CGI Documentation

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Catalog

1.Low Power Mode

Note：Electric corded cameras do not have this functionality.

（1）CGI for setting power mode："trans_cmd_string.cgi?cmd=2106&command=2&lowPower=$value", value=0,30,10000

Parameter	Type	Description
value	int	0: Keep working mode 30: power saving mode 10000: Super power saving mode

（2）CGI for getting current power mode ：”trans_cmd_string.cgi?cmd=2106&command=1&“ data["lowPower"]=》0,30,1000

Note：use "get_status.cgi?" get supportSmartElectricitySleep value，if the value==1，It support smart sleep mode。It should turn off smart sleep mode when switch to other mode。

（1）CGI for setting smart sleep mode："trans_cmd_string.cgi?cmd=2106&command=18&Smart_Electricity_Sleep_Switch=$enable&Smart_Electricity_Threshold=$electricityThreshold&"

Parameter	Type	Description
enable	int	turn on 1， turn off 0
electricityThreshold	int	Battery threshold, such as：30

（2）CGI for getting smart sleep mode："trans_cmd_string.cgi?cmd=2106&command=17&"
Field：Smart_Electricity_Sleep_Switch、Smart_Electricity_Threshold

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2.Device Volume

（1）CGI for setting volume：camera_control.cgi?param=$param&value=$value&

Parameter	Type	Description
param	int	24: microphone, 25: horn
value	int	0-31: volume range value

（2）CGI for getting volume value:
file：video_command.dart, method：getCameraParams()
command：get_camera_params.cgi?
microphone：involume = int.tryParse(data["involume"] ?? "") ?? 0;
horn：outvolume = int.tryParse(data["outvolume"] ?? "") ?? 0;
（1） CGI for judging if device support horn: get_status.cgi?
haveHorn = data["haveHorn"] == "1" ? true : false;

3.Hide Indicator Light

CGI for setting indicator light："trans_cmd_string.cgi?cmd=2125&command=0&hide_led_disable=${hide == true ? 1 : 0}&"

Parameter	Type	Description

hide_led_disable	int	1 Hide, 0 Unhide

CGI for getting indicator light hidden state: "trans_cmd_string.cgi?cmd=2125&command=1&"
Judging condition: hideLed = data["hide_led_disable"] == "1"

4.PTZ

1. **Vertical cruise**

CGI for turnning on： "decoder_control.cgi?command=26&onestep=0&"
CGI for turnning off： "decoder_control.cgi?command=27&onestep=0&"
Status Field: preset_cruise_status_v =>1 turn on; 0 turn off

2.**Horizontal cruise**

CGI for turnning on： decoder_control.cgi?command=28&onestep=0&
CGI for turnning off： decoder_control.cgi?command=29&onestep=0&
Status Field： preset_cruise_status_h =>1 turn on; 0 turn off

3.**Pre-position cruise**

CGI for turnning on： decoder_control.cgi?command=22&onestep=0&
CGI for turnning off： "decoder_control.cgi?command=23&onestep=0&"
Status Field： preset_cruise_status =>1 turn on; 0 turn off | preset_cruise_curpos =>-1 turn off; 0-4 position

4.**PTZ correction**

Note: This feature is not available if the device's battery level is below 20%.
CGI for turnning on: decoder_control.cgi?command=25&onestep=0&
Status Field： center_status

5.**Pre-position**（there are five positions）

CGI : "decoder_control.cgi?command=$cmd&onestep=0&"
cmd value for setting【30,32,34,36,38】
cmd value for cruising【31,33,35,37,39】
cmd value for deleting【62,63,64,65,66】
Note: It is recommended to save frequently viewed images to your own server and retrieve them from the server when needed.

6.**Caretaker**

CGI for setting caretaker： "set_sensor_preset.cgi?sensorid=255&presetid=$index&"（index 1-5 ,0 is turn off）
Note: You need to set up pre-position before setting up caretaker position, and the caretaker position should be selected from the pre-positions.

7.**Get the pre-postion index value (1)**

CGI: get_status.cgi?
Field: preset_value

```
var list = presetValue
    .toRadixString(2)
    .padLeft(16, '0')
    .substring(0, 5)
    .split('')
    .toList();
```

Convert the value to binary characters, fill it with 0 to 16 characters, take the first 5 characters, and then convert it to a list. The value 1 is set and 0 is unset.

8.**Get the pre-postion index value (2)**

CGI： trans_cmd_string.cgi?cmd=2161&command=0&
Note: There are a total of 16 preset position value, with the first 5 being selected. If the result is 1, it indicates that this index is set

5.Activity Zone

Note: It could be set when motion detection is enabled.

CGI for setting activity zone：

```
"trans_cmd_string.cgi?cmd=2123&command=$command&sensor=${sensor}&"
      "${reignString}reign0=${records[0]}&"
      "${reignString}reign1=${records[1]}&"
      "${reignString}reign2=${records[2]}&"
      "${reignString}reign3=${records[3]}&"
      "${reignString}reign4=${records[4]}&"
      "${reignString}reign5=${records[5]}&"
      "${reignString}reign6=${records[6]}&"
      "${reignString}reign7=${records[7]}&"
      "${reignString}reign8=${records[8]}&"
      "${reignString}reign9=${records[9]}&"
      "${reignString}reign10=${records[10]}&"
      "${reignString}reign11=${records[11]}&"
      "${reignString}reign12=${records[12]}&"
      "${reignString}reign13=${records[13]}&"
      "${reignString}reign14=${records[14]}&"
      "${reignString}reign15=${records[15]}&"
      "${reignString}reign16=${records[16]}&"
      "${reignString}reign17=${records[17]}&"
```

