

WELDEX HTTP API Specification

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DOCUMENT HISTORY

Version	Date	Comment
1.0	2019-12-17	Initial version.
1.1	2021-10-07	"Virtual input" add.

1. OVERVIEW

Interface is based on HTTP. This document defines the interface between WELDEX IP CAMERA and the application.

HTTP-based interface parameters can be updated/queried/controlled.

1.1 General CGI URL syntax

Texts in the <> and [] specify information that are actually being used in the environment.

If no information is provided in the [], it can be omitted.

There are two parameter transmission types: <parameter>=<value> and XML.

Table 1, 2 contains examples.

Request	http://<servername>:HTTP_PORT[<subdir>]/<cgi>.<ext>[?<action>=<value>[&<argument>=<value>...]]
Return	HTTP Code: <code> Content-Type: <type> <parameter>=<value> <parameter>=<value> <parameter>=<value> ...
Example	[Request list of network] http://192.168.0.201/param.cgi?action=search&param=network.mac [Return list of network] HTTP/1.1 200 OK Content-type: text/plain network.mac=00:18:9c:05:00:9a

Table1 CGI URL syntax(parameter)

Request	http://<servername>:HTTP_PORT[<subdir>]/<cgi>.<ext>[?<action>=<value>[&<argument>=<value>...]]
Return	HTTP Code: <code> Content-Type: <type> <XML Data>
Example	[Request list of network]

	<p>http://192.168.0.201/param.cgi?action=search&param=network</p> <p>[Return list of network]</p> <p>HTTP/1.1 200 OK Content-type: text/xml</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <network table_offset = "0" mac="00:18:9c:05:00:41" dhcp_enable="0" ip1="192" ip2="168" ip3="0" ip4="201" netmask1="255" netmask2="255" netmask3="255" netmask4="0" gateway1="255" gateway2="255" gateway3="255" gateway4="0" dns1="0" dns2="0" dns3="0" dns4="0" http_port="80"/> </root></pre>
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Table2 CGI URL syntax(XML)

2. Command Group

This table organizes in groups the parameters that can be searched and updated.

The selected group can be searched & updated as a whole, or specific parameters in a group can be searched and updated.

3. Search

Specific parameter

Specific parameters in the selected group can be queried, or entire parameters in the selected group can be queried.

3.1 Search parameter

If more than one parameter is queried in the selected group, the corresponding parameter's information will be returned.

If the parameter is composed of more than one row, a specific line can be updated. If no row is specified, the first row will be applied

Request	http://<servername>:HTTP_PORT/param.cgi?action=search¶m=<gourp.param>[¶m=<group.param>...]
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	<p>When specifying row numbers for parameters that have more than one rows: (row : the first row is 0 and increments by 1)</p> <p><code>http://<servername>:HTTP_PORT/param.cgi?action=search&<group.param>=<row*value>[&<group.param>=<row*value>...]</code></p>
Return	<p>HTTP Code: <code></p> <p>Content-Type: <type></p> <p><parameter>=<value></p> <p><parameter>=<value></p> <p>...</p>

3.1.1 Search single parameter

If a single parameter is queried in the selected group, the corresponding parameter's information will be returned.

Example	<p>[Request] http://192.168.0.201:80/param.cgi?action=search&param=audio.enable</p> <p>[Return] HTTP/1.1 200 OK Content-type: text/plain audio.enable=0</p>
----------------	--

3.1.2 Search multi parameters

Example for multi parameters	<p>[Request] http://192.168.0.201:80/param.cgi?action=search&param=audio.enable&param=network.ip1</p> <p>[Return] HTTP/1.1 200 OK Content-type: text/plain audio.enable=0 network.ip1=192</p>
---	---

3.2 Search groups

If no parameter is specified during search, entire parameters of the selected group will be

returned. The data will be converted to XML format.

The tag of the XML group name will display the parameter information's line number (in tablet offset name)

Request	<a href="http://<servername>:HTTP_PORT/param.cgi?action=search&param=<group>[&param=<group>...]" style="color: blue;">http://<servername>:HTTP_PORT/param.cgi?action=search&param=<group>[&param=<group>...]
Return	HTTP Code: <code> Content-Type: <type> <?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <group_name parameter="value" parameter="value" ... parameter="value"/> <group_name parameter="value" parameter="value" ... parameter="value"/> ... </root>

3.2.1 Search single group

If a search is performed against a single group without specifying parameters, the entire parameters will be returned for that group.

