URL command for DCS-5220, DCS-2120

Version 1.0B

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URL commands of the Network Camera

For some customers who already have their own web site or web control application, the Network Camera can be easily integrated through convenient URLs. This section lists the commands in URL format corresponding to the basic functions of the erase Network Camera.

Get server parameter values

Note: This request require administrator access
Method: GET/POST

Syntax:

```
http://<servername>/cgi-bin/admin/getparam.cgi?[<parameter>]
[&<parameter>…]
```

where the *<parameter>* should be *<group>*[_*<name>*] or *<group>*[.*<name>*] If you do not specify the any parameters, all the parameters on the server will be returned. If you specify only *<group>*, the parameters of related group will be returned.

When query parameter values, the current parameter value are returned.
Successful control requests returns parameter pairs as follows.
Return:

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: <length>\r\n
\r\n
<parameter pair>
```

where <parameter pair> is
=<value>\r\n
[<parameter pair>]

<length> is the actual length of content.

Example: request IP address and it's response

Request:
http://192.168.0.123/cgi-bin/admin/getparam.cgi?network_ipaddress

Response:

```
HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: 33\r\n
\r\n
network.ipaddress=192.168.0.123\r\n
```

Set server parameter values

Note: This request require administrator access
Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/admin/setparam.cgi?
[nosync=*<value>*&]*<parameter>*=*<value>*
[&<parameter>=<value>…][&return=<return page>]

parameter	value	description
<group>_<name>.	value to assigned	Assign *<value>* to the parameter *<group>_<name>..*
return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned*.* The *<return page>* can be a full URL path or relative path according the the current path. If you omit this parameter, it will redirect to an empty page. (note: The return page can be a general HTML file(.htm, .html) or a D-Link server script executable (.vspx) file. It can not be a CGI command. It can not have any extra parameters. This parameter must be put at end of parameter list)

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/html\r\n
Context-Length: <length>\r\n
\r\n
<parameter pair>

where <parameter pair> is

=<value>\r\n

[<parameter pair>]

Only the parameters that you set and readable will be returned.

Example: Set the IP address of server to 192.168.0.123

Request:

http://myserver/cgi-bin/admin/setparam.cgi?Network_IPAddress=192.168.0.123

Response:

HTTP/1.0 200 OK\r\n

Content-Type: text/html\r\n

Context-Length: 33\r\n

\r\n

network.ipaddress=192.168.0.123\r\n

Available parameters on the server

NOTE: The bold characters in table are the default value of each parameter.

Group: **System**

NAME	VALUE	DESCRIPTION
hostname (r/w)	<text string shorter than 40 characters>	host name of server <<Wireless>Network Camera >
ledoff (r/w)	0	Do not turn off the led indicator
	1	Turn off the led indicator
date (r/w)	<yyyy/mm/dd>	year, month and date separated by slash.
	<keep>	keep date unchanged
	<auto>	Using NTP to sync date/time automatically
time (r/w)	<hh:mm:ss>	hour, minute and second separated by colon.
	<keep>	keep date unchanged
