Panasonic

External Control Interface – user's manual

Ver 1.00

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Panasonic System Networks Co., Ltd.

AV Systems Business Unