

**DSE RK IP Camera CGI API
Programming User Manual
V1.0.0.9**

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1. CGI API Overview

This CGI API is developed based on http, used for pc or other endpoint device get access to the Herospeed ip camera.

1. 1 Change list

Version	Date	Comment
V 1.0.0.1	2016.4.13	Create the base version
V 1.0.0.2	2016.7.4	Add new config(alarm)
V 1.0.0.3	2016.12.2	Added requests for Motion Detection Alarm
V 1.0.0.5	2018.1.11	Add new config(sdcard)
V 1.0.0.6	2018.4.24	Add Notice about modify video width and height
V 1.0.0.7	2018.4.26	Add Notice about modify the stream resolution.
V 1.0.0.8	2018.11.20	Add Notice about modify the encodingtype.
V 1.0.0.9	2019.01.28	Add PTZ control

1. 2 The main functions supported by the SDK

- The API to get and set the configuration of video
- The API to get and set the configuration of audio
- The API to get and set the configuration of local network
- The API to get and set the configuration of date and time
- The API to get and set the configuration of network service
- The API to get and set the configuration of user
- The API to get and set the configuration of image
- The API to get and set the configuration of motion detection
- The API to get and set the configuration of private area
- The API to get and set the configuration of ddns
- The API to get and set the management of device

- The API to get and set the management of sdcard

2. API Calling Reference

2. 1 CGI API Format

API get access to the camera for get and set the configuration.

The url of setting configuration format:

```
http://<servername>/xx.htm?<parameter>=<value>&...
```

Example:

```
http://192.168.1.168/vb.htm?ipcamrestartcmd=1
```

The url of getting configuration format:

```
http://<servername>/ini.htm
```

Example:

```
http://192.168.1.168/ini.htm
```

The http content of getting configuration:

Request:

```
GET/ini.htm HTTP/1.1
```

```
Authorization: Basic YWRtaW46YWRtaW4=\r\n
```

```
\r\n
```

Response:

```
HTTP /1.1 200 OK\r\n
```

The http response format:

```
HTTP/1.1 <HTTP code> <HTTP text>\r\n
```

HTTP code	HTTP text	Description
200	OK	<p>Standard response for successful HTTP requests.</p> <p>There is another response message:</p> <p>Successful: The operation is successful</p> <p>Successful Need Reboot: The operation is successful, but it take effective after reboot the camera</p> <p>No Privilege: Permission denied</p> <p><param> invalid: The parameter of command is invalid.</p> <p><param> missing: The command is lack of parameter.</p>
400	Bad Request	The server cannot or will not process the request due to an apparent client error
401	Unauthorized	The response must include a WWW-Authenticate header field containing a challenge applicable to the requested resource or the user does not have the necessary permissions for the resource.
404	Not Found	The requested resource could not be found but may be available in the future. Subsequent requests by the client are permissible.
503	Service Unavailable	The server is currently unavailable (because it is overloaded or down for maintenance). Generally, this is a temporary state.

2. 2 The configuration of video

Format:

<http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...>

Notice:

If you want to change the value of videocodeccomboBox(the width of stream) and videocodeccomboBoxh(the height of stream), you have to modify three streams at the same time. Meanwhile, the video stream resolution you set must be supported by the device, otherwise you will fail. For the resolution that the device supports, please check the device background.

Example:

<http://192.168.1.168/vb.htm?videocodeccomboBox1=1024&videocodeccomboBoxh1=1024&videocodeccomboBox2=720&videocodeccomboBoxh2=720&videocodeccomboBox3=512&videocodeccomboBoxh3=512&encodingtype=2>

Parameter	Values	Description
title =<string>	String	The title of camera
videocodec=<int>	0;1;2	0:Single;1:Dual(currently not support) 2:Tri-Stream
videocodecname	Single; Dual; Tri-Stream	The type of video stream
mirctrl=<int>	0;1;2;3;	0:OFF;1:HORIZONTAL; 2:VERTICAL 3:BOTH
mirctrlname	OFF; HORIZONTAL; VERTICAL;	