	<auto>	Using NTP to sync date/time automatically
ntp (r/w)	<domain name or IP address>	NTP server <skip to invoke default server>
timezone (r/w)	-12 ~ 12	time zone, 8 means GMT +8:00 <8>

updateinterval (r/w)	0 ~ 2592000	0 to Disable automatic time adjustment, otherwise, it means the seconds between NTP automatic update interval. <0>
serialnumber (r)	<mac address>	12 characters mac address without hyphen connected
firmwareversion (r)	<text string shorter than 39 characters>	The version of firmware, including model, company, and version number
restore (w)	0	Restore the system parameters to default value.
	Positive integer	Restore the system parameters to default value and restart the server after <value> seconds.
reset (w)	0 ~ 65535	Restart the server after <value> seconds.
	-1	Not restart the server.
viewmode (r/w)	0	Using the profile of viewing by computer
	1	Using the profile of viewing by mobile phone
dinormalstatus (r/w)	0	Define DI normal status as "Low"
	1	Define DI normal status as "High"
dinormalstatus (r/w)	0	Define DO normal status as "Grounded"
	1	Define DO normal status as "Open"
resetdo (r/w)	0	Disable the function of resetting DO
	1	Enable the function of resetting DO
resetdo (r/w)	Positive integer	Reset DO to normal status after <value> seconds.
di<1~4> (r)	L	Normal status
	H	Triggering status
do<1~4> (r)	L	Normal status
	H	Triggering status

Group: Security

NAME	VALUE	DESCRIPTION

username_<1~20> (r/w)	<text string shorter than 16 characters>	change user name. <blank>
userpass_<0~20> (r/w)	<text string shorter than 14 characters>	change user's password. The UserPass_0 is root's password. <blank>
userattr_<1~20> (r)	[conf]	show user's privilege. The privilege can be <blank> - only permit to view live media conf – Permit to change server's configuration <blank>
usercount (r)	1 ~ 21	The current account number on the server including root.**<1>**

Group: **Network**

NAME	VALUE	DESCRIPTION
type (r/w)	0	LAN
	1	PPPoE
pppoeuser (r/w)	<text string shorter than 80 characters>	PPPoE account user name <blank>
pppoepass (r/w)	<text string shorter than 15 characters>	PPPoE account password <blank>
resetip (r/w)(restart)	1	enable to get ipaddress, subnet, router, dns1, dns2 from DHCP server at next reboot
	0	Using preset ipaddress, subnet, router, dns1, dns2
ipaddress (r/w) (restart)	<IP address>	IP address of server <192.168.0.99>
subnet (r/w) (restart)	<IP address>	subnet mask <255.255.255.0>
router (r/w) (restart)	<IP address>	default gateway <blank>
dns1 (r/w) (restart)	<IP address>	primary DNS server <blank>
dns2 (r/w) (restart)	<IP address>	secondary DNS server <blank>
smtp1 (r/w)	<domain name or IP address, string shorter than 40 characters>	primary SMTP server <blank>

mailto1 (r/w)	<string shorter than 80 characters>	mail recipient address <blank>
mailuser1 (r/w)	<text string shorter than 63 characters>	User name of primary smtp server <blank>
mailpass1 (r/w)	<text string shorter than 15 characters>	Password of primary smtp server <blank>
smtp2 (r/w)	<domain name or IP address, string shorter than 40 characters>	secondary SMTP server <blank>
mailto2 (r/w)	<text string shorter than 80 characters>	mail recipient address <blank>
mailuser2 (r/w)	<text string shorter than 63 characters>	User name of secondary smtp server <blank>
mailpass2 (r/w)	<text string shorter than 15 characters>	Password of secondary smtp server <blank>
