

# **《HTTP Application Programming Interface》**

**Version: V0.9**

**Date:2016-6-29**

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## Revision history

Version	Status	Description	Date	Author
0.1	Create		2015-07-27	Liuyujian
0.2	update		2015-07-30	Liuyang
0.3	update		2015-12-22	Liuyang
0.4	fix		2015-12-29	Liuyang
0.5	fix		2016-05-25	Liuyang
0.6	fix	Update download path	2016-06-2	Weixianzhi
0.7	fix	1. Add locked file search 2. Add search file by time 3. Fix lock/unlock file 4. Compatible dual camera	2016-06-16	Weixianzhi
0.8	fix	Update get version	2016-06-22	Weixianzhi
0.9	fix	1. Add product type 2. Add product ID 3. Add file size 4. Add the version of cgi	2016-06-29	Weixianzhi

# 1、Preface

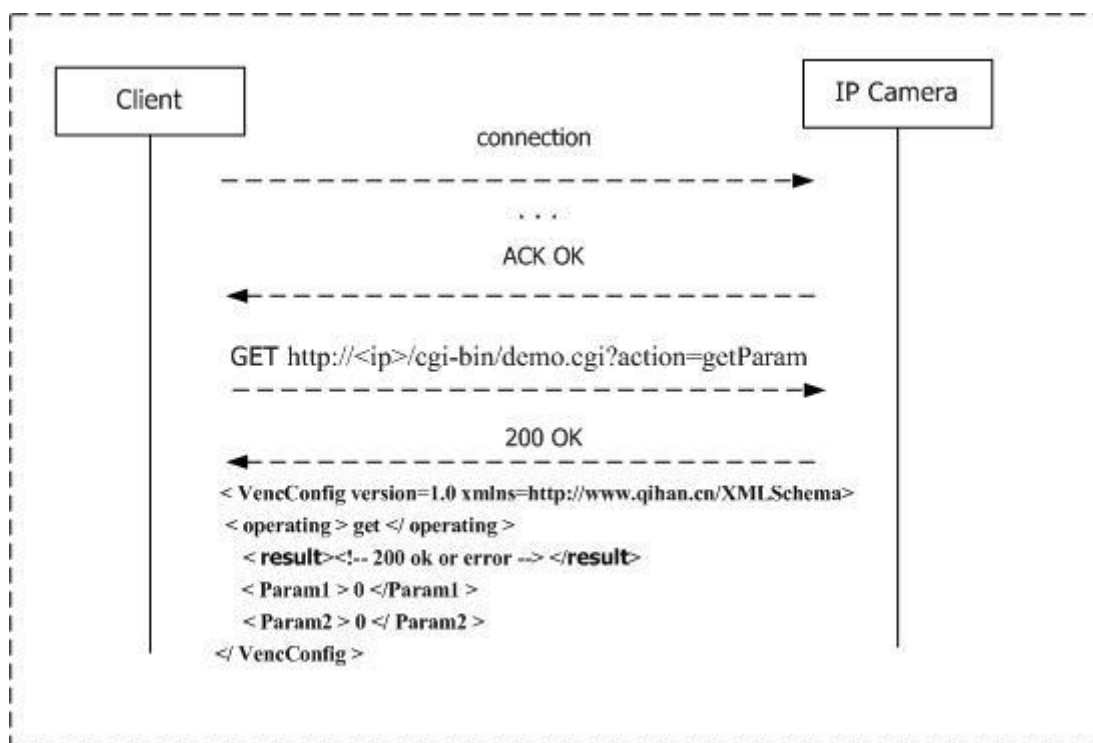
## 1.1 Overview

此文档详细描述了我司的 HTTP API，通过 HTTP 方式实现对设备的配置及控制。目前支持参数配置\查询、系统控制。

## 1.2 HTTP API Description

Client 与设备之间使用 HTTP 协议进行通信，以 GET 方式传送、接收 URL 参数，设备端执行相应操作后，将返回状态码：200（请求正常）、400（请求失败）、500(服务器内部出错)。并将结果数据以 XML 格式发送给 client，大概交互流程如下图所示：

URL 示例： `http://<ip>/cgi-bin/Control.cgi?Type=<TypeItem>Action=Get<ParamItem>`



### Note:

- url 的编码格式遵循 RFC3986 标准，URL 中只允许包含英文字母（a-zA-Z）、数字（0-9）、-\_.~4 个特殊字符以及所有保留字符：!\*'();: @ & = + \$ , / ? # [ ]。

