

IP KAM 9070 Series SDK

1. ActiveX guide

ActiveX register name : VideoDeviceControl

Intro of Basic property and method :

1.1 URL and LiveURL (property GET/SET)

Parameters: URL of 9070

Remarks:

Setup 9070 IP address and port , and appointed codec to view video 。

/ipcam/mjpeg.cgi : use motion jpeg

/ipcam/mpeg4.cgi: use mpeg4 720P (1280x720)

/ipcam/mpeg4cif.cgi: use mpeg4 cif (352X192) 。

Example:

Under VC developing environment , if port as 1025:

```
m_vidCtrl.SetUrl("http://192.168.1.168:1025/ipcam/mjpeg.cgi");
```

or :

```
m_vidCtrl.SetLiveURL("http://192.168.1.168:1025/ipcam/mpeg4cif.cgi");
```

1.2 MediaUsername (property GET/SET)

Parameters: username

Remarks:

Appointed username 。

Example:

```
m_vidCtrl.SetMediaUsername("admin");
```

1.3 MediaPassword (property GET/SET)

Parameters: password

Remarks:

Appointed password

Example:

```
m_vidCtrl.SetMediaPassword("12345678");
```

1.4 UIMode (property GET/SET)

Parameters: user interface

Remarks:

Setting screen mode 。

1 is Normal , 2 is Motion detection mode。 You can get list wizard by right click of mouse as under mode 2 。

Example:

```
m_vidCtrl.SetUIMode(2);
```

1.5 Start (Method)

Parameters: void

Return Value: void

Remarks:

Setup URL of 9070, login username and password, use this way to open video

Example:

```
m_vidCtrl.Start();
```

1.6 DeviceAPIEasyGet (Method)

Parameters: apiName, 9070system parameter

Return Value: system setting parameter

Remarks:

Get 9070's system setting parameter. Please refer the 2nd part oo CGI introduce about the setting parameter of 9070.

Example:

```
dnsIP = m_vidCtrl.DeviceAPIEasyGet("getdnsip");
```

1.7 RecordStart (Method)

Parameters: filename, the direction and file name of recording file.

Return Value: void

Remarks:

Record as appointed file name. Now we only support record video as MPEG4 format , not support MJPEG format . If parameter is set as hard disk like "c:", then AcitveX will jump windows of direction for choose.

Example:

```
m_vidCtrl.RecordStart("c:");  
m_vidCtrl.RecordStart("d:\\test.avi");
```

1.8 RecordStop (Method)

Parameters: void

Return Value: void

Remarks:

Stop record

Example:

```
m_vidCtrl.RecordStop();
```

1.9 NotifyStop (Method)

Parameters: void

Return Value: void

Remarks:

Stop view .

Example:

```
m_vidCtrl.Start();  
....
```

```
m_vidCtrl. NotifyStop ();
```

1.10 ForceStop (Method)

Parameters: void

Return Value: void

Remarks:

Force to stop view video .

Example:

```
m_vidCtrl. Start();  
....  
m_vidCtrl. ForceStop ();
```

1.11 GetCurrentImage()

Parameters: void

Return Value: BMP format data

Remarks:

Tale a picture .

VC Example :

```
VARIANT v = m_vidCtrl.GetCurrentImage();  
ofstream f1;  
f1.open("c:\\snapshot.bmp",ios::binary);  
f1.write((char*)v.parray->pvData,v.parray->rgsabound->cElements);  
f1.close();
```

VB example :

```
Dim bytes() As Byte = m_vidCtrl.GetCurrentImage()  
Dim ms As New System.IO.MemoryStream(bytes, 0, bytes.Length)  
Dim pic As Image = Image.FromStream(ms)  
Picture.Image = pic
```

1.12 IsAlive()(property GET)

Parameters : void

Return Value : 0 or 1

Remarks :

To check if the video activity stop . Response as “0 ” means the connection interrupt , Response as “1 ” means normal . As Response as “0 ” , user need to adjust Start(), or the video do nto auto re-connect.

2. HTTP COMMAND (CGI) Intro.

9070 use HTTP BASE64, so user can use SSL (HTTPS) to adjust CGI.

When use CGI in program, user should put username : password encode as BASE64, then add it on the end of CGI line. Add two mark \n\n in the front.

For example : the based64 encode admin:12345678 as YWRtaW46MTIzNDU2Nzg=, then the command as use this http command "ini.htm" is :
GET /ini.htm HTTP/1.1

Authorization: Basic YWRtaW46MTIzNDU2Nzg=

Of course, user can type in /ini.htm on browser, browser will jump out windows to type in username and password and use based 64 encode by it selves.