Example1	[Request] http://192.168.0.201:80/param.cgi?action=search&param=audio [Return] HTTP/1.1 200 OK Content-type: text/xml <?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <audio_table table_offset = "0" enable="1" volume_in="75" codec="1" sample="1" bitrate="2" bitrate_value="64000"/> </root>
Example2	[Request] http://192.168.0.201:80/param.cgi?action=search&param=device_info [Return] <?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <device_info table_offset = "0" serial_num="ee:aa:00:ff:ee:01" revision="20140320200836 model="WDP-17S05MF" fwversion="0.4.9"/> </root>

Example3	<p>[Request]</p> <pre>http://192.168.0.201:80/param.cgi?action=search&param=venc</pre> <p>[Return]</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <venc table_offset = "0" enable="1" fps="30" res="3" brc="2" kbps="4000" gop="30" qp="0" image_quality="0" h264_profile="1" apply="0"/> <venc table_offset = "1" enable="1" fps="30" res="3" brc="0" kbps="0" gop="0" qp="50" image_quality="0" h264_profile="1" apply="0"/> <venc table_offset = "2" enable="0" fps="0" res="0" brc="0" kbps="0" gop="0" qp="0" image_quality="0" h264_profile="1" apply="0"/> </root></pre>
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3.2.2. Search multi groups

If the search is for more than one group without specifying parameters, the corresponding parameter information for each group will be returned.

Example	<p>[Request]</p> <pre>http://192.168.0.201:80/param.cgi?action=search&param=audio&param=stream</pre> <p>[Return]</p> <pre>HTTP/1.1 200 OK Content-type: text/xml <root> <audio table_offset = "0" enable="1" volume_in="75" codec="1" sample="1" bitrate="2" bitrate_value="64000"/> <stream table_offset = "0" codec_type="3" width="720" height="480" fps="30" rate_control="1" bitrate="4096" apply="0"/> <stream table_offset = "1" codec_type="3" width="720" height="480" fps="15" rate_control="2" bitrate="1024" apply="0"/> <stream table_offset = "2" codec_type="0" width="0" height="0" fps="0" rate_control="0" bitrate="0" apply="0"/> </root></pre>
----------------	--

3.2.3. Search all groups

If 'all' is used without specifying a group, entire parameters of all groups will be returned (except for upgrade and system)

Example	<p>[Request]</p> <p>http://192.168.0.201:80/param.cgi?action=search&param=all</p> <p>[Return]</p> <p>HTTP/1.1 200 OK</p> <p>Content-type: text/xml</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <device_info table_offset = "0" serial_num="00:18:9c:05:00:9d" revision="20130503170246 " model="WDD-4399HD" fwversion="0.4.9"/> <account table_offset = "0" user="admin" password="9999" authority="0"/> <account table_offset = "1" user="" password="" authority="9"/> <account table_offset = "2" user="" password="" authority="9"/> <account table_offset = "3" user="" password="" authority="9"/> <account table_offset = "4" user="" password="" authority="9"/> <account table_offset = "5" user="" password="" authority="9"/> <account table_offset = "6" user="" password="" authority="9"/> <account table_offset = "7" user="" password="" authority="9"/> <account table_offset = "8" user="" password="" authority="9"/> <account table_offset = "9" user="" password="" authority="9"/> <account table_offset = "10" user="" password="" authority="9"/> <account table_offset = "11" user="" password="" authority="9"/> <account table_offset = "12" user="" password="" authority="9"/> <account table_offset = "13" user="" password="" authority="9"/> <account table_offset = "14" user="" password="" authority="9"/> <account table_offset = "15" user="" password="" authority="9"/> <time table_offset = "0" server="tw.pool.ntp.org" timezone="7" refresh="0" dst="0" date="2013/05/05" time="19:31:56"/> <audio table_offset = "0" enable="0" volume_in="75" codec_type="0" sample="0" bitrate="0" bitrate_value="64000" apply="0"/> <overlay table_offset = "0" date_enable="0" time_enable="0" date_position="1" time_position="1" date_format="2" time_format="1"/> <overlay table_offset = "1" date_enable="0" time_enable="0" date_position="1" time_position="1" date_format="2" time_format="1"/> <overlay table_offset = "2" date_enable="0" time_enable="0" date_position="1" time_position="1" date_format="2" time_format="1"/> <stream table_offset = "0" codec_type="0" width="1280" height="720" fps="30" rate_control="1" bitrate="8000000" apply="0"/> <stream table_offset = "1" codec_type="1" width="1280" height="720" fps="30" rate_control="0" bitrate="75" apply="0"/> <stream table_offset = "2" codec_type="0" width="0" height="0" fps="0"</pre>
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```