## 2 、 URL Syntax

### A、 URL Syntax

Operating	URL
Set Param	http://<ip>/cgi-bin/Control.cgi?Type=<TypeItem>&Action=Set<ParamItem>& <ParamName>=<ParamValue>&<ParamName>=<ParamValue>&...
Get Param	http://<ip>/cgi-bin/Control.cgi?Type=<TypeItem>Action=Get<ParamItem>
System	http://<ip>/cgi-bin/Control.cgi?Type=<TypeItem>Action=get<ParamItem> (if surrpot get) http://<ip>/cgi-bin/Control.cgi?Type=<TypeItem>Action=set<ParamItem>&<ParamName>= <ParamValue> (if surrpot set) http://<ip>/cgi-bin/Control.cgi?Type=<TypeItem>Action=get<ParamItem>
File	http://<ip>/cgi-bin/ Control.cgi?Type=<TypeItem>Action=<ParamItem>& <SubParamItem>=<SubParamvalue>
Image	http://<ip>/cgi-bin/ Control.cgi?Type=<TypeItem>Action=<ParamItem>& <SubParamItem>=<SubParamvalue>
Snapshot	http://<ip>/cgi-bin/ Control.cgi?Type=<TypeItem>&

## B、Response Info

Operating	Response	Data Format
Set Param	<?xml version="1.0" encoding="UTF-8" ?> - <xxxx version="2.0" xmlns="http://www.w3.org/XMLSchema"> <Result>OK</Result> </xxxx>	XML
Get Param	<?xml version="1.0" encoding="UTF-8" ?> - <ImageConfig version="2.0" xmlns="http://www.w3.org/XMLSchema"> <Result>OK</Result> <Param1>21</ Param 1> < Param2 >22</ Param2 > < Param3>23</ Param23> </xxxx>	XML

## C、Special Response Info

Operating	Response	Data Format
File Searching	{ "result": "ok", "prevideo": [{ "videoid": 0, "videotitle": "20150101014330.mkv", "videoname": "20150101014330.mkv", "videostatus": 1, "videoduration": 0, "filesize": 0 } ] }  <b>Notes: videostatus 0 – locked, 1 -- unlocked</b>	json
Image Searching	{ "result": "ok", "prevideo": [{ "imageid": 0, "imagetitle": "20150101014330.jpg", "imagenam": "20150101014330.jpg", "imagestatus": 1, "imageduration": 0, "filesize": 0 } ] } <b>(Notes: single camera)</b>	json
	{ "result": "ok", "prevideo": [{ "imageid": 0, "imagetitle": "20150101014330_R.jpg", "imagenam": "20150101014330_R.jpg", "imagestatus": 1, "imageduration": 0, "filesize": 0 } ] } <b>(Notes: double camera)</b>	
Get version	<Product_type>SGKS-DA401-AW</Product_type> <Product_id >00:11:22:33:44:55</Product_id> <Firmware_version>v2.1.7.4 </Firmware_version> <Product_model >TWO_CAM_DVR</Product_model >  <b>Notes: TWO_CAM_DVR ---- double camera</b> <b>WIFI_DVR ---- single camera</b>	

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## 2.1 TypeItem

TypeItem	ParamItem
Param	Image Preview Record Audio Gsensor
System	Recstat Recmode formattf Restore getversion CheckTF Datetime
File	Search Lock Unlock Delete
Image	Search
Snapshot	NULL

## 2.2 ParamItem

### 2.2.1 Param

ParamItem	Param Description
Image	Brightness (0~255) Contrast(0~255 Hue(0~255) Saturation(0~255) Sharpness(0~255) Power_frequency(0:50hz,1:60hz) VideoFormat(0:PAL, 1:NTSC) Ispmode(0:auto, 1>manual) Image_mirror(0:close, 1:vertical, 2:horizontal, 3: horizontal-vertical);
Preview	Resolution{ 0=1080P 1=720P 2=360P} Frames{0=30fps 1=25fps 2=20fps 3=15fps} Quality{0=Best 1=Good 2=Normal} Bitrate{2=2Mbps 3=3Mbps 4=4Mbps 5=5Mbps 6=6Mbps 7=7Mbps 8=8Mbps} Profile{0=main 1=baseline} Bcr{0:cbr 1=vbr 2=cbr_keepquality 3=vbr_keepquality}
Record	Resolution{ 0=1080P 1=720P 2=360P} Frames{0=30fps 1=25fps 2=20fps 3=15fps} Quality{0=Best 1=Good 2=Normal} Bitrate{2=2Mbps 3=3Mbps 4=4Mbps 5=5Mbps 6=6Mbps 7=7Mbps 8=8Mbps} Profile{0=main 1=baseline} Bcr{0=cbr 1=vbr 2=cbr_keepquality 3=vbr_keepquality} Rectime{0=1min 1=3min 2=5min} Rstamp{0=off 1=on} OSD(not used)
Audio	Volume{1~13} Mute{0:sound on 1:sound off } For rtsp RecMute{0:sound on 1:sound off } For recording