returnemail (r/w)	<text string shorter than 80 characters>	return email address <blank>
localftpport (r/w)	<positive number less than 65535>	FTP port <21>
ftp1 (r/w)	<domain name or IP address, string shorter than 40 characters >	primary FTP server <blank>
ftpport1 (r/w)	<positive number less than 65535>	primary FTP port <21>
ftpuser1 (r/w)	<text string shorter than 63 characters>	user name for primary FTP server <blank>
ftppass1 (r/w)	<text string shorter than 15 characters>	password for primary FTP server <blank>
ftpfolder1 (r/w)	<text string shorter than 40 characters>	upload folder in primary FTP server <blank>
ftppasvmode1 (r/w)	1 0	Enable passive mode of primary FTP server Disable passive mode of primary FTP server
ftp2 (r/w)	<domain name or IP address, string shorter than 40 characters >	secondary FTP server
ftpport2 (r/w)	<positive number less than 65535>	secondary FTP port <21>
ftpuser2	<text string shorter than	user name for secondary FTP server

(r/w)	63 characters>	<blank>
ftppass2	<text string shorter than	password for secondary FTP server
(r/w)	15 characters>	<blank>
ftpfolder2	<text string shorter than	upload folder in secondary FTP server
(r/w)	40 characters>	<blank>
ftppasvmode2	1	Enable passive mode of primary FTP server
(r/w)	0	Disable passive mode of primary FTP server
httpport	<positive number less	HTTP port
(r/w) (restart)	than 65535>	<80>
rtspport	<positive number less	RTSP port
(r/w) (restart)	than 65535>	<554>
videoport	<positive number less	video Channel port for RTP
(r)	than 65535>	<5558>
audioport	<positive number less	audio Channel port for RTP
(r)	than 65535>	<5556>
accessname	<text string shorter than	RTSP access name
(r/w)	20 characters>	<live.sdp>

Group: Wireless (restart)

ssid	<text string shorter than	SSID for wireless lan settings
(r/w)	32 characters>	<default>
wlmode	0	Infrastructure mode
(r/w)	1	Adhoc mode
txrate	"NONE", "1M", "2M",	Transmit rate in Mbps
(r/w)	"5.5M", "11M", "22M"	<Auto>
	for 802.11b+	
	"NONE", "1M", "2M",	
	"5.5M", "11M", "6M",	
	"9M", "12M", "18M",	
	"24M", "36M", "48M",	
	"54M", "Auto" for	
	802.11g	
encrypt	0	None data encryption
(r/w)	1	WEP data encryption
	2	WPA-PSK data encryption
authmode	Open	Open mode
(r/w)	Shared	Shared mode

keylength (r/w)	(**64**, 128) for 802.11g	Key length in bits <64>
keyformat (r/w)	HEX	Key1 ~ Key4 will be represented in HEX format
	ASCII	Key1 ~ Key4 will be represented in ASCII format
keyselect (r/w)	1 ~ 4	Default key number <1>
key1 (r/w)	<text string shorter than 58 characters> (depends on keyformat & keylength)	WEP key1 for encryption <0000000000>
key2 (r/w)	<text string shorter than 58 characters> (depends on keyformat & keylength)	WEP key2 for encryption <0000000000>
key3 (r/w)	<text string shorter than 58 characters> (depends on keyformat & keylength)	WEP key3 for encryption <0000000000>
key4 (r/w)	<text string shorter than 58 characters> (depends on keyformat & keylength)	WEP key4 for encryption <0000000000>
algorithm (r/w)	TKIP	TKIP data encryption algorithm for WPA-PSK
	AES	AES data encryption algorithm for WPA-PSK
presharedkey (r/w)	<text string shorter than 58 characters>	WPA-PSK key for encryption <00000000>

Group: IPFilter

NAME	VALUE	DESCRIPTION
allowstart_<0~9> (r/w)	1.0.0.0 ~ 255.255.255.255	Allowed starting RTSP connection IP address **<1.0.0.0>**