2.0 Get MPEG4/MJPEG STREAM CGI

/ipcam/mjpeg.cgi?language=ie : get motion jpeg video streaming.

/ipcam/mpeg4.cgi?language=ie : get mpeg4 720P (1280x720) or mpeg4 VGA (640x480) video streaming

/ipcam/mpeg4cif.cgi?language=ie : get mpeg4 cif (352x192) video streaming.

Notice : For firmware Ver. 1.2.1.1 or lower, user can NOT delete language=ie in CGI COMMAND. Other higher version can use with out language=ie

2.1 /ini.htm

Get all message of system setting. Response in format "parameter = value".

For example : date=2008/11/05 time=16:31:20 sntpip=tw.pool.ntp.org
snptptimezone=20 snptfrequency=0 dhcpenable=0

2.1.1 /keyword.htm

Get the name of system parameter and the operate level to log in.

return : sequence number . parameter name and the right

Like VIEWER is as normal user, OPERATOR, ADMIN is administrator

| | |
|--------------------------|--------------------------|
| 1.date VIEWER | 2.time VIEWER |
| 3.sntpip OPERATOR | 4.snptptimezone OPERATOR |
| 5.snptfrequency OPERATOR | 6.dhcpenable OPERATOR |

7.dnsip OPERATOR 8.gateway OPERATOR
 9.httpport OPERATOR 10.netip OPERATOR
 11.netmask OPERATOR

2.1.2 http://192.168.1.168/vb.htm?paratest=date

2.2 /vb.htm?cmd1=value1& cmd2=value2...

Setting system parameter command 。 Please refer 2.3 CGI intro for the name .

Example:

/vb.htm?language=ie&cameratitle=IPCAM9070&quality=0&mpeg4cvalue=4000&videocodecmode=1&videocodecres=1

2.3 /cmdlist.htm

Get all command and right system support 。 You will get message by this CGI:

Series number , command , right

In Right part : if the right is 0 which means need admin`s right , 1 means Operator, 2 means Viewer

For example :

001.dhcp 1 002.internetip 1 003.subnetmask 1 004.dnsip 1 005.gateway 1
 006.httpport 1 007.sntpfdn 1 008.newdate 1 009.newtime 1 010.setdaylight 1
 011.timezone 1 012.timefrequency 1 013.timeformat 1 014.colorkiller 1 015.awb 1
 016.tvcable 1 017.binning 1 018.setblc 1 019.setbacklight 1 020.brightness 1 021.contrast
 1 022.saturation 1 023.sharpness 1 024.quality 1 025.cameratitle 1 026.getvideomode 2
 027.imageformat 1 028.resolution 1 029.mpeg4resolution 1 030.mpeg42resolution 1
 031.schedule 1 032.setsdaenable 1 033.aviduration 1 034.aviformat 1 035.ftpfileformat 1
 036.sdfileformat 1 037.attfileformat 1 038.audioenable 1 039.getaudioenable 2
 040.ratecontrol 1 041.jpegframerate 1 042.mpeg4framerate 1 043.mpeg42framerate 1
 044.videocodecmode 1 045.videocodecres 1 046.setimagesource 1 047.img2a 1
 048.mpeg4cvalue 1 049.mpeg42cvalue 1 050.imagedefault 1 051.asmtppattach 1
 052.rftpenable 1 053.setsdrenable 1 054.lostalarm 1 055.aftpenable 1 056.asmtppenable 1
 057.alarmduration 1 058.motionenable 1 059.motioncenable 1 060.motionlevel 1
 061.motioncvalue 1 062.motionblock 1 063.motionxblock 1 064.motionyblock 1
 065.supportmotion 1 066.delschedule 1 067.paratest 1 068.ipncptz 1 069.ptzpopup 1
 070.getdate 1 071.gettime 1 072.getdhcpenable 1 073.getnetip 1 074.getnetmask 1
 075.getgateway 1 076.getdnsip 1 077.gethttpport 1 078.getsntpip 1 079.ftpfqdn 1
 080.ftpport 1 081.ftpuser 1 082.ftppath 1 083.ftppassword 1 084.sntpfdn 1 085.smtppauth
 1 086.smtppsender 1 087.smtpto 1 088.smtppuser 1 089.smtppwd 1 090.stream1xsize 2
 091.stream1ysize 2 092.stream2xsize 2 093.stream2ysize 2 094.stream3xsize 2
 095.stream3ysize 2 096.adduser 0 097.deluser 0 098.eventstart 1 099.setgioinenable 1
 100.setgioitype 1 101.setgiooutenable 1 102.setgioouttype 1 103.tstampenable 1

104.tstampformat 1 105.audioinvolume 1 106.sdformat 1 107.sdunmount 1 108.language 2 109.ipcamrestartcmd 1 110.getalarmstatus 2

With “get” in the front means (Include motionxblock, motionyblock) read parameter command . The others are setting parameter command .