rate_control="0" bitrate="0" apply="0"/>
<stream_info table_offset = "0" width="1280" height="720" rtsp_port="0" name="H264"
rtsp_url="/wdx/media/stream.h264"/>
<stream_info table_offset = "1" width="1280" height="720" rtsp_port="0"
name="MJPEG" rtsp_url="/wdx/media/stream.mjpeg"/>
<stream_info table_offset = "2" width="0" height="0" rtsp_port="0" name=""
rtsp_url=""/>
<network table_offset = "0" mac="00:18:9c:05:00:9d" dhcp_enable="0" ip1="192"
ip2="168" ip3="0" ip4="63" netmask1="255" netmask2="255" netmask3="255"
netmask4="0" gateway1="192" gateway2="168" gateway3="0" gateway4="1" dns1="164"
dns2="124" dns3="101" dns4="2" http_port="80" apply="0"/>
<lancam_table table_offset = "0" title="WDX-00189C0500B8"/>
<venc table_offset = "0" enable="1" fps="25" res="3" brc="1" kbps="4000" gop="20"
qp="0" image_quality="0" h264_profile="1" apply="0"/>
<venc table_offset = "1" enable="1" fps="10" res="1" brc="0" kbps="0" gop="0"
qp="50" image_quality="0" h264_profile="1" apply="0"/>
<venc table_offset = "2" enable="0" fps="0" res="0" brc="0" kbps="0" gop="0" qp="0"
image_quality="0" h264_profile="1" apply="0"/>
</root>

```

4. UPDATE

Specific parameters in a group or group's entire parameters can be updated.

4.1 Update parameters

If more than one parameter update is requested in the selected group, the corresponding parameters will be updated.

If the parameter is composed of more than one row, a specific line can be updated. If no row is specified, the first row will be applied.

Request	<p><a <servername>:http_port="" href="http://<servername>:HTTP_PORT/param.cgi?action=update&<group.param>=<value>[*value][&<group.param>=<value>...]</p> <p>When specifying row numbers for parameters that have more than one rows:
(row : the first row is 0 and increments by 1)</p> <p><a href=" http:="" param.cgi?action="update&<group.param>=<row*value>[&<group.param>=<row*value>...]</a"></p>
Return	<p>HTTP Code: <code></p> <p>Content-Type: <type></p> <p><parameter>=<value></p> <p><parameter>=<value></p>

	...
--	-----

4.1.1 Update single parameter

If a single parameter update is requested in the selected group, the corresponding parameter's information will be updated.

Example1	<p>[Request]</p> <p>http://192.168.0.201/param.cgi?action=update&network.dhcp_enable=1</p> <p>[Return]</p> <p>HTTP/1.1 200 OK</p> <p>Content-type: text/plain</p> <p>OK</p>
Example2	<p>[Request]</p> <p>http://192.168.0.201/param.cgi?action=update&venc.h264_profile=0*1</p> <p>[Return]</p> <p>HTTP/1.1 200 OK</p> <p>Content-type: text/plain</p> <p>OK</p>

4.1.2 Update multi parameters

If more than one parameter update is requested, the corresponding parameter's information will be updated.

Example	<p>[Request]</p> <p>http://192.168.0.201:80/param.cgi?action=update&overlay.date_enable=n*1&overlay.time_enable=m*1</p> <p>[Return]</p> <p>HTTP/1.1 200 OK</p> <p>Content-type: text/plain</p> <p>OK</p>
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5. API Groups

5.1 Get DEVICE_INFO

Sample1	<p>[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=search&param=device_info">http://<servername>:HTTP_PORT/param.cgi?action=search&param=device_info</p> <p>[Return]</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <device_info table_offset = "0" serial_num="ee:aa:00:ff:ee:01" revision="20140320200836 " model="WDP-17S05MF" fwversion="0.4.9"/> </root></pre>
