" : 1000,
        "password" : "11111111",
        "port" : 21,
        "remoteDir" : "0516",
        "schedule" : {
          "enable" : 1,
          "table" :
"1111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
        },
        "server" : "192.168.2.146",
        "userName" : "jhx",
        "streamType":0,
        "interval":30
      }
    }
  }
]
```


Field description

Field	description
initial	The initial value of the Ftp field.
range	The range of the Ftp field.
value	The real value of the Ftp field.
server	FTP server, can fill in the IP address or domain name. At most 127 characters.
port	Port of FTP Server, Limit 1~65535.
anonymous	Whether anonymous or not
userName	FTP account name.
password	FTP account password.
remoteDir	FTP root directory.
maxSize	Maximum size of FTP file.
streamType	The types of the uploading files. 0 is for uploading both pictures and videos, and 1 is for uploading pictures only.
interval	When streamType=0, interval stands for the time of post record, the range is between 30 to 1800 seconds. When streamType=1, interval stands for the time interval, the range is between 1 to 1800 seconds.
schedule->enable	Whether ftp receive the alarm information
schedule->table	The schedule about when ftp receives the alarm information

3.3.9 SetFtp

- **Interface Description**

It is used to set configuration of Ftp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetFtp&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"SetFtp",
"param":{
"Ftp":{

```
            "server":"pool.ftp.org",
            "port":21,
            "anonymous":0,
            "userName":"name",
            "password":"password",
            "remoteDir":"Dir",
            "maxSize":20,
            "streamType":0,
            "interval":30,
            "schedule":{
               "enable":1,
               "table":"111111111111111"
            }
         }
      }
   }
]
```


Field description

Field	Description	M/O
server	FTP server, can fill in the IP address or domain name.	O
port	Port of FTP Server.	O
anonymous	Whether anonymous or not	O
userName (Depend on anonymous)	FTP account name. When the value of anonymous is 0, the user Name field is necessary.	O
password (Depend on anonymous)	FTP account password. FTP account name. When the value of anonymous is 0, the password field is necessary.	O
remoteDir	FTP root directory.	O
maxSize	Maximum size of FTP file.	O
streamType	The type of the uploading files. 0 is for uploading both pictures and videos, and 1 is for uploading pictures only.	O
interval	When streamType=0, interval stands for the time of post record, the range is between 30 to 1800 seconds. When streamType=1, interval stands for the time interval, the range is between 1 to 1800 seconds.	O
schedule->enable	Whether ftp receive the alarm information [0, 1]	O
schedule->table	The schedule about when ftp receives the alarm information	O

- **Return data description**

Return data correctly	

[
{
"cmd" : "SetFtp",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.3.10 TestFtp

- **Interface Description**

It is used to set configuration of TestFtp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=TestFtp&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"TestFtp",
"param":{
"Ftp":{
"server":"pool.ftp.org",
"port":21,
"anonymous":0,
"userName":"name",

<table>
<tr><td colspan="3">"password":"password",
"remoteDir":"Dir"
}
}
}
]</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
<tr><td>server</td><td>FTP server, can fill in the IP address or domain name. At most 127 characters.</td><td>M</td></tr>
<tr><td>port</td><td>Port of FTP Server ,Limit 1~65535.</td><td>M</td></tr>
<tr><td>anonymous</td><td>Whether anonymous or not</td><td>M</td></tr>
<tr><td>userName (Depend on anonymous)</td><td>FTP account name. FTP account password. FTP account name. When the value of anonymous is 0, the userName field is necessary.</td><td>O</td></tr>
<tr><td>password (Depend on anonymous)</td><td>FTP account password. FTP account password. FTP account name. When the value of anonymous is 0, the password field is necessary.</td><td>O</td></tr>
<tr><td>remoteDir</td><td>FTP root directory.</td><td>M</td></tr>
</table>

- **Return data description**

<table>
<tr><td colspan="2">Return data correctly</td></tr>
<tr><td colspan="2">[
{
"cmd" : "TestFtp",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>rspCode</td><td>Response code</td></tr>
</table>

3.3.11 GetNtp

- **Interface Description**

It is used to get configuration of NTP.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetNtp&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetNtp",
"action":1
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "GetNtp",
"code" : 0,
"initial" : {
"Ntp" : {
"enable" : 1,
"interval" : 1440,
"port" : 123,
"server" : "pool.ntp.org"
}
},
"range" : {

```
      "Ntp" : {
        "interval" : {
          "max" : 65535,
          "min" : 60
        },
        "port" : {
          "max" : 65535,
          "min" : 1
        },
        "server" : {
          "maxLen" : 127
        }
      }
    },
    "value" : {
      "Ntp" : {
        "enable" : 1,
        "interval" : 1440,
        "port" : 123,
        "server" : "pool.ntp.org"
      }
    }
  }
]
```

Field description	
Field	**description**
enable	NTP switch, The value of 1 represents the open, and the 0 is the opposite.
server	NTP server, can fill in the IP address or domain name.
port	Port of NTP Server.
interval	Time synchronization interval. Limit 10~65535, and 0 on behalf of the immediate synchronization.

3.3.12 SetNtp

- **Interface Description**

It is used to set configuration of Set Ntp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetNtp&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetNtp",
    "param":{
      "Ntp":{
        "enable":1,
        "server":"pool.ntp.org",
        "port":123,
        "interval":1440
      }
    }
  }
]
```

Field description

Field	Description	M/O
enable	NTP switch, The value of 1 represents the open, and the 0 is the opposite.	O
server	NTP server, can fill in the IP address or domain name.	O
port	Port of NTP Server .	O
interval	Time synchronization interval. Limit 10~65535,and 0 on behalf of the immediate synchronization.	O

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetNtp",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
```

]	
Field description	
Field	**description**
rspCode	Response code

3.3.13 GetNetPort

- **Interface Description**

It is used to get configuration of NetPort.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetNetPort&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetNetPort",
"action":1
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "GetNetPort",
"code" : 0,
"initial" : {
"NetPort" : {

```
        "httpPort" : 80,
        "httpsPort" : 443,
        "mediaPort" : 9000,
        "onvifPort" : 8000,
        "rtmpPort" : 1935,
        "rtspPort" : 554
      }
    },
    "range" : {
      "NetPort" : {
        "httpPort" : {
          "max" : 65535,
          "min" : 1
        },
        "httpsPort" : {
          "max" : 65535,
          "min" : 1
        },
        "mediaPort" : {
          "max" : 65535,
          "min" : 1
        },
        "onvifPort" : {
          "max" : 65535,
          "min" : 1
        },
        "rtmpPort" : {
          "max" : 65535,
          "min" : 1
        },

        "rtspPort" : {
          "max" : 65535,
          "min" : 1
        }
      }
    },
    "value" : {
      "NetPort" : {
        "httpPort" : 80,
        "httpsPort" : 445,
        "mediaPort" : 9000,
        "onvifPort" : 8000,
```

```
        "rtmpPort" : 1935,
        "rtspPort" : 555
      }
    }
  }
]
```

Field description	
Field	**description**
httpPort	Port of http.
httpsPort	Port of https.
mediaPort	Port of media.
onvifPort	Port of onvif.
rtspPort	Port of rtsp.
rtmpPort	Port of rtmp.

3.3.14 SetNetPort

- **Interface Description**

It is used to set configuration of NetPort.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetNetPort&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetNetPort",
    "param":{
      "NetPort":{
        "httpPort":80,
        "httpsPort":445,
        "mediaPort":9000,
        "onvifPort":8000,
        "rtmpPort" : 1935,
        "rtspPort":555
```

<table>
<tr><td colspan="3">}
}
}
]</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
<tr><td>httpPort</td><td>Port of http.</td><td>O</td></tr>
<tr><td>httpsPort</td><td>Port of https.</td><td>O</td></tr>
<tr><td>mediaPort</td><td>Port of media.</td><td>O</td></tr>
<tr><td>onvifPort</td><td>Port of onvif.</td><td>O</td></tr>
<tr><td>rtspPort</td><td>Port of rtsp.</td><td>O</td></tr>
<tr><td>rtmpPort</td><td>Port of rtmp.</td><td>O</td></tr>
</table>

- **Return data description**

<table>
<tr><td colspan="2">Return data correctly</td></tr>
<tr><td colspan="2">[
{
"cmd" : "SetNetPort",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>rspCode</td><td>Response code</td></tr>
</table>

3.3.15 GetUpnp

- **Interface Description**

It is used to get configuration of Upnp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetUpnp&token=TOKEN

- **POST Data**

Data example

[
  {
  "cmd":"GetUpnp",
  "action":1
  }
]

Field description

Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
  {
  "cmd" : "GetUpnp",
  "code" : 0,
  "initial" : {
  "Upnp" : {
  "enable" : 1
  }
  },
  "range" : {
  "Upnp" : {
  "enable" : "boolean"
  }
  },
  "value" : {
  "Upnp" : {
  "enable" : 1
  }
  }
  }
]

Field description

Field	**description**

enable	Upnp switch,The value of 1 represents the open, and the 0 is the opposite.

3.3.16 SetUpnp

- **Interface Description**

It is used to set configuration of Upnp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetUpnp&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"SetUpnp",
"param":{
"Upnp":{
"enable":1
}
}
}
]		

Field description		
Field	**Description**	**M/O**
enable	Upnp switch, The value of 1 represents the open, and the 0 is the opposite.	O

- **Return data description**

Return data correctly
[{

<table>
<tr><td>"cmd" : "SetUpnp",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]</td></tr>
<tr><td>Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>rspCode</td><td>Response code</td></tr>
</table>

3.3.17 GetWifi

- **Interface Description**

It is used to get configuration of GetWifi.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetWifi&token=TOKEN

- **POST Data**

<table>
<tr><td colspan="3">Data example</td></tr>
<tr><td colspan="3">[
{
"cmd":"GetWifi",
"action":1
}
]</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
</table>

- **Return data description**

Return data correctly
[

```
  {
    "cmd" : "GetWifi",
    "code" : 0,
    "initial" : {
      "Wifi" : {
        "password" : "",
        "ssid" : ""
      }
    },
    "range" : {
      "Wifi" : {
        "password" : {
          "maxLen" : 127
        },
        "ssid" : {
          "maxLen" : 127
        }
      }
    },
    "value" : {
      "Wifi" : {
        "password" : "123456",
        "ssid" : "ssid"
      }
    }
  }
]
```


Field description	
Field	**description**
ssid	The name of the wireless network
password	The password of the wireless network

3.3.18 SetWifi

- **Interface Description**

It is used to set configuration of Wifi.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetWifi&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"SetWifi",
"param":{
"Wifi":{
"ssid":"ssid",
"password":"password"
}
}
}
]

Field description		
Field	**Description**	**M/O**
ssid	The name of the wireless network	O
password	The password of the wireless network	O

- **Return data description**

Return data correctly

[
{
"cmd" : "SetWifi",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description	
Field	**description**
rspCode	Response code

3.3.19 TestWifi

- **Interface Description**

It is used to set configuration of TestWifi.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=TestWifi&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"TestWifi",
"param":{
"Wifi":{
"ssid":"ssid",
"password":"password"
}
}
}
]