According to 2.2 intro, user can following command to set up the 9070 device name as MyIPCAM:

GET /vb.htm?cameratitle=MyIPCAM

2.3.1 Setign CODEC mode

Use followign comman dto setup CODEC mode and rate range:

/vb.htm?videocodecmode=1&videocodecres=0

- videocodecmode=0 means MPEG4+MPEG4+JPEG mode
 - videocodecres=0 means rate can be choose from M4:720,M4:CIF,JPG:320x176
(For Firmware V1.2.1.2 or above)

Please refer 1.1 (by following CGI) to adjust the rate :

/ipcam/mjpeg.cgi : use motion jpeg encode

/ipcam/mpeg4.cgi: use mpeg4 720P (1280x720) encode

/ipcam/mpeg4cif.cgi: use mpeg4 cif (352X192 or VGA 640X480) encode.

- videocodecmode=1 means MPEG4+JPEG mode
 - videocodecres=0 means M4:VGA , JPG:VGA
 - videocodecres=1means M4:720 ,JPG:352
(For Firmware V1.2.1.2 or above , JPG resolution is 720P)
- videocodecmode=2 means MPEG4+MPEG4 mode
 - videocodecres=0 means M4:720 , M4:CIF
- videocodecmode=3 means Single MPEG4 mode
 - videocodecres=0 means M4:720 one resolution.
- videocodecmode=4 means Single MJPEG mode
 - videocodecres=0 means JPG:720P one resolution.

2.3.2 Setup Video quality of JPEG

/vb.htm? quality=value

- value = 0 : high quality
- value = 1 : normal quality
- value = 2 : low quality

2.3.3 Setup frane of JPEG

/vb.htm?jpegframerate=value

- value = 0 : 30fps
- value = 1 : 15fps
- value = 2 : 7.5fps
- value = 3 : 3fps
- value = 4 : 1fps

2.3.4 Setup speed of encode

/vb.htm?ratecontrol=value

- value = 0 : CVBR
- value = 1 : CBR

2.3.5 Setup Bit rate of MPEG4

MPEG4_1: /vb.htm?mpeg4cvalue=value

MPEG4_2: /vb.htm?mpeg42cvalue=value

2.3.6 Setup frame rate MPEG4.

MPEG4_1: /vb.htm?mpeg4framerate=value

MPEG4_2: /vb.htm?mpeg42framerate=value

- value = 0 : 30fps
- value = 1 : 15fps
- value = 2 : 7.5fps

2.3.7 Setup Color system

/vb.htm?setimagesource=value

- value = 0 : NTSC/60HZ
- value = 1 : PAL/50HZ

2.3.8 Setup White Balance)

/vb.htm?awb=value

- value = 0 : auto
- value = 1 : indoor
- value = 2 : outdoor

2.3.9 Setup day/night mode

/vb.htm?colorkiller=value

- value = 0 : night
- value = 1 : day

2.3.10 Setup binning /Skipping mode

/vb.htm?binning=value

- value = 0 : binning
- value = 1 : skipping
- value = 2 : 4xbinning

2.3.11 Setup BLC

/vb.htm?setblc=value

- value = 0 : off
- value = 1 : on

2.3.12 Setup BackLight

/vb.htm?setbacklight=value

- value = 0-255

2.3.13 Setup brightness contrast,saturation, sharpness, .

/vb.htm?brightness=128&contrast=128&saturation=128&sharpness=128

Value range is 0~255

2.3.14 Get alarm message

GET /vb.htm?getalarmstatus

System will return a value based on as 16 hex

If alarm(schedule or motion detection) happen :

getalarmstatus=0001

If alarm of motion detection happens :

getalarmstatus=0002

If scheduler recording happens :

getalarmstatus=0004

If record as AVI format :

getalarmstatus=0008

If record as JPEG format :

getalarmstatus=0010

The getalarmstatus value accumulate if all above situation happen same time.

For instance :

If scheduler recording+ record as AVI format happens, it returns as :

OK getalarmstatus=000c

At the same time if MOTION DETECTION happen , it returns as :

OK getalarmstatus=000e

2.4 Take pictures

/ snapshot.cgi

If it is in codec -save in JPEG , (Refer 2.3.1) , then CGI response a pictures of JPEG.

2.5 View webpage through cell phone or PDA

/pda.htm

Notice: command “ pda.htm “ need to work with firmware V1.2.1.0 or above .