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5.2 Video Stream

Set video codec, max frame rate, etc. actual value will be applied when the 'apply' field is present.

Request	<p><a href="http://<servername>:HTTP_PORT/param.cgi?action=update&<venc.enable>=<value>&<venc.h264_profile>=<value>&<venc.res>=<value>&<venc.fps>=<value>&<venc.brc>=<value>&<venc.kbps>=<value>&<venc.codec_type>=<value>[&...]&venc.apply=2*1">http://<servername>:HTTP_PORT/param.cgi?action=update&<venc.enable>=<value>&<venc.h264_profile>=<value>&<venc.res>=<value>&<venc.fps>=<value>&<venc.brc>=<value>&<venc.kbps>=<value>&<venc.codec_type>=<value>[&...]&venc.apply=2*1</p>
Return	<p>[Return]</p> <p>HTTP/1.1 200 OK Content-type: text/plain</p> <p>OK</p>
Example	<p>[H264 Configure stream]</p> <p>http://192.168.0.201/param.cgi?action=update&venc.enable=0*1&venc.h264_profile=0*1&venc.res=0*3&stream.fps=0*30&stream.brc=0*1&venc.kbps=0*4000&venc.gop=0*30&venc.image_quality=0*1&venc.apply=2*1</p> <p>[Return]</p> <p>HTTP/1.1 200 OK Content-type: text/plain</p> <p>OK</p> <p>[H264 Stream Configuration – resolution only]</p> <p>http://192.168.0.201/param.cgi?action=update&venc.res=0*4&venc.apply=2*1</p> <p>[Return]</p> <p>OK</p> <p>[H264 Stream Configuration – fps only]</p> <p>http://192.168.0.201/param.cgi?action=update&venc.fps=0*15&venc.apply=2*1</p>

	[Return] OK
Remark	To update venc table, "venc.apply=2*1" should be used

5.2.1 Parameter List

Parameter Name	Value Range	Description
enable	0~1	0:off, 1:enable
codec_type	0~1	0:h264, 1:mjpeg
fps	1~30	
res	1~8	1: 1920x1080 , 2: 1280x1024, 3: 1280x720, 4: 1024x768, 5: 800x600, 6: 800x480, 7: 640x480, 8: 2048x1536
brc	1~2	1:VBR, 2:CBR
kbps	400~10,000	
qp	5~95	
gop	1~30	
Image_quality	0~2	0:high, 1:medium, 2:low
h264_profile	0~3	0:baseline, 1:main, 2:not use, 3:high
apply	2*1	only, else ignore

5.3 Event Log

5.3.1 Search Event Log

Request	<a href="http://<servername>:HTTP_PORT/param.cgi?action=log_list">http://<servername>:HTTP_PORT/param.cgi?action=log_list
Return	<p>HTTP Code: <code></p> <p>Content-Type: <type></p> <pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <EventLog date="value" log="string"/> <EventLog date="value" log="string"/> ... </pre>

	<pre></root> OK</pre>
Example	<p>[Request]</p> <p>http://192.168.0.201:80/param.cgi?log_list</p> <p>[Return]</p> <p>HTTP/1.1 200 OK Content-type: text/html</p> <pre><?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <EventLog date="2011/04/07 10:12:55" log="admin login"/> <EventLog date="2011/04/07 10:19:55" log="admin login"/> </root></pre> <p>OK</p>

5.3.2 Clear Event Log

Deletes all Event Log information

	<p>[Request]</p> <p><a href="http://<servername>:HTTP_PORT/param.cgi?action=log_delete">http://<servername>:HTTP_PORT/param.cgi?action=log_delete</p>
Example	<p>[Return]</p> <p>HTTP/1.1 200 OK Content-type: text/plain</p> <pre>OK</pre>

5.4 Reset

Reboots the IP Camera.

	<p>[Request]</p> <p><a href="http://<servername>:80/param.cgi?action=reboot">http://<servername>:80/param.cgi?action=reboot</p> <p>[Return]</p> <p>HTTP/1.1 200 OK Content-type: text/plain</p> <pre>OK</pre>
--	--

5.5 Set Factory Default

Resets all parameters to factory defaults (except for MAC Address and Network parameters)

Sample	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=factory">http://<servername>:HTTP_PORT/param.cgi?action=factory [Return] HTTP/1.1 200 OK Content-type: text/plain OK