Parameter	Type	Description
records	List	Draw area data, and the value of List corresponds to the binary to decimal value of each row of smeared area
command	int	0 Motion detection, 2 Human detection, 4 Off duty detection, 6 Face detection, 8 Facial recognition zone
sensor	int	0: First sensor, 1:Second sensor, 2:Third sensor, 3:Fourth sensor
reignString	String	“md_” Motion detection “pd_” Human detection “depart_” Off duty detection zone “face_detect_” Face detection zone “face_recognition_”Facial recognition zone

records value reference：

Initialize 2D list data with a size of 18x22, fill with 1, and then modify the corresponding elements to 0 based on the applied area. Afterwards, it treats the rows as binary numbers and uses the pow function to convert them to decimal, thereby calculating the total number of each row.

```
var data = [];
///绘制区域矩阵  18 * 22
for (int i = 0; i < 18; i++) {
   List elemen = [];
   for (int j = 0; j < 22; j++) {
      elemen.add(1);
   }
   data.add(elemen);
}
///绘制区域的值为 0
state.saveRectModels.forEach((element) {
   data[element.row][element.colum] = 0;
});
```

```
List records = [];
for (int i = 0; i < data.length; i++) {
  int total = 0;
  int length = data[i].length;
  //print(data[i]);
  List list = data[i];
  list = list.reversed.toList();
  for (int j = 0; j < length; j++) {
    total = total + list[j] * pow(2, j);
  }
  records.add(total);
  //print("区域$i:$total 0x${total.toRadixString(16)}");
}
```

CGI for getting activity zone data：

trans_cmd_string.cgi?cmd=2123&command=$command&sensor=$sensor&

Parameter	Type	Description
command	int	command 1 Motion detection,3 Human detection
sensor	int	0: One sensor, 1:Second sensor, 2:Third sensor,3:Fourth sensor

---

6.Resolution

Note: use "get_status.cgi?" to get the support_pixel_shift value, if support_pixel_shift ==“1” then the camera device supports super HD

CGI for setting definition：camera_control.cgi?param=16&value=$index&

Note:1.use "get_status.cgi?" to get the pixel value;

2. if (pixel == 200 && resolution == VideoResolution.superHD) || (pixel == 300 && resolution == VideoResolution.high) the switching of image quality requires restarting the device to take effect.

```
///设备状态监听回调，result => StatusResult
if (result.pixel != null) {
  deviceModel.pixel.value = int.tryParse(result.pixel) ?? 0;
  DeviceManager().setcacheDevicePixel(deviceModel.id, result.pixel);//本地存储
}
```

Parameter	Type	Description
index	int	4: low 2: general 1: high 100:superHD

7.Night Vision Setting

CGI for setting night vision：

(1) camera_control.cgi?param=33&value=$value&

Note: When switching to full color night vision and smart night vision, the black and white mode needs to be changed to black and white night vision.

Parameter	Type	Description
value	int	0: black and white mode 1: full color night vision 2: smart night vision

(1) camera_control.cgi?param=14&value=$value&

Note: Before setting up starlight night vision and black and white night vision, you need to switch to black and white mode first.

Parameter	Type	Description
value	int	0 : starlight night vision ; 1: black and white night vision;

CGI for getting night vision： get_camera_params.cgi?

ircut => 1：[if night_vision_mode==0, it is black and white night vision],0：starlight night vision

night_vision_mode => 0: [if ircut==0, is starlight night vision else is black and white night vision],1：full color night vision ,2：smart night vision

---

8.Cloud Video Recording Switch

CGI for setting cloud video recording：

trans_cmd_string.cgi?cmd=2106&command=9&pirPushSwitch=1&pirPushSwitchVideo=1&

Note：Only low-power device has this functionality when motion detection is enabled, if this switch is turned off, cloud playback can only see images but no videos after an alarm is triggered.

```
String cgi = "trans_cmd_string.cgi?cmd=2106&command=9&pirPushSwitch=${pushEnable
      ? 1
      : 0}&pirPushSwitchVideo=${videoEnable ? 1 : 0}&";
if (videoDuration != -1) {
   cgi = "trans_cmd_string.cgi?cmd=2106&command=9&pirPushSwitch=${pushEnable
         ? 1
         : 0}&pirPushSwitchVideo=${videoEnable
         ? 1
         : 0}&CloudVideoDuration=${videoDuration ?? 15}&autoRecordMode=${autoRecordMode ?? 0}&";
}
```

Parameter	Type	Description
pirPushSwitch	int	Push switch, default 1: on, 0: off
pirPushSwitchVideo	int	Cloud video recording switch, default 1: on, 0: off
CloudVideoDuration	int	Cloud video time: 5s,10s,15s,30s
autoRecordMode	int	Auto record mode, 0: off

CGI for getting cloud video recording：trans_cmd_string.cgi?cmd=2106&command=8&

command to retrieve data for parsing, pirPushVideoEnable = data["pirPushSwitchVideo"] == "1";

9.Zoom

CGI for whether the camera supports zoom：get_status.cgi?

if support_focus > 0 or MaxZoomMultiple > 0 , or is4XDeviceByFirmware()==true, the camera supports zoom.

```
///设备状态监听回调，result => StatusResult
if (result.support_focus != null) {
   deviceModel.support_focus.value = int.tryParse(result.support_focus);
}

if (result.MaxZoomMultiple != null) {
   deviceModel.MaxZoomMultiple.value =
         int.tryParse(result.MaxZoomMultiple);
}
deviceModel.currentSystemVer.value = result.sys_ver;
bool is4XDeviceByFirmware() {
   List array = deviceModel?.currentSystemVer?.value != null
         ? deviceModel?.currentSystemVer?.value?.split(".")
         : null;
   if (array == null || array.length < 4) {
      array = ['0', '0', '0', '0'];
   }
   String second = array[1];
   if (second == '81'&& array[2] != '176') {
      return true;
   }
   return false;
}
```

CGI for setting zoom：

if (MaxZoomMultiple>0) => "decoder_control.cgi?command=84&param=$scale&"

else => "decoder_control.cgi?command=${scale + 20}&onestep=0&"

Parameter	Type	Description
scale	int	default value: 1 - 4 if MaxZoomMultiple>0, the value is 1- MaxZoomMultiple

CGI for getting initial zoom value：

CurZoomMultiple

```
///设备状态监听回调，result => StatusResult
if (result.CurZoomMultiple != null) {
   deviceModel.CurZoomMultiple.value =
         int.tryParse(result.CurZoomMultiple);
}
```

10.Alarm

Note: The alarm will automatically turn off when it rings for 10 seconds,and alarm unable to turn on when the device battery level is below 20%.

CGI for setting alarm："trans_cmd_string.cgi?cmd=2109&command=0&siren=$siren&"

Parameter	Type	Description
siren	int	1: turn on,0: turn off

11.White Light

Note: If hardwareTestFunc device supports while light, the white light can be turned on; If support_manual_light has no value or equals to 1, it supports manually turning on white light.