Field description		
Field	**Description**	**M/O**
ssid	The name of the wireless network	M
password	The password of the wireless network	O

- **Return data description**

Return data correctly

[
{
"cmd" : "TestWifi",
"code" : 0,
"value" : {
"rspCode" : 200

} }]
Field description

Field	**description**
rspCode	Response code

3.3.20 ScanWifi

- **Interface Description**

It is used to get configuration of ScanWifi.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=ScanWifi&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"ScanWifi",
"param":{}
}
]

Field description

Field	**Description**	**M/O**

- **Return data description**

Return data correctly
[{ "cmd" : "ScanWifi", "code" : 0,

```
    "value" : {
      "Wifi" : [
        {
          "signal" : 4,
          "ssid" : "TP-LINK_123456"
        },
        ... // There may be multiple wireless networks.
      ]
    }
  }
]
```

Field description	
Field	**description**
signal	Wireless signal strength (1 : signal <= -60) (2 : signal <= -50) (3 : signal <= -40) (4 : signal > -40)
ssid	The name of wireless network

3.3.21 GetPush

- **Interface Description**

It is used to get configuration of Push.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPush&token=TOKEN

- **POST Data**

Data example

[
  {
  "cmd":"GetPush",
  "action":1
  }

]		
Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : "GetPush",
    "code" : 0,
    "initial" : {
      "Push" : {
        "schedule" : {
          "enable" : 1,
          "table" :
"111111111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111"
        }
      }
    },
    "range" : {
      "Push" : {
        "schedule" : {
          "enable" : "boolean",
          "table" : {
            "maxLen" : 168,
            "minLen" : 168
          }
        }
      }
    },
    "value" : {
      "Push" : {
        "schedule" : {
          "enable" : 1,
          "table" :
"111111111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111111111
```

```
1111111111111111111111111111111"
        }
      }
    }
  }
]
```

Field description	
Field	**description**
Schedule->enable	Whether push the alarm information
Schedule->table	The schedule about when push the alarm information

3.3.22 SetPush

- **Interface Description**

It is used to set configuration of Push.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetPush&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetPush",
    "param":{
      "Push":{
        "schedule" : {
          "enable" : 1,
          "table" :
"111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
        }
      }
    }
```

}]
Field description

Field	Description	M/O
Schedule->enable	Whether push the alarm information [0, 1]	O
Schedule->table	The schedule about when push the alarm information	O

- **Return data description**

Return data correctly

[
{
"cmd" : " SetPush",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description

Field	description
rspCode	Response code

3.3.23 GetCloud

- **Interface Description**

Get cloud

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetCloud&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd": "GetCloud",
    "action": 1
  }
]
```

Field description

Field	Description	M/O
		M

- **Return data description**

Return data correctly

```
[
  {
    "cmd": " GetCloud",
    "code": 0,
    "value": {
      "Cloud": {
        "detail": "network timeout.",
        "RspCode": 0,
        "Login": 1,
        "UserName": "username",
        "data": {
          "account": "account",
          "uid": 0000,
          "avatar": "avatar",
          "createTime": 0000,
        }
      }
    }
  }
]
```

Field description

Field	description
rspCode	Response code

3.3.24 SetCloud

- **Interface Description**

Set cloud

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetCloud&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"SetCloud",
"Cloud":{
"sign":0,
"userName":"username",
"password":"password",
"capth":"capth",
"capthid":"capthid"
}
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd" : "SetCloud",
"code" : 0,
"value" : {
"rspCode" : 200

} }]
Field description

Field	**description**
rspCode	Response code

3.3.25 GetCloudSchedule

- **Interface Description**

Get Cloud Schedule

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetCloudSchedule&token=TOKEN

- **POST Data**

Data example

[
{
"cmd": "GetCloudSchedule",
"action": 1
}
]

Field description

Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd": "GetCloudSchedule",
"code": 0,
"initial": {

```
        "Cloud": {
          "schedule": {
            "enable": 1,
            "table":
"111111111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111"
          }
        }
      },
      "range": {
        "Push": {
          "schedule": {
            "enable": "boolean",
            "table": {
              "maxLen": 168,
              "minLen": 168
            }
          }
        }
      },
      "value": {
        "Cloud": {
          "schedule": {
            "enable": 1,
            "table":
"111111111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111"
          }
        }
      }
    }
]
```


Field description	
Field	**description**
Schedule->enable	Whether upload recorder to cloud or not
Schedule->table	The schedule about when upload recorder to cloud

3.3.26 SetCloudSchedule

- **Interface Description**

SetCloudSchedule

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetCloudSchedule&token=TOKEN

- **POST Data**

Data example


```
[
  {
    "cmd": "SetCloudSchedule",
    "param": {
      "Cloud": {
        "schedule": {
          "enable": 0,
          "table":
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
        }
      }
    }
  }
]
```


Field description

Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly


```
[
  {
```

<table>
<tr><td>

```
    "cmd" : " SetCloudSchedule",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

</td></tr>
<tr><td>Field description</td></tr>
<tr><td>

Field	description
rspCode	Response code

</td></tr>
</table>

3.3.27 Get3G

- **Interface Description**

Get 3G information

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Get3G&token=TOKEN

- **POST Data**

<table>
<tr><td>Data example</td></tr>
<tr><td>

```
[
  {
    "cmd": "Get3G",
    "action": 1
  }
]
```

</td></tr>
<tr><td>Field description</td></tr>
<tr><td>

Field	Description	M/O
		M

</td></tr>
</table>

- **Return data description**

Return data correctly


```
[
  {
    "cmd": " Get3G ",
    "code": 0,
    "value": {
      "3G": {
        "autoApn": 0,
        "phone": 0,
        "apn": "apn",
        "userName": "username",
        "password": "password"
      }
    },
    "initial": {
      "3G": {
        "autoApn": 0,
        "phone": 0,
        "apn": "apn",
        "userName": "username",
        "password": "password"
      }
    },
    "range": {
      "3G": {
        "autoApn": "boolean",
        "phone": 0,
        "apn": "apn",
        "userName": "username",
        "password": "password"
      }
    }
  }
]
```


Field description

Field	**description**
autoApn	Whether use auto apn or not
phone	Apn phone number
apn	Apn type
userName	Apn user name
password	Apn password

3.3.28 Set3G

- **Interface Description**

Set3G

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Set3G&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd": "Set3G",
    "param": {
      "3G": {
        "autoApn": 0,
        "apn": "cmnet",
        "userName": "userName",
        "password": "password",
        "phone": "phone"
      }
    }
  }
]
```

Field description

Field	Description	M/O
autoApn	Whether use auto apn or not, [0, 1]	O
phone	Apn phone number	O
apn	Apn type	O
userName	Apn user name	O
password	Apn password	O

- **Return data description**

Return data correctly

[
  {
  "cmd" : " Set3G",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description

Field	**description**
rspCode	Response code

3.3.29 GetP2p

- **Interface Description**

Get tP2pinformation

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetP2p&token=TOKEN

- **POST Data**

Data example

[
  {
  "cmd": "GetP2p",
  "action": 1
  }
]

Field description

Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd": "GetP2p",
"code": 0,
"initial": {
"P2p": {
"enable": 1
}
},
"range": {
"P2p": {
"enable": "boolean"
}
},
"value": {
"P2p": {
"enable": 1,
"uid": "95270000SXIPOGIJ"
}
}
}
]

Field description	
Field	**description**
enable	Whether enable p2p or not
uid	IPC uid

3.3.30 SetP2p

- **Interface Description**

SetP2P

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetP2p&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd": "SetP2p",
    "param": {
      "P2p": {
        "enable": 0
      }
    }
  }
]
```

Field description

Field	Description	M/O
enable	Whether enable p2p or not	O

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : " SetP2P",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description
rspCode	Response code

3.4 Video input

3.4.1 GetNorm

- **Interface Description**

It is used to get configuration of Norm.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetNorm&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetNorm",
"action":1
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "GetNorm",
"code" : 0,
"initial" : {
"Norm" : "NTSC"
},
"range" : {
"Norm" : ["PAL", "NTSC"]

<table>
<tr><td>
<pre>
    },
    "value" : {
      "Norm" : "NTSC"
    }
  }
]
</pre>
</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
</table>

3.4.2 SetNorm

- **Interface Description**

It is used to set configuration of Norm.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetNorm&token=TOKEN

- **POST Data**

<table>
<tr><td colspan="3">Data example</td></tr>
<tr><td colspan="3">
<pre>
[
  {
    "cmd":"SetNorm",
    "param":{
      "Norm":"NTSC"
    }
  }
]
</pre>
</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
<tr><td>Norm</td><td></td><td>M</td></tr>
<tr><td colspan="3">Note : After changing the Norm , the system will reboot.</td></tr>
</table>

- **Return data description**

Return data correctly

[
  {
  "cmd" : "SetNorm",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description	
Field	**description**
rspCode	Response code

3.4.3 GetImage

- **Interface Description**

It is used to get configuration of image.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetImage&token=TOKEN

- **POST Data**

Data example

[
  {
  "cmd":"GetImage",
  "action":1,
  "param":{
  "channel":0
  }
  }
]

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : "GetImage",
    "code" : 0,
    "initial" : {
      "Image" : {
        "bright" : 128,
        "channel" : 0,
        "contrast" : 128,
        "hue" : 128,
        "saturation" : 128,
        "sharpen" : 128
      }
    },
    "range" : {
      "Image" : {
        "bright" : {
          "max" : 255,
          "min" : 0
        },
        "channel" : 0,
        "contrast" : {
          "max" : 255,
          "min" : 0
        },
        "hue" : {
          "max" : 255,
          "min" : 0
        },
        "saturation" : {
          "max" : 255,
          "min" : 0
        },
        "sharpen" : {
          "max" : 255,
          "min" : 0
```

```
        }
      }
    },
    "value" : {
      "Image" : {
        "bright" : 150,
        "channel" : 0,
        "contrast" : 150,
        "hue" : 150,
        "saturation" : 150,
        "sharpen" : 150
      }
    }
  }
]
```


Field description	
Field	**description**
bright	Bright of video.
contrast	Contrast of video.
saturation	Saturation of video.
hue	Hue of video.
sharpen	Sharpen of video.

3.4.4 SetImage

- **Interface Description**

It is used to set configuration of image.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetImage&token=TOKEN

- **POST Data**

Data example
[{

```
    "cmd":"SetImage",
    "param":{
      "Image":{
        "channel":0,
        "bright":150,
        "contrast":150,
        "saturation":150,
        "hue":150,
        "sharpen":150
      }
    }
  }
]
```

Field description

Field	Description	M/O
channel	IPC channel number.	M
bright	Bright of video.	M
contrast	Contrast of video.	M
saturation	Saturation of video.	M
hue	Hue of video.	M
sharpen	Sharpen of video.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetImage",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description
rspCode	Response code

3.4.5 GetOsd

- **Interface Description**

It is used to get configuration of Osd.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetOsd&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "GetOsd",
"action": 1,
"param": {
"channel": 0
}
}
]		

Field description		
Field	**Description**	**M/O**
channel	IPC channel number	M

- **Return data description**

Return data correctly

[
{
"cmd": "GetOsd",
"code": 0,
"initial": {
"Osd": {
"bgcolor": 0,
"channel": 0,
"osdChannel": {

