Camera HTTP API
User Guide

Version 1

2016-11

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

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 /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

1. Get token first.

Request:

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

Response:

HTTP/1.1 200 OK
Server: Ngnix/1.6.2
Date: Thu, 03 Mar 2016 10:48:53 GMT
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. Execute command GetUpnp.

Request：

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

Response：

HTTP/1.1 200 OK
Server: Ngnix/1.6.2
Date: Thu, 03 Mar 2016 10:48:53 GMT
Transfer-Encoding: chunked
Connection: keep-alive
Pragma: O-cache
Cache-Control: O-cache

Content-Type: application/json;charset=utf-8

```
[
    {
        "cmd":"GetUpnp",
        "code" : 1,
        "value":{
                "Upnp":{
                  "enable":1
                }
        }
    }
]
```

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://192.168.2.128:80/cgi-bin/api.cgi?cmd=Snap&channel=0&rs=wuuPhkmUCeI9WG7C&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",
"type" : "IPC",
"wifi" : 1
}
}

}]

Field description	
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,
```

<table>
<tr><td>"min" : 0,
"sec" : 1,
"weekDay" : "Thursday"
}
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	description
enable	Auto maintainance 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**

<table>
<tr><td>Data example</td></tr>
<tr><td>[
{
"cmd":"SetAutoMaint",
"param":{
"AutoMaint":{
"enable":1,</td></tr>
</table>

```
            "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,

<table>
<tr><td>"mount" : 1,
"size" : 8949
}
]
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

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**

<table>
<tr><td>Data example</td></tr>
<tr><td>[
{
"cmd":"Format",
"param":{
"HddInfo":{
" id":[</td></tr>
</table>

```
                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.

- **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 xxxxxxxxxxx.....(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 ImportCfg

- **Interface Description**

It is used to import configuration files into the device.

- **Interface call instructions**

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

- **Post Data**

Data example
Content-Type: multipart/form-data; boundary=----WebKitFormBoundaryAtLgQgti6s8VC7TD Referer: http://192.168.2.232/ Accept-Encoding: gzip, deflate Accept-Language: zh-CN,zh;q=0.8 ------WebKitFormBoundaryAtLgQgti6s8VC7TD Content-Disposition: form-data; name="config-file"; filename="xxx.tgz" Content-Type: application/gzip xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx.....(File content） ------WebKitFormBoundaryAtLgQgti6s8VC7TD--

Field description

Field	**Description**	**M/O**
boundary	Delimiter	M
name	Bound to be "config-file"	M
filename	The file name of the imported file	M

- **Return data description**

Return data correctly

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

Field description	
Field	**description**

3.1.13 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**

3.1.14 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**

3.2 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**

Data example

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

Field description		
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 time 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' infomation.

- **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",
                    "userName" : "admin"
```

```
                }
            ],
            ... // There may be multiple users
        }
    }
]
```

Field description

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**

Data example

```
[
    {
        "cmd":"AddUser",
        "param":{
            "User":{
                "userName":"GuestUser",
                "password":"123456",
                "level":"guest"
            }
        }
    }
]
```

Field description

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 onlusers' infomation.

- **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
[

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

Field description

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**

Data example

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

Field description

Field	Description	M/O

- **Return data description**

Return data correctly


```
[
    {
        "cmd" : "GetLocalLink",
        "code" : 0,
        "initial" : {
            "LocalLink" : {
                "dns" : {
                    "auto" : 1,
                    "dns1" : "192.168.0.1",
                    "dns2" : "192.168.0.1"
                },
                "mac" : "EC:71:DB:2F:A7:93",
                "static" : {
                    "gateway" : "192.168.0.1",
                    "ip" : "192.168.0.100",
                    "mask" : "255.255.255.0"
                },
                "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" : "202.96.128.166",
                    "dns2" : "202.96.134.133"
                },
                "mac" : "EC:71:DB:2F:A7:93",
                "static" : {
                    "gateway" : "192.168.2.1",
                    "ip" : "192.168.2.122",
                    "mask" : "255.255.255.0"
                },
                "type" : "DHCP"
            }
        }
    }
]
```


Field description

Field	**description**
activeLink	Network connection type [LAN, Wi-Fi]
mac	
type	
Static->ip	Ip address
Static->gateway	Gateway address
Static->mask	Subnet mask
Dns->auto	
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		O
Static->ip	Ip address	O
Static->gateway	Gateway address	O

Static->mask	Subnet mask	O
Dns->auto		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 Email.

