Merit LILIN Ent. Co., Ltd.

HTTP API/SDK Document for LILIN IP Cameras

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Table of Contents

Chapter 1. INTRODUCTION

Chapter 1-1. Overview

This document, HTTPAPI, specifies the HTTP-based application-programming interface (API) for Merit LILIN iMegaPro and iMegaLite. Application developers can use this document to develop applications for Merit LILIN's IP products. The HTTP-based camera interface provides the functionalities, for example, to request video images, to control device outputs (PTZ, output relay etc.), and to get and to set IP devices' information.

Chapter 1.1. Firmware versions

The support for this HTTPAPI document is highly dependent on the product release. Please make sure that the functions, you want, are provided by the release of your product.

Chapter 1.2. Product-specific functionality

Some of the functions described in this specification may not be implemented in every IP-based product, and the set of the Common Gateway Interface (CGI) parameters and actual parameter values may differ among different products. At the end of each API function has product information for developers.

Chapter 1.3. Product Support List

iMegaPro (Full HD IP Camera Series, 2, 3, and 5 MP):

IPR733, IPR434, IPR742, IPR722, IPR320, IPG1022, IPG1032, IPG1052, IPD2122S IPD622, IPD2220, IPR6122, IPD6122, IPD2322

L series (1080P 15FPS or 720P 30FPS):

LR742, LR7022, LB1022, LD2222, LR6122, LD2322, LD2122, LR7224, LR7228, LR7722, LR2322

Video Server

VS212

PTZ

IPS722 (1.3MP indoor), IPS622 (1.3MP outdoor), IPS926(960H 26X indoor), IPS826(960H 26X outdoor), IPS936(960H 36X indoor), IPS836(960H 36X outdoor)

Chapter 2. HOW TO USE THIS MANUAL

This section contains information about general usages of this document.

Chapter 2.1. General notations

Chapter 2.1.1. General abbreviations

CGI : Common Gateway Interface – a standardized way to communicate between a client (e.g., a web browser) and a server (e.g., a web server).

N/A : Not applicable – a feature/parameter/value is not used in a specific task.

Chapter 2.2. Convention of this document

In URL syntax and in descriptions of CGI parameters, text in italic within angle brackets denotes that is to be replaced with either a value or a string. When replacing the text string, the angle brackets shall also be replaced.

Chapter 2.3 HTTP status returned codes

The built-in Web server uses the standard HTTP status codes. The syntax of returned HTTP status is as following format:

HTTP/1.0 <HTTP code> <HTTP text> \r\n

HTTP code and text meanings are described as the followings:

HTTP Code	HTTP Text	Description
200	OK	The request has succeeded.
204	No Content	Server has received the request but there is no information returned, and the client should stay in the same document view. This is mainly to allow inputting scripts without changing the document at the same time.
400	Bad Request	The request had bad syntax or was inherently impossible to be satisfied.
401	Unauthorized	The parameter to this message gives a specification of authorization schemes that are acceptable. The client should retry the request with a suitable Authorization header.
403	Forbidden	The request is for an action that is forbidden.
404	Not Found	The server has not found anything matching the given URL.

Chapter 3. HTTP API

Chapter 3.1. Image and video request URLs

There are two different ways to request images from Merit LILIN's IP Fast Dome, LAN camera, and video server—snapshot (JPEG) and server-push (MJPEG).

Chapter 3.1.1. JPEG image (snapshot)

When a jpeg image is requested, the server either returns the specified JPEG image file or an image with an error image (No Video | Not Permission | Not available).

Syntax:

http://< *serverIP* >/snap<*image size*>

Parameter	Values	Description
<image size>	"cif" "480p" "720p" "1080p"	352 by 240 720 by 480 1280 by 768 2MP cameras (if JPEG 1080P profile gets opened)

Example: Request JPEG image from video input with 480P size.

HTTP/1.0 200 OK\r\n
Content-Type: image/jpeg\r\n
Content-Length: 8567\r\n
\r\n
<*JPEG image data which start with 0xffd8 and end with 0xffd9*>\r\n

Example: Request JPEG image by camera's default resolution.

http://192.168.0.200/snap480p

Return: Requested JPEG image

Note: This 192.168.0.200/snap CGI is across all LILIN IP camera platforms.

HTTP/1.0 200 OK\r\n
Content-Type: image/jpeg\r\n
[Content-Length: <image size>\r\n]
\r\n
<JPEG image data>
\r\n

Example: Request JPEG image by camera's 720P resolution.

http://192.168.0.200/snap720p

Return: Requested JPEG image

Syntax:

http://<*serverIP*>/snap?credentail=<base64>

Example:

http://192.168.0.200/snap?credentail=YWRtaW46cGFzcw==

Parameters:

Parameter	Values	Description
Base64=<string>	<admin>:<pass>	Base64 encoded string for admin:pass
<admin>	String	User name
<pass>	String	Password

Note: LILIN default username and password is admin and pass. Base64 streaming is YWRtaW46cGFzcw== for admin:pass.
D:\Documents\SDK\IPCamSDK D:\Documents\SDK\IPCamSDK

Chapter 3.1.2. MJPEG video (server-push)

When an MJPG video is requested, the server either returns continuous flow of jpeg images or an image with an error image (No Video | Not Permission | Not available) returned. The content type is "multipart/x-mixed-replace" and each image ends with a boundary string <boundary>. The returned image and HTTP data are equal to the request for a single JPEG image.

Syntax:

http://<*serverIP*>/getimage

Example: Request JPEG image stream from the camera, by default D1 resolution.
http://192.168.0.200/getimage
Example: Request JPEG image stream from the camera for 1080P JPEG.
http://192.168.0.200/getimage/getimage?fmt=1080p
Example: Request JPEG image stream from the camera for 720P JPEG.
http://192.168.0.200/getimage/getimage?fmt=720p
Example: Request JPEG image stream from the camera for CIF JPEG.
http://192.168.0.200/getimage/getimage?fmt=sif

HTTP/1.0 200 OK\r\n
Content-Type: multipart/x-mixed-replace;boundary=--<*boundary*>\r\n
\r\n
--<*boundary*>\n
<image>
--<*boundary*>\n
<image>
…
where the <*boundary*> field in Merit LILIN digital device is
<*myboundary*>\n
and the returned <*image*> field is

Content-Type: image/jpeg\n

Content-Length: <*jpeg image size*> Stamp:<YYYYMMDD 00HHmmss TK SSSSSSSS>\n\n
<*jpeg image data*>

where

Stamp: Time stamp, of which format is with “Date”, “Time”, “Tick”, and “Sequence-number”

	Field	Bits	Example
Date:	Year, A.D.	31-16	07d2=2002 AD
	Month (1~12)	15-8	04=Apr
	Day (1~31)	7-0	01=First
Time:	Hour (0~23)	31-16	0011=17 hr
	Minute (0~59)	15-8	36=54 min
	Second (0~59)	7-0	0e=14 sec
Tick:	Ticks(0~99)	7-0	09=90 ms from last sec.
Seq:	Seq (0~2^{32}-1)	31-0	84b=2123 images since server start

Syntax:

http://<*serverIP*>/getimage?fmt=<res>&credentail=<base64>

Example:

http://192.168.0.200/getimage?fmt=480p&credentail=YWRtaW46cGFzcw==

http://192.168.0.200/getimage?credentail=YWRtaW46cGFzcw==

Parameters:

Parameter	Values	Description
Base64=<string>	<admin>:<pass>	Base64 encoded string for admin:pass
<admin>	String	User name
<pass>	String	Password

Note: LILIN default username and password is admin and pass. Base64 streaming is YWRtaW46cGFzcw== for admin:pass.

Chapter 3.1.3. H.264 streaming

See chapter 4 for detail.

Chapter 3.1.3.1. Streaming setting

Get or set H.264 AVC video streaming setting.

Syntax:

Parameters:

Parameter	Values	Description
cmd=<string>	get,set	It is necessary to choose what kind of command. ‘get’=request the motion detection settings. ‘set’=set the motion detection settings.
vbrcbr=<int>	0,1	0=VBR, 1=CBR.
biterate=<int>	56~3072	Biterate setting
gop=<int>	0~2	

outrate=<int>	0~30	Output frame rate
entropy=<int>	0~1	CABLC/CABAC
deinterlace=<int>	0~7	VLC de-interlace setting

Chapter 3.1.4. Audio configuration request

Request audio configuration.