CGI for setting white light： "trans_cmd_string.cgi?cmd=2109&command=0&light=$light&"

Note: it will unable to turn on when the device battery level is below 20%.

Parameter	Type	Description
light	int	1: turn on,0: turn off

CGI for getting white light status：
"trans_cmd_string.cgi?cmd=2109&command=2&"
lightSwitch = data["lightStatus"] == "1"

12.Human Frame

Note：1. If result. support_ PeopleDetection has a value. To close the human frame, human detection needs to be turned off first. To open the human frame, human detection needs to be turned on first; 2. The human framing is not available after enabling physical occlusion.

CGI for setting human frame： "trans_cmd_string.cgi?cmd=2126&command=0&bHumanoidFrame=$enable&"

Parameter	Type	Description
enable	int	1:turn on; 0: turn off

CGI for getting human frame status： "trans_cmd_string.cgi?cmd=2126&command=1&"
humanFrameEnable = int.tryParse(data["bHumanoidFrame"] ?? "0")

13.Human Detection

CGI for setting human detection：
"trans_cmd_string.cgi?cmd=2106&command=4&humanDetection=$pirLevel&DistanceAdjust=$distanceAdjust&HumanoidDetection=$value&"

Parameter	Type	Description
pirLevel	int	motion detection frequency: 1-3
distanceAdjus	int	detection distance: 1-3
value	int	human detection: 1: turn on; 0:turn off

14.TF Playback Data

（1）CGI for getting specified date data： "get_record_file.cgi?GetType=file&dirname=$dirname&"

Parameter	Type	Description
dirname	String	Date string, such as：20230322

（2）CGI for paging data retrieval： get_record_file.cgi?PageSize=$pageSize&PageIndex=$pageIndex&

Parameter	Type	Description
pageSize	int	data size per page
pageIndex	int	pages index: begin from 0

（3）CGI for segmenting data by timeline： get_record_idx.cgi?dirname=$date&offset=$offset

Parameter	Type	Description
date	String	date,such as：20230322

offset	int	Begin from 0, when obtaining data byte length==60012,+1;

（4）CGI for downloading video in the list：livestream.cgi?streamid=4&filename=$recordName&offset=0&download=1&

Parameter	Type	Description
recordName	String	file name

（5）CGI for downloading video by timeline:
"livestream.cgi?streamid=5&ntsamp=$timestamp&event=$event&framenum=$frameNo&recch=$channel&key=$key&"

Parameter	Type	Description
timestamp	int	Recording timestamp, corresponding to recordTime
event	int	record type: 0:Real time recording,1:Alarm recording,2:Humanoid recording The recordAlarm corresponding to the RecordTimeLineModel
frameNo	int	Keyframe number
channel	int	2 or 3,default 4
key	int	random number,Random().nextInt(9999)

（6）Stop video file download：livestream.cgi?streamid=17&

（7）CGI for timeline file download："record_fastplay.cgi?ctrl=1&playlist=${jsonEncode(data)}&"

Parameter	Type	Description
data	Map	data["download"] = filesList such as: filesList=[{"f": name, "s": start, "e": end},{"f": name, "s": start, "e": end},...] name: file name,start: start time,end: end time

（8）CGI for stop timeline file download："record_fastplay.cgi?ctrl=0&"

（9）CGI for delete file："del_file.cgi?name=$recordName&"

Parameter	Type	Description
recordName	String	record file name

（10）CGI for getting recorded video date："get_record_file.cgi?GetType=date&"

15.Person Tracking

Note: If the camera supports human detection, it supports person tracking.

CGI for setting person tracking：trans_cmd_string.cgi?cmd=2127&command=0&enable=$enable&

Parameter	Type	Description
enable	int	1:turn on; 0:turn off

CGI for getting person tracking：trans_cmd_string.cgi?cmd=2127&command=1&
humanTrackingEnable = int.tryParse(data["enable"] ?? "0")

16.Red&Blue lights

Note：use "get_status.cgi?" to get hardwareTestFunc value, if hardwareTestFunc & 0x200 != 0, then the camera device

supports Red&Blue lights.

CGI for setting Red&Blue lights： trans_cmd_string.cgi?cmd=2109&command=0&alarmLed=$value&

Parameter	Type	Description
value	int	1: turn on; 0:turn off

CGI for getting Red&Blue lights：trans_cmd_string.cgi?cmd=2109&command=2&

CGI for setting Red&Blue lights mode：trans_cmd_string.cgi?cmd=2108&command=1&alarmLedMode=$mode&

Parameter	Type	Description
mode	int	1： Linkage with alarms； 0 ： Unlink with alarms

CGI for getting Red&Blue lights mode：trans_cmd_string.cgi?cmd=2108&command=0&

17.Alarm Flashing Light

Note: If hardwareTestFunc device supports white light, it supports alarm flashing light.

CGI for setting alarm flashing light：trans_cmd_string.cgi?cmd=2108&command=1&lightMode=$light&

Parameter	Type	Description
light	int	0:turn off 1:turn on but no flashing(white light) 2 : turn on and flash

CGI for getting alarm flashing light： trans_cmd_string.cgi?cmd=2108&command=0&

18.Virtual Joystick

Move Left CGI：String _cgi = "decoder_control.cgi?command=4&onestep=0&"
Move Right CGI：String _cgi = "decoder_control.cgi?command=6&onestep=0&"
Move Up CGI：String _cgi = "decoder_control.cgi?command=0&onestep=0&"
Move Down CGI：String _cgi = "decoder_control.cgi?command=2&onestep=0&"

```
if (currBinocular != null) {
   _cgi = _cgi + "curr_binocular=$currBinocular&";
}
if (motorSpeed != null) {
   _cgi = _cgi + "motor_speed=$motorSpeed&";
}
```

Parameter	Type	Description
command	int	0:Up,2:Down,4:Left,6:Right
currBinocular	int	0 : First lens 1 : Second lens
motorSpeed	int	1 ~ 10, 1: Slowest,10: Fastest