```
            "enable": 1,
            "name": "Camera1",
            "pos": "Lower Right"
        },
        "osdTime": {
            "enable": 1,
            "pos": "Top Center"
        },
        "watermark": 1
    }
},
"range": {
    "Osd": {
        "bgcolor": "boolean",
        "channel": 0,
        "osdChannel": {
            "enable": "boolean",
            "name": {
                "maxLen": 31
            },
            "pos": [
                "Upper Left",
                "Top Center",
                "Upper Right",
                "Lower Left",
                "Bottom Center",
                "Lower Right"
            ]
        },
        "osdTime": {
            "enable": "boolean",
            "pos": [
                "Upper Left",
                "Top Center",
                "Upper Right",
                "Lower Left",
                "Bottom Center",
                "Lower Right"
            ]
        },
        "watermark": "boolean"
    }
},
```

```
    "value": {
      "Osd": {
        "bgcolor": 0,
        "channel": 0,
        "osdChannel": {
          "enable": 1,
          "name": "Camera1",
          "pos": "Lower Right"
        },
        "osdTime": {
          "enable": 1,
          "pos": "Top Center"
        },
        "watermark": 1
      }
    }
  }
]
```


Field description	
Field	**description**
osdChannel->enable	Camera name display switch.
osdChannel->name	Camera name
osdChannel->pos	Camera name display position.
osdTime->enable	Camera time display switch.
osdTime->pos	Camera time display position.

3.4.6 SetOsd

- **Interface Description**

It is used to set configuration of Osd.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetOsd&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd": "SetOsd",
    "param": {
      "Osd": {
        "channel": 0,
        "osdChannel": {
          "enable": 1,
          "name": "Camera101",
          "pos": "Lower Right"
        },
        "osdTime": {
          "enable": 1,
          "pos": "Upper Right"
        }
      }
    }
  }
]
```

Field description

Field	Description	M/O
channel	IPC channel number.	M
osdChannel->enable	Camera name display switch.	M
osdChannel->name	Camera name	M
osdChannel->pos	Camera name display position.	M
osdTime->enable	Camera time display switch.	M
osdTime->pos	Camera time display position.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd": "SetOsd",
    "code": 0,
    "value": {
      "rspCode": 200
    }
  }
]
```

Field description	
Field	**description**
rspCode	Response code

3.4.7 GetIsp

- **Interface Description**

It is used to get configuration of Isp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetIsp&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"GetIsp",
"action":1,
"param":{
"channel":0
}
}
]

Field description		
Field	**Description**	**M/O**
channel	IPC channel number	M

- **Return data description**

Return data correctly

[
{
"cmd" : "GetIsp",
"code" : 0,
"initial" : {

```
    "Isp" : {
      "antiFlicker" : "Off",
      "backLight" : "Off",
      "blc" : 128,
      "blueGain" : 128,
      "channel" : 0,
      "dayNight" : "Auto",
      "drc" : 128,
      "exposure" : "Auto",
      "gain" : {
        "max" : 62,
        "min" : 1
      },
      "mirroring" : 0,
      "nr3d" : 1,
      "redGain" : 128,
      "rotation" : 0,
      "shutter" : {
        "max" : 125,
        "min" : 0
      },
      "whiteBalance" : "Auto"
    }
  },
  "range" : {
    "Isp" : {
      "antiFlicker" : [ "Outdoor", "50HZ", "60HZ", "Off" ],
      "backLight" : [ "Off", "BackLightControl", "DynamicRangeControl" ],
      "blc" : {
        "max" : 255,
        "min" : 0
      },
      "blueGain" : {
        "max" : 255,
        "min" : 0
      },
      "channel" : 0,
      "dayNight" : [ "Auto", "Color", "Black&White" ],
      "drc" : {
        "max" : 255,
        "min" : 0
      },
      "exposure" : [ "Auto", "LowNoise", "Anti-Smearing", "Manual" ],
```

```
        "gain" : {
          "max" : 100,
          "min" : 1
        },
        "mirroring" : "boolean",
        "nr3d" : "boolean",
        "redGain" : {
          "max" : 255,
          "min" : 0
        },
        "rotation" : "boolean",
        "shutter" : {
          "max" : 125,
          "min" : 0
        },
        "whiteBalance" : [ "Auto", "Manual" ]
      }
    },
    "value" : {
      "Isp" : {
        "antiFlicker" : "Off",
        "backLight" : "Off",
        "blc" : 128,
        "blueGain" : 128,
        "channel" : 0,
        "dayNight" : "Auto",
        "drc" : 128,
        "exposure" : "Auto",
        "gain" : {
          "max" : 62,
          "min" : 1
        },
        "mirroring" : 0,
        "nr3d" : 1,
        "redGain" : 128,
        "rotation" : 0,
        "shutter" : {
          "max" : 125,
          "min" : 0
        },
        "whiteBalance" : "Auto"
      }
    }
```

}]	
Field description	
Field	**description**
antiFlicker	Flicker prevention,["Outdoor", "50HZ", "60HZ", "Off"]
exposure	Exposure mode, ["Auto", "LowNoise", "Anti-Smearing", "Manual"]
gain (Depend on exposure)	When the value of exposure is LowNoise or Manual, the gain field is effective.
shutter (Depend on exposure)	When the value of exposure is Anti-Smearing or Manual, the shutter field is effective.
whiteBalance	White Balance,["Auto", "Manual"]
blueGain (Depend on whiteBalance)	When the value of whiteBalance is Anti-Smearing or Manual, the blueGain field is effective.
redGain (Depend on whiteBalance)	When the value of whiteBalance is Anti-Smearing or Manual, the redGain field is effective.
dayNight	Day&Night,["Auto", "Color", "Black&White"]
backLight	Backlight compensation, ["Off", "BackLightControl", "DynamicRangeControl"]
Blc (Depend on backLight)	When the value of backLight is BackLightControl, the blc field is effective.
Drc (Depend on backLight)	When the value of backLight is DynamicRangeControl, the drc field is effective.
nr3d	
mirroring	Video mirroring.
rotation	Video rotation.

3.4.8 SetIsp

- **Interface Description**

It is used to set configuration of Isp.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetIsp&token=TOKEN

- **POST Data**

Data example


```
[
  {
    "cmd":"SetIsp",
    "action":1,
    "param":{
      "Isp":{
        "channel":0,
        "antiFlicker":"Off",
        "backLight":"Off",
        "blc":128,
        "blueGain":128,
        "dayNight":"Auto",
        "drc":128,
        "exposure":"Auto",
        "gain":{
          "max":62,
          "min":1
        },
        "mirroring":0,
        "nr3d":1,
        "redGain":128,
        "rotation":0,
        "shutter":{
          "max":125,
          "min":0
        },
        "whiteBalance":"Auto"
      }
    }
  }
]
```


Field description

Field	Description	M/O
channel	IPC channel number.	M

antiFlicker	Flicker prevention,["Outdoor", "50HZ", "60HZ", "Off"]	M
exposure	Exposure mode, ["Auto", "LowNoise", "Anti-Smearing", "Manual"]	M
gain (Depend on exposure)	When the value of exposure is LowNoise or Manual, the gain field is effective.	M
shutter (Depend on exposure)	When the value of exposure is Anti-Smearing or Manual, the shutter field is effective.	M
whiteBalance	White Balance,["Auto", "Manual"]	M
blueGain (Depend on whiteBalance)	When the value of whiteBalance is Anti-Smearing or Manual, the blueGain field is effective.	M
redGain (Depend on whiteBalance)	When the value of whiteBalance is Anti-Smearing or Manual, the redGain field is effective.	M
dayNight	Day&Night,["Auto", "Color", "Black&White"]	M
backLight	Backlight compensation, ["Off", "BackLightControl", "DynamicRangeControl"]	M
Blc (Depend on backLight)	When the value of backLight is BackLightControl, the blc field is effective.	M
Drc (Depend on backLight)	When the value of backLight is DynamicRangeControl, the drc field is effective.	M
nr3d		M
mirroring	Video mirroring.	M
rotation	Video rotation.	M

- **Return data description**

Return data correctly

[
  {
  "cmd" : "SetOsd",
  "code" : 0,
  "value" : {
  "rspCode" : 200

} }]
Field description

Field	**description**
rspCode	Response code

3.4.9 GetMask

- **Interface Description**

It is used to get configuration of Mask.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetMask&token=TOKEN

- **POST Data**

Data example

[
{
"cmd": "GetMask",
"action": 1,
"param": {
"channel": 0
}
}
]

Field description

Field	**Description**	**M/O**
channel	IPC channel number	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "GetMask",
    "code" : 0,
    "initial" : {
      "Mask" : {
        "area" : [
          {
            "block" : {
              "height" : 720,
              "width" : 1280,
              "x" : 0,
              "y" : 0
            },
            "screen" : {
              "height" : 720,
              "width" : 1280
            }
          }
        ],
        "channel" : 0,
        "enable" : 0
      }
    },
    "range" : {
      "Mask" : {
        "channel" : 0,
        "enable" : "boolean",
        "maxAreas" : 4
      }
    },
    "value" : {
      "Mask" : {
        "area" : [
          {
            "block" : {
              "height" : 720,
              "width" : 1280,
              "x" : 0,
              "y" : 0
            },
            "screen" : {
              "height" : 720,
```

```
                "width" : 1280
              }
            },
            ... // There may be multiple areas, up to 4 areas.
          ],
          "channel" : 0,
          "enable" : 1
        }
      }
    }
]
```

Field description	
Field	**description**
enable	Video mask switch.
Block->height	Block height.
Block->width	Block width.
Block->x	Left upper X axis coordinates
Block->y	Left upper Y axis coordinates
Screen->height	Screen height.
Screen->width	Screen width.