Syntax:

http://<*serverIP*>/getaudio

Example #1: Request the audio configuration

http://192.168.0.200/getaudio

Return 1: Requested audio configurations

audio_enable=1
audio_sample_rate=8
audio_input_volume=50
audio_input_mode=1
audio_input_gain=0
audio_input_filter=1
audio_output_volume=50

Chapter 3.1.4.1. Audio setting

Set H.264 AVC audio setting.

Syntax:

http://<*serverIP*>/setaudio[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
audio_enable=<int>	0,1	0=Off, 1=On
audio_sample_rate =<int>	0,1	0=8000Hz, 1=44.1KHz
audio_input_volume =<int>	1~100	Audio volume
audio_input_gain =<int>	0~3	0: 0dB, 1: +20dB 2: +26dB 3: +32dB
audio_input_filter	0~3	0, 1, 2, 3
audio_output_volume	1~100	Output volume

Chapter 3.1.4.2 Audio streaming

See chapter 4 for detail.

Chapter 3.2. Clock adjustment

Adjust or read the server clock.

Chapter 3.2.1. Clock time request

This function requests time from Merit LILIN IP cameras, video servers, or IP PTZ cameras

Syntax:

http://<*serverIP*>/getclock

Return: requested time

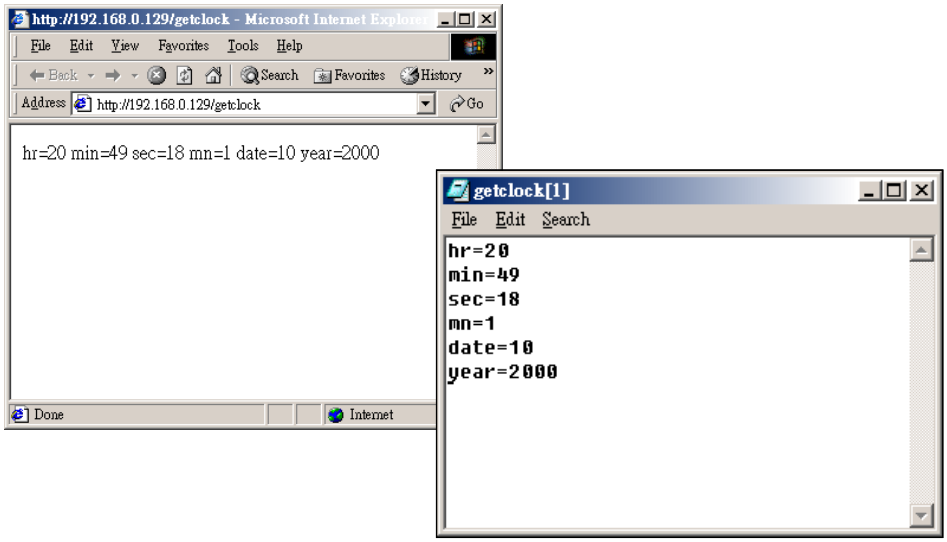
HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: <*content_length*>\r\n
\r\n
hr=<*hour*>\n
min=<*minute*>\n
sec=<*second*>\n
mn=<*month*>\n
date=<*date*>\n
year=<*year*>\n

Example: Request time from the server

http://192.168.0.200/getclock

Return: Requested time from the server

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 42\r\n
\r\n
hr=1\n
min=20\n
sec=38\n
mn=1\n
date=26\n
year=2000\n
You can try the CGI function with the browser.



The source of the HTML page is on the notepad. It's the returned values that you request via the CGI command.

Chapter 3.2.2. Clock time adjust

Syntax:

http://<*serverIP*> /setclock?Time=<*hour*>:<*minute*>:<*second*>&Date=<*year*>/<*month*>/<*date*>

Parameter	Values	Description
<*hour*>	1~ 23	Hour
<*min*>	1~59	Minute
<*sec*>	1~59	Second
<*month*>	1~12	Month
<*date*>	1~30	Date
<*year*>	0000~9999	Year

Example: Request time from the server

http://192.168.0.200/setclock?Time=21:23:22&Date=2012/02/28

Chapter 3.2.3. NTP time adjust

Syntax:

http://<*serverIP*>/apply.cgi?action=datetime_apply&ntpc_interval=<Interval>

Parameter	Values	Description
<*interval*>	0~ 3600	0: close NTP, 3600: Update every 3600 seconds.

Chapter 3.3. Server Device Configuration

Chapter 3.3.1. Server configuration request

Request server's configuration.

Syntax:

http://<*serverIP*>/server

Example #1: Request the server configuration

http://192.168.0.200/server

Return: Requested server configurations

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 244\r\n
\r\n
device name=webcam1\n
MAC address=00-04-29-00-81-e0\n
logoEnable=1\n
Software Version=1.15\n
Model=0\n
TVSYSTEM=1\n
Language=0\n
DhcpEnable=0\n
SysFeature=348992\n
MaxUser=3/7

Parameter	Values	Description
MaxUser	<IntCurrent/IntMax>	IntCurrent= Current user count IntMax=Maximum user allowed

SysFeature is the decimal value (four bytes) representing features for a camera. The features are described as below:

Constant	Hex value	Function	Note
SYS_ALARM_IN	0x01	Alarm in	
SYS_ALARM_OUT	0x02	Alarm out	
SYS_IR_REV	0x04	IR Cut feature	
SYS_IR_REV_EXT	0x08	IR Cut external input	
SYS_TV_OUT	0x10	analogue output	
SYS_EXT_PTZ	0x20	IP PTZ, Type = 1	Optical PTZ
SYS_SD_CARD	0x40	SD card	
SYS_AUTO_FOCUS	0x80	Auto focus camera	
SYS_AUD_IN	0x100	Audio in model	
SYS_AUD_MIC_IN	0x200	MIC input	

SYS_AUD_LINE_IN	0x400	Line in	
SYS_AUD_OUT	0x800	Line out/speaker out	
SYS_ALARM_MOTION	0x1000	Motion detection	
SYS_ALARM_FACE	0x2000	Face detection	
SYS_ALARM_AUDIO	0x4000	Audio detection	
SYS_ALARM_TAMPER	0x8000	Tampering detection	
SYS_ALARM_NET	0x10000	Network lose detection	
SYS_ROI_RPTZ	0x20000	ROI, ePTZ, Type = 2	
SYS_PRI_MASK	0x40000	//Mask feature	
SYS_SENSOR_2710	0x80000	Reserve	
SYS_VARIFOCAL	0x100000	Varifocal camera	
SYS_FISHEYE	0x200000	// Fisheye, Type = 3	
SYS_IRLED	0x400000	//Reserve	
SYS_ALARM_WIRE	0x800000	Cross wire detection	Tentative
SYS_COLOR_LINE	0x1000000	Color and wire detection	Tentative
SYS_PEOPLECOUNT	0x2000000	People counting	Tentative
SYS_TRACKING	0x4000000	Tracking speed dome	Tentative

Example:

SysFeature=348992=0x55340, please use 0x55340 AND above constants to get supported feature.

Chapter 3.4. Network configuration

Chapter 3.4.1. Network configuration setting

Syntax:

http://<*serverIP*>/setnetwork[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
save=<int>	0,1	Save the configurations to EEPROM. 0=no, 1=yes.
IP address=<string>	<characters>	IP address of the server.
subnet mask=<string>	<characters>	Subnet mask for the server domain.
web server IP=<string>	<characters>	Deprecated.
web server name=<string>	<characters>	Deprecated.
dns1=<string>	<characters>	The 1st DNS server.
dns2=<string>	<characters>	The 2nd DNS server
dns3=<string>	<characters>	The 3rd DNS server
gateway=<string>	<characters>	The gateway of the domain.
http_port=<int>	1~65535	The Http connection port number.