Stop moving left CGI： decoder_control.cgi?command=5&onestep=0&
Stop moving right CGI： decoder_control.cgi?command=7&onestep=0&
Stop moving up CGI： decoder_control.cgi?command=1&onestep=0&
Stop moving down CGI： decoder_control.cgi?command=3&onestep=0&

19.Recording Duration

CGI for setting record duration of corded electric device：

```
cgi = "set_alarm.cgi?enable_alarm_audio=0&motion_armed=${enable
      ? 1
      : 0}&motion_sensitivity=$level&CloudVideoDuration=$videoDuration&"
      "input_armed=1&ioin_level=0&iolinkage=0&ioout_level=0&preset=0&mail=0&snapshot=1&"
      "record=1&upload_interval=0&schedule_enable=1&schedule_sun_0=$plan&schedule_sun_1=$plan&"
      "schedule_sun_2=$plan&schedule_mon_0=$plan&schedule_mon_1=$plan&schedule_mon_2=$plan&"
      "schedule_tue_0=$plan&schedule_tue_1=$plan&schedule_tue_2=$plan&schedule_wed_0=$plan&"
      "schedule_wed_1=$plan&schedule_wed_2=$plan&schedule_thu_0=$plan&schedule_thu_1=$plan&"
      "schedule_thu_2=$plan&schedule_fri_0=$plan&schedule_fri_1=$plan&schedule_fri_2=$plan&"
      "schedule_sat_0=$plan&schedule_sat_1=$plan&schedule_sat_2=$plan&defense_plan1=0&"
      "defense_plan2=0&defense_plan3=0&defense_plan4=0&defense_plan5=0&defense_plan6=0&defense_plan7=0&"

"defense_plan8=0&defense_plan9=0&defense_plan10=0&defense_plan11=0&defense_plan12=0&defense_plan13=0&"

"defense_plan14=0&defense_plan15=0&defense_plan16=0&defense_plan17=0&defense_plan18=0&defense_plan19=0
&"
      "defense_plan20=0&defense_plan21=0&";
```

Parameter	Type	Description
enable	bool	true : turn on,false : turn off
level	int	detection sensitivity value
videoDuration	int	Recording duration unset：-1 video　time (s)：5,10,15,30
plan	int	if enable==true, plan = -1,else plan = 0

CGI for setting record duration of low-power device：

```
cgi = "trans_cmd_string.cgi?cmd=2106&command=9&pirPushSwitch=${pushEnable
      ? 1
      : 0}&pirPushSwitchVideo=${videoEnable
      ? 1
      : 0}&CloudVideoDuration=${videoDuration ?? 15}&autoRecordMode=${autoRecordMode ?? 0}&";
```

Parameter	Type	Description
pushEnable	bool	true: turn on,false: turn off
videoEnable	bool	true: turn on,false: turn off
videoDuration	int	Recording duration video　time (s)：5,10,15,30
autoRecordMode	int	1: auto record, 0:else

CGI for getting recording duration：
1.Corded electric device: "get_params.cgi? "
2.low-power device: "trans_cmd_string.cgi?cmd=2106&command=8&"
videoDuration = int.tryParse(data["CloudVideoDuration" ?? "15"]);
autoRecordVideoMode = int.tryParse(data["autoRecordMode" ?? "0"]);

20.Detection Schedule

Note: This functionality should use PlanModel class on demo,please check on demo;
CGI for setting Detection schedule：

```
"trans_cmd_string.cgi?cmd=2017&command=2&mark=212&"
"motion_push_plan1=${records[0]}&"
"motion_push_plan2=${records[1]}&"
"motion_push_plan3=${records[2]}&"
```

```
"motion_push_plan4=${records[3]}&"
"motion_push_plan5=${records[4]}&"
"motion_push_plan6=${records[5]}&"
"motion_push_plan7=${records[6]}&"
"motion_push_plan8=${records[7]}&"
"motion_push_plan9=${records[8]}&"
"motion_push_plan10=${records[9]}&"
"motion_push_plan11=${records[10]}&"
"motion_push_plan12=${records[11]}&"
"motion_push_plan13=${records[12]}&"
"motion_push_plan14=${records[13]}&"
"motion_push_plan15=${records[14]}&"
"motion_push_plan16=${records[15]}&"
"motion_push_plan17=${records[16]}&"
"motion_push_plan18=${records[17]}&"
"motion_push_plan19=${records[18]}&"
"motion_push_plan20=${records[19]}&"
"motion_push_plan21=${records[20]}&"
"motion_push_plan_enable=$enable&"
```

Parameter	Type	Description
records	list<int>	list length: 21, default value: -1 The set value: weighted sum of corresponding time
enable	int	1: motion detection,5: human detection （if the device is low-power device, enable = 5）

All Day Detection： No need to set, default value.

Daytime detection only：Moring 8:00 - Night 20:00, records list is:

```
///仅白天侦测
int startTime = 480;
int endTime = 1200;
List weeks = [7, 1, 2, 3, 4, 5, 6];
PlanModel model =
      PlanModel.fromPlans(startTime, endTime, weeks, state.deviceModel.id);
var actionPlans = <PlanModel>[];
actionPlans.add(model);
List records = [];
actionPlans.forEach((element) {
  records.add(element.sum);
});
if (records.length < 21) {
  int num = 21 - records.length;
  for (int i = 0; i < num; i++) {
    records.add(-1);
  }
}
```

Nighttime detection only：Night 20:00 - Next Day Morning 8:00, records list is:

```
///仅夜间侦测
int startTime = 1200;
int endTime = 480;
List weeks = [7, 1, 2, 3, 4, 5, 6];
```

```
PlanModel model =
      PlanModel.fromPlans(startTime, endTime, weeks, state.deviceModel.id);
var actionPlans = <PlanModel>[];
actionPlans.add(model);
List records = [];
actionPlans.forEach((element) {
   records.add(element.sum);
});
if (records.length < 21) {
   int num = 21 - records.length;
   for (int i = 0; i < num; i++) {
      records.add(-1);
   }
}
```

Detection schedule（**customize**）：Calculate the value of records based on the user's selected startTime, endTime, and weeks.