3.4.10 SetMask

- **Interface Description**

It is used to set configuration of Mask.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetMask&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetMask",
    "action":0,
    "param":{
      "Mask":{
        "channel":0,
```

```
"enable":1,
"area":[
  {
    "screen":{
      "height":720,
      "width":1280
    },
    "block":{
      "x":110,
      "y":95,
      "width":36,
      "height":166
    }
  },
  {
    "screen":{
      "height":720,
      "width":1280
    },
    "block":{
      "x":251,
      "y":100,
      "width":54,
      "height":175
    }
  },
  {
    "screen":{
      "height":720,
      "width":1280
    },
    "block":{
      "x":425,
      "y":102,
      "width":23,
      "height":211
    }
  },
  {
    "screen":{
      "height":720,
      "width":1280
    },
```

```
                "block":{
                   "x":632,
                   "y":88,
                   "width":51,
                   "height":245
                }
             }
          ]
       }
    }
 }
]
```

Field description		
Field	**Description**	**M/O**
channel	IPC channel number.	M
enable	Video mask switch.	M
block->height	Block height.	M
block->width	Block width.	M
block->x	Left upper X axis coordinates	M
block->y	Left upper Y axis coordinates	M
screen->height	Screen height.	M
screen->width	Screen width.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetMask",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description	
Field	**description**
rspCode	Response code

3.4.11 Preview

- **Interface Description**

discard

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Preview&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "Preview",
"Preview": {
"channel": 0,
"enable": 0,
"type": "main"
}
}
]		

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd" : " Preview ",
"code" : 0,
"value" : {
"rspCode" : 200
}
}

]	
Field description	
Field	**description**
rspCode	Response code

3.4.12 GetCrop

- **Interface Description**

It is used to get configuration of Crop.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetCrop&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetCrop"
 	
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly
[{ "cmd": " GetCrop",

```
    "code": 0,
    "value": {
      "Crop": {
        "minHeight": 0,
        "minWidth": 0,
        "mainHeight": 0,
        "mainWidth": 0,
        "cropHeight": 0,
        "cropWidth": 0,
        "topLeftY": 0,
        "topLeftX": 0
      }
    },
    "initial": {
      "Crop": {
        "minHeight": 0,
        "minWidth": 0,
        "mainHeight": 0,
        "mainWidth": 0,
        "cropHeight": 0,
        "cropWidth": 0,
        "topLeftY": 0,
        "topLeftX": 0
      }
    },
    "range": {
      "Crop": {
        "topLeftY": {
          "min": 0,
          "max": 10
        },
        "topLeftX": {
          "min": 0,
          "max": 10
        }
      }
    }
  }
]
```


Field description	
Field	**description**
rspCode	Response code
minHeight	Minimum height of crop area

minWidth	Minimum width of crop area
mainHeight	height of Main stream
mainWidth	width of Main stream
cropHeight	height of crop area
cropWidth	width of crop area
topLeftY	Distance between the upper left corner of the crop area and the upper boundary
"topLeftX	Distance between the upper left corner of the crop area and the left boundary

3.5 Enc

3.5.1 GetEnc

- **Interface Description**

It is used to get configuration of Enc.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetEnc&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetEnc",
"action":1,
"param":{
"channel":0
}
}
]		

Field description		
Field	**Description**	**M/O**
channel	IPC channel number	M

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : "GetEnc",
    "code" : 0,
    "initial" : {
      "Enc" : {
        "audio" : 0,
        "channel" : 0,
        "mainStream" : {
          "bitRate" : 6144,
          "frameRate" : 30,
          "profile" : "High",
          "size" : "2560*1440"
        },
        "subStream" : {
          "bitRate" : 160,
          "frameRate" : 7,
          "profile" : "High",
          "size" : "640*360"
        }
      }
    },
    "range" : {
      "Enc" : [
        {
          "audio" : "boolean",
          "mainStream" : {
            "bitRate" : [ 1024, 1536, 2048, 3072, 4096, 5120, 6144, 7168, 8192 ],
            "default" : {
              "bitRate" : 6144,
              "frameRate" : 30
            },
            "frameRate" : [ 30, 22, 20, 18, 16, 15, 12, 10, 8, 6, 4, 2 ],
            "profile" : [ "Base", "Main", "High" ],
            "size" : "2560*1440"
          },
```

```
      "subStream" : {
        "bitRate" : [ 64, 128, 160, 192, 256, 384, 512 ],
        "default" : {
          "bitRate" : 160,
          "frameRate" : 7
        },
        "frameRate" : [ 15, 10, 7, 4 ],
        "profile" : [ "Base", "Main", "High" ],
        "size" : "640*360"
      }
    },
    {
      "audio" : "boolean",
      "mainStream" : {
        "bitRate" : [ 1024, 1536, 2048, 3072, 4096, 5120, 6144, 7168, 8192 ],
        "default" : {
          "bitRate" : 5120,
          "frameRate" : 30
        },
        "frameRate" : [ 30, 22, 20, 18, 16, 15, 12, 10, 8, 6, 4, 2 ],
        "profile" : [ "Base", "Main", "High" ],
        "size" : "2048*1536"
      },
      "subStream" : {
        "bitRate" : [ 64, 128, 160, 192, 256, 384, 512 ],
        "default" : {
          "bitRate" : 160,
          "frameRate" : 7
        },
        "frameRate" : [ 15, 10, 7, 4 ],
        "profile" : [ "Base", "Main", "High" ],
        "size" : "640*360"
      }
    },
    {
      "audio" : "boolean",
      "mainStream" : {
        "bitRate" : [ 1024, 1536, 2048, 3072, 4096, 5120, 6144, 7168, 8192 ],
        "default" : {
          "bitRate" : 5120,
          "frameRate" : 30
        },
        "frameRate" : [ 30, 22, 20, 18, 16, 15, 12, 10, 8, 6, 4, 2 ],
```

```
            "profile" : [ "Base", "Main", "High" ],
            "size" : "2304*1296"
          },
          "subStream" : {
            "bitRate" : [ 64, 128, 160, 192, 256, 384, 512 ],
            "default" : {
              "bitRate" : 160,
              "frameRate" : 7
            },
            "frameRate" : [ 15, 10, 7, 4 ],
            "profile" : [ "Base", "Main", "High" ],
            "size" : "640*360"
          }
        },
        {
          "audio" : "boolean",
          "mainStream" : {
            "bitRate" : [ 1024, 1536, 2048, 3072, 4096, 5120, 6144, 7168, 8192 ],
            "default" : {
              "bitRate" : 5120,
              "frameRate" : 30
            },
            "frameRate" : [ 30, 22, 20, 18, 16, 15, 12, 10, 8, 6, 4, 2 ],
            "profile" : [ "Base", "Main", "High" ],
            "size" : "1080P"
          },
          "subStream" : {
            "bitRate" : [ 64, 128, 160, 192, 256, 384, 512 ],
            "default" : {
              "bitRate" : 160,
              "frameRate" : 7
            },
            "frameRate" : [ 15, 10, 7, 4 ],
            "profile" : [ "Base", "Main", "High" ],
            "size" : "640*360"
          }
        },
        {
          "audio" : "boolean",
          "mainStream" : {
            "bitRate" : [ 512, 768, 1024, 1536, 2048, 3072, 4096, 5120 ],
            "default" : {
              "bitRate" : 3072,
```

```
              "frameRate" : 30
            },
            "frameRate" : [ 30, 22, 20, 18, 16, 15, 12, 10, 8, 6, 4, 2 ],
            "profile" : [ "Base", "Main", "High" ],
            "size" : "720P"
          },
          "subStream" : {
            "bitRate" : [ 64, 128, 160, 192, 256, 384, 512 ],
            "default" : {
              "bitRate" : 160,
              "frameRate" : 7
            },
            "frameRate" : [ 15, 10, 7, 4 ],
            "profile" : [ "Base", "Main", "High" ],
            "size" : "640*360"
          }
        }
      ]
    },
    "value" : {
      "Enc" : {
        "audio" : 1,
        "channel" : 0,
        "mainStream" : {
          "bitRate" : 6144,
          "frameRate" : 30,
          "profile" : "Main",
          "size" : "2560*1440"
        },
        "subStream" : {
          "bitRate" : 160,
          "frameRate" : 7,
          "profile" : "High",
          "size" : "640*360"
        }
      }
    }
  }
]
```


Field description

Field	description
audio	Audio switch.

mainStream->bitRate	Bit rate of main stream.
mainStream->frameRate	FrameRate of main stream.
mainStream->profile	H.264 Profile.
mainStream->size	Resolution.
subStream->bitRate	Bit rate of sub stream.
subStream->frameRate	FrameRate of sub stream.
subStream->profile	H.264 Profile.
subStream->size	Resolution.

3.5.2 SetEnc

- **Interface Description**

It is used to set configuration of Enc.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetEnc&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetEnc",
    "param":{
      "Enc":{
        "channel":"_ChnNum",
        "audio":1,
        "mainStream":{
          "bitRate":6144,
          "frameRate":30,
          "profile":"Main",
          "size":"2560*1440"
        },
        "subStream":{
          "bitRate":160,
          "frameRate":7,
```

<table>
<tr><td>

```
            "profile":"High",
            "size":"640*360"
          }
        }
      }
    }
]
```

</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
<tr><td>channel</td><td>IPC channel number.</td><td>M</td></tr>
<tr><td>audio</td><td>Audio switch.</td><td>M</td></tr>
<tr><td>mainStream->bitRate</td><td>Bit rate of main stream.</td><td>M</td></tr>
<tr><td>mainStream->frameRate</td><td>FrameRate of main stream.</td><td>M</td></tr>
<tr><td>mainStream->profile</td><td>H.264 Profile.</td><td>M</td></tr>
<tr><td>mainStream->size</td><td>Resolution.</td><td>M</td></tr>
<tr><td>subStream->bitRate</td><td>Bit rate of sub stream.</td><td>M</td></tr>
<tr><td>subStream->frameRate</td><td>FrameRate of sub stream.</td><td>M</td></tr>
<tr><td>subStream->profile</td><td>H.264 Profile.</td><td>M</td></tr>
<tr><td>subStream->size</td><td>Resolution.</td><td>M</td></tr>
</table>

- **Return data description**

<table>
<tr><td>Return data correctly</td></tr>
<tr><td>

```
[
  {
    "cmd" : "SetEnc",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>rspCode</td><td>Response code</td></tr>
</table>

3.6 Record

3.6.1 GetRec

- **Interface Description**

It is used to get configuration of record.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetRec&token=TOKEN

- **Post Data**

Data example		

[
{
"cmd":"GetRec",
"action":1,
"param":{
"channel":0
}
}
]		

Field description		
Field	**Description**	**M/O**
channel	Index of channel	M

- **Return data description**

Return data correctly

[
{
"cmd" : "GetRec",
"code" : 0,
"initial" : {

"Rec" : {
"channel" : 0,
"overwrite" : 1,
"postRec" : "15 Seconds",
"preRec" : 1,
"schedule" : {
"enable" : 1,
"table" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111"
}
}
},
"range" : {
"Rec" : {
"channel" : 0,
"overwrite" : "boolean",
"postRec" : ["15 Seconds", "30 Seconds", "1 Minute"],
"preRec" : "boolean",
"schedule" : {
"enable" : "boolean"
}
}
},
"value" : {
"Rec" : {
"channel" : 0,
"overwrite" : 1,
"postRec" : "1 Minute",
"preRec" : 1,
"schedule" : {
"enable" : 1,
"table" :
"00011111111111111111111111111111000111111111111111111111000111100
001111110011101000111100001100010011111111111100001100010011111111
1111000011000100111111111111111111111"
}
}
}
}
]

Field description

Field	description
channel	Channel number
overwrite	Whether the video files can be overwritten
postRec	Post record time
preRec	Enable pre record
enable	Enable scheduled recording
table	A string with the length of 7 days*24 hours. Each byte in this hour indicates whether it's recording. With the value of 0, the recording is off, otherwise the recording is on.