---------------	---

5.6 Set Hard Factory Default

Resets all parameters to factory defaults (except for MAC Address)

Sample	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=hard_factory">http://<servername>:HTTP_PORT/param.cgi?action=hard_factory [Return] HTTP/1.1 200 OK Content-type: text/plain OK
---------------	---

5.7 Get Date/Time

Sample1	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=search&param=time">http://<servername>:HTTP_PORT/param.cgi?action=search&param=time [Return] <?xml version="1.0" encoding="UTF-8" standalone="yes" ?> <root> <time table_offset = "0" sync_mode="1" server="pool.ntp.org" timezone="21" refresh="0" dst="0" date="2016/04/28" time="17:49:19"/> </root>
Sample 2	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=search&param=time.date">http://<servername>:HTTP_PORT/param.cgi?action=search&param=time.date [Return] time.date=2016/04/29
Sample 3	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=search&param=time.sync_mode">http://<servername>:HTTP_PORT/param.cgi?action=search&param=time.sync_mode

	<p>[Return] time.sync_mode=1</p>
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5.7.1 Parameter List

Parameter Name	Value Range	Description
sync_mode	1,2	1:NTP, 2:Manual
server	string	NTP sever domain name(or IP Address)
timezone	0~24	<p>Current Time Zone (0 ~ 24) (* ntp_timezone and daylight_time should be updated simultaneously)</p> <p>"GMT-12 Eniwetok, Kwajalein", "GMT-11 Midway Island, Samoa", "GMT-10 Hawaii", "GMT-09 Alaska", "GMT-08 Pacific Time (US & Canada), Tijuana", "GMT-07 Mountain Time (US & Canada), Arizona", "GMT-06 Central Time (US & Canada), Mexico City, Tegucigalpa, Saskatchewan", "GMT-05 Eastern Time (US & Canada), Indiana(East), Bogota, Lima", "GMT-04 Atlantic Time (Canada), Caracas, La Paz", "GMT-03 Brasilia, Buenos Aires, Georgetown", "GMT-02 Mid-Atlantic", "GMT-01 Azores, Cape Verdes Is.", "GMT+00 GMT, Dublin, Edinburgh, London, Lisbon, Monrovia, Casablanca", "GMT+01 Berlin, Stockholm, Rome, Bern, Brussels, Vienna, Paris, Madrid, Amsterdam, Prague, Warsaw, Budapest", "GMT+02 Athens, Helsinki, Istanbul, Cairo, Eastern Europe, Harare, Pretoria, Israel", "GMT+03 Baghdad, Kuwait, Nairobi, Riyadh, Moscow, St. Petersburg, Kazan, Volgograd", "GMT+04 Abu Dhabi, Muscat, Tbilisi", "GMT+05 Islamabad, Karachi, Ekaterinburg, Tashkent", "GMT+06 Alma Ata, Dhaka", "GMT+07 Bangkok, Jakarta, Hanoi", "GMT+08 Taipei, Beijing, Chongqing, Urumqi, Hong Kong",</p>

		Perth, Singapore", "GMT+09 Tokyo, Osaka, Sapporo, Seoul, Yakutsk", "GMT+10 Brisbane, Melbourne, Sydney, Guam, Port Moresby, Vladivostok, Hobart", "GMT+11 Magadan, Solomon Is., New Caledonia", "GMT+12 Fiji, Kamchatka, Marshall Is., Wellington, Auckland"
refresh	1	Get Time use NTP Sever
dst	0~1	Adjust for daylight saving time changes.(On/OFF)
date	String[10]	Set current date (yyyy/mm/dd) when sync_mode is 2(manual).
time	String[8]	Set current time(hh:mm:ss) when sync_mode is 2(manual).

5.8 Set Date/Time

Sample1 : change NTP mode and get time from NTP Server	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=update&time.sync_mode=1&time.refresh=1">http://<servername>:HTTP_PORT/param.cgi?action=update&time.sync_mode=1&time.refresh=1 [Return] OK