CGI for getting Detection schedule："trans_cmd_string.cgi?cmd=2017&command=11&mark=212&type=2&"

```
///解析报警计划数据，转为 PlanModel
if (planMap != null) {
   motionPushEnable = int.tryParse(planMap["motion_push_enable"]);
   for (int i = 1; i <= 21; i++) {
      String value = planMap["motion_push_plan$i"];
      int num = int.tryParse(value);
      if (num != 0 && num != -1 && num != 1) {
         PlanModel model = PlanModel.fromCgi(num);
         planModels.add(model);
      }
   }
}
```

21.Alarm Sound

Note：1.Audio format requirements: .wav suffix, single channel,16bit, 8000Hz, g711a.
2.If the device battery level is below 20%, the alarm sound will no work.

CGI for setting alarm sound：String cgi ="trans_cmd_string.cgi?cmd=2135&command=0&urlJson=$urlJson&filename=$voiceName&switch=$swtich&voicetype=$voicetype&"

```
///指令拼接
if (playInDevice == true) {
///play=1  设置的时候进行播放,playtimes  播放次数
   cgi = cgi + "play=1&" + "playtimes=$playTimes&";
} else {
   cgi = cgi + "playtimes=$playTimes&";
}
```

CGI for turnning off alarm sound：String cgi ="trans_cmd_string.cgi?cmd=2135&command=0&switch=$swtich&voicetype=$voicetype&"

Parameter	Type	Description
swtich	int	1: turn on, 0:turn off
voicetype	int	0---Facial detection alarm sound 1---Human detection alarm sound 2---Smoke alarm sound

		3---Motion detection alarm sound 4---Off duty detection sound 5---Cry detection sound 6---On duty detection sound 7---Flame warning sound 8---Smoke warning sound
urlJson	String	var dic = {"url": voiceUrl}; urlJson = json.encode(dic);
voiceName	String	filename
play	int	1 : play
playtimes	String	AI devices will support

CGI for getting alarm sound：
"trans_cmd_string.cgi?cmd=2135&command=1&voicetype=$voiceType&"

22.TF Card Sound Recording

CGI for setting sound recording： "set_recordsch.cgi?record_audio=1&"

Parameter	Type	Description
record_audio	int	1 : turn on,0 : turn off

CGI for getting sound recording： get_record.cgi?

23.TF Card Recording Mode

1.Only supported by corded electric cameras, and TF status is 1 or 2;
2.When not recording, schedule recording, 24h recording, and motion detection video record should be turned off;
3.Schedule recording, 24h recording, and motion detection video records cannot exist simultaneously. When one is turned on, the other two must be turned off;

CGI for setting schedule recording：
Note: enable =》 1 recording,0 not recording, records value refers to smart timing detection.

```
"trans_cmd_string.cgi?cmd=2017&command=3&mark=212&"
"record_plan1=${records[0]}&"
"record_plan2=${records[1]}&"
"record_plan3=${records[2]}&"
"record_plan4=${records[3]}&"
"record_plan5=${records[4]}&"
"record_plan6=${records[5]}&"
"record_plan7=${records[6]}&"
"record_plan8=${records[7]}&"
"record_plan9=${records[8]}&"
"record_plan10=${records[9]}&"
"record_plan11=${records[10]}&"
"record_plan12=${records[11]}&"
"record_plan13=${records[12]}&"
"record_plan14=${records[13]}&"
"record_plan15=${records[14]}&"
"record_plan16=${records[15]}&"
"record_plan17=${records[16]}&"
"record_plan18=${records[17]}&"
"record_plan19=${records[18]}&"
"record_plan20=${records[19]}&"
"record_plan21=${records[20]}&"
"record_plan_enable=$enable&"
```

CGI for setting motion detection video record：

Note: enable =》 1 recording,0 not recording,records list value is -1

```
"trans_cmd_string.cgi?cmd=2017&command=1&mark=212&"
"motion_record_plan1=${records[0]}&"
"motion_record_plan2=${records[1]}&"
"motion_record_plan3=${records[2]}&"
"motion_record_plan4=${records[3]}&"
"motion_record_plan5=${records[4]}&"
"motion_record_plan6=${records[5]}&"
"motion_record_plan7=${records[6]}&"
"motion_record_plan8=${records[7]}&"
"motion_record_plan9=${records[8]}&"
"motion_record_plan10=${records[9]}&"
"motion_record_plan11=${records[10]}&"
"motion_record_plan12=${records[11]}&"
"motion_record_plan13=${records[12]}&"
"motion_record_plan14=${records[13]}&"
"motion_record_plan15=${records[14]}&"
"motion_record_plan16=${records[15]}&"
"motion_record_plan17=${records[16]}&"
"motion_record_plan18=${records[17]}&"
"motion_record_plan19=${records[18]}&"
"motion_record_plan20=${records[19]}&"
"motion_record_plan21=${records[20]}&"
"motion_record_plan_enable=$enable&"
```

CGI for setting 24h recording：

```
var value = enable == 1 ? -1 : 0;
"set_recordsch.cgi?record_cover=1&"
    "record_timer=$record_timer&"
    "time_schedule_enable=$enable&"
    "schedule_sun_0=$value&"
    "schedule_sun_1=$value&"
    "schedule_sun_2=$value&"
    "schedule_mon_0=$value&"
    "schedule_mon_1=$value&"
    "schedule_mon_2=$value&"
    "schedule_tue_0=$value&"
    "schedule_tue_1=$value&"
    "schedule_tue_2=$value&"
    "schedule_wed_0=$value&"
    "schedule_wed_1=$value&"
    "schedule_wed_2=$value&"
    "schedule_thu_0=$value&"
    "schedule_thu_1=$value&"
    "schedule_thu_2=$value&"
    "schedule_fri_0=$value&"
    "schedule_fri_1=$value&"
    "schedule_fri_2=$value&"
    "schedule_sat_0=$value&"
    "schedule_sat_1=$value&"
    "schedule_sat_2=$value&"
    "record_audio=$record_audio&"
```

Parameter	Type	Description

enable	int	1 turn on,0 turn off
record_timer	String	record time: 5,10,15,30
record_audio	String	“1”to record audio,“0”not record audio
value	int	turn on -1,turn off 0；

CGI for getting schedule recording：
"trans_cmd_string.cgi?cmd=2017&command=11&mark=212&type=3&"
Field：record_plan_enable
CGI for getting motion detection video record:
"trans_cmd_string.cgi?cmd=2017&command=11&mark=212&type=1&"
Field：motion_record_enable
CGI for getting 24h recording：get_record.cgi?
Field：record_time_enable