Example: Set the server IP address to 192.168.0.129, subnet mask to 255.255.255.0, the 1st DNS server to 192.168.0.1, 2nd DNS server to 0.0.0.0, 3rd DNS server to 0.0.0.0, gateway to 192.168.0.254, and the Http connection port to 3080.

http://192.168.0.200/setnetwork?save=1&IP address=192.168.0.200&subnet

mask=255.255.255.0&dns1=192.168.0.1&dns2=0.0.0.0&dns3=0.0.0.0&gateway=192.168.0.254&http_port=3080

Chapter 3.4.2. Network configuration request

Syntax:

http://<*serverIP*>/network

Example: request the network configuration

http://192.168.0.200/network

Return: Requested network configurations

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 124\r\n
\r\n
IP address=192.168.0.200\n
subnet mask=255.255.255.0\n
gateway= 192.168.0.1
dns1=192.168.0.1\n
dns2=0.0.0.0\n
dns3=0.0.0.0\n
gateway=192.168.0.254\n
http_port=3080\n

Chapter 3.5. User configuration

Chapter 3.5.1. User configuration setting

Syntax:

http://<*serverIP*>/setusers[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
tag=<int>	1,2,3,4	Command type: 1=add, 2=modify, 3=delete, 4=who am I.
name=<string>	<characters>	User name
password=<string>	<characters>	Password
priority=<int>	0,..,100	Deprecated
admin checked=<int>	<characters>	Administration permission 0=disable, 1=enable
see image=<int>	0,1	Deprecated
see video=<int>	0,1	Deprecated
change param=<int>	0,1	Permission to change the Image type (Full, SIF, or QSIF)

		0=disable, 1=enable
see source1=<int>	0,1	Permission to see video source 1 0=disable, 1=enable
see source2=<int>	0,1	Permission to see Video source 2 0=disable, 1=enable
see source3=<int>	0,1	Permission to see Video source 3 0=disable, 1=enable
see source4=<int>	0,1	Permission to see Video source 4 0=disable, 1=enable
see source_all=<int>	0,1	Permission to see the 4-split Video 0=disable, 1=enable

Example: Add a user with name=admin and password=admin. Set this user with administration permission, change image type permission, see video 1 to 4, and see 4-split video permission.

http://192.168.0.200/setusers?tag=1&name=admin&password=admin&admin checked=1&change param=1&see source1=1&see source2=1&see source3=1&see source4=1&see source_all=1

Chapter 3.5.2. User configuration request

Syntax:

http://<*serverIP*>/users

Example: Request the user configuration

http://192.168.0.200/users

Return: Requested user configurations

```
HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 326\r\n
\r\n
amount=2\n
name=admin\n
password=admin\n
priority=0\n
admin checked=1\n
see image=0\n
see video=0\n
change param=1\n
see source1=1\n
see source2=1\n
see source3=1\n
see source4=1\n
```

see source_all=1\n
name=guest\n
password=guest\n
priority=0\n
admin checked=0\n
see image=0\n
see video=0\n
change param=1\n
see source1=1\n
see source2=1\n
see source3=1\n
see source4=1\n
see source_all=1\n

Chapter 3.6. Video configuration

Chapter 3.6.1. Change video profile

Change video profile.

Syntax:

http://<*serverIP*>/setstreaming?changeprofile=<*value*>

Where: <value> = 1~4

Example: Change profile to #2 streaming profile.

http://192.168.0.200/setstreaming?changeprofile=2

Return: Requested countdown script.

```
<html>
<head>
<link href="template.css" rel="stylesheet" type="text/css"></head><body onload="clock(); return
true;" class=body>
<script language=javascript>.var i = 90;
function clock()
{
        i=i-1; document.formnow.dd.value = i;
        if(i>0) setTimeout("clock();",1000);
      else window.location.replace("/");
}</script><center>
<br><br>
<form name=formnow>
<font color=#000000>
Update OK Waiting For System Reboot
 <input type=text name=dd size=2> sec
</form>
</body>
</html>
```

Note: Change profile needs 90 seconds reboot time. Change frame rate and bitrate that do not need reboot.

Chapter 3.6.2. Change video profile for 120FPS camera

Example: Change output frame rate

http://192.168.0.200/setstreaming?profilename=H2641080P&outrate=120

Parameters:

Parameter	Values	Description
outrate=<int>	1~120	Output frame rate

Chapter 3.7. Get and set video configuration

Chapter 3.7.1. Get video configuration

Get H.264 AVC video compression configuration.

Syntax:

http://<*serverIP*>/getstreaming

Example: Request H.264 AVC video compression configuration

http://192.168.0.200/getstreaming

Return: Requested video configurations

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 308\r\n
\r\n
outrate=30 profilename=H2641080P profile_00_quality=20
outrate=5 profilename=JPEG480P profile_01_quality=60
outrate=15 profilename=H264480P profile_02_quality=20
outrate=5 profilename=JPEGCIF profile_03_quality=70
\r\n

Chapter 3.7.2. Set video configuration

Set H.264 AVC video configuration.

Syntax:

http://<*serverIP*>/setstreaming[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
profilename=<string>	<characters>	Streaming profile (H.264 HD IP camera) (H.264 2,3MP IP camera)
vbrcbr =<int>	0/1	0:CBR,1:VBR
bitrate =<int>	128~5120 Kbps	Bit rate of connection (H.264 2,3MP IP camera)
iframeperiod=<int>	1~30	I frame period (H.264 2,3MP IP camera)

outrate =<int>	1~30	Parameter of frame rate. (H.264 2,3MP IP camera)
quality=<int>	20~80	20:Low~80:High (H.264 2,3MP IP camera)

Example: Set profile H2641080P for CBR at 2MBps bitrate and 20 FPS.

http://192.168.0.200/setstreaming?profilename=H2641080P&vbrcbr=1&bitrate=2048&outrate=20
http://192.168.0.200/setstreaming?profilename=JPEGCIF&vbrcbr=0&outrate=6&bitrate=3072&quality=30

http://192.168.0.200/setstreaming?profilename=H264480P&vbrcbr=0&bitrate=512&iframeperiod=30&outrate=30

Note: For HD IP camera, reboot is required for changing frame rate, bitrate, and resolution of H.264 streaming, Reboot is required for changing quality and frame rate of JPEG streaming.,

Chapter 3.7.3. Get video streaming limitation

Get available streaming profiles, video streaming settings, and streaming limitations.

Syntax:

http://<*serverIP*>/getprofile

Example: Get current available streaming profiles' limitations

```
HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 308\r\n
\r\n

profileno=0 profileno_range=0,1,2,3
profile_00_name=H2641080P profile_00_type=0 profile_00_mode=0 profile_00_gop=30
profile_00_bps=3072 profile_00_res=1920x1080 profile_00_fps=30 profile_00_mode_range=0~1
profile_00_gop_range=1~30 profile_00_fps_range=1~30
profile_00_bps_range=1024,2048,3072,4096,5120,6144,7168,8192,9216,10240

profile_01_name=JPEG480P    profile_01_type=1 profile_01_quality=60 profile_01_res=720x480
profile_01_fps=5 profile_01_fps_range=1~30 profile_01_quality_range=20,30,40,50,60,70,80

profile_02_name=H264480P    profile_02_type=0 profile_02_mode=0 profile_02_gop=15
profile_02_bps=1024 profile_02_res=720x480 profile_02_fps=15 profile_02_mode_range=0~1
profile_02_fps_range=1~30 profile_02_gop_range=1~30
profile_02_bps_range=128,256,512,1024,2048,3072

profile_03_name=JPEGCIF     profile_03_type=1 profile_03_quality=70 profile_03_res=352x240
profile_03_fps=5 profile_03_fps_range=1~30 profile_03_quality_range=20,30,40,50,60,70,80
\r\n
```

Parameters:

Where:
<num> is 0~3 for streaming ID.

Parameter	Values	Description
profileno	0~4	The current profile ID
profileno_range		Profiles available
profile_<num>_name	String	The name of the profile
profile_<num>_type	0~1	0: H.264, 1: JPEG
profile_<num>_mode		0: CBR, 1: VBR
profile_<num>_gop		Current GOP setting
profile_<num>_bps	See mode range.	Current bitrate setting
profile_<num>_res		Current resolution setting
profile_<num>_fps		Current FPS setting
profile_<num>_mode_range	0~1	The range of 0: CBR, 1: VBR
profile_<num>_gop_range		The range of GOP
profile_<num>_fps_range		The range of FPS
profile_<num>_bps_range		The range of bitrate
profile_<num>_quality		Current JPEG quality setting (JPEG stream only)
profile_<num>_quality_rang		JPEG quality range (JPEG stream only)

Chapter 3.7.4. Get URL

Get available RTSP uniform resource identifiers (URLs) information for a streaming profile.