- **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,
```

```
                "password" : "password",
                "type" : "Dyndns",
                "userName" : "username"
            }
        }
    }
]
```

Field description

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" : "SetEmail",
        "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" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
}
}
}
}
]

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	Recver address1, at most 127 characters.
addr2	Recver address2, at most 127 characters.
addr3	Recver address3, at most 127 characters.
Schedule->enable	
Schedule->table	

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" :
"1111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111"
				}
			}
		}
	}
]
```


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 is Boolean.	O
interval	Send mail interval. Range of value is ["30 Seconds", "1 Minute", "5 Minutes", "10 Minutes"].	O
addr1	Recver address1,at most 127 characters.	O
addr2	Recver address2,at most 127 characters.	O
addr3	Recver address3,at most 127 characters.	O
Schedule->enable		O
Schedule->table		O

- **Return data description**

Return data correctly

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

Field description	
Field	**description**
rspCode	Response code

3.3.7 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" : {
"aOnymous" : 0,
"maxSize" : 100,
"password" : "",
"port" : 21,
"remoteDir" : "",
"schedule" : {
"enable" : 1,
"table" :

```
"1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111"
                },
                "server" : "",
                "userName" : "",
                "streamType":0,
                "interval":30
            }
        },
        "range" : {
            "Ftp" : {
                "aOnymous" : "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" : {
"aOnymous" : 0,
"maxSize" : 1000,
"password" : "11111111",
"port" : 21,
"remoteDir" : "0516",
"schedule" : {
"enable" : 1,
"table" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
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.
aOnymous	

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	
Schedule->table	

3.3.8 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,
"aOnymous":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
aOnymous		O
userName (Depend on aOnymous)	FTP account name. When the value of aOnymous is 0, the user Name field is necessary.	O
Password (Depend on aOnymous)	FTP account password. FTP account name. When the value of aOnymous 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->en		O

able		
Schedule->table		O

- **Return data description**

Return data correctly

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

Field description	
Field	**description**
rspCode	Response code

3.3.9 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.

3.3.10 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

3.3.11 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.

3.3.12 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
            }
        }
    }
]
```

Field description

Field	Description	M/O
httpPort	Port of http.	O
httpsPort	Port of https.	O
mediaPort	Port of media.	O
onvifPort	Port of onvif.	O
rtspPort	Port of rtsp.	O
rtmpPort	Port of rtmp.	O

- **Return data description**

Return data correctly

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

Field description	
Field	**description**
rspCode	Response code

3.3.13 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,
"aOnymous":0,
"userName":"name",
"password":"password",

<table>
<tr><td>"remoteDir":"Dir"
}
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

Field	Description	M/O
server	FTP server, can fill in the IP address or domain name. At most 127 characters.	M
port	Port of FTP Server ,Limit 1~65535.	M
aOnymous		M
userName (Depend on aOnymous)	FTP account name. FTP account password. FTP account name. When the value of aOnymous is 0, the userName field is necessary.	O
Password (Depend on aOnymous)	FTP account password. FTP account password. FTP account name. When the value of aOnymous is 0, the password field is necessary.	O
remoteDir	FTP root directory.	M

- **Return data description**

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

Field	description
rspCode	Response code

3.3.14 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.

3.3.15 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":"SetDdns",
        "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

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

Field description	
Field	**description**
rspCode	Response code

3.3.16 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**

Data example

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

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

- **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	
password	

3.3.17 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

3.3.18 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

3.3.19 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 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	Recver address1, at most 127 characters.	O
addr2	Recver address2, at most 127 characters.	O
addr3	Recver 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

3.3.21 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" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
                }
            }
        },
        "range" : {
            "Push" : {
                "schedule" : {
                    "enable" : "boolean",
                    "table" : {
                        "maxLen" : 168,
                        "minLen" : 168
                    }
                }
            }
        },
        "value" : {
            "Push" : {
                "schedule" : {
                    "enable" : 1,
                    "table" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
                }
            }
        }
```

}]

Field description	
Field	**description**
Schedule->enable	
Schedule->table	

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" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111"
                }
            }
        }
    }
]
```


Field description

Field	Description	M/O
Schedule->enable		O
Schedule->table		O

- **Return data description**

Return data correctly

[
{
"cmd" : "SetEmail",
"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"]
},
"value" : {
"Norm" : "NTSC"
}
}
]

Field description

Field	**description**

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**

Data example		

[
{
"cmd":"SetNorm",
"param":{
"Norm":"NTSC"
}
}
]		

Field description		
Field	**Description**	**M/O**
Norm		M
Note : After changing the Norm , the system will reboot.		