	BOTH	
dateformat=<int>	0;1;2	0:YYYY/MM/DD; 1:MM/DD/YYYY; 2:DD/MM/YYYY
dateformatname	YYYY/MM/DD; MM/DD/YYYY; DD/MM/YYYY	The value of OSD date and time format
bitrate1=<int>	Integer	The bitrate of the main stream
bitrate2=<int>	Integer	The bitrate of the sub stream
bitrate3=<int>	Integer	The bitrate of the third stream
ratecontrol1=<int>	0, 1	0:CBR 1:VBR The rate control of the main stream
ratecontrol2=<int>	0, 1	0:CBR 1:VBR The rate control of the sub stream
ratecontrol2=<int>	0, 1	0:CBR 1:VBR The rate control of the thid stream
ratecontrolname	CBR VBR	The rate control of the stream
timestampenable1 =<int>	0, 1	The enable of display OSD date and time
textenable1=<int>	0, 1	The enable of display OSD text
textposition1=<int>	0;1	0:Top-Left; 1:Top-Right
textpositionname	Top-Left; Top-Right	The position index of OSD
overlaytext1 =<string>	String	The OSD text
framerate1=<int>	Integer	The frame rate of the main stream
framerate2=<int>	Integer	The frame rate of the sub stream
framerate3=<int>	Integer	The frame rate of the third stream
frameraterange	0~30	The framerate range of the stream
livequality1=<int>	0, 1, 2	The profile of the main stream 0:Baseline Profile 1: Main Profile 2:High Profile
livequality2=<int>	0, 1, 2	The profile of the sub stream 0:Baseline Profile 1: Main Profile 2:High Profile
livequality3=<int>	0, 1, 2	The profile of the third stream 0:Baseline Profile 1: Main Profile

		2:High Profile
qualityname	Baseline Profile; Main Profile; High Profile;	The profile of the stream
ipratio1=<int>	1-5 seconds	The I frame interval of the main stream
ipratio2=<int>	1-5 seconds	The I frame interval of the sub stream
ipratio3=<int>	1-5 seconds	The I frame interval of the third stream
videocodecwidth1	Integer	The width of main stream
videocodecheight1	Integer	The height of main stream
videocodecwidth2	Integer	The width of sub stream
videocodecheight2	Integer	The height of sub stream
videocodecwidth3	Integer	The width of third stream
Videocodecheight3	Integer	The height of third stream
encodingtype	2, 3	2:H264; 3:H265;

2.3 The configuration of audio

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...

Parameter	Values	Description
audioenable=<int>	0, 1	The enable of audio input
audioinput=<int>	0; 1	0: Mic In; 1: Line In
audioinputname	Mic In; Line In	The value of audio input type
audioinvolume=<int>	0-100	The volume of audio input

2.4 The configuration of local network

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...

e>&...

Parameter	Values	Description
IpAddress=<string>	XXX.XXX.XXX.XXX	Ip address
netmask=<string>	XXX.XXX.XXX.XXX	Netmask
gateway=<string>	XXX.XXX.XXX.XXX	Gateway
DNS =<string>	String	DNS address

2. 5 The configuration of date and time

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<valu

e>&...

Parameter	Values	Description
newdate=<string>	YY/MM/DD	The date of setting
newtime=<string>	HH:MM:SS	The time of setting
timezone=<int>	Integer	The time zone of setting
ntpserver=<string>	String	The address of snpt

2. 6 The configuration of network service

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<valu

e>&...

Parameter	Values	Description
smtpauth=<int>	0, 1	The enable of smtp to use encryption
smtpuser=<string>	String	The username of smtp sender
smtppwd=<string>	String	The password of smtp sender
smtpsender=<string>	String	The email address of sender
smtpip=<string>	String	The address of smtp server
smtpport=<int>	Integer	The port of smtp server
emailuser=<string>	String	The email address of receiver

ftpip=<string>	String	The address of ftp server
ftpipport=<int>	Integer	The port of ftp server
ftpuser=<string>	String	The username of ftp account
ftppassword=<string>	String	The password of ftp account
ftppath=<string>	String	The path of ftp upload
httpport=<int>	Integer	The port of http server
rtspport=<int>	Integer	The port of rtsp server

2.7 The configuration of user

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...

Parameter	Values	Description
adduser=<string>	String Example: "admin:1234:2"	Add or modify a user
deluser=<string>	String Example: "exampleuer"	Delete a user

2.8 The configuration of image

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...

