Avadesign

DP104 API

v1.01

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Table of Contents

HTTP Request

Feature

1. Shell script CGI with extension name **.ncgi**
2. Embedded C language CGI in HTTP plugin
3. Response in JSON format except for stream request

Content-type: application/json\r\n\r\n

{“value”:”xxx”}

Limitation

1. Only support GET method
2. Request string is case sensitive

Request Format

From Browser

http://server:port + **Resuest String**
Example: http://192.168.100.1:80/video.cgi

From Socket

GET **Request String** HTTP/1.1\r\n\r\n
Example: GET /video.cgi HTTP/1.1\r\n\r\n

Response Header

Response Content-Type depends on request type

HTTP/1.1 200 OK\r\n
Proxy-Connection: Keep-Alive\r\n
Connection: Close\r\n
Server: avadesign\r\n

Cache-Control: no-store, no-cache, must-revalidate, pre-check=0, post-check=0, max-age=0\r\n
Pragma: no-cache\r\n
Expires: 0\r\n

Video (MJPG)

To request MJPG

To request continuous MJPG

Request String
/video.cgi

Available Parameter List

Name	Value	Description
identify_key	Integer	Key to identify different connection
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)
from_file	0 or 1	Play video stream from live or file 0: Live, 1: File

Response

Content-Type: multipart/x-mixed-replace;boundary=videoboundary\r\n\r\n

--videoboundary\r\n\r\n

Content-Type: image/jpeg\r\n
Content-Length: xxxxx\r\n\r\n

JPEG Data

Example
/video.cgi?identify_key=12345678&pipe=0

To get one still image

Request String
/image.cgi

Available Parameter List

Name	Value	Description
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)

Response

Content-Type: image/jpeg\r\n
Content-Length: xxxxx\r\n\r\n

JPEG Data

Audio

Download Audio Stream (PCM)

Request String
/server.audio
Available Parameter List

Name	Value	Description
type	pcm	Specified desired audio type to return in pcm

Response

Content-Type: audio/wav\r\n

Content-Length: xxxxx\r\n\r\n

PCM Data

Upload Audio Stream (PCM)

Request String
/audio.input
Attached Request Data

Host: xxx.xxx.xxx.xxx\r\n
Content-Type: audio/wav\r\n
Content-Length: xxxxx\r\n\r\n

PCM Data

Video Parameter

To set resolution

Request String

/server.command?command=set_resol

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)
value	0~3	Available option depends on connected sensor 0: QVGA (320x240) 1: VGA (640x480) 2: 720p (1080x720) 3: 1080p (1920x1080)
width	Integer	Width
height	Integer	Height

Response

Content-type: application/json\r\n\r\n

{“value”:”1”}

Example

/server.command?command=set_resol&type=jpeg&pipe=0&value=0

/server.command?command=set_resol&type=h264&pipe=0&width=640&height=480

To get resolution

Request String

/server.command?command=get_resol

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)

Return Value

Name	Value	Description
value	0~3	Available option depends on connected sensor 0: QVGA (320x240) 1: VGA (640x480)

2: 720p (1080x720)

3: 1080p (1920x1080)

To set encode quality -disable

Request String

/server.command?command=set_quality

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)
value	1 (best) ~ 15 (worst)	Encode quality

Return Value

Name	Value	Description
value	0	0 for success

To get encode quality -disable

Request String

/server.command?command=get_quality

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)

Return Value

Name	Value	Description
value	1 ~ 15 for JPEG 1 ~ 52 for H.264	1 (best) ~ 15 (worst) 1 (best) ~ 52 (worst)

To set encode bitrate

Request String

/server.command?command=set_enc_bitrate

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)
value	Integer	In Kbps

Return Value

Name	Value	Description
value	0	0 for success

To get encode bitrate

Request String
/server.command?command=get_enc_bitrate
Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)

Return Value

Name	Value	Description
value	Integer	In Kbps

To set max FPS

Request String
/server.command?command=set_max_fps
Available Parameter List

Name	Value	Description
port	0~1	Specify video port index
value	1 ~ 30	Desired maximum input frame rate

Return Value

Name	Value	Description
value	0	0 for success

To get max FPS

Request String
/server.command?command=get_max_fps
Available Parameter List

Name	Value	Description
port	0~1	Specify video port index

Return Value

Name	Value	Description
value	1 ~ 30	Current maximum input frame rate

To get brightness

Request String

/server.command?command=get_birghtness

Available Parameter List

Name	Value	Description
port	0~1	Specify video port index
value	Integer	Current brightness value of sensor and actual range depends on sensor