- **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" : {
                "channel" : 0,
                "osdChannel" : {
                    "enable" : 1,
                    "name" : "Camera1",
                    "pos" : "Lower Right"
                },
                "osdTime" : {
                    "enable" : 1,
                    "pos" : "Top Center"
                }
            }
        },
        "range" : {
```

```
            "Osd" : {
                "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"
                    ]
                }
            }
        },
        "value" : {
            "Osd" : {
                "channel" : 0,
                "osdChannel" : {
                    "enable" : 1,
                    "name" : "Camera100",
                    "pos" : "Bottom Center"
                },
                "osdTime" : {
                    "enable" : 1,
                    "pos" : "Top Center"
                }
            }
        }
    }
```

]	
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":"Camera100",
"pos":"Bottom Center"
},
"osdTime":{
"enable":1,
"pos":"Top Center"
}

```
                }
            }
        }
]
```

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", "LowOise", "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", "LowOise", "Anti-Smearing", "Manual"]
gain (Depend on exposure)	When the value of exposure is LowOise 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",	M

	"Off"]	
exposure	Exposure mode, ["Auto", "LowOise", "Anti-Smearing", "Manual"]	M
gain (Depend on exposure)	When the value of exposure is LowOise 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

3.5 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,
                        "profile":"High",
                        "size":"640*360"
                    }
                }
            }
        }
]
```


Field description

Field	Description	M/O
channel	IPC channel number.	M
audio	Audio switch.	M
mainStream->bitRate	Bit rate of main stream.	M
mainStream->frameRate	FrameRate of main stream.	M
mainStream->profile	H.264 Profile.	M
mainStream->size	Resolution.	M
subStream->bitRate	Bit rate of sub stream.	M
subStream->frameRate	FrameRate of sub stream.	M
subStream->profile	H.264 Profile.	M
subStream->size	Resolution.	M

- **Return data description**

Return data correctly


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

```
        }
    }
]
```

Field description

Field	description
rspCode	Response code

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" :
"1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111"
                }
            }
        },
        "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" : {
```

<table>
<tr><td>"enable" : 1,
"table" :
"000111111111111111111111111111110001111111111111111111000111100001111110011101000111100001100010011111111111000011000100111111111111000011000100111111111111111111111111"
}
}
}
}
]</td></tr>
<tr><td>Field description</td></tr>
</table>

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" :
"11111111111111111111111111111111111111111111111111111111111111111
111111111111111111111111111111111111111111111111111111111111111111
1111111111111111111111111111111111111"
                  }
              }
      }
   }
]
```