Parameter	Values	Description
brightness =<int>	0-255	Brightness
contrast=<int>	0-255	Contrast
saturation=<int>	0-255	Saturation
sharpness=<int>	0-255	Sharpness
ircutswitchtime=<int>	2-10	The switch of ircut
awb=<int>	0,1	0: Auto 1: Manual
awbname	Auto;	The mode of white balance

	Manual	
mwb_rgain=<int>	0-255	The gain of red
mwb_ggain=<int>	0-255	The gain of green
mwb_bgain=<int>	0-255	The gain of blue
3dnrstrength=<int>	0-255	The strength of 3d denoise
ble=<int>	0,1	Back light control
backlight=<int>	0,1,2	0: Min 1: Mid 2: Max
backlightname	Min; Mid; Max	The value of back light control
imagesource=<int>	0,1,2	0: Indoor NTSC 1: Indoor PAL 2: Outdoor
imagesourcename	Indoor NTSC IndoorPAL Outdoor	The mode image source
ircutmode=<int>	0;1;2;3	0: LDR Auto; 1: Video Auto; 2: Color 3: B/W
ircutmodename	LDR Auto; Video Auto; Color; B/W	The value of iris
sensorlinearwdr=<int>	0;1;2;3;4;5	0:Shut Down 1:Automatic 2:Weak 3:Moderate 4:Strong 5:Super

sensorlinearwdrname	Shut Down Automatic Weak Moderate Strong Super	WDR level
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2.9 The configuration of motion detection

Format:

`http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...`

You can use `http://<servername>/motion.htm` to get motion information

Parameter	Values	Description
<code>motionenable=<int></code>	0,1	The enable of motion detection
<code>alarmenable=<int></code>	0,1	The enable of alarm
<code>motionsensitivity=<int></code>	1-10	The sensitivity of motion
<code>motionblock=<string></code>	003ffffff0000000000000 00000000000000000000 00000000000000000000 00000000000000000000 00000000000000000000 00000000000000000000 00000000000000000000 (22*18 block)	The configuration of motion area
<code>aftpnable=<int></code>	0,1	The enable of motion ftp
<code>asmtpenable=<int></code>	0,1	The enable of motion smtp
<code>alarmlocalstorage=<int></code>	0,1	The enable of localstorage
<code>exttriggeroutput=<int></code>	0,1	The enable of io output

2. 10 The configuration of private area

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...

Parameter	Values	Description
str1x1=<int>	Integer	The x1 of private 1st area
str1y1=<int>	Integer	The y1 of private 1st area
str1x2=<int>	Integer	The x2 of private 1st area
str1y2=<int>	Integer	The y2 of private 1st area
str2x1=<int>	Integer	The x1 of private 2nd area
str2y1=<int>	Integer	The y1 of private 2nd area
str2x2=<int>	Integer	The x2 of private 2nd area
str2y2=<int>	Integer	The y2 of private 2nd area
str3x1=<int>	Integer	The x1 of private 3rd area
str3y1=<int>	Integer	The y1 of private 3rd area
str3x2=<int>	Integer	The x2 of private 3rd area
str3y2=<int>	Integer	The y2 of private 3rd area

2. 11 The configuration of ddns

Format:

http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...

Parameter	Values	Description
ddnsenable=<int>	0, 1	The enable of ddns
ddnstypename=<string>	oray; 3322.org; tzo; dyndns	The name of ddns type
ddnstype=<int>		The index of ddns type
ddnssite=<string>		The site of ddns
ddnsuser=<string>		The username of ddns
ddnspwd=<string>		The password of ddns

2. 12 The management of device

Format:

<http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...>

Parameter	Values	Description
ipcamrestartcmd=<int>	1	Reboot the device
paradefaultcmd=<int>	1	Restore the device

2. 13 The configuration of alarm

Format:

<http://<servername>/vb.htm?<parameter>=<value>&<parameter>=<value>&...>

Parameter	Values	Description
getalarmstatus=<int>	0(motion) 1(IO)	set alarm status 0:off 1:on

2. 14 The information of sdcard

You can use <http://<servername>/sdcard.htm> to get sdcard information

Parameter	Values	Description
sdformat=<int>	0	Set sdcard format

2. 15 The information of PTZ

Format:

`http://<servername>/ ptz.htm?<parameter>=<value>`

Parameter	Values	Description
ptzcontrol=<int>	9,10,21,22	9:zoom wide 10:zoom tele 21:one key focus 22:init lens