3.6.2 SetRec

- **Interface Description**

It is used to set configuration of record.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetRec&token=TOKEN

- **Post Data**

Data example
[{ "cmd":"SetRec", "param": { "Rec" : { "channel" : 0, "overwrite" : 1, "postRec" : "30 Seconds", "preRec" : 1, "schedule" : { "enable" : 1, "table" : "111111111111111111111111111111111111111111111111111111111111111111111111

```
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111"
        }
      }
   }
 }
]
```

Field description		
Field	**Description**	**M/O**
channel	See also GetRec	M
overwrite	See also GetRec	O
postRec	See also GetRec	O
preRec	See also GetRec	O
enable	See also GetRec	O
table	See also GetRec	O

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetRec",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description	
Field	**description**

3.6.3 Search

- **Interface Description**

It is used to search video files.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=Search&token=TOKEN

- **Post Data**

Data example

```
[
 {
  "cmd":"Search",
  "param":{
   "Search":{
    "channel":0,
    "onlyStatus":0,
    "streamType":"main",
    "StartTime":{
     "year":2015,
     "mon":1,
     "day":31,
     "hour":1,
     "min":1,
     "sec":1
    },
    "EndTime":{
     "year":2016,
     "mon":6,
     "day":7,
     "hour":23,
     "min":50,
     "sec":1
    }
   }
  }
 }
]
```

Field description

Field	Description	M/O
channel	Channel number	M
onlyStatus	The value 1 means it will only get the data of dates instead of requiring the details of the files. The value 0 means it will get the details information of a certain day.	M

streamType	The stream type of the recordings, “main” is for searching main stream, otherwise is for searching sub stream.	M
StartTime	The start time of the recordings	M
EndTime	The end time of the recordings	M
Noted: Searching a big amount of files might lead to searching time out		

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "Search",
    "code" : 0,
    "value" : {
      "SearchResult" : {
        "Status" : [
          {
            "mon" : 5,
            "table" : "00000000000000000000000011111110",
            "year" : 2016
          }
        ],
        "channel" : 0
      }
    }
  }
]
```

Field description

Field	**description**
mon	Record date(month)
year	Record date(year)
channel	channel number
table	Each byte in the string represent the days of the month, indicating whether it’s recording. With the value of 0, the recording is off, with the value of 1, the recording is on.

Return data correctly (onlyStatus 为 0)

```
[
  {
    "cmd" : "Search",
    "code" : 0,
    "value" : {
      "SearchResult" : {
        "File" : [
          {
            "EndTime" : {
              "day" : 25,
              "hour" : 20,
              "min" : 1,
              "mon" : 5,
              "sec" : 21,
              "year" : 2016
            },
            "StartTime" : {
              "day" : 25,
              "hour" : 20,
              "min" : 0,
              "mon" : 5,
              "sec" : 57,
              "year" : 2016
            },
            "frameRate" : 30,
            "height" : 1440,
            "name" : "Rec_20160525_110057_411_M.mp4",
            "size" : 19437931,
            "type" : "main",
            "width" : 2560
          },
          {
            "EndTime" : {
              "day" : 25,
              "hour" : 20,
              "min" : 2,
              "mon" : 5,
              "sec" : 44,
              "year" : 2016
            },
            "StartTime" : {
              "day" : 25,
              "hour" : 20,
```

```
      "min" : 2,
      "mon" : 5,
      "sec" : 21,
      "year" : 2016
    },
    "frameRate" : 30,
    "height" : 1440,
    "name" : "Rec_20160525_110221_411_M.mp4",
    "size" : 18441719,
    "type" : "main",
    "width" : 2560
  },
  {
    "EndTime" : {
      "day" : 25,
      "hour" : 20,
      "min" : 3,
      "mon" : 5,
      "sec" : 15,
      "year" : 2016
    },
    "StartTime" : {
      "day" : 25,
      "hour" : 20,
      "min" : 2,
      "mon" : 5,
      "sec" : 53,
      "year" : 2016
    },
    "frameRate" : 30,
    "height" : 1440,
    "name" : "Rec_20160525_110253_411_M.mp4",
    "size" : 17880700,
    "type" : "main",
    "width" : 2560
  },
  {
    "EndTime" : {
      "day" : 25,
      "hour" : 20,
      "min" : 4,
      "mon" : 5,
      "sec" : 51,
```

```
            "year" : 2016
          },
          "StartTime" : {
            "day" : 25,
            "hour" : 20,
            "min" : 4,
            "mon" : 5,
            "sec" : 23,
            "year" : 2016
          },
          "frameRate" : 30,
          "height" : 1440,
          "name" : "Rec_20160525_110423_411_M.mp4",
          "size" : 22532061,
          "type" : "main",
          "width" : 2560
        }
      ],
      "Status" : [
        {
          "mon" : 5,
          "table" : "00000000000000000000000011111110",
          "year" : 2016
        }
      ],
      "channel" : 0
    }
  }
]
```


Field description

Field	description
frameRate	Frame rate
height	The height of the image
width	The width of the image
name	File name
size	File size
type	Stream type
StartTime	The start time of the recordings
EndTime	The end time of the recordings
mon	Month
year	Year
channel	Channel number

table	Each byte in the string represent the days of the month, indicating whether it's recording. With the value of 0, the recording is off, with the value of 1, the recording is on.

3.6.4 Download

- **Interface Description**

It is used to download video files.

- **Interface call instructions**

Request URL	http://IPC_IP/cgi-bin/api.cgi?cmd=Download&source=Rec_20160622_021427_411_M.mp4&output=Rec_20160622_101427_411_M.mp4&token=TOKEN

- **Request parameter description**

Parameter	M/O	Description
source	M	The name of the source file
output	M	Video files storage name

- **Return data description**

Return data correctly
Content-Type: application/octet-stream Content-Length: 30199455 Last-Modified: Wed, 22 Jun 2016 02:19:42 GMT Connection: keep-alive Content-Disposition: attachment;filename=Rec_20160622_101903_411_M.mp4 ETag: "5769f5be-1ccce9f" Accept-Ranges: bytes .....(file content)
Field description

Field	description
filename	The name of the video file

3.6.5 Snap

- **Interface Description**

It is used to capture an image.

- **Interface call instructions**

Request URL	http://IPC_IP/cgi-bin/api.cgi? cmd=Snap&channel=0&rs=6PHVjvf0UntSLbyT&token=TOKEN

- **Request parameter description**

Parameter	M/O	Description
channel	M	Channel number
rs	M	Random character with fixed length. It's used to prevent browser caching.

- **Return data description**

Return data correctly	
HTTP/1.1 200 OK Server: nginx/1.6.2 Date: Wed, 08 Jun 2016 03:16:22 GMT Content-Type: image/jpeg;name="snap.jpg" Transfer-Encoding: chunked Connection: keep-alive .....(File content)	
Field description	
Field	**description**
name	Picture name

3.7 PTZ

3.7.1 GetPtzPreset

- **Interface Description**

It is used to get configuration of Ptz Preset.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPtzPreset&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "GetPtzPreset",
"action": 1,
"param": {
"channel": 0
}
}
]		

Field description		
Field	**Description**	**M/O**
channel	The channel number.	M

- **Return data description**

Return data correctly
[{ "cmd" : "GetPtzPreset",

```
    "code" : 0,
    "range" : {
      "PtzPreset" : {
        "channel" : 0,
        "enable" : "boolean",
        "id" : {
          "max" : 64,
          "min" : 1
        },
        "name" : {
          "maxLen" : 31
        }
      }
    },
    "value" : {
      "PtzPreset" : [
        {
          "channel" : 0,
          "enable" : 0,
          "id" : 1,
          "name" : "pos1"
        },
        ... // There are total 64 PtzPreset.
      ]
    }
  }
]
```


Field description

Field	**description**
enable	Preset switch, The value of 1 represents the open, and the 0 is the opposite.
id	ID number of the Preset.
name	Name of the Preset.

3.7.2 SetPtzPreset

- **Interface Description**

It is used to set configuration of PtzPreset.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetPtzPreset&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetPtzPreset",
    "action":0,
    "param":{
      "PtzPreset":{
        "channel":0,
        "enable":1,
        "id":1,
        "name":"pos1"
      }
    }
  }
]
```

Field description

Field	Description	M/O
channel	IPC channel number.	M
enable	1 means that is on, and 0 means it's off. If that field doesn't exist it means only the name of the preset can be revised.	O
id	ID number of preset. Range [1~64].	M
name	Name of preset, limit 1~31 characters.	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetPtzPreset",
    "code" : 0,
    "value" : {
      "rspCode" : 200
```

} }]
Field description

Field	**description**
rspCode	Response code

3.7.3 GetPtzPatrol

- **Interface Description**

It is used to get configuration of PtzPatrol.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPtzPatrol&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"GetPtzPatrol",
"action":1,
"param":{
"channel":0
}
}
]

Field description

Field	**Description**	**M/O**
channel	The channel number.	M

- **Return data description**

Return data correctly
[

```
{
  "cmd" : "GetPtzPatrol",
  "code" : 0,
  "range" : {
    "PtzPatrol" : {
      "enable" : "boolean",
      "id" : {
        "max" : 1,
        "min" : 1
      },
      "preset" : {
        "dwellTime" : {
          "max" : 30,
          "min" : 1
        },
        "id" : {
          "max" : 64,
          "min" : 1
        },
        "speed" : {
          "max" : 64,
          "min" : 1
        }
      },
      "running" : "boolean"
    }
  },
  "value" : {
    "PtzPatrol" : [
      {
        "channel" : 0,
        "enable" : 1,
        "id" : 1,
        "preset" : [
          {
            "dwellTime" : 30,
            "id" : 35,
            "speed" : 30
          },
          ... // There are at most 16 preset.
        ],
        "running" : 0
      }
```

<table>
<tr><td>
<pre>
      ]
    }
  }
]
</pre>
</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>enable</td><td>Patrol switch, The value 1 means that’s enabled, and 0 means the opposite.</td></tr>
<tr><td>id</td><td>ID number of the Patrol.</td></tr>
<tr><td>running</td><td>Whether running or not</td></tr>
<tr><td>Preset->dwellTime</td><td>Patrol time</td></tr>
<tr><td>Preset->id</td><td>ID number of the preset</td></tr>
<tr><td>Preset->speed</td><td>Patrol speed</td></tr>
</table>

3.7.4 SetPtzPatrol

- **Interface Description**

It is used to set configuration of PtzPatrol.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetPtzPatrol&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"SetPtzPatrol",
    "action":0,
    "param":{
      "PtzPatrol":{
        "channel":0,
        "enable":1,
        "id":1,
        "preset":[
          {
            "dwellTime":3,
            "id":1,
```

```
                "speed":10
            },
            {
                "dwellTime":4,
                "id":2,
                "speed":20
            },
            ... // There may be multiple preset.
        ]
      }
    }
  }
]
```

Field description

Field	Description	M/O
channel	IPC channel number.	M
enable	Whether enable the preset or not	M
id	ID number of Patrol.	M
Preset->dwellTime	Patrol time	M
Preset->id	ID number of preset. Range [1~64].	M
Preset->speed	Patrol speed	M
Note : Support up to 16 preset.		