Syntax:

http://<*serverIP*>/geturl

Return: Available RTSP string

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 244\r\n
\r\n
rtsp://192.168.0.200/rtsph2641080p
rtsp://192.168.0.200/rtsph264480p
rtsp://192.168.0.200/rtspjpeg480p
rtsp://192.168.0.200/rtspjpegcif

Chapter 3.7.5. Set video Flip

Set video Filp.

Syntax:

http://<*serverIP*>/flip

Chapter 3.7.6. Set video Mirror

Set video Mirror.

Syntax:

http://<*serverIP*>/mirror

Chapter 3.7.7. Set user OSD

Set user defined OSD on video

Syntax:

http://<*serverIP*>/setosd?myosd=<userdefinedosd>

Where:

The length of OSD can not exceed 40 characters and only 1080P video has the user defined OSD.

Syntax:

http://<*serverIP*>/setosd?myosd=<userdefinedosd>&pos=<myPOS>

Parameters:

Parameter	Values	Description
userdefinedosd	String	
myPOS	String	topleft, topright, bottomleft, bottomright

Chapter 3.7.8. Set privacy mask

Set user defined privacy mask

Syntax:

http://<*serverIP*>/privacymask[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
cmd=<string>	set	'set'=set the privacy mask settings.
pmID=<int>	1~4	Privacy mask ID, there are total four masks.
privacy_enable =<int>	0,1	Privacy mask feature enable or disable 0=disable, 1=enable.
pmBlock=<int>	0v~239v	Array of blocks for privacy mask

Privacy mask array:

0v	1v	2v	3v	4v	5v	6v	7v	8v	9v	10v	11v	12v	13v	14v	15v	16v	17v	18v	19v
20v	21v	22v	23v	24v	25v	26v	27v	28v	29v	30v	31v	32v	33v	34v	35v	36v	37v	38v	39v
40v	41v	42v	43v	44v	45v	46v	47v	48v	49v	50v	51v	52v	53v	54v	55v	56v	57v	58v	59v
60v	61v	62v	63v	64v	65v	66v	67v	68v	69v	70v	71v	72v	73v	74v	75v	76v	77v	78v	79v
80v	81v	82v	83v	84v	85v	86v	87v	88v	89v	90v	91v	92v	93v	94v	95v	96v	97v	98v	99v
100v	101v	102v	103v	104v	105v	106v	107v	108v	109v	110v	111v	112v	113v	114v	115v	116v	117v	118v	119v
120v	121v	122v	123v	124v	125v	126v	127v	128v	129v	130v	131v	132v	133v	134v	135v	136v	137v	138v	139v
140v	141v	142v	143v	144v	145v	146v	147v	148v	149v	150v	151v	152v	153v	154v	155v	156v	157v	158v	159v
160v	161v	162v	163v	164v	165v	166v	167v	168v	169v	170v	171v	172v	173v	174v	175v	176v	177v	178v	179v
180v	181v	182v	183v	184v	185v	186v	187v	188v	189v	190v	191v	192v	193v	194v	195v	196v	197v	198v	199v

200v	201v	202v	203v	204v	205v	206v	207v	208v	209v	210v	211v	212v	213v	214v	215v	216v	217v	218v	219v
220v	221v	222v	223v	224v	225v	226v	227v	228v	229v	230v	231v	232v	233v	234v	235v	236v	237v	238v	239v

Example: Set the privacy mask block of ID1.

http://192.168.0.200/privacymask?cmd=set&privacy_enable=1&pmID=1&pmBlock=0v1v20v21v

Chapter 3.7.9. Clear privacy mask

Clear privacy mask.

Syntax:

http://<serverIP>/privacymask?cmd=set&pmClear<PrivacyMask>

Example: Clear all privacy masks.

http://192.168.0.200/privacymask?cmd=set&pmClear=0

Example: Clear privacy mask #2.

http://192.168.0.200/privacymask?cmd=set&pmClear=2

Chapter 3.8. PTZ configuration

Chapter 3.8.1. PTZ commands

Send the PTZ command.

Syntax:

http://*<serverIP>*/control[?*<parameter>*=*<value>*[&*<parameter>*=*<value>*…]]

Parameters:

Parameter	Values	Description
camid=<int>	1~4	Camera channel for pan, tilt, or zoom
panpos=<int>	0~19199	Parameter of pan control to a absolute position (IPS0/1)
	0~12799	Parameter of pan control to a absolute position (IPS4/5/6/7 Series)
	0~15999	Parameter of pan control to a absolute position (IPS2/3/8/9 Series)
tiltpos=<int>	1120~6560	Parameter of tilt control to a absolute position (IPS0/1 series)
	467 ~2734	Parameter of tilt control to a absolute position (IPS4/5/6/7 Series)
	0~3999	Parameter of tilt control to a absolute position (IPS2/3/8/9 Series)
zoompos=<int>	25~1197	Parameter of zoom control to a absolute position
	64~2465	Parameter of zoom control to a absolute position (IPS025/125)
	64~2520	Parameter of zoom control to a absolute position (IPS030/130)
	64~2548	Parameter of zoom control to a absolute position (IPS035/135)
	0~782	Parameter of zoom control to a absolute position (IPS203/303)
	64~1334	Parameter of zoom control to a absolute position (IPS212/312)
	0~19184	Parameter of zoom control to a absolute position (IPS836/936)
	0~34320	Parameter of zoom control to a absolute position

		(IPS826/926))
	0~2333~6029	Parameter of zoom control to a absolute position (IPS622/722)
	0~16384~31424	Parameter of zoom control to a absolute position (IPS420/520)
	0~10080	Parameter of zoom control to a absolute position (IPS418/518)
rpan=<int>	-7~7	Pan relatively (positive value means pan right)
rtilt=<int>	-7~7	Tilt relatively (positive value means tilt up)
rzoom=<int>	-7~7	Zoom relatively (positive value means zoom out)
rotate=1	1	Rotate 180
stop	1	Stop relative Pan
panposdegree=<int>	0~359	Pan degree
tiltposdegree=<int>	-6~96	Tilt degree
zoomposdegree=<int>	1~36	Zoom degree
cmd=getpanpos		Get pan position
cmd=gettiltpos		Get tilt position
cmd=getzoompos		Get zoom position
cmd=getallpos		Get all position
cmd=getpanposdegree		Get pan degree
cmd=gettiltposdegree		Get tilt degree
cmd=getzoomposdegree		Get zoom degree
cmd=getallposdegree		Get pan degree,tilt degree and zoom degree
type	1~4	3: fish eye, 4: auto focus model

Example: Set the camera 1 to pan right with speed 7 without stop.

http://192.168.0.200/control?camid=1&rpan=7

Example: Set the camera 1 to stop.

http://192.168.0.200/control?stop=1

Example: Set the camera 1 to pan right with speed 7 and stop.

http://192.168.0.200/control?camid=1&rpan=7&stop=1

Example: Set the camera 1 to pan to position 33.

http://192.168.0.200/control?camid=1&panpos=1911

Example: Set camera 1 to zoom out relatively.

http://192.168.0.227/control?rzoom=-3

Example: Set camera 1 to zoom out a bit and then stop zooming immediately.

http://192.168.0.227/control?rzoom=3&stop=1

Example: Set camera 1 to pan 180 degree, tilt 45 degree, zoom 10.

http://192.168.0.227/control?panposdegree=180&tiltposdegree=45&zoomposdegree=10

Example: Get camera 1 pan, tilt and zoom degree.

http://192.168.0.227/control?cmd=getallposdegree

Chapter 3.8.2. PTZ preset setting

Set the PTZ preset points command.

Syntax:

http://<*serverIP*>/ptzpreset[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
camid=<int>	1~4	Camera number for preset settings
goto_preset=<int>	0,..,19	Goto a preset position according to the preset number.
set_preset=<int>	0,..,19	Assign a preset number to a preset position.
autopan	0/1	0: stop auto pan/1: start auto pan

Example: Set camera ID #1 to go to preset point #3.

http://192.168.0.200/ptzpreset?camid=1&goto_preset=3

Example: Set the camera ID #1 to remember the PTZ position to preset point #11.

http://192.168.0.200/ptzpreset?camid=1&set_preset=11

Example: Remove a preset name according the preset point 5.

http://192.168.0.200/ptzpreset?camid=1&rem_preset=5

Chapter 3.8.3. PTZ lens setting

Send the PTZ iris/focus command.