allowend_<0~9> (r/w)	1.0.0.0 ~ 255.255.255.255	Allowed ending RTSP connection IP address <255.255.255.255>
denystart_<0~9> (r/w)	1.0.0.0 ~ 255.255.255.255	Denied starting RTSP connection IP address <blank>
denyend_<0~9> (r/w)	1.0.0.0 ~ 255.255.255.255	Denied ending RTSP connection IP address <blank>

Group: **Video**

NAME	VALUE	DESCRIPTION
text (r/w)	<text string shorter than 14 characters>	enclosed caption <blank>
codectype (r/w)	0	MPEG4
	1	MJPEG
keyinterval (r/w)	1, 3, 5, 10, 30, 60, 90, 120	Key frame interval <60>
size (r)	1	half
	2	half x 2
	3	normal
	4	normal x 2
	5	double
	256	This field is obsolete (use resolution)
resolution (r/w)	176x144 (for mobile)	Video resolution 176 x 144
	160x120	Video resolution 160 x 120
	320x240	Video resolution 320 x 240
	640x480 (for computer)	Video resolution 640 x 480
color (r/w)	0	monochrome
	1	color
quality (r/w)	0	fix bit rate
	1	fix quantization
quant (r/w)	1	lowest quality of video
	2	lower quality of video
	3	normal quality of video
	4	higher quality of video
	5	highest quality of video
bitrate (r/w)	20000	set bit rate to 20K bps
	30000	set bit rate to 30K bps
	40000	set bit rate to 40K bps
	50000	set bit rate to 50K bps
	64000	set bit rate to 64K bps
	128000	set bit rate to 128K bps
	256000	set bit rate to 256K bps
	512000	set bit rate to 512K bps
	768000	set bit rate to 768K bps
	1000000	set bit rate to 1000K bps

	1500000	set bit rate to 1500K bps
	2000000	set bit rate to 2000K bps
	3000000	set bit rate to 3000K bps
	4000000	set bit rate to 4000K bps
maxframe (r/w)	1	set maximum frame rate to 1 fps
	2	set maximum frame rate to 2 fps
	3	set maximum frame rate to 3 fps
	5	set maximum frame rate to 5 fps
	10	set maximum frame rate to 10 fps
	15	set maximum frame rate to 15 fps
	20	set maximum frame rate to 20 fps
	25	set maximum frame rate to 25 fps
	30 (for 60Hz only)	set maximum frame rate to 30 fps
mode (r/w) (in CMOS version only)	50	synchronize with 50Hz utility
	60	synchronize with 60Hz utility
whitebalance (r/w) (in CMOS version only)	0	auto white balance
	1	fixed indoor(3200K)
	2	fixed fluorescent (5500K)
	3	fixed outdoor(> 5500K)
flip (r/w)	1	flip image
	0	normal image
mirror (r/w)	1	mirror image
	0	normal image
imprinttimestamp (r/w)	1	Overlay time stamp on video
	0	Do not overlay time stamp on video

Group: **Audio**

NAME	VALUE	DESCRIPTION
type (r/w)	AAC4 (for computer)	set codec to AAC
	GAMR (for mobile)	set codec to GSM-AMR
aacbitrate (r/w)	16000	set AAC bitrate to 32K bps
	32000	set AAC bitrate to 32K bps
	48000	set AAC bitrate to 32K bps
	64000	set AAC bitrate to 32K bps
	96000	set AAC bitrate to 32K bps

	128000	set AAC bitrate to 32K bps
amrbitrate (r/w)	4750	set AMR bitrate to 4.75K bps
	5150	set AMR bitrate to 5.15K bps
	5900	set AMR bitrate to 5.9K bps
	6700	set AMR bitrate to 6.7K bps
	7400	set AMR bitrate to 7.4K bps
	7950	set AMR bitrate to 7.95K bps
	10200	set AMR bitrate to 10.2K bps
	12200	set AMR bitrate to 12.2K bps
source (r/w)	0	Use line input
	1	Use external microphone input
boostmic (r/w)	0, 1	Enable microphone boost
inputgain (r/w)	0~31	Gain of input
mute (r/w)	0, 1	Enable audio mute

Group: **Image**

NAME	VALUE	DESCRIPTION
brightness (r/w)	<-5 ~ 5>	Adjust brightness of image according to mode settings. **<0>**
saturation (r/w)	<-5 ~ 5>	Adjust saturation of image according to mode settings. **<0>**
contrast (r/w)	<-5 ~ 5>	Adjust contrast of image according to mode settings. **<0>**