24.TF Card Recording Time

CGI for setting recording time："trans_cmd_string.cgi?cmd=2204&command=2&record_resolution=$resolution&"

Parameter	Type	Description
resolution	int	0-->Ultra short video recording time(Ultra HD) 1-->Short video recording time(HD) 2-->Long video recording time(SD)

CGI for getting recording time："trans_cmd_string.cgi?cmd=2204&command=1&"

25.TF Card Format

CGI for setting tf card format：set_formatsd.cgi?
CGI for getting tf card status：get_status.cgi?
Field：sdstatus （1 or 2: normal,3: File system error.4：formatting.5: unmounted）

26.Linkage Correction（Two sensors）

Note：use get_status.cgi? to get support_pininpic and support_mutil_sensor_stream value, if support_pininpic==1 or support_mutil_sensor_stream==1 or ==2, the device supports linkage correction.
1.CGI for linkage correction switch：trans_cmd_string.cgi?cmd=4101&command=1&gblinkage_enable=$enable&

Parameter	Type	Description
enable	int	1 turn on,0 turn off

CGI for getting linkage correction switch status：trans_cmd_string.cgi?cmd=4101&command=0&
gblinkage_enable: 0 invisible, 1 turn on,2 turn off
2.Linkage correction- PTZ reset
CGI for setting PTZ reset："trans_cmd_string.cgi?cmd=4100&command=0&"
CGI for getting PTZ reset status："trans_cmd_string.cgi?cmd=4100&command=1&"
3.Linkage correction- Image correction

CGI for image correction："camera_control.cgi?param=40&value=0&x_percent=${x_percent}&y_percent=${y_percent}"

Parameter	Type	Description
x_percent	int	Correction position coordinate X-axis scale：1-100
y_percent	int	Correction position coordinate Y-axis scale：1-100

4.Linkage coordinate setting
CGI for setting linkage coordinate：
"camera_control.cgi?param=39&value=0&x_percent=${x_percent}&y_percent=${y_percent}"

Parameter	Type	Description
x_percent	int	Correction position coordinate X-axis scale：1-100
y_percent	int	Correction position coordinate Y-axis scale：1-100

27.Multi Sensor Camera

Note: use get_status.cgi? to get splitScreen value and support_mutil_sensor_stream value.
1.if splitScreen==null,and support_mutil_sensor_stream== 1 or ==2 , It is two sonsor camera.
2.if support_mutil_sensor_stream != null and splitScreen != null, It is (fake) three sonsor camera.
Creating player controller：

```
//第一个
var subController = AppPlayerController();
var result = await subController.create();
result = await subController.setVideoSource(SubPlayerSource());
await subController.start();
result = await controller!.enableSubPlayer(subController);
//第二个
var sub2Controller = AppPlayerController();
var result = await sub2Controller.create();
result = await sub2Controller.setVideoSource(SubPlayerSource());
await sub2Controller.start();
result = await controller!.enableSub2Player(sub2Controller);
```

28.Humanoid Zoom Tracking

Note: use get_status.cgi? to get support_humanoid_zoom value, if support_humanoid_zoom =="1", the camera supports this functionality;
CGI for setting humanoid zoom tracking："trans_cmd_string.cgi?cmd=2126&command=1&"
CGI for getting humanoid zoom tracking："trans_cmd_string.cgi?cmd=2126&command=0&humanoid_zoom=$enable&"

Parameter	Type	Description
enable	int	1:turn on,0:turn off

29.Screenshot

CGI for one sonsor：snapshot.cgi?res=1&
CGI for two sonsor：snapshot.cgi?sensor=$sensor&　（sensor= 0:Tracking Camera,1:Panorama Camera）

30.Video Flipping

CGI for setting video flipping：
camera_control.cgi?param=5&value=$value&

Parameter	Type	Description
value	int	0 : Dot not flip,3: Flip upside down

CGI for getting video flipping：get_camera_params.cgi?
Field：flip

31.Light Anti-interference

CGI for setting light anti-interference：camera_control.cgi?param=3&value=$value&

Parameter	Type	Description
value	int	0 :50Hz , 1: 60Hz

CGI for getting light anti-interference：get_camera_params.cgi?
Field：mode

32.Video Time Display

CGI for setting video time display："set_misc.cgi?osdenable=$value&"

Parameter	Type	Description
value	int	1:Display. 0 :Do not display

CGI for getting video time display：get_status.cgi?
Field：osdenable

33.Remote Power On/Off

Note：When the device is in deep sleep, it does not support remote power on/off. When shutting down remotely, it is necessary to ensure that it is connected. After successful shutdown, it is necessary to actively disconnect. When starting up remotely, it is necessary to wake up the device first, connect the device, and then call the CGI；
Note: use get_status.cgi? to get support_Remote_PowerOnOff_Switch value, if value=="1", the devices supports this functionality.
CGI for setting remote power on/off："trans_cmd_string.cgi?cmd=2106&command=13&PowerSwitch=$open&"

Parameter	Type	Description
open	int	1:Turn off. 0 Turn on

CGI for getting remote power on/off："trans_cmd_string.cgi?cmd=2106&command=14&"
Field：PowerSwitch

34.QR Code Network Connection

QR-code data format：

```
qrContent =
      '{"BS":"$bssid","P":"$pwd","U":"${userId}-OEM","RS":"$ssid"}';
```

Parameter	Type	Description
bssid	String	WiFi bssid
pwd	String	WiFi password
ssid	String	WiFi ssid（wifi name）
userId	String	User unique identifier, Such as：“2384782”

Query devices connected to the network API：

Request method：post

Request url：https://api.eye4.cn/hello/query

Request parameter：

{"key": key}

Parameter	Type	Description
key	String	${userId}-OEM_binding（userId is the user unique identifier）

success - reponse：{"value":"VE0005622QHOW"}

fail - reponse：{"msg":"未搜索到","code":404}

Delete devices connected to the network API：

Request method：post

Request url：https://api.eye4.cn/hello/confirm

Request parameter：

{"key": key}

Parameter	Type	Description
key	String	${userId}-OEM_binding（userId is unique identifier）