Sample2 : Get time from NTP Server	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=update&time.refresh=1">http://<servername>:HTTP_PORT/param.cgi?action=update&time.refresh=1 [Return] OK
Sample 3 : change Manual Mode	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=update&time.sync_mode=2">http://<servername>:HTTP_PORT/param.cgi?action=update&time.sync_mode=2 [Return] OK
Sample 4 : set date	[Request] <a href="http://<servername>:HTTP_PORT/param.cgi?action=update&time.date=2016/04/28">http://<servername>:HTTP_PORT/param.cgi?action=update&time.date=2016/04/28 [Return] OK

5.9 Get JPEG

if JPEG Codec is selected, it gets 1x JPEG frame from the IP camera.

Request	<a href="http://<servername>:HTTP_PORT/cgi/get_image.cgi?action=jpeg_download">http://<servername>:HTTP_PORT/cgi/get_image.cgi?action=jpeg_download
Return	HTTP Code: <code> Content-Type: image/jpeg

	Content-Length: <JPEG data size> <JPEG data>																									
Example1	<p>[Get JPEG File]</p> <pre>curl -o test.jpg "http://admin:admin@192.168.0.201:80/cgi/get_image.cgi?action=jpeg_download"</pre> <p>[Return]</p> <table> <thead> <tr> <th>? % Total</th> <th>% Received</th> <th>% Xferd</th> <th>Average Speed</th> <th>Time</th> <th>Time</th> <th>Time</th> <th>Current</th> </tr> <tr> <th>Dload</th> <th>Upload</th> <th>Total</th> <th>Spent</th> <th>Left</th> <th>Speed</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>128k</td> <td>100</td> <td>128k</td> <td>0</td> <td>0</td> <td>236k</td> <td>0</td> <td>--::-- ::--::-- ::--::-- 258k</td> </tr> </tbody> </table>	? % Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current	Dload	Upload	Total	Spent	Left	Speed			100	128k	100	128k	0	0	236k	0	--::-- ::--::-- ::--::-- 258k
? % Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current																			
Dload	Upload	Total	Spent	Left	Speed																					
100	128k	100	128k	0	0	236k	0	--::-- ::--::-- ::--::-- 258k																		
Example 2	<p>[Get JPEG File]</p> <pre>curl "http://admin:admin@192.168.0.201:80/cgi/get_image.cgi?action=jpeg_download"</pre> <p>HTTP/1.1 200 OK</p> <p>Content-type: image/jpeg</p> <p>Content-Length: 15632</p> <p>JFIF...222222222222222222.....22222222222222jfefjfewf... abbreviated.</p>																									

5.10 Get MJPG

It gets the JPEG images until the connection is closed.

Request	<a href="http://<servername>:HTTP_PORT/cgi/get_image.cgi?action=mjpg_download">http://<servername>:HTTP_PORT/cgi/get_image.cgi?action=mjpg_download
Return	HTTP Code: <code> Content-Type: multipart/x-mixed-replace; boundary=<string> --string Content-Type: image/jpeg\r\nContent-Length: <JPEG Size> <JPEG Data> --string Content-Type: image/jpeg\r\nContent-Length: <JPEG Size> <JPEG Data> --string Content-Type: image/jpeg\r\nContent-Length: <JPEG Size> <JPEG Data> --string [continuous]
Example	[Get MJPG File]

	<p>http://192.168.0.201/cgi/get_image.cgi?action=mjpg_download</p> <p>[Return]</p> <p>HTTP/1.1 200 OK</p> <p>Content-type: multipart/x-mixed-replace; boundary=myboundary</p> <p>--myboundary</p> <p>Content-Type: image/jpeg\r\nContent-Length: 15632</p> <p>JFIF...222222222222222222.....2222222222222222jfefjfewf...</p> <p>--myboundary</p> <p>Content-Type: image/jpeg\r\nContent-Length: 11235</p> <p>JFIF...222222222222222222.....2222222222222222jfefjfewf...</p> <p>--myboundary</p> <p>Content-Type: image/jpeg\r\nContent-Length: 45210</p> <p>JFIF...222222222222222222.....2222222222222222jfefjfewf...</p> <p>--myboundary</p> <p>[repeated]</p>