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetPtzPatrol",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description
rspCode	Response code

3.7.5 PtzCtrl

- **Interface Description**

It is used to control the operation of PTZ.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=PtzCtrl&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"PtzCtrl",
"param":{
"channel":0,
"op":"Auto",
"speed":32
}
},
{
"cmd":"PtzCtrl",
"param":{
"channel":0,
"op":"Stop"
}
},
{
"cmd":"PtzCtrl",
"param":{
"channel":0,
"op":"ToPos",
"id":1,
"speed":32
}
}
...
]

Field description

Field	Description	M/O
channel	IPC channel number.	M
op	Operation to control the PTZ.	M
id	Preset id number or Patrol id number.	O
speed	PTZ running speed.	O

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : "PtzCtrl",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  },
  {
    "cmd" : "PtzCtrl",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  },
  {
    "cmd" : "PtzCtrl",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  },
  ...
]
```


Field description

Field	description
rspCode	Response code

Notes :
connect to the ptz command, some parameters are unneeded. you just set it "0".

the value of op is:

"Stop": PTZ stop turning. "Left": PTZ turn left in the specified speed. "Right": PTZ turn right in the specified speed. "Up": PTZ turn up in the specified speed. "Down": PTZ turn down in the specified speed. "LeftUp": PTZ turn left-up in the specified speed. "LeftDown": PTZ turn left-down in the specified speed. "RightUp": PTZ turn right-up in the specified speed. "RightDown": PTZ turn right-down in the specified speed. "IrisDec":Iris shrink in the specified speed. "IrisInc":Iris enlarge in the specified speed. "ZoomDec":Zoom in in the specified speed. "ZoomInc":Zoom out in the specified speed. "FocusDec":Focus backwards in the specified speed. "FocusInc":Focus forwards in the specified speed. "Auto": PTZ turn auto in the specified speed. "StartPatrol": PTZ patrol in the specified speed. "StopPatrol": PTZ stop patrol. "ToPos": PTZ turn to a specified preset in the specified speed.

3.7.6 GetPtzSerial

- **Interface Description**

GetPtzSerial.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPtzSerial&token=TOKEN

- **POST Data**

Data example

[
{
"cmd": "GetPtzSerial",
"action": 1,
"param": {
"channel": 0

```
    }
  }
]
```

Field description

Field	Description	M/O
channel	The channel number.	M

- **Return data description**

Return data correctly


```
[
  {
    "cmd": "GetPtzSerial",
    "code": 0,
    "initial": {
      "PtzSerial": {
        "baudRate": 9600,
        "channel": 0,
        "ctrlAddr": 1,
        "ctrlProtocol": "PELCO_D",
        "dataBit": "CS8",
        "flowCtrl": "none",
        "parity": "none",
        "stopBit": 1
      }
    },
    "range": {
      "PtzSerial": {
        "baudRate": [
          1200,
          2400,
          4800,
          9600
        ],
        "channel": 0,
        "ctrlAddr": {
          "max": 64,
          "min": 1
        },
        "ctrlProtocol": [
```

```
            "PELCO_D",
            "PELCO_P"
          ],
          "dataBit": [
            "CS8",
            "CS7",
            "CS6",
            "CS5"
          ],
          "flowCtrl": [
            "none",
            "hard",
            "xon",
            "xoff"
          ],
          "parity": [
            "none",
            "odd",
            "even"
          ],
          "stopBit": [
            1,
            2
          ]
        }
      },
      "value": {
        "PtzSerial": {
          "baudRate": 9600,
          "channel": 0,
          "ctrlAddr": 1,
          "ctrlProtocol": "PELCO_D",
          "dataBit": "CS8",
          "flowCtrl": "none",
          "parity": "none",
          "stopBit": 1
        }
      }
    }
]
```


Field description

Field	description
channel	The channel number.

baudRate	The baud rate of the serial in ptz
ctrlAddr	The control address of the serial in ptz
ctrlProtocol	The control protocol of the serial in ptz
dataBit	The data bit of the serial in ptz
flowCtrl	The flow control of the serial in ptz
parity	The parity of the serial in ptz
stopBit	The stop bit of the serial in ptz

3.7.7 SetPtzSerial

- **Interface Description**

SetPtzSerial.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetPtzSerial&token=TOKEN

- **POST Data**

Data example

[
{
"cmd": "SetPtzSerial",
"action": 0,
"param": {
"PtzSerial": {
"channel": 0,
"baudRate": 9600,
"dataBit": "CS6",
"stopBit": 2,
"parity": "odd",
"flowCtrl": "hard",
"crtlProtocol": "PELCO_P",
"ctrlAddr": 2
}
}
}
]

Field description		
Field	**Description**	**M/O**
channel	The channel number.	M
baudRate	The baud rate of the serial in ptz	O
ctrlAddr	The control address of the serial in ptz, which is default equal to channel plus 1	O
ctrlProtocol	The control protocol of the serial in ptz, which is between “PELCO_D” and “PELCO_P”	O
dataBit	The data bit of the serial in ptz, which is between “CS8”, “CS7”, “CS6” and “CS5”	O
flowCtrl	The flow control of the serial in ptz, which is between “none”, “hard”, “xon” and “xoff”	O
parity	The parity of the serial in ptz, which is between “none”, “odd” and “even”	O
stopBit	The stop bit of the serial in ptz, which can be 1 or 2	O

- **Return data description**

Return data correctly

[
{
"cmd" : " SetPtzSerial ",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description	
Field	**description**
rspCode	Response code

3.7.8 GetPtzTattern

- **Interface Description**

GetPtzTattern.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPtzTattern&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "GetPtzTattern",
"action": 1,
"param": {
"channel": 0
}
}
]		

Field description		
Field	**Description**	**M/O**
channel	The channel number.	M

- **Return data description**

Return data correctly

[
{
"cmd": "GetPtzTattern",
"code": 0,
"initial": {
"PtzTattern": {
"channel": 0,
"track": [
{
"enable": 0,
"id": 1,
"name": "track1",
"running": 0
},

```
            {
               "enable": 0,
               "id": 1,
               "name": "track2",
               "running": 0
            },
            {
               "enable": 0,
               "id": 1,
               "name": "track3",
               "running": 0
            },
            {
               "enable": 0,
               "id": 1,
               "name": "track4",
               "running": 0
            },
            {
               "enable": 0,
               "id": 1,
               "name": "track5",
               "running": 0
            },
            {
               "enable": 0,
               "id": 1,
               "name": "track6",
               "running": 0
            }
         ]
      }
   },
   "range": {
      "PtzTattern": {
         "track": {
            "enable": "boolean",
            "id": {
               "max": 6,
               "min": 1
            },
            "name": {
               "maxLen": 191
```

```
            },
            "running": "boolean"
        }
    }
},
"value": {
    "PtzTattern": {
        "channel": 0,
        "track": [
            {
                "enable": 0,
                "id": 1,
                "name": "track1",
                "running": 0
            },
            {
                "enable": 0,
                "id": 2,
                "name": "track2",
                "running": 0
            },
            {
                "enable": 0,
                "id": 1,
                "name": "track3",
                "running": 0
            },
            {
                "enable": 0,
                "id": 1,
                "name": "track4",
                "running": 0
            },
            {
                "enable": 0,
                "id": 1,
                "name": "track5",
                "running": 0
            },
            {
                "enable": 0,
                "id": 1,
                "name": "track6",
```

<table>
<tr><td>

<pre>
                "running": 0
            }
          ]
        }
      }
    }
]
</pre>

</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	**description**
channel	The channel number.
id	ID number of the track.
name	The name of the track
enable	Track switch, The value 1 means that's enabled, and 0 means the opposite
running	Whether running or not

3.7.9 SetPtzTattern

- **Interface Description**

SetPtzTattern.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetPtzTattern&token=TOKEN

- **POST Data**

<table>
<tr><td>Data example</td></tr>
<tr><td>

<pre>
[
  {
    "cmd": "SetPtzTattern",
    "action": 0,
    "param": {
      "PtzTattern": {
        "channel": 0,
        "track": [
          {
            "id": 1,
</pre>

</td></tr>
</table>

```
                "enable": 0,
                "running": 0,
                "name": "track1"
            },
            {
                "id": 2,
                "enable": 0,
                "running": 0,
                "name": "track2"
            }
        ]
    }
  }
]
```


Field description

Field	Description	M/O
channel	The channel number.	M
id	ID number of the track. Range [1~6]	M
name	The name of the track	O
enable	Track switch, The value 1 means that's enabled, and 0 means the opposite	O
running	Whether running or not	O

- **Return data description**

Return data correctly


```
[
  {
    "cmd" : " SetPtzTattern",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```


Field description

Field	description
rspCode	Response code

3.7.10 GetAutoFocus

- **Interface Description**

GetAutoFocus.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetAutoFocus&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "GetAutoFocus",
"action": 1,
"param": {
"channel": 0
}
}
]		

Field description		
Field	**Description**	**M/O**
channel	The channel number.	M

- **Return data description**

Return data correctly

[
{
"cmd": "GetAutoFocus",
"code": 0,
"initial": {
"AutoFocus": {

```
            "disable": 0
          }
        },
        "range": {
          "AutoFocus": {
            "disable": "boolean"
          }
        },
        "value": {
          "AutoFocus": {
            "disable": 0
          }
        }
    }
]
```


Field description	
Field	**description**
disable	Forbid the autofocus of the ptz or not

3.7.11 SetAutoFocus

- **Interface Description**

SetAutoFocus.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetAutoFocus&token=TOKEN

- **POST Data**

Data example


```
[
    {
        "cmd": "SetAutoFocus",
        "action": 0,
        "param": {
            "AutoFocus": {
                "channel": 0,
```

<table>
<tr><td colspan="3">"disable": 1
}
}
}
]</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
<tr><td>disable</td><td>Forbid the autofocus of the ptz, 1 means forbidding, 0 means enabling</td><td>M</td></tr>
</table>

- **Return data description**

<table>
<tr><td colspan="2">Return data correctly</td></tr>
<tr><td colspan="2">[
{
"cmd" : " SetAutoFocus",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>rspCode</td><td>Response code</td></tr>
</table>

3.8 Alarm

3.8.1 GetAlarm

- **Interface Description**

It is used to get alarm setting.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetAlarm&token=TOKEN

- **Post Data**

Data example

```
[
 {
  "cmd":"GetAlarm",
  "action":1,
  "param":{
   "Alarm":{
     "type":"md",
     "channel":0
   }
  }
 }
]
```