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: apolication/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
                }
            ]
        }
    }
]
```


Field description

Field	description
enable	Patrol switch, The value 1 means that’s enabled, and 0 means the opposite.

id	ID number of the Patrol.
running	
Preset->dwellTime	
Preset->id	
Preset->speed	

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		M
id	ID number of Patrol.	M
Preset->dwellTime		M
Preset->id	ID number of preset. Range [1~64].	M
Preset->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.

3.8 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" :
"1111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111111111111
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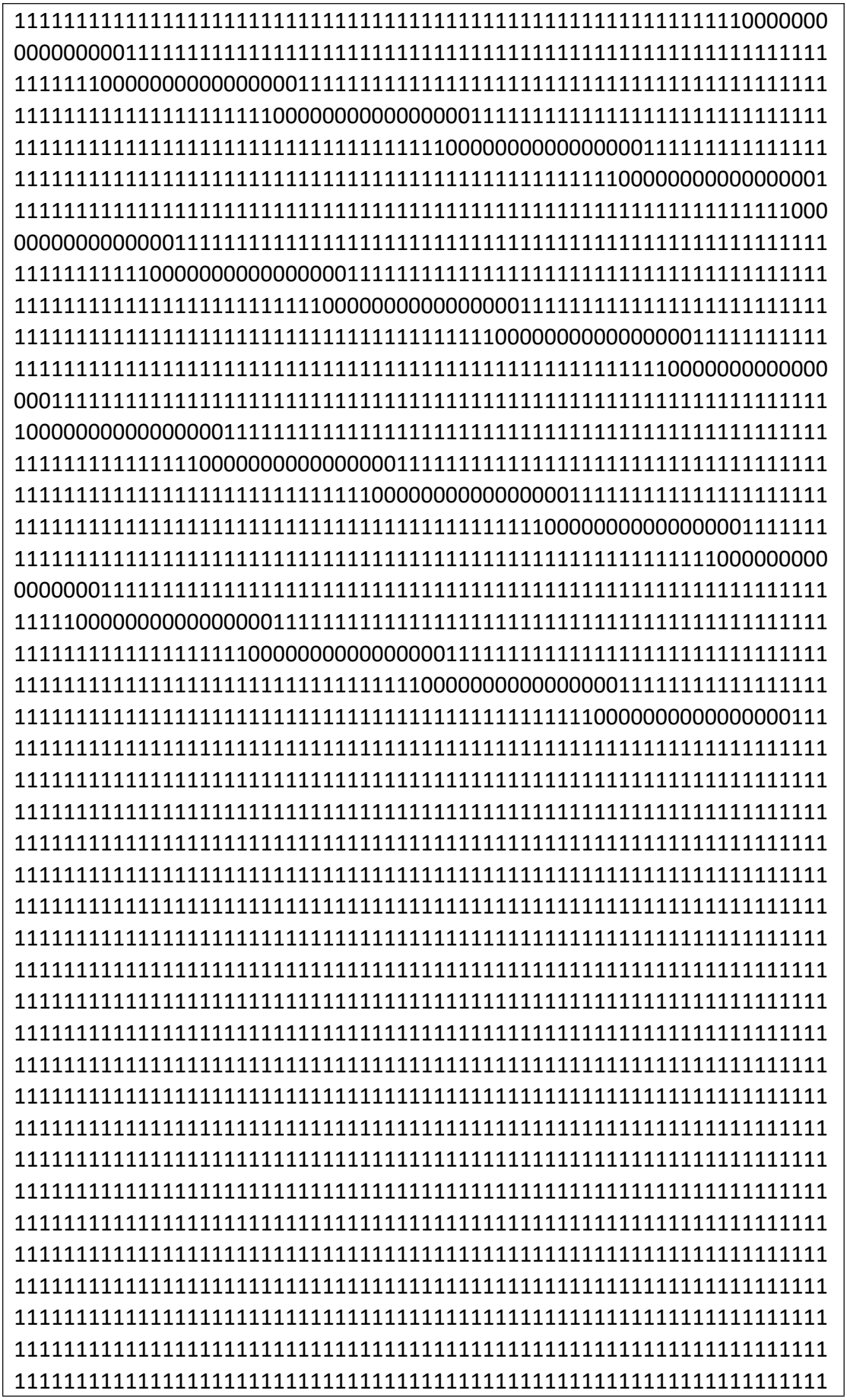
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111"
            },
            "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" :
"11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111111111111111111111111111111111111111111111111111111
11111111111111110000000000000000111111111111111111111111111111111
11111111111111111111111111110000000000000000011111111111111111111
11111111111111111111111111111111111111111110000000000000000011111
```



```
1111111111111111111111111111111111111111111111111111111111111111111111111111
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" :
"11111111111111111111111111111111111111111111111111111111111111111
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                },
                "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

<table>
<tr><td>

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

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

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**

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

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

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

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.

4. Response

4.1 Error

Error Response

```
[
    {
        "cmd":string,
        "code":0,
        "error":{
            "rspCode":int,
            "detail":string
        }
    }
]
```

rspCode	Details	Description
-1	not exist	Missing parameters

-2	out of mem	Used up memory
-3	check err	Check error
-4	param error	Parameters error
-5	max session	Reached the max session number.
-6	please login first	Login required
-7	login failed	Login error
-8	timeout	Operation timeout
-9	not support	Not supported
-10	protocol	Protocol error
-11	fcgi read failed	Failed to read operation
-12	get config failed	Failed to get configuration.
-13	set config failed	Failed to set configuration.
-14	malloc failed	Failed to apply for memory
-15	create socket failed	Failed to created socket
-16	send failed	Failed to send data
-17	rcv failed	Failed to receiver data
-18	open file failed	Failed to open file
-19	read file failed	Failed to read file
-20	write file failed	Failed to write file
-21	error token	Token error
-22	The length of the string exceeds the limit	The length of the string exceeds the limitmation
-23	missing param	Missing parameters
-24	error command	Command error
-25	internal error	Internal error
-26	ability error	Ability error
-27	invalid user	Invalid user
-28	user already exist	User already exist
-29	maximum number of users	Reached the maximum

		number of users
-30	same version	The version is identical to the current one.
Note : Field "details" means more detailed error information.		