Syntax:

http://<*serverIP*>/camera[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
iris=<int>	1,-1	Iris relatively (positive value means Iris large)
autoiris=<int>	1	Set auto iris.
focus=<int>	1,-1	Focus relatively (positive value means Focus far)
autofocus=<int>	1	Set auto focus.

Note: IPS4, IPS5, IPS8, and IPS9 do support manual iris for iris+ and iris-.

Example: Set camera 1 to iris large

http://192.168.0.200/camera?iris=1

http://192.168.0.200/control?stop=1

Example: Set camera 1 to focus near.

http://192.168.0.200/camera?focus=-1

http://192.168.0.200/control?stop=1

Example: Set camera 1 to auto iris.

http://192.168.0.200/camera?autoiris=1

Chapter 3.8.4. Auto focus adjustment

For auto focus camera, please use the following CGI commands:

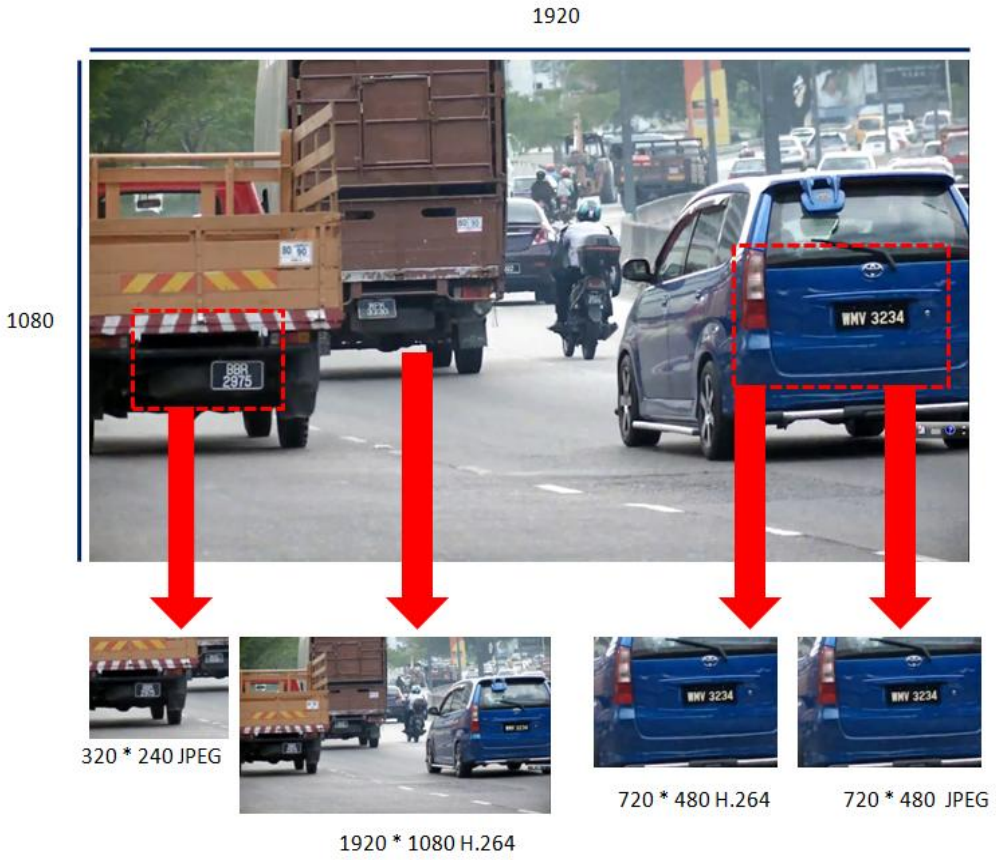
Zoom in:	http://192.168.0.200/control?zoom=-1&type=4
Zoom out:	http://192.168.0.200/control?zoom=1&type=4
Auto focus:	http://192.168.0.200/camera?autofocus=1&type=4
Focus near:	http://192.168.0.200/camera?focus=-1&type=4
Focus far:	http://192.168.0.200/camera?focus=1&type=4

Chapter 3.8.5. ROI adjustment

Set region of interest cropping window. Please make sure that the ROI feature is enabled. For ROI mode, streaming #1 is used for main streaming. The rest of streaming 2, 3, and 4 can be cropped based on streaming #1

Syntax:

http://<*serverIP*>/control[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>



Parameters: Parameter	Values	Description
streamno=<int>	2, 3, 4	Streaming #2, #3, and #4
dptzdirect =<int>	1	Enable direct positioning digital PTZ based on X and Y coordinates.
dptzx =<int>	0~319/0~719	Cropping start X position of the streaming resolution
dptzy =<int>	0~239/0~479	Cropping start Y position of the streaming resolution
Dptzw =<int>	0~319/0~719	Cropping width of the streaming resolution
Dptzh = <int>	0~239/0~479	Cropping height of the streaming resolution

Example: Crop the video on streaming #2 at D1 (720 * 480) resolution starting at 6 pixel of the x direction with width 703 pixel and starting at 4 pixel of the y direction with 467 height.

http://<serverIP>/control?streamno=2&dptzdirect=1&dptzx=6&dptzy=4&dptzw=703&dptzh=467

Example: Disable ROI feature on streaming #2 and return to home position.

http://<serverIP>/control?home=1&streamno=2

Chapter 3.9. System Functions

Chapter 3.9.1. Reboot server

Reboot the server.

Syntax:

http://<*serverIP*>/control?reboot=1

Example: Request the server to reboot.

http://192.168.0.200/reboot

Chapter 3.9.2. Get reboot time

Get the time of last reboot.

Syntax:

http://<*serverIP*>/control?getreboot

Example: Request the time of reboot.

http://192.168.0.200/control?getreboot

Return: 2014/01/02 20:21:32

Chapter 3.9.3. Factory default

Restore configurations to factory default.

Syntax:

http://<*serverIP*>/factorydefault

Example: Request the server to load factory default.

http://192.168.0.200/factorydefault

Chapter 3.10. Video quality adjustment

Syntax:

http://<*serverIP*>/quality[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
cmd=<string>	set,get	It is necessary to choose what kind of command: 'set'=set the video quality settings. 'get'=get the video quality settings.
DayNight=<int>	0,1	Set/get day quality is 0 Set/get night quality is 1
EV=<int>	1~16	Exposure Value
WDR=<int>	0,1	0=Off, 1=On
BLC=<int>	0,1	Back-light Compensation 0=off, 1=On

ShutterLimitmin=<int>	30~8000	Shutter Limit(sec): Min 30=1/30, 50=1/50, 60=1/60, 100=1/100, 120=1/120, 160=1/160, 200=1/200, 240=1/240, 320=1/320, 400=1/400, 480=1/480, 640=1/640, 800=1/800, 1000=1/1000, 1600=1/1600, 2000=1/2000, 3000=1/3000, 4000=1/4000, 6000=1/6000, 8000=1/8000
ShutterLimitmax=<int>	30~8000	Shutter Limit(sec): Max 30=1/30, 50=1/50, 60=1/60, 100=1/100, 120=1/120, 160=1/160, 200=1/200, 240=1/240, 320=1/320, 400=1/400, 480=1/480, 640=1/640, 800=1/800, 1000=1/1000, 1600=1/1600, 2000=1/2000, 3000=1/3000, 4000=1/4000, 6000=1/6000, 8000=1/8000
AGC=<int>	1~6	Auto Gain Control 1=2x(6dB), 2=4x(12dB), 3=8x(18dB), 4=16x(24dB), 5=32x(30dB), 6=64x(36dB)
NoiseReduction=<int>	0~32	3D Noise Reduction
SenseUp=<int>	0~4	Sense Up 0=Off, 1=1 frame, 2=2 frames, 3=3 frames,4=7 frames
AWB=<int>	0~6	White Balance Control 0=Auto, 1=Tungsten, 2=Fixed Indoor, 3=Fixed Fluorescents 1, 4=Fixed Fluorescents 2, 5=Fixed Outdoor1, 6=Fixed Outdoor2
MIRROR=<int>	0,1	Mirror 0=Off, 1=On
FLIP=<int>	0,1	Flip 0=Off, 1=On