--	--

5.11 Set RTSP Authentication

Sample	<p>[Request]</p> <p><a href="http://<servername>:HTTP_PORT/fcgi/port.cgi?rtsp.auth=0">http://<servername>:HTTP_PORT/fcgi/port.cgi?rtsp.auth=0</p> <p>[Return]</p> <p>HTTP/1.1 200 OK</p> <p>Content-type: text/plain</p> <p>OK</p>
Parameter	<p>auth=(0~1)</p> <p>0:off</p> <p>1:on</p>

5.12 Firmware Update

Parameter	upfile
	⇒ Parameter name that specifies the file name (transmission method: Form Data)
Request url	<a href="http://<servername>:HTTP_PORT/cgi/fwupdate.cgi?">http://<servername>:HTTP_PORT/cgi/fwupdate.cgi?
Return	Returns file check value after firmware file upload completion.

	<p>See section 12 for details on error return values. Standard update time is 4-5 minutes depending on network conditions.</p>																																
curl test code	<p>Use the following to perform firmware update: curl (tool transfer data tool, command line utility)</p> <pre>curl -u admin:xxxxx -F "upfile=@wdp4608mxv_1.0.0.bin" http://192.168.0.158/cgi/fwupdate.cgi -u : authentication -F : --form can also be used, form data upfile : parameter name (firmware file) wdp4608mxv_1.0.0.bin : file name of the update file.</pre> <p>[Return] If succeed OK Otherwise.</p> <table border="1"> <tr><td>1</td><td>No file, or invalid file format</td></tr> <tr><td>2</td><td>Checksum error.</td></tr> <tr><td>3</td><td>MD5 error</td></tr> <tr><td>4</td><td>Error for Firmware file length.</td></tr> <tr><td>17</td><td>Exceeded Buffer length</td></tr> <tr><td>18</td><td>Upgrade already in progress</td></tr> <tr><td>19</td><td>There is no uploaded file</td></tr> <tr><td>21</td><td>Missing fwinfo.ini (needed for upgrade)</td></tr> <tr><td>22</td><td>Failed loading fwinfo.ini file.</td></tr> <tr><td>23</td><td>Invalid Flag.(missing file that correspond to flag, KERNEL=2, FILESYSTEM=4, APP=8)</td></tr> <tr><td>24</td><td>Invalid Model (firmware does not match the camera model)</td></tr> <tr><td>60</td><td>Error during update</td></tr> <tr><td>74</td><td>No file</td></tr> <tr><td>75</td><td>Error in size</td></tr> <tr><td>76</td><td>Firmware file is not for the camera model</td></tr> <tr><td>77</td><td>Error in the firmware file content</td></tr> </table>	1	No file, or invalid file format	2	Checksum error.	3	MD5 error	4	Error for Firmware file length.	17	Exceeded Buffer length	18	Upgrade already in progress	19	There is no uploaded file	21	Missing fwinfo.ini (needed for upgrade)	22	Failed loading fwinfo.ini file.	23	Invalid Flag.(missing file that correspond to flag, KERNEL=2, FILESYSTEM=4, APP=8)	24	Invalid Model (firmware does not match the camera model)	60	Error during update	74	No file	75	Error in size	76	Firmware file is not for the camera model	77	Error in the firmware file content
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75	Error in size																																
76	Firmware file is not for the camera model																																
77	Error in the firmware file content																																

5.13 Camera Configuration

5.13.1 Get Camera Configuration

Request	<a href="http://<servername>:HTTP_PORT/fcgi/camsetup.cgi?action=get_config">http://<servername>:HTTP_PORT/fcgi/camsetup.cgi?action=get_config
Example	<p>[Request] http://192.168.0.201:80/fcgi/camsetup.cgi?action=get_config</p> <p>[Return]</p>