Determine if the ID is our camera ID:

```
bool isBlueDev(String name) {
  ///print('是否蓝牙设备:${name} ');
  if (name.startsWith("IPC-")) {
    name = name.replaceAll('IPC-', '');
  } else if (name.startsWith("MC-")) {
    name = name.replaceAll('MC-', '');
  } else if (name.startsWith("VP-")) {
    name = name.replaceAll('VP-', '');
  } else {
    return false;
  }
  RegExp exp = RegExp(r'^[a-zA-Z]{1,}\d{7,}.*[a-zA-Z]$');
  bool isVirtualId = exp.hasMatch(name);

  ///print('是否蓝牙设备:${name}   isBlueDev : ${isVirtualId}');
  return isVirtualId;
}
```

35.Bluetooth Network Connection

service-uuid: "0000FFF0-0000-1000-8000-00805F9B34FB"
characteristics-uuid: "0000FFF1-0000-1000-8000-00805F9B34FB"
1.Get wifi list protocol:
Send：0xFF 0xFF
Receive：0xF0 0xF3 （The length of a data packet is 40）
Replay： 0xFF index
End： index=10000
2.Bluetooth network connection：
First package Send：[0xF0, 0xF0] +118
First package Receive：[0xF0, 0xF0]

Second package Send：[0xF0, 0xF1] +36
Second package Receive：[0xF0, 0xF1]

Third package Receive：[0xF0, 0xF2] + status (0->success；1->password error；2->connect timeout；3 -〉dhcp fail；4->Gateway configuration failed)

36.Update Firmware Version

1.**Get the latest version number by the current version number**（use get_status.cgi? to get sys_ver value）
Request url: http://api4.eye4.cn:808/firmware/${currentVersion}/cn
Reponse：

```
{
   "name":"47.1.8.14",
   "MD5":"0DB3C057ADC28FBA46C63D89BF55ED89",
   "en":"",
   "zh":"",
   "download_file":"/firmware_47.1.8.14_1582342675.bin",
   "Size":"1255424",
   "download_server":"doraemon.ipcam.so"
}
```

2.**CGI for update firmware version**
"auto_download_file.cgi?server=$server&file=$file&type=0&resevered1=&resevered2=&resevered3=&resevered4=&"

Parameter	Type	Description
file	String	download_file
server	String	download_server

37.Switching Device WIFI

1.**Get wifi list CGI**:
（1）wifi_scan.cgi?
（2）get_wifi_scan_result.cgi?
2.**Switch device wifi CGI**:
"set_wifi.cgi?ssid=${Uri.encodeQueryComponent(info.ssid)}&channel=${info.channel}&authtype=${info.security}&wpa_psk=${Uri.encodeQueryComponent(password)}&enable=1&"
or：
"set_wifi.cgi?ssid=${Uri.encodeQueryComponent(info.ssid)}&channel=${info.channel}&authtype=${info.security}&wpa_psk=${Uri.encodeQueryComponent(password)}&enable=1&$area&"

38.AI Smart Service

(1)、get AI smart service status CGI:

"trans_cmd_string.cgi?cmd=2400&command=1&AiType=$aiType&"

Parameter	Type	Description
aiType	int	0 Area intrusion 1 Human loitering detection 2 Illegal parking detection 3 Line crossing detection 4 Absence detection 5 Vehicle retrograde detection 6 Package detection 7 Fire detection

(2)、set AI smart service data CGI:

"trans_cmd_string.cgi?cmd=2400&command=0&AiType=$aiType&AiCfg=$aiConfigSring&"

Parameter	Type	Description
aiType	int	0 Area intrusion 1 Human loitering detection 2 Illegal parking detection 3 Line crossing detection 4 Absence detection 5 Vehicle retrograde detection 6 Package detection 7 Fire detection
aiConfigSring	String	model data json string，such as： {"enable":0,"staytime":80,"region":[{"point":[{"x":0,"y":0},{"x":0,"y":1},{"x":1,"y":1},{"x":1,"y":0}]}],"sensitive":2,"alarmLed":0,"lightLed":0,"areaframe":1}

(3)、AI model data

1、Area intrusion

Parameter	Type	Description
enable	int	0 turn off，1 turn on
object	int	Target Type： 1 pet，2 car，3 person and car，4 pet，5 person and pet，6 car and pet，7 person car and pet
region	list	Activity zone data , such as: [{"point": [{"x": "0.126563", "y": "0.225"}, {"x": "0.38125", "y": "0.225"}, {"x": "0.253125", "y": "0.677778"}, {"x": "0.126563", "y": "0.677778"}]}, {point: [{"x": "0.507813", "y": "0.225"}, {"x": "0.890625", "y": "0.225"}, {"x": "0.890625", "y": "0.677778"}]}]
sensitive	int	Sensitivity，1-3
lightLed	int	Flashing light，0 turn off，1 turn on
areaframe	int	Display of target box and

		detection rules, 0 turn off, 1 turn on

2、Human loitering

Parameter	Type	Description
enable	int	0 turn off, 1 turn on
staytime	int	Human loitering time: 30-3600 seconds
region	list	Activity zone data , such as: [{"point": [{"x": "0.126563", "y": "0.225"}, {"x": "0.38125", "y": "0.225"}, {"x": "0.253125", "y": "0.677778"}, {"x": "0.126563", "y": "0.677778"}]}, {point: [{"x": "0.507813", "y": "0.225"}, {"x": "0.890625", "y": "0.225"}, {"x": "0.890625", "y": "0.677778"}]}]
sensitive	int	Sensitivity, 1-3
lightLed	int	Flashing light, 0 turn off, 1 turn on
areaframe	int	Display of target box and detection rules, 0 turn off, 1 turn on

3、Illegal parking

Parameter	Type	Description
enable	int	0 turn off, 1 turn on
staytime	int	Illegal parking time: 30-3600 seconds
region	list	Activity zone data , such as: [{"point": [{"x": "0.126563", "y": "0.225"}, {"x": "0.38125", "y": "0.225"}, {"x": "0.253125", "y": "0.677778"}, {"x": "0.126563", "y": "0.677778"}]}, {point: [{"x": "0.507813", "y": "0.225"}, {"x": "0.890625", "y": "0.225"}, {"x": "0.890625", "y": "0.677778"}]}]
sensitive	int	Sensitivity, 1-3
lightLed	int	Flashing light, 0 turn off, 1 turn on
areaframe	int	Display of target box and detection rules, 0 turn off, 1 turn on