Gsensor	Gsensordpi{0:low 1:normal 2:high}
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## 2.2.2 System

ParamItem	Param Description	Note
Recstatus	Recording status recstat {0: Not recording 1:Recording}	Surspot get & set
Recmode	Recording mode recmode {0:Auto recording 1:Manual Recording}	Surspot get & set
Formattf	Format SD card (No param)	
Restore	Factory Reset (No param)	The system will reboot
CheckTF	Check SD card (No param) {Result: 0: OK 1:No space}	
Version	Get version number (No param) Product_type{xxxx} Product_id{xxxx} Product_model{xxxxxxx} Firmware_version{xxxx}	Surspot get
Cgiversion	Get cgi version number (No param) Cgi_version{xxxx}	Surspot get
Datetime	Set: {xxxx-xx-xx_xx:xx:xx}	Surspot get & set

Ex: http://192.168.57.150/cgi-bin/Control.cgi?type=system&action=setrecstatus&recstat=0

Ex: http://192.168.57.150/cgi-bin/Control.cgi?type=system&action=setrecmode&recmode=1

Ex: http://192.168.57.150/cgi-bin/Control.cgi?type=system&action=Restore

Ex: http://192.168.57.150/cgi-bin/Control.cgi?type=system&action=setdatetime&2012-12-24\_00:00:00

Ex: http://192.168.57.150/cgi-bin/Control.cgi?type=system&action=getversion (Please read the [demo](#))

## 2.2.3 File

ParamItem	SubParamItem	Param Description
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SearchFile	Index	The start index of searching (Limit of 20)
	Starttime	The start time of searching(Limit of 20)
	Endtime	The end time of searching
SearchEvent	Index	The start index of searching (Limit of 20)
	Starttime	The start time of searching(Limit of 20)
	Endtime	The end time of searching
LockFile	name	Lock the video
UnlockFile	name	Unlock the video
DeleteFile	name	Delete the video

## 2.2.4 Image

ParamItem	SubParamItem	Param Description
SearchImg	Index	The start index of searching
DeleteImg	name	Delete the picture

## 2.2.5 Snapshot

ParamItem	Param Description
Snapshot	Take a picture

## 3.Download

### 3.1 Image

URL	<a href="http://ip/sdcard/DVR/PIC/xxxxx.jpg">http://ip/sdcard/DVR/PIC/xxxxx.jpg</a>
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### 3.2 Video

URL	<a href="http://ip/sdcard/DVR/VIDEO/xxxxx.mkv">http://ip/sdcard/DVR/VIDEO/xxxxx.mkv</a>
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### 3.3 Event

URL	<a href="http://ip/sdcard/DVR/EVENT/xxxxx.mkv">http://ip/sdcard/DVR/EVENT/xxxxx.mkv</a>
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## D、 Demo

### 1.GET IMAGE

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=param&action=getimage
<b>Response Info</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; - &lt;ImageConfig version="2.0" xmlns="http://www.w3.org/XMLSchema"&gt;   &lt;Result&gt;OK&lt;/Result&gt;   &lt;Brightness&gt;128&lt;/Brightness&gt;   &lt;Contrast&gt;150&lt;/Contrast&gt;   &lt;Hue&gt;128&lt;/Hue&gt;   &lt;Saturation&gt;60&lt;/Saturation&gt;   &lt;Sharpness&gt;128&lt;/Sharpness&gt;   &lt;Power_frequency&gt;0&lt;/Power_frequency&gt;   &lt;VideoFormat&gt;0&lt;/VideoFormat&gt;   &lt;Image_mirror&gt;0&lt;/Image_mirror&gt;   &lt;Ispmode&gt;1&lt;/Ispmode &gt; &lt;/ImageConfig&gt;</pre>