```

<?xml version="1.0" encoding="UTF-8"?>
<camera_config>
<ex.lenstype>1</ex.lenstype>
<ex.shutterspeed>0</ex.shutterspeed>
<ex.auto_range_min>30</ex.auto_range_min>
<ex.auto_range_max>16000</ex.auto_range_max>
<ex.slow_shutter>0</ex.slow_shutter>
<ex.agc>9</ex.agc>
<ex.ae_target_level>4</ex.ae_target_level>
<ex.hdr>0</ex.hdr>
<ex.flicker>1</ex.flicker>
<wb.mode>0</wb.mode>
<wb.rgain>50</wb.rgain>
<wb.bgain>50</wb.bgain>
<brightness>50</brightness>
<saturation>50</saturation>
<ct.auto>1</ct.auto>
<ct.contrast>50</ct.contrast>
<ct.strength>50</ct.strength>
<sharpness>6</sharpness>
<daynight>1</daynight>
<dy_switching_level>3</dy_switching_level>
<3dnrlevel>5</3dnrlevel>
<backlight>1</backlight>
</camera_config>

```

5.13.2 Set Camera Configuration

Request	<a href="http://<servername>:HTTP_PORT/fcgi/camsetup.cgi?action=set_config">http://<servername>:HTTP_PORT/fcgi/camsetup.cgi?action=set_config
Example	<p>[Request] http://192.168.0.201:80/fcgi/camsetup.cgi?action=set_config&wb.mode2&wb.rgain=50&wb.bgain=50</p> <p>[Return] OK</p>

5.13.3 Parameter List

Parameter Name	Value Range	Description
ex.lenstype	0~1	0: DC, 1: MANUAL
ex.shutterspeed	0~9	0: AUTO, 1: 1/30s, 2: 1/60s, 3: 1/120s 4: 1/240s, 5: 1/480s, 6: 1/1000s

		7: 1/2000s, 8: 1/4000s, 9: 1/8000s
ex.auto_range_min	30~16000	Must not be greater than range_max
ex.auto_range_max	30~16000	Must not be less than range_min
ex.slow_shutter	0~3	0: OFF, 1: 0x3, 2: 0x6, 3: 0x15
ex.agc	0~9	0: 0, 1: 4, 2: 8, 3: 12, 4: 16 5: 20, 6: 24, 7: 28, 8: 32, 9: 36
ex.ae_target_level	0~9	
ex.hdr	0~1	0: OFF, 1: ON
ex.flicker	0~1	0: 50Hz, 1: 60Hz
wb.mode	0~3	White balance mode 0: ATW, 1: 2800K, 2: 4000K, 3: Manual
wb.rgain	10~100	Only if the mode is manual
wb.bgain	10~100	Only if the mode is manual
brightness	0~100	
saturation	0~100	
ct.auto	0~1	Auto Contrast 0: OFF, 1: ON
ct.contrast	0~100	Only if the mode is OFF.
ct.strength	0~100	Only if the mode is ON.
sharpness	0~100	
daynight	0~2	Day & Night MODE 0: AUTO, 1: COLOR, 2: B/W(Black & Wite)
dy_switching_level	1~10	Only if the mode is AUTO.
3dnrlevel	0~11	
backlight	0~1	0: OFF, 1: ON

5.14 Virtual Input

5.14.1 Get Configuration

Request	<a href="http://<servername>:HTTP_PORT/fcgi/virtual_input.cgi?action=get_config">http://<servername>:HTTP_PORT/fcgi/virtual_input.cgi?action=get_config
Example	<p>[Request] http://192.168.0.201:80/fcgi/virtual_input.cgi?action=get_config</p> <p>[Return]</p> <pre><?xml version="1.0" encoding="UTF-8"?> <virtual_input_config> <input_number>2</input_number> <name>Virtual_Input</name> <action_type>Overlay Text</action_type> <active>High</active> <enable>No</enable></pre>

```

<input_number>3</input_number>
<name>Virtual_Input03</name>
<action_type>Overlay Text</action_type>
<active>High</active>
<enable>YES</enable>
</virtual_input_config>

```

5.13.2 Set Configuration

Request	<a href="http://<servername>:HTTP_PORT/fcgi/virtual_input.cgi?action=set_config">http://<servername>:HTTP_PORT/fcgi/virtual_input.cgi?action=set_config
Example	<p>[Request] http://192.168.0.201:80/fcgi/virtual_input.cgi?action=set_config&number=2&active=1</p> <p>[Return] OK</p>
Parameter	number=1~10 active=0~1 0:low 1:high

5.15 Error Code

Number	Description
1	Mode Error(HCGI_ERR_INVMODE)
2	Input Error(HCGI_ERR_INVPARAM)
3	No Such Action Exists(HCGI_ERR_ACTION)
4	No Such Command Exists(HCGI_ERR_METHOD)
5	Format Error(HCGI_ERR_FORMAT)
6	Group Error(HCGI_ERR_GROUP)
7	XML Error(HCGI_ERR_XML)
8	System Error(HCGI_ERR_SYSTEM)
9	Memory Related Error(HCGI_ERR_NOMEMORY)
10	No Data(HCGI_ERR_NODATA)
11	URL Error(HCGI_ERR_URL)
12	Operation Failed(HCGI_ERR_FAIL)
13	No Data(HCGI_ERR_END_DATA)
14	Log-in Fail(HCGI_ERR_LOGIN)