Example: Set the video quality .

http://192.168.0.200/quality?cmd=set&DayNight=0&EV=7&WDR=1&BLC=0&ShutterLimitmin=8000&ShutterLimitmax=30&AGC=2&NoiseReduction=2&SenseUp=0&AWB=0&MIRROR=0&FLIP=0

Example: Request the video quality.

http://192.168.0.200/quality?cmd=get&DayNight=0

Return: Requested video quality settings

HTTP/1.0 200 OKDate: Wed, 08 Feb 2012 06:43:22 GMTConnection: closeContent-Type: text/htmlContent-Length: 112
EV=7
WDR=1
BLC=0
ShutterLimitmin=8000
ShutterLimitmax=30
AGC=2
NoiseReduction=2
SenseUp=0
AWB=0
MIRROR=0
FLIP=0

Chapter 3.10.1. Video quality adjustment

Syntax:

http://<*serverIP*>/camctrl[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
cmd=<string>	set,get	It is necessary to choose what kind of command: 'set'=set the video quality settings. 'get'=get the video quality settings. 'camstat'=return the format of the connected video. (0=No Video, 1=NTSC, 2=SECAM, 3=PAL)
contrast=<int>	-50~50	Contrast level adjustment
bright=<int>	-50~50	Brightness level adjustment
hue=<int>	-50~50	Hue level adjustment
Saturation=<int>	-50~50	Saturation level adjustment
Sharpness=<int>	0~31	Sharpness level adjustment
camstat=<int>	1,3	TV Out(1=NTSC, 3=PAL)

Example: Set the video quality of video.

http://192.168.0.200/camctrl?cmd=set&contrast=0&bright=0&hue=0&Saturation=0&Sharpness=0&camstat=3

Example: Get the video quality of video.

http://192.168.0.200/camctrl?cmd=get

Return: Requested video quality settings

```
HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 114\r\n
\r\n
bright=0\n
contrast=0\n
hue=0\n
Saturation=0\n
Sharpness=0\n
camstat=3\n
```

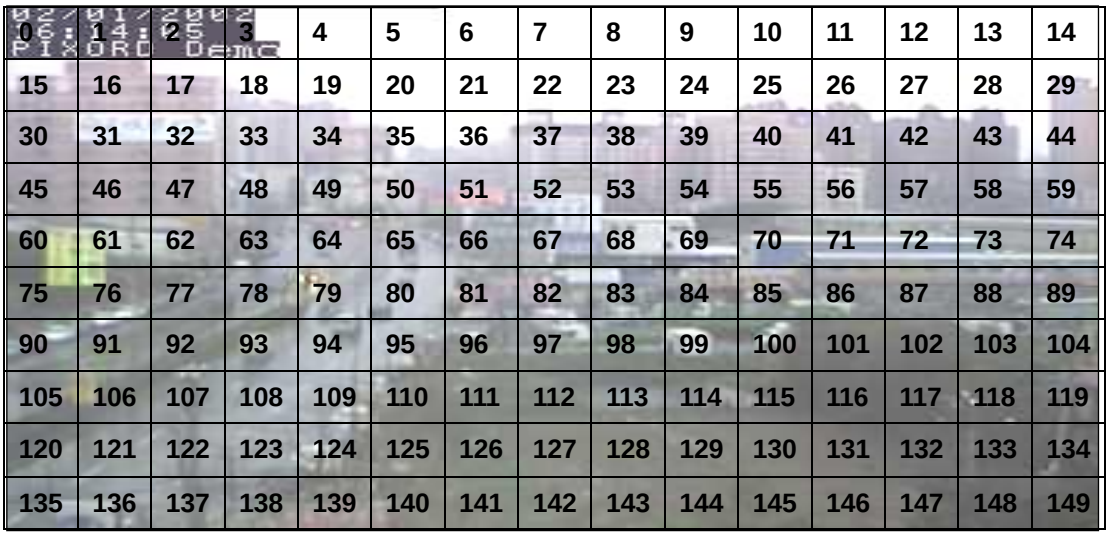
Chapter 3.11. Motion detection configuration

Syntax:

http://<*serverIP*>/motion[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
cmd=<string>	get,set	It is necessary to choose what kind of command. 'get'=request the motion detection settings. 'set'=set the motion detection settings.
mdEv=<int>	0,1	Motion detection feature enable or disable 0=disable, 1=enable.
mdSen=<int>	1~30	Motion detection sensitivity, larger value means less sensitive. Default value is 5.
mdFreq=<int>	1~100	Polling Frequency in 1/10 second. Default value is 5.
mdX0=<int>	0~10	Left most coordinates of grid number
mdX1=<int>	0~10	Right most coordinates of grid number
mdY0=<int>	0~6	Top coordinates of grid Number
mdY1=<int>	0~6	Bottom coordinates of grid number
MdBlock=<int>[,<int>,..]	0,..,76	Series of blocks for detect motion if using GRID method.



0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
105	106	107	108	109	110	111	112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127	128	129	130	131	132	133	134
135	136	137	138	139	140	141	142	143	144	145	146	147	148	149

Parameter	Values	Description
cmd=<string>	get,set	It is necessary to choose what kind of command. 'get'=request the motion detection settings. 'set'=set the motion detection settings.
mdEv=<int>	0,1	Motion detection feature enable or disable 0=disable, 1=enable.
mdSen=<int>	1~99	Motion detection sensitivity, larger value means less sensitive. Default value is 30.
mdX0=<int>	0~14 0~19	Left most coordinates of grid number (H.264 D1 IP camera) Left most coordinates of grid number (H.264 HD IP camera)
mdX1=<int>	0~14 0~19	Right most coordinates of grid number (H.264 D1 IP camera) Right most coordinates of grid number (H.264 HD IP camera)
mdY0=<int>	0~9 0~11	Top coordinates of grid Number (H.264 D1 IP camera) Top coordinates of grid Number (H.264 HD IP camera)
mdY1=<int>	0~9 0~11	Bottom coordinates of grid number (H.264 D1 IP camera) Bottom coordinates of grid number (H.264 HD IP camera)
MdBlock=<int>[,<int>,..]	0v,…149v 0v,…239v	Series of blocks for detect motion if using GRID method. (H.264 D1 IP camera) Series of blocks for detect motion if using GRID method. (H.264 HD IP camera)

Example: Request the motion detection configuration.

http://192.168.0.200/motion?cmd=get&camid=1

Return: Requested motion detection configuration

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 48\r\n
\r\n
mdEv=1\n
mdSen=5\n
mdFreq=5\n
mdBlock=1:12:13\n

Chapter 3.12. GPIO functions

Chapter 3.12.1. Set relay output.

Enable the relay output of the IP camera.

Syntax:

http://<*serverIP*>/setio[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
relay1=<int>	0/1	0=low, 1=high
Input=<int>	0/1	0=normal close, 1=normal open

Example: Set GPIO relay configuration.

http://192.168.0.200/setio?relay1=1

Chapter 3.13. Alarm or motion notification via email or FTP

Chapter 3.13.1. Email notification

Get email notification configuration.