hue (r/w)	<-5 ~ 5>	Adjust hue of image according to mode settings. **<0>**

Group: **Motion**

NAME	VALUE	DESCRIPTION
enabled (r/w)	0	disable motion detection
	1	enable motion detection
winenabled_<0~2> (r/w)	0	disable motion window #1
	1	enable motion window #1
winname_<0~2> (r/w)	<text string shorter than 14 characters >	name of motion window #1 <blank>

winleft_<0~2> (r/w)	0 ~ 320	Left coordinate of window position. <0>
wintop_<0~2> (r/w)	0 ~ 240	Top coordinate of window position. <0>
winwidth_<0~2> (r/w)	0 ~ 320	Width of motion detection window. <0>
winheight_<0~2> (r/w)	0 ~ 240	Height of motion detection window. <0>
winobjsize_<0~2> (r/w)	0 ~ 100	Percent of motion detection window <0>
winsensitivity_<0~2> (r/w)	0 ~ 100	Sensitivity of motion detection window <0>
update (w)	*1*	Update the above motion detection settings to take effect

Group: **DDNS**

NAME	VALUE	DESCRIPTION
enable (r/w)	0, 1	Enable or disable the dynamic dns. <0>
provider (r/w)	1 ~ 6	dyndns.org (dynamic) dyndns.org (custom) tzo.com dhs.org safe100.net dyn-interfree.it <1>
hostname (r/w)	Text string shorter than 127 characters.	Your dynamic hostname. <blank>
usernameemail (r/w)	Text string shorter than 63 characters.	Your user or email to login ddns service provider <blank>
passwordkey (r/w)	Text string shorter than 20 characters.	Your password or key to login ddns service provider <blank>
update (w)	0, 1	Update the above ddns settings to take effect

Group: **UPNP**

NAME	VALUE	DESCRIPTION
enable (r/w)	0, 1	Enable or disable the UPNP presentation service. <1>

Group: **UPNPfor**

NAME	VALUE	DESCRIPTION
enable (r/w)	0, 1	Enable or disable the UPNP port forwarding service. <0>

Group: **App**

NAME	VALUE	DESCRIPTION
scriptname (r)	<text string shorter than 255 characters>	File name of script <script.vssx>
enablescript (r/w)	0	Disable script
	1	Enable script

Group: **Syslog**

NAME	VALUE	DESCRIPTION
enableremotelog (r/w)	0	disable remote log
	1	enable remote log
serverip (r/w)	<IP address>	Log server IP address
serverport (r/w)	<514>	Server port used for log

Group: CAMCTRL (For DCS-5220 series only)

NAME	VALUE	DESCRIPTION
panspeed (r/w)	-5 ~ 5	Pan speed <0>
tiltspeed (r/w)	-5 ~ 5	Tilt speed <0>
zoomspeed (r/w)	-5 ~ 5	Zoom speed <0>
autospeed (r/w)	-5 ~ 5	Auto pan speed <0>

dwelling (r/w)	0 ~ 9999	Time to dwelling when patrol <0>
presetname_<0~9> (r/w)	Text string shorter than 40 characters.	The name of preset location <blank>
presetpan_<0~9> (r/w)	-1024 ~ 1024	The pan coordinates of preset location. <0>
presettilt_<0~9> (r/w)	-56 ~ 144	The tilt coordinates of preset location. <0>
patrolname_<0~19> (r/w)	Text string shorter than 40 characters.	The name of patrol location <blank>

Application page CGI command

Note: This request requires administrator privilege.
Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/admin/gen-eventd-conf.cgi?[snapshot_enable=<value>]
[&weekday=<value>][&time_method=<value>][&begin_time=<value>]
[&end_time=<value>]
[&ss_prefix=<value>][&trigger_type=<value>]
[&md_prenum=<value>][&md_postnum=<value>][&md_delay=<value>]
[&sq_interval=<value>]
[&send_method=<value][&ftp_suffix=<value>]

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: *<length>*\r\n
\r\n
<depends on method value>
If(method == get || method == set)
{
tue=<value>\r\n
wed=<value>\r\n
…