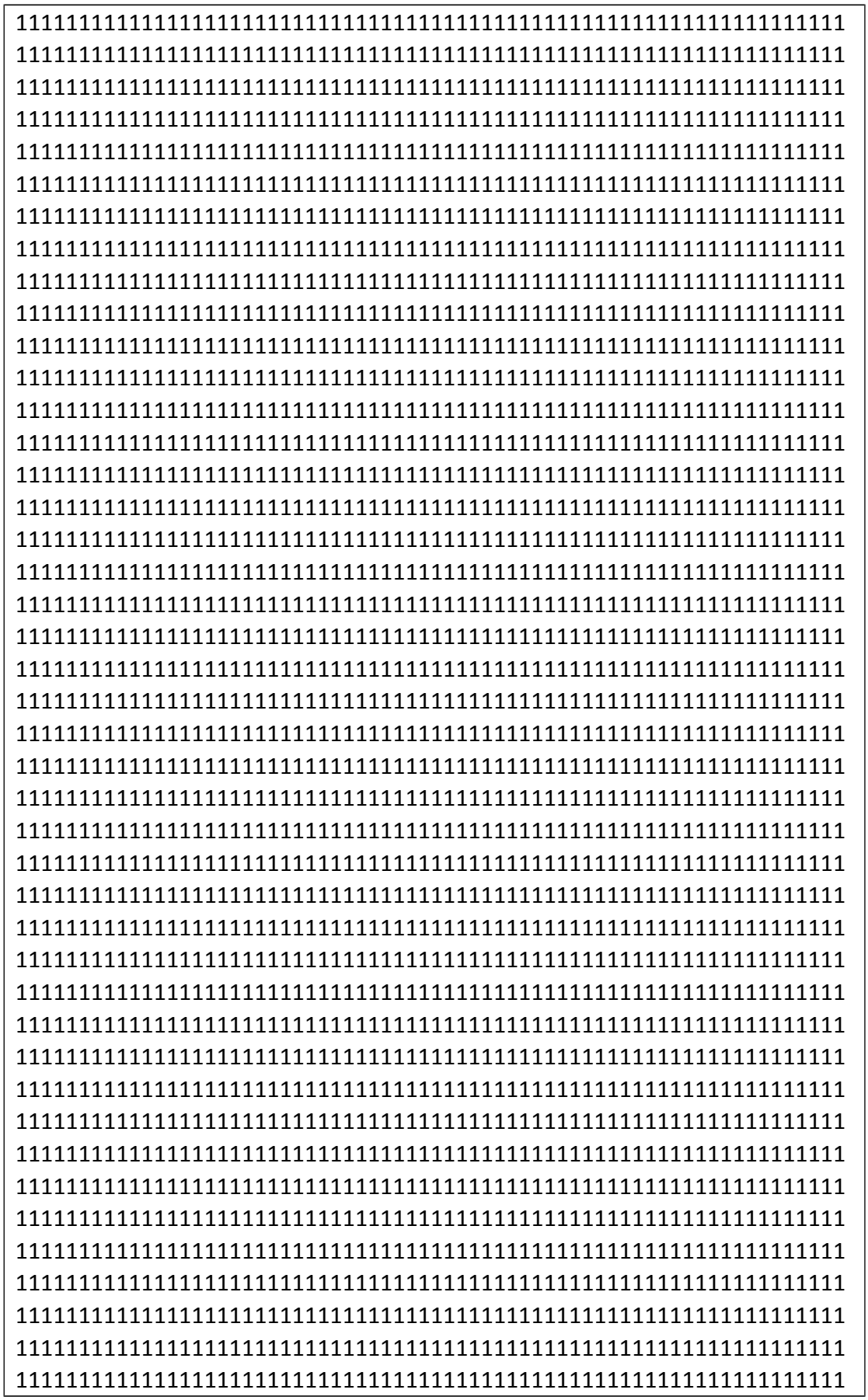
Field description

Field	Description	M/O
channel	Index of channel	M
type	Alarm type , only support "md" now	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "GetAlarm",
    "code" : 0,
    "initial" : {
      "Alarm" : {
        "channel" : 0,
        "scope" : {
          "cols" : 80,
          "rows" : 45,
          "table" :
"11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
```

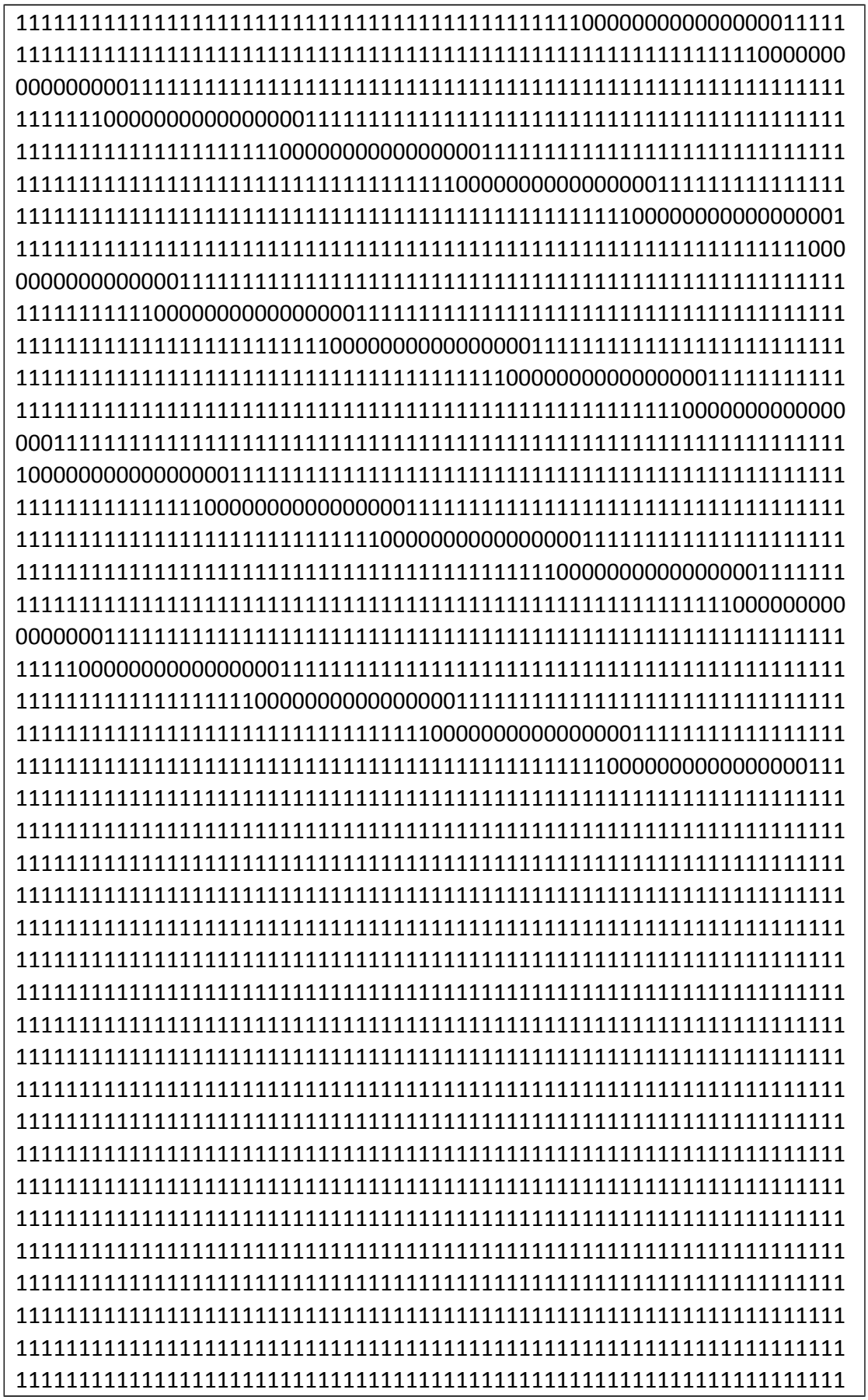


```
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111"
        },
        "sens" : [
          {
            "beginHour" : 0,
            "beginMin" : 0,
            "endHour" : 6,
            "endMin" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 6,
            "beginMin" : 0,
            "endHour" : 12,
            "endMin" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 12,
            "beginMin" : 0,
            "endHour" : 18,
            "endMin" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 18,
            "beginMin" : 0,
            "endHour" : 23,
            "endMin" : 59,
            "sensitivity" : 9
          }
        ],
        "type" : "md"
      }
```

```
    },
    "range" : {
      "Alarm" : {
        "channel" : 0,
        "scope" : {
          "cols" : {
            "max" : 80,
            "min" : 80
          },
          "rows" : {
            "max" : 45,
            "min" : 45
          },
          "table" : {
            "maxLen" : 6399
          }
        },
        "sens" : [
          {
            "beginHour" : {
              "max" : 23,
              "min" : 0
            },
            "beginMin" : {
              "max" : 59,
              "min" : 0
            },
            "endHour" : {
              "max" : 23,
              "min" : 0
            },
            "endMin" : {
              "max" : 59,
              "min" : 0
            },
            "id" : 0,
            "sensitivity" : {
              "max" : 50,
              "min" : 1
            }
          },
          {
            "beginHour" : {
```

```
      "max" : 23,
      "min" : 0
    },
    "beginMin" : {
      "max" : 59,
      "min" : 0
    },
    "endHour" : {
      "max" : 23,
      "min" : 0
    },
    "endMin" : {
      "max" : 59,
      "min" : 0
    },
    "id" : 1,
    "sensitivity" : {
      "max" : 50,
      "min" : 1
    }
  },
  {
    "beginHour" : {
      "max" : 23,
      "min" : 0
    },
    "beginMin" : {
      "max" : 59,
      "min" : 0
    },
    "endHour" : {
      "max" : 23,
      "min" : 0
    },
    "endMin" : {
      "max" : 59,
      "min" : 0
    },
    "id" : 2,
    "sensitivity" : {
      "max" : 50,
      "min" : 1
    }
```

```
          },
          {
            "beginHour" : {
              "max" : 23,
              "min" : 0
            },
            "beginMin" : {
              "max" : 59,
              "min" : 0
            },
            "endHour" : {
              "max" : 23,
              "min" : 0
            },
            "endMin" : {
              "max" : 59,
              "min" : 0
            },
            "id" : 3,
            "sensitivity" : {
              "max" : 50,
              "min" : 1
            }
          }
        ],
        "type" : "md"
      }
    },
    "value" : {
      "Alarm" : {
        "channel" : 0,
        "scope" : {
          "cols" : 80,
          "rows" : 45,
          "table" :
"1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111000000000000000001111111111111111111111111111111
1111111111111111111111111111110000000000000000011111111111111111
```



```
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111"
        },
        "sens" : [
          {
            "beginHour" : 2,
            "beginMin" : 0,
            "endHour" : 23,
            "endMin" : 0,
            "id" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 23,
            "beginMin" : 0,
            "endHour" : 23,
            "endMin" : 0,
            "id" : 1,
            "sensitivity" : 9
          },
          {
            "beginHour" : 23,
            "beginMin" : 0,
            "endHour" : 23,
            "endMin" : 0,
            "id" : 2,
            "sensitivity" : 9
          },
          {
            "beginHour" : 23,
            "beginMin" : 0,
            "endHour" : 23,
            "endMin" : 59,
            "id" : 3,
            "sensitivity" : 9
          }
        ],
        "type" : "md"
      }
    }
  }
```

]	
Field description	
Field	**description**
channel	Channel number
scope	Motion detection scope, consisting of 80 columns and 45 rows. Appointed by cols and rows.
cols	The number of col
rows	The number of row
table(scope)	A string with the length of 80*45, each byte represents an area. With the value 1 motion detection is active in that period of time. With the value of 0 no response will be made with any detected motion.
sens	The sensitivity settings for motion detection. It is devided into 4 intervals by time.
beginHour	The start hour.
beginMin	The start minute.
endHour	The ending hour.
endMin	The ending minute.
sensitivity	Sensitivity
id	Section index
type	Alarm type, only “md” is supported.

3.8.2 SetAlarm

- **Interface Description**

It is used to set alarm setting.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetAlarm&token=TOKEN

- **Post Data**

Data example

[
{
"cmd":"SetAlarm",
"param":{

"Alarm" : {
"channel" : 0,
"scope" : {
"cols" : 80,
"rows" : 45,
"table" :
"111111111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111111111111
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```
111111111111111111111111111111111111111111111111111111111111111111
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111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111"
        },
        "sens" : [
          {
            "beginHour" : 2,
            "beginMin" : 0,
            "endHour" : 6,
            "endMin" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 7,
            "beginMin" : 0,
            "endHour" : 12,
            "endMin" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 14,
            "beginMin" : 0,
            "endHour" : 18,
            "endMin" : 0,
            "sensitivity" : 9
          },
          {
            "beginHour" : 20,
```

```
            "beginMin" : 0,
            "endHour" : 23,
            "endMin" : 59,
            "sensitivity" : 9
          }
        ],
        "type" : "md"
      }
    }
  }
]
```