Syntax:

http://<*serverIP*>/setnotification[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Example

http://192.168.0.200/setnotification?rcvaddress=receiver@mail.com&sndaddress=sender@mail.com&smtpserver=mail.com

Parameters:

SMTP setting version #1

Parameter	Values	Description
rcvaddress=<string>	characters	Email recipient

sndaddress=<string>	characters	Sender email address
smtpserver=<string>	characters	SMTP server
Authentication=<int>	0/1	0: disable 1: enable
authaccount=<string>	characters	SMTP server's account name
authpassword=<string>	characters	SMTP server's password

SMTP setting version #2

Parameter	Values	Description
rcvaddress=<string>	characters	Email recipient
mail_auto_en=<int>	0/1	0: disable 1: enable auto e-mail sent
email_timer=<int>	60~3600	Auto e-mail sent dwell time(sec.)
am_email_flag=<int>	0/1	0: disable 1: enable event detection e-mail sent
mail_alarmin_en=<int>	0/1	0: disable 1: enable alarm input detection sent mail
mail_motion_en=<int>	0/1	0: disable 1: enable motion detection sent mail
mail_face_en=<int>	0/1	0: disable 1: enable face detection sent mail
mail_audio_en=<int>	0/1	0: disable 1: enable audio detection sent mail
mail_tamper_en=<int>	0/1	0: disable 1: enable tamper detection sent mail
am_email_sec=<int>	5~300	Event detection e-mail sent dwell time(sec.)
sndaddress=<string>	characters	Sender email address
smtpserver=<string>	characters	SMTP server
smtp_auth_mode=<int>	0/1	0: Auth Login 1: Auth SSL
smtp_email_port=<int>	25~65535	SMTP server port
Authentication=<int>	0/1	0: disable 1: enable Athentication
authaccount=<string>	characters	SMTP server's account name
authpassword=<string>	characters	SMTP server's password

Chapter 3.13.2. FTP notification

Get or set FTP notification configuration.

http://<*serverIP*>/setnotification[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Example

http://192.168.0.200/getnoification

Parameters:

Parameter	Values	Description
FTP	get,set	Get/set

ftpaddress	string	FTP address
ftpaccount	string	FTP account
ftppass	string	FTP password
ftppath	string	FTP path

Chapter 3.13.3. Alarm and motion status

Get alarm and motion status

http://<serverIP>/getalarmmotion

Example:

http://192.168.0.200/getalarmmotion

Return: alarm and motion detect status

--myboundary\r\n
Content-Type: text/plain\r\n
CamTime:2011-07-28 11:11:01\r\n
MotionDetect=0\r\n
AlarmInputDetect=0\r\n
AudioDetect=0\r\n
TemperDetect=0
FaceDetectNumber=0\r\n
--myboundary\r\n

Content-Type: text/plain\r\n
CamTime:2011-07-28 11:11:02\r\n
MotionDetect=0\r\n
AlarmInputDetect=0\r\n
AudioDetect=0\r\n
TemperDetect=0\r\n
FaceDetectNumber=0\r\n
--myboundary\r\n

Chapter 3.13.4. Post alarm and motion status

LILIN IP can send HTTP Post protocol to a VMS server or a controller for alarm notification.

Syntax:

http://<*serverIP*>/sethttppost[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Example:

http://192.168.0.200/sethttppost?destip=192.168.1.212&destport=23352&url=%2Falarmnotification?&SysFeature=0x2000000&httppost_en=1&httppostjpeg_en=1&alarm_en=1&motion_en=1&face_en=1&audio_en=1&tamper_en=1&account=admin&password=pass&dwell=5

Parameters:

Parameter	Values	Description
destip	IP address string	Destination's IP address of the receiver
destport	Port number string	Destination's port number of the receiver
url	String	The event URL for the receiver %2F is the "/" or slash in the URL.
SysFeature	String	See Chapter 3.3.1. Server configuration request Only the following SysFeature is supported. SYS_ALARM_IN=0x01 SYS_ALARM_TAMPER=0x8000 SYS_ALARM_AUDIO=0x4000 SYS_ALARM_FACE=0x2000 SYS_ALARM_MOTION=0x1000 SYS_ALARM_WIRE=0x800000 SYS_COLOR_LINE=0x1000000 SYS_PEOPLECOUNT=0x2000000
httppost_en	0/1	0:disable,1:enable http post
httppostjpeg_en	0/1	0:disable,1:enable http post jpeg attachment
alarm_en	0/1	0:disable,1:enable http post alarm in detection
motion_en	0/1	0:disable,1:enable http post motion detection
face_en	0/1	0:disable,1:enable http post face detection
audio_en	0/1	0:disable,1:enable http post audio detection
tamper_en	0/1	0:disable,1:enable http post tamper detection
account	String	Destination's account of the receiver
password	String	Destination's password of the receiver
dwell	1~5	http post dwell time (sec.)

Chapter 3.13.5. Trigger email and FTP notification with snapshot

To trigger a snapshot via email and FTP, you can

Syntax:

http://<*serverIP*>/trigger [?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Example: Trigger snapshot via FTP and email.

http://192.168.0.200/trigger?sendftp=1

http://192.168.0.200/trigger?sendmail=1

http://192.168.0.200/trigger?subject=user define subject

http://192.168.0.200/trigger?content=user define message

Parameters:

Parameter	Values	Description
sendftp	1	Send ftp snapshot via predefined FTP server.
sendmail	1	Send email snapshot via predefined email server.
User define subject	Text	
User define message	Test	

Chapter 3.13.6. Check Digital Input Status

Example:

http://192.168.0.200/io?input=check

Parameters:

Parameter	Values	Description
Input1	1	0 = N/O 1= N/C

Chapter 3.13.7. Check Relay Output Status

Example:

http://192.168.0.200/io?relay=check

Parameters:

Parameter	Values	Description
Relay		0 = No output 1= Enable output

Chapter 3.14. DDNS CGI

When Merit LILIN digital device enables the DDNS service, it “registers” to Merit LILIN DDNS server with its information, such as server name to access, router virtual port number, and updated frequency, etc. Merit LILIN digital device automatically “updates” to DDNS server by a fix frequency, so even IP of the digital device is changed by ISP, the DDNS server could still get and update internal database.

Chapter 3.14.1. Get DDNS configurations

Get DDNS configuration from digital device.

Syntax:

http://<*serverIP*>/ddns?cmd=get

Example #1: Query DDNS configurations.

http://192.168.0.200/ddns?cmd=get

HTTP/1.0 200 OK\r\n
Date: Thu, 01 Jan 1970 00:00:00 GMT\r\n
Connection: close\r\n
Content-Type: text/html\r\n
Content-Length: 32\r\n

DDNS Configuration:
enable=0
ddnsaddr=ddns.meritlilin.com
ddnsport=8098

Chapter 3.14.2. Set DDNS configurations

Set DDNS configurations.

Syntax:

http://<*serverIP*>/ddns?cmd=set&<*parameter*>=<*value*>

Parameters:

Parameter	Values	Description
enable=<int>	0,1	0: Disable, 1: Enable DDNS service
Ddnsaddr=<string>	Omit default: “ddns.meritlilin.com”	Specify the DDNS server IP address. You may use domain name.

Example:

http://192.168.0.200/ddns?cmd=set&ddnsaddr=ddns.dyndns.org

Chapter 3.15. PPPoE CGI

Set PPPoE configurations.

Syntax:

http://<*serverIP*>/pppoe[?<*parameter*>=<*value*>[&<*parameter*>=<*value*>…]]

Parameters:

Parameter	Values	Description
cmd=<string>	Get/set	0: Disable, 1: Enable DDNS service
pppoeaccount=<string>		Specify the PPPoE account string
Pppoepassword=<string>		Specify the PPPoE acount password

Chapter 3.16. IR Cut

Enable IR or disable IR LEDs.

Syntax:

http://<*serverIP*>/ir=<status>

Example:

http://192.168.0.200/ir=off

Parameters:

Parameter	Values	Description
Status	on / off / auto	

Chapter 3.17. Serial port transmission

This section describes the serial port data transmission including sending and receiving actions.

Syntax:

http://<serverIP>/serial[?<parameter>=<value>[&<parameter>=<value>…]]

Parameters:

Parameter	Values	Description
port=<int> write=<string>	1,2 Hex string of ASCII code, e.g.	The COM port is selected with this parameter. write=414243 as “ABC”, The string going to send through RS232/485 port.

Example:
Send string “Hello” to com2.

http://192.168.0.200/serial?port=2&write=48656c6c6f

Chapter 4. H.264 Streaming

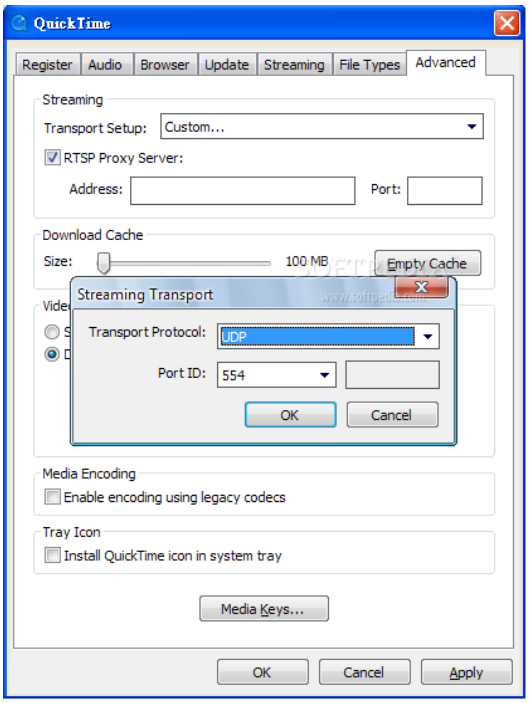
Chapter 4.1.1. Testing and verifying H.264 AVC video for your application

VideoLAN media player, (VLC media player) can be used for testing and verifying Merit LILIN's H.264 AVC IP cameras, video servers, or IP PTZ cameras before integrating Merit LILIN's H.264 AVC video streaming into your product.