```
}
Else if(method == normal)
{
 Application page contents
}
```

parameter	Value	description
snapshot_enable	0	Enable snapshot application
	1	Disable snapshot application
weekday	0,1,2,3,4,5,6	The array indicate weekly schedule
time_method	*always*	24 hours full day
	interval	Select begin time and end time
begin_time	*hh:mm*	Begin time of weekly schedule
end_time	*hh:mm*	End time of weekly schedule
ss_prefix	*<text string shorter than 60 characters>*	Snapshot file name prefix for both event and sequential operation
trigger_type	*motion*	Set trigger by motion detect
	sequential	Snapshot sequentially
md_win	*0,1,2*	The array indicate which motion windows are used
md_prenum	*1~5*	The numbers of snapshot before event
md_postnum	*1~5*	The numbers of snapshot after event
md_delay	*1~999*	The delay seconds for detecting next motion event
sq_interval	*1~999*	The interval seconds of sequential snapshot
send_method	*mail*	Send snapshot by mail
	ftp	Send snapshot by ftp
ftp_suffix	*0/1*	Enable/Disable file name prefix

Capture single snapshot

Note: This request require normal user privilege
Method: GET/POST

Syntax:

http://*<servername>*/cgi-bin/video.jpg

Server will return the most up-to-date snapshot in JPEG format. The size and quality of image will be set according to the video settings on the server.

Return:

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

<binary JPEG image data>

Account management

Note: This request requires administrator privilege
Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/admin/editaccount.cgi?
method=<value>&username=<*name*>[&userpass=<*value*>][&privilege=<*value*>]
[&privilege=<value>][…][&return=<*return page*>]

parameter	value	Description
method	add	Add an account to server. When using this method, "username" field is necessary. It will use default value of other fields if not specified.
	delete	Remove an account from server. When using this method, "username" field is necessary, and others are ignored.
	edit	Modify the account password and privilege. When using this method, "username" field is necessary, and other fields are optional. If not specified, it will keep original settings.
username	<name>	The name of user to add, delete or edit
userpass	<value>	The password of new user to add or that of old user to modify. The default value is an empty string.

privilege	\<value\>	The privilege of user to add or to modify. The privilege can be the addition of the following values. Ex: A user with configure access can be assigned privilege as **privilege=conf**.
	conf	configuration privilege
return	\<return page\>	Redirect to the page *\<return page\>* after the parameter is assigned*.* The *\<return page\>* can be a full URL path or relative path according the the current path. If you omit this parameter, it will redirect to an empty page.

System logs

Note: This request require administrator privilege
Method: GET/POST

Syntax:

http://*\<servername\>*/cgi-bin/admin/syslog.cgi

Server will return the up-to-date system log.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: \<syslog length\>\r\n
\r\n
\<system log information\>\r\n

Configuration file

Note: This request requires administrator privilege
Method: GET/POST

Syntax:

http://*\<servername\>*/cgi-bin/admin/configfile.cgi

Server will return the up-to-date configuration file.

Return:

HTTP/1.0 200 OK\r\n
Content-Type: text/plain\r\n
Content-Length: <configuration file length>\r\n
\r\n
<configuration data>\r\n

Upgrade firmware

Note: This request requires administrator privilege
Method: POST

Syntax:

http://<*servername*>/cgi-bin/admin/upgrade.cgi

Post data:

fimage=<file name>[&return=<return page>]\r\n
\r\n
<multipart encoded form data>

Server will accept the upload file named <file name> to be upgraded the firmware and return with <return page> if indicated.

Camera Control (For DCS-5220 series only)

Note: This request requires camera control access privilege
Method: GET/POST

Syntax:

http://<*servername*>/cgi-bin/camctrl.cgi? [move=<value>][&focus=<value>]
[&iris=<value>][&speedpan=<value>][&speedtilt=<value>][&speedzoom=<value>]
[&speedapp=<value>][&auto=<value>][&zoom=<value>][&return=<*return page*>]

parameter	value	description

move	home	Move to camera to home position
	up	Move camera up
	down	Move camera down
	left	Move camera left
	right	Move camera right
speedpan	-5 ~ 5	Set the pan speed
speedtilt	-5 ~ 5	Set the tilt speed
speedzoom	-5 ~ 5	Set the zoom speed
speedapp	-5 ~ 5	Set the auto pan/patrol speed
auto	pan	Auto pan
	patrol	Auto patrol
	stop	Stop camera
zoom	wide	To zoom for larger view with current speed
	tele	To zoom for farer view with current speed
focus	auto	To do auto focus
	far	To focus on farer distance
	stop	To focus on nearer distance
iris	auto	Let the Network Camera control iris size
	open	Manually control the iris for bigger size
	stop	Manually control the iris for smaller size
return	<return page>	Redirect to the page <return page> after the parameter is assigned. The <return page> can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.

Recall (For DCS-5220 series only)

Note: This request requires camera control access privilege
Method: GET

Syntax:

http://<servername>/cgi-bin/recall.cgi?
recall=<value>[&return=<return page>]

parameter	value	description
recall	Text string less than 30 characters	One of the present positions to recall.
return	*<return page>*	Redirect to the page *<return page>* after the parameter is assigned. The *<return page>* can be a full URL path or relative path according to the current path. If you omit this parameter, it will redirect to an empty page.