To increase brightness

Request String

/server.command?command=plus_birghtness

Available Parameter List

Name	Value	Description
port	0~1	Specify video port index

Return Value

Name	Value	Description
value	0	0 for success

To decrease brightness

Request String

/server.command?command=minus_birghtness

Available Parameter List

Name	Value	Description
port	0~1	Specify video port index

Return Value

Name	Value	Description
value	0	0 for success

To get contrast

Request String

/server.command?command=get_contrast

Available Parameter List

Name	Value	Description
port	0~1	Specify video port index

Return Value

Name	Value	Description
value	Integer	Current contrast value of sensor and actual range depends on sensor

To increase contrast

Request String

/server.command?command=plus_contrast

Available Parameter List

Name	Value	Description
port	0~1	Specify video port index

Return Value

Name	Value	Description
value	0	0 for success

To decrease contrast

Request String

/server.command?command=minus_contrast

Available Parameter List

Name	Value	Description
port	0~1	Specify video port index

Return Value

Name	Value	Description
value	0	0 for success

To set H.264 group of picture (GOP)

Request String

/server.command?command=set_enc_gop

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)
value	1 ~ 30	Output I frame count per second

Return Value

Name	Value	Description
value	0	0 for success

To get H.264 group of picture (GOP)

Request String

/server.command?command=get_enc_gop

Available Parameter List

Name	Value	Description

type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)

Return Value

Name	Value	Description
value	1 ~ 30	Current GOP configuration

To force H.264 encode I-Frame

Request String

/server.command?command=force_i_frame

Available Parameter List

Name	Value	Description
value	0 or 1	Pipe index

Return Value

Name	Value	Description
value	0	0: Success

Audio Parameter

Mute/Unmute

Request String

/server.command?command=enable_mute

Available Parameter List

Name	Value	Description
value	0 or 1	0: Unmute, 1: Mute

Return Value

Name	Value	Description
value	0	0: Success

Information

To get connection count of HTTP video viewer

Request String

/server.command?command=get_conn

Return Value

Name	Value	Description
value	0~n	Current viewer count of **HTTP** connection

To get transfer bitrate of current video stream

Request String
/server.command?command=get_tran_bitrate

Name	Value	Description
identify_key	Integer	Key to identify different connection

Return Value

Name	Value	Description
value	Integer	Current video transfer bitrate of specified **HTTP** connection

To get transfer FPS of current video stream

Request String
/server.command?command=get_fps
Available Parameter List

Name	Value	Description
identify_key	Integer	Key to identify different connection

Return Value

Name	Value	Description
value	1 ~ 30	Current video transfer FPS of specified **HTTP** connection

To check available storage

Request String
/server.command?command=check_storage
Return Value

Name	Value	Description
value	0 or 1	0: No storage, 1: Has storage

Record

Check recorder status

Request String
/server.command?command=is_recording
Return Value

Name	Value	Description
value	0 or 1	0: Idle, 1: Recording

Start record by default configuration

Request String

/server.command?command=start_record

Return Value

Name	Value	Description
value	0	0: Success

Start record with specified pipe

Request String

/server.command?command=start_record_pipe

Available Parameter List

Name	Value	Description
type	jpeg or h264	Specify video type
pipe	0~3	Specify pipe index (Maximum is 3 but it depends on actual configuration)

Return Value

Name	Value	Description
value	0	0: Success

Stop record

Request String

/server.command?command=stop_record

Return Value

Name	Value	Description
value	0	0: Success

List all Ethernet network parameters

Request String

/param.cgi?action=list&group=Ethernet

Return Value

Name	Value	Description
DEVICE	eth0 or ppp0	Ethernet or PPPoE
BOOTPROTO	STATIC or DHCP	Boot protocol
IPADDR	xxx.xxx.xxx.xxx	IP address
GATEWAY	xxx.xxx.xxx.xxx	Gateway
USER	String	PPPoE username
PASSWD	String	PPPoE password

Example Response Data

{"DEVICE": "eth0", "BOOTPROTO": "DHCP", "IPADDR": "192.168.100.1", "GATEWAY": "192.168.100.1", "USER": "", "PASSWD": ""}

Update Ethernet network parameters

Request String

/param.cgi?action=update&group=ethernet

Available Parameter List

Name	Value	Description
DEVICE	eth0 or ppp0	Ethernet or PPPoE
BOOTPROTO	STATIC or DHCP	Boot protocol
IPADDR	xxx.xxx.xxx.xxx	IP address
GATEWAY	xxx.xxx.xxx.xxx	Gateway
USER	String	PPPoE username
PASSWD	String	PPPoE password

Return Value

Name	Value	Description
value	0	0: Success

Example Request String

/param.cgi?action=update&group=ethernet&DEVICE=eth0&BOOTPROTO=DHCP

System

Reboot System

Request String

/restart.cgi

RTSP

Motion JPEG

Default RTSP port is 554
rtsp://server:port/cam1/mpeg4

H.264

Default RTSP port is 554
rtsp://server:port/cam1/h264

Revision History

Version	Date	Change Log
v1.01	Dec. 18, 2014	Update command
v1.00	Dec. 11, 2014	Created