Field description

Field	Description	M/O
channel	See also GetAlarm	M
scope	See also GetAlarm	O
cols	See also GetAlarm	O
rows	See also GetAlarm	O
table	See also GetAlarm	O
sens	See also GetAlarm	O
beginHour	See also GetAlarm	O
beginMin	See also GetAlarm	O
endHour	See also GetAlarm	O
endMin	See also GetAlarm	O
sensitivity	See also GetAlarm	O
id	See also GetAlarm	O
type	See also GetAlarm	M

- **Return data description**

Return data correctly

```
[
  {
    "cmd" : "SetAlarm",
    "code" : 0,
    "value" : {
      "rspCode" : 200
    }
  }
]
```

Field description

Field	description

3.8.3 GetMdState

- **Interface Description**

It is used to get state of MD.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetMdState&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetMdState",
"param":{
"channel":0
}
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly

[
{
"cmd" : "GetMdState",
"code" : 0,
"value" : {
"state" : 1
}
}

]	
Field description	
Field	**description**
state	The state of motion detection. The value 1 means motions have been detected and 0 means no motion has been detected.

3.8.4 GetAudioAlarm

- **Interface Description**

GetAudioAlarm.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetAudioAlarm&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd": "GetAudioAlarm",
"action": 1,
"param": {}
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly
[

```
  {
    "cmd": "GetAudioAlarm",
    "code": 0,
    "value": {
      "Audio": {
        "schedule": {
          "table": 0,
          "enable": 0
        }
      }
    },
    "initial": {
      "Audio": {
        "schedule": {
          "table": 0,
          "enable": 0
        }
      }
    },
    "range": {
      "Audio": {
        "schedule": {
          "table": {
            "minlen": 0,
            "maxlen": 10
          },
          "enable": "boolean"
        }
      }
    }
  }
]
```


Field description

Field	description
rspCode	Response code

3.8.5 SetAudioAlarm

- **Interface Description**

SetAudioAlarm.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=SetAudioAlarm&token=TOKEN

- **Post Data**

Data example


```
[
  {
    "cmd": " SetAudioAlarm",
    "param": {
      "Audio": {
        "schedule": {
          "enable": 1,
          "table":
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
        }
      }
    }
  }
]
```


Field description

Field	**Description**	**M/O**
enable	See also GetAlarm	O
table	See also GetAlarm	O

- **Return data description**

Return data correctly


```
[
 {
   "cmd" : "SetAlarm",
   "code" : 0,
   "value" : {
     "rspCode" : 200
   }
```

}]
Field description

Field	description

3.9 RTMP

3.9.1 rtmp=start

- **Interface Description**

rtmp=start

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=rtmp=start&token=TOKEN

- **POST Data**

Data example

[
{
"cmd": "rtmp=start",
"Preview": {
"channel": 0,
"enable": 0,
"type": "main"
}
}
]

Field description

Field	Description	M/O
		M

- **Return data description**

Return data correctly

[
  {
  "cmd" : " rtmp=start",
  "code" : 0,
  "value" : {
  "rspCode" : 200
  }
  }
]

Field description	
Field	**description**
rspCode	Response code

3.9.2 rtmp=stop

- **Interface Description**

rtmp=stop

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=rtmp=stop&token=TOKEN

- **POST Data**

Data example

[
  {
  "cmd": "rtmp=stop",
  "Preview": {
  "channel": 0,
  "enable": 1,
  "type": "main"
  }
  }

]		
Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly	

[
{
"cmd" : " rtmp=stop",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]	

Field description	
Field	**description**
rspCode	Response code

3.9.3 rtmp=auth

- **Interface Description**

rtmp=auth

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=rtmp=auth&token=TOKEN

- **POST Data**

Data example
[{

"cmd":" rtmp=auth" }]

Field description		
Field	**Description**	**M/O**
		M

- **Return data description**

Return data correctly

[
{
"cmd" : " rtmp=auth",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]

Field description	
Field	**description**
rspCode	Response code

3.10 LED

3.10.1 GetIrLights

- **Interface Description**

It is used to get IrLights information of device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetIrLights&token=TOKEN

- **POST Data**

Data example

```
[
  {
    "cmd":"GetIrLights"
  }
]
```

Field description

Field	Description	M/O

- **Return data description**

Return data correctly

```
[
  {
    "cmd": "GetIrLights",
    "code": 0,
    "value": {
      "IrLights": {
        "state": 0
      }
    },
    "initial": {
      "IrLights": {
        "state": 0
      }
    },
    "range": {
      "IrLights": {
        "state": {
          "Auto"
          "Off"
          "On"
        }
      }
    }
  }
```

]	
Field description	
Field	**description**
rspCode	Response code

3.10.2 GetPowerLed

- **Interface Description**

It is used to get power led information of device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd=GetPowerLed&token=TOKEN

- **POST Data**

Data example		

[
{
"cmd":"GetPowerLed"
}
]		

Field description		
Field	**Description**	**M/O**

- **Return data description**

Return data correctly
[{ "cmd": "GetPowerLed", "code": 0,

```
    "value": {
      "PowerLed": {
        "channel": 0,
        "state": 0
      }
    },
    "range": {
      "PowerLed": {
        "state": {
          "On"
          "Off"
        }
      }
    }
  }
]
```

Field description	
Field	**description**
rspCode	Response code

3.10.3 SetPowerLed

- **Interface Description**

It is used to set power led information of device.

- **Interface call instructions**

Request URL	http://IPC_IP/api.cgi?cmd= SetPowerLed&token=TOKEN

- **POST Data**

Data example

[
{
"cmd":"SetPowerLed",
"param":{
"PowerLed":{
"state":"Off",

<table>
<tr><td>"channel":0
}
}
}
]</td></tr>
<tr><td colspan="3">Field description</td></tr>
<tr><td>Field</td><td>Description</td><td>M/O</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3"></td></tr>
</table>

- **Return data description**

<table>
<tr><td>Return data correctly</td></tr>
<tr><td>[
{
"cmd" : " SetPowerLed ",
"code" : 0,
"value" : {
"rspCode" : 200
}
}
]</td></tr>
<tr><td colspan="2">Field description</td></tr>
<tr><td>Field</td><td>description</td></tr>
<tr><td>rspCode</td><td>Response code</td></tr>
</table>

4. Response

4.1 Error

<table>
<tr><td>Error Response</td></tr>
<tr><td>[
{
"cmd":string,</td></tr>
</table>

<table>
<tr><td colspan="3">"code":0,
"error":{
"rspCode":int,
"detail":string
}
}
]</td></tr>
<tr><td>rspCode</td><td>Details</td><td>Description</td></tr>
<tr><td>-1</td><td>not exist</td><td>Missing parameters</td></tr>
<tr><td>-2</td><td>out of mem</td><td>Used up memory</td></tr>
<tr><td>-3</td><td>check err</td><td>Check error</td></tr>
<tr><td>-4</td><td>param error</td><td>Parameters error</td></tr>
<tr><td>-5</td><td>max session</td><td>Reached the max session number.</td></tr>
<tr><td>-6</td><td>please login first</td><td>Login required</td></tr>
<tr><td>-7</td><td>login failed</td><td>Login error</td></tr>
<tr><td>-8</td><td>timeout</td><td>Operation timeout</td></tr>
<tr><td>-9</td><td>not support</td><td>Not supported</td></tr>
<tr><td>-10</td><td>protocol</td><td>Protocol error</td></tr>
<tr><td>-11</td><td>fcgi read failed</td><td>Failed to read operation</td></tr>
<tr><td>-12</td><td>get config failed</td><td>Failed to get configuration.</td></tr>
<tr><td>-13</td><td>set config failed</td><td>Failed to set configuration.</td></tr>
<tr><td>-14</td><td>malloc failed</td><td>Failed to apply for memory</td></tr>
<tr><td>-15</td><td>create socket failed</td><td>Failed to created socket</td></tr>
<tr><td>-16</td><td>send failed</td><td>Failed to send data</td></tr>
<tr><td>-17</td><td>rcv failed</td><td>Failed to receiver data</td></tr>
<tr><td>-18</td><td>open file failed</td><td>Failed to open file</td></tr>
<tr><td>-19</td><td>read file failed</td><td>Failed to read file</td></tr>
<tr><td>-20</td><td>write file failed</td><td>Failed to write file</td></tr>
<tr><td>-21</td><td>error token</td><td>Token error</td></tr>
<tr><td>-22</td><td>The length of the string exceeds the limit</td><td>The length of the string exceeds the limitation</td></tr>
<tr><td>-23</td><td>missing param</td><td>Missing parameters</td></tr>
<tr><td>-24</td><td>error command</td><td>Command error</td></tr>
<tr><td>-25</td><td>internal error</td><td>Internal error</td></tr>
<tr><td>-26</td><td>ability error</td><td>Ability error</td></tr>
<tr><td>-27</td><td>invalid user</td><td>Invalid user</td></tr>
<tr><td>-28</td><td>user already exist</td><td>User already exist</td></tr>
<tr><td>-29</td><td>maximum number of users</td><td>Reached the maximum number of users</td></tr>
<tr><td>-30</td><td>same version</td><td>The version is identical to the current one.</td></tr>
</table>

-31	busy	Ensure only one user can upgrade
-32	ip conflict	Modify IP conflicted with used IP
-34	need bing email	Cloud login need bind email first
-35	unbind	Cloud login unbind camera
-36	network timeout	Cloud login get login information out of time
-37	password err	Cloud login password error
-38	uid err	Cloud bind camera uid error
-39	user not exist	Cloud login user doesn't exist
-40	unbind failed	Cloud unbind camera failed
-41	cloud not support	The device doesn't support cloud
-42	login cloud server failed	Cloud login server failed
-43	bind failed	Cloud bind camera failed
-44	cloud unknown err	Cloud unknown error
-45	need verify code	Cloud bind camera need verify code
-48	Fetching a picture failed	Snap a picture failed
-100	test failed	Test Email、Ftp、Wifi failed
-101	check firmware failed	Upgrade checking firmware failed
-102	download online failed	Upgrade download online failed
-103	get upgrade status failed	Upgrade get upgrade status failed
Note : Field "details" means more detailed error information.		