4、Line crossing

Parameter	Type	Description
enable	int	0 turn off, 1 turn on
object	int	Target Type: 1 pet, 2 car, 3 person and car, 4 pet, 5 person and pet, 6 car

		and pet，7 person car and pet

crosslineArr	list	Cross line array, such as：
		[{
		"0": {
		"0": {"x": 0.5, "y": 0.0},
		"1": {"x": 0.5, "y": 1.0}
		},
		'dir': 1,
		}
		]

sensitive	int	Sensitivity，1-3
lightLed	int	Flashing light，0 turn off，1 turn on
areaframe	int	Display of target box and detection rules，0 turn off，1 turn on

5、Absence detection

Parameter	Type	Description
enable	int	0 turn off，1 turn on
leavetime	int	Absence time： 30-3600 seconds
sumperson	int	Minimum number of personnel on duty: 1，2，3
region	list	Activity zone data , such as: [{"point": [{"x": "0.126563", "y": "0.225"}, {"x": "0.38125", "y": "0.225"}, {"x": "0.253125", "y": "0.677778"}, {"x": "0.126563", "y": "0.677778"}]}, {point: [{"x": "0.507813", "y": "0.225"}, {"x": "0.890625", "y": "0.225"}, {"x": "0.890625", "y": "0.677778"}]}]
sensitive	int	Sensitivity，1-3
lightLed	int	Flashing light，0 turn off，1 turn on
areaframe	int	Display of target box and detection rules，0 turn off，1 turn on

6、Vehicle retrograde

Parameter	Type	Description
enable	int	0 turn off，1 turn on

region	list	Activity zone data , such as:
		[{
		"0": {
		'point': {
		"0": {"x": 20.0, "y": 20.0},
		"1": {"x": 20.0, "y": 160.0},

		"2": {"x": 300.0, "y": 160.0}, "3": {"x": 300.0, "y": 20.0}, }, 'selectedLine': 1, }, }]
sensitive	int	Sensitivity，1-3
lightLed	int	Flashing light，0 turn off，1 turn on
areaframe	int	Display of target box and detection rules，0 turn off，1 turn on

7、Package detection

Parameter	Type	Description
appearEnable	int	Package appear 0 turn off，1 turn on
disappearEnable	int	Package disappear 0 turn off，1 turn on
stayEnable	int	Package stay 0 turn off，1 turn on
region	list	Activity zone data , such as: [{"point": [{"x": "0.126563", "y": "0.225"}, {"x": "0.38125", "y": "0.225"}, {"x": "0.253125", "y": "0.677778"}, {"x": "0.126563", "y": "0.677778"}]}, {point: [{"x": "0.507813", "y": "0.225"}, {"x": "0.890625", "y": "0.225"}, {"x": "0.890625", "y": "0.677778"}]}]
stayTime	int	Detention time (unit needs to be converted to seconds)：10 minutes、30 minutes、1 hour、6 hours、12 hours、24 hours、48 hours、72 hours
sensitive	int	Sensitivity，1-3
appearLightLed	int	Package appear flash light: 0 turn off，1 turn on
disappearLightLed	int	Package disappear flash light: 0 turn off，1 turn on
stayLightLed	int	Package stay flash light: 0 turn off，1 turn on
areaframe	int	Display of target box and detection rules，0 turn off，1 turn on

8、Fire&Smoke detection

Parameter	Type	Description
fireEnable	int	Fire detection 0 turn off，1 turn on

smokeEnable	int	Smoke detection 0 turn off, 1turn on
sensitive	int	Sensitivity，1-3
fireLightLed	int	Fire flash light，0 turn off，1 turn on
smokeLightLed	int	Smoke flash light，0 turn off，1 turn on
firePlace	int	Scene：0 indoor，1outdoor
areaframe	int	Display of target box and detection rules, 0 turn off, 1 turn on

(4)、AI detection schedule

CGI for setting detection schedule：

```
"trans_cmd_string.cgi?cmd=2017&command=$type&mark=1&"
    "${typeString}_plan1=${records[0]}&"
    "${typeString}_plan2=${records[1]}&"
    "${typeString}_plan3=${records[2]}&"
    "${typeString}_plan4=${records[3]}&"
    "${typeString}_plan5=${records[4]}&"
    "${typeString}_plan6=${records[5]}&"
    "${typeString}_plan7=${records[6]}&"
    "${typeString}_plan8=${records[7]}&"
    "${typeString}_plan9=${records[8]}&"
    "${typeString}_plan10=${records[9]}&"
    "${typeString}_plan11=${records[10]}&"
    "${typeString}_plan12=${records[11]}&"
    "${typeString}_plan13=${records[12]}&"
    "${typeString}_plan14=${records[13]}&"
    "${typeString}_plan15=${records[14]}&"
    "${typeString}_plan16=${records[15]}&"
    "${typeString}_plan17=${records[16]}&"
    "${typeString}_plan18=${records[17]}&"
    "${typeString}_plan19=${records[18]}&"
    "${typeString}_plan20=${records[19]}&"
    "${typeString}_plan21=${records[20]}&"
    "${typeString}_plan_enable=$enable&"
```

Parameter	Type	Description
type	int	12 fire detection 14 area intrusion 15 human loitering detection 16 illegal parking detection 17 Line crossing detection 18 Absence detection 19 Vehicle retrograde detection 20 Package detection
typeString	String	12->"fire" 14->"region_entry" 15->"person_stay" 16->"car_stay" 17->"line_cross" 18->"person_onduty" 19->"car_retrograde" 20->"package_detect"

records	list	Plan records, length =21, default value=-1， Specific value calculation reference [20 Detection Schedule]
enable	int	1turn on， 0 turn off

CGI for getting detection schedule data：
"trans_cmd_string.cgi?cmd=2017&command=11&mark=1&type=$type&"

Parameter	Type	Description
type	int	12 fire detection 14 area intrusion 15 human loitering detection 16 illegal parking detection 17 Line crossing detection 18 Absence detection 19 Vehicle retrograde detection 20 Package detection