### 2.SET IMAGE

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=param&action=setimage&hue=80&brightness=100
<b>Response Info</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; - &lt;ImageConfig version="2.0" xmlns="http://www.w3.org/XMLSchema"&gt;   &lt;Result&gt;OK&lt;/Result&gt; &lt;/ImageConfig&gt;</pre>

### 3.FileSearch

#### 3.1 Unlocked Filesearch by index

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=searchfile&index=0
<b>Response Info</b>	<pre>{"result":"ok","prevideo":[{"videoid":0,"videotitle":"20150101014330.mkv","videoname": "20150101014330.mkv","videostatus":1,"videoduration":0,"filesize":0}]}</pre>

### 3.2 Unlocked Filesearch by time

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=searchfile&starttime=20150101014000&endtime=20150101014600
<b>Response Info</b>	{"result":"ok","prevideo":[{"videoid":0,"videotitle":"20150101014330.mkv","videoname":"20150101014330.mkv","videostatus":1,"videoduration":0,"filesize":0}]}

### 3.3 Locked Filesearch by index

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=searchevent&index=0
<b>Response Info</b>	{"result":"ok","prevideo":[{"videoid":0,"videotitle":"20150101014330.mkv","videoname":"20150101014330.mkv","videostatus":0,"videoduration":0,"filesize":0}]}

### 3.4 Locked Filesearch by time

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=searchevent&starttime=20150101014000&endtime=20150101014600
<b>Response Info</b>	{"result":"ok","prevideo":[{"videoid":0,"videotitle":"20150101014330.mkv","videoname":"20150101014330.mkv","videostatus":0,"videoduration":0,"filesize":0}]}

## 4.LockFile/UnlockFile/DeleteFile

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=lockfile&name=20150101014330.mkv http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=unlockfile&name=20150101014330.mkv http://192.168.57.150/cgi-bin/Control.cgi?type=file&action=deletefile&name=20150101014330.mkv
<b>Response Info</b>	<?xml version="1.0" encoding="UTF-8" ?> - <xxxFile version="2.0" xmlns="http://www.w3.org/XMLSchema"> <Result>OK</Result> </ xxxFile >

## 5.ImageSearch

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=image&action=searchimg&index=0
<b>Response Info</b>	{ "result": "ok", "prevideo": [{ "imageid": 0, "imagetitle": "20150101014330.jpg", "imagenam": "20150101014330.jpg", "imagestatus": 1, "imageduration": 0, "filesize": 0 } ] } (Notes: single camera)
	{ "result": "ok", "prevideo": [{ "imageid": 0, "imagetitle": "20150101014330_R.jpg", "imagenam": "20150101014330_R.jpg", "imagestatus": 1, "imageduration": 0, "filesize": 0 } ] } (Notes: double camera)

## 6.Snapshot

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=snapshot&
<b>Response Info</b>	<?xml version="1.0" encoding="UTF-8" ?> - <SnapshotConfig version="2.0" xmlns="http://www.w3.org/XMLSchema"> <Result>OK</Result> <ImgName>20150101000113.jpg</ImgName> </SnapshotConfig> (Notes: single camera)
	<?xml version="1.0" encoding="UTF-8" ?> - <SnapshotConfig version="2.0" xmlns="http://www.w3.org/XMLSchema"> <Result>OK</Result> <ImgName>20150101000113_L.jpg</ImgName> <ImgName_s>20150101000113_R.jpg</ImgName_s> </SnapshotConfig> (Notes: double camera)

## 7.GetVersion

<b>Command</b>	http://192.168.57.150/cgi-bin/Control.cgi?type=system&action=getversion
<b>Response Info</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; - &lt;SystemConfig version="2.0" xmlns="http://www.w3.org/XMLSchema"&gt;   &lt;Result&gt;OK&lt;/Result&gt;   &lt;Product_type&gt;SGKS-DA401-AW&lt;/Product_type&gt;   &lt;Product_id&gt;00:11:22:33:44:55&lt;/Product_id&gt;   &lt;Product_model&gt;TWO_CAM_DVR&lt;/Product_model&gt;   &lt;Firmware_version&gt;v2.1.7.4&lt;/Firmware_version&gt; &lt;/SystemConfig&gt;</pre>