Chapter 4.2. H.264 and JPEG RTSP streaming

To test streamings of H.264 and JPEG of NVT media stramings via RTP/RTSP/HTTP, you can verify the streamings by using QuickTime.

To test RTP/RTSP/HTTP, please click on QuickTime->Edit->Preference. Click on Transport Setup->Custom. Change the protocol to HTTP and make sure port ID is 554.



After setting up above, please click on File->Open URL. Please type the following URLs:

Chapter 4.2.1. RTSP session description protocol (SDP)

2MP, iMEGAPRO and L series & 2MP PTZ, IPS420 & IPS520

Transport Protocol: HTTP

rtsp://192.168.0.200/rtsph2641080p
rtsp://192.168.0.200/rtsph264480p

rtsp://192.168.0.200/rtspjpeg480p
rtsp://192.168.0.200/rtspjpegcif

Transport Protocol: RTSP/TCP

rtsp://192.168.0.200:554/rtsph2641080p
rtsp://192.168.0.200:554/rtsph264480p

rtsp://192.168.0.200:554/rtspjpeg480p
rtsp://192.168.0.200:554/rtspjpegcif

Transport Protocol: UDP

rtsp://192.168.0.200:554/rtsph2641080p
rtsp://192.168.0.200:554/rtsph264480p

rtsp://192.168.0.200:554/rtspjpeg480p
rtsp://192.168.0.200:554/rtspjpegcif

5MP, iMEGAPRO, IPG1052

rtsp://192.168.0.200/rtsph2645m
rtsp://192.168.0.200/rtsph264480p

3MP, iMEGAPRO, IPG1032

rtsp://192.168.0.200/rtsph2643m
rtsp://192.168.0.200/rtsph264480p

4K, UHG1182

rtsp://192.168.0.200/rtsph2644k
rtsp://192.168.0.200/rtsph264480p

1.3MP, PTZ, IPS622 and IPS722

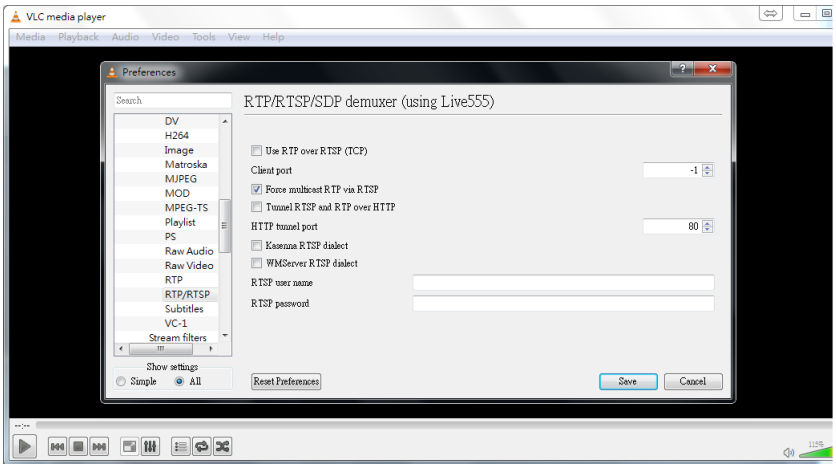
rtsp://192.168.0.200/rtsph264sxga
rtsp://192.168.0.200/rtsph264480p

960H, Video Server, VS212

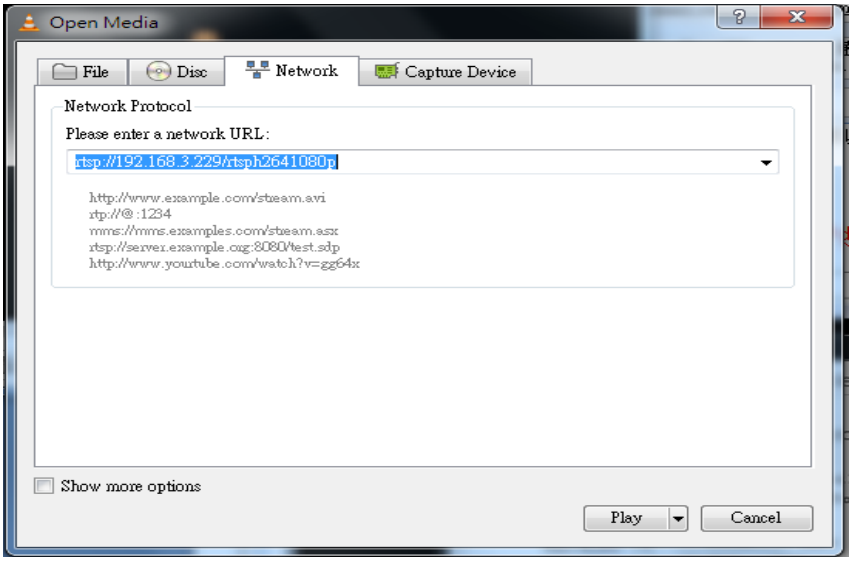
rtsp://192.168.0.200/rtsph960h

Verify Multicast Streaming

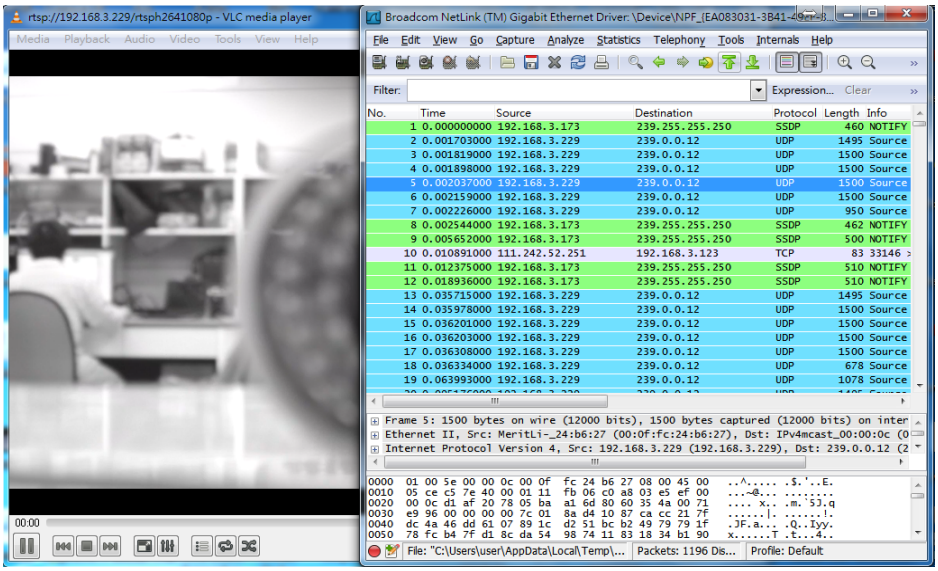
Force VLC to multicast streaming via Tools->Preference->Demuxers->RTP/RTSP/SDP demuxer->Force multicast RTP via RTSP.



Open the Streaming based on the RTSP string.



Verify the Multicast Stream via Wireshark



Chapter 4.3 Audio
Chapter 4.3.1 Audio output (IP Camera to PC)
Transport Protocol: HTTP

IP cameras to PC (G.711 audio)

Audio coding type: G.711
Audio sample rate: 8KHz
Audio bitrate: 64kbps

rtsp://192.168.0.200/rtspaudio

Chapter 4.3.2 HTTP audio input (PC to IP camera)
Transport Protocol: HTTP

Audio coding type: PCM
Audio sample rate: 8kKHz
Audio bitrate: 16kbps

http://192.168.0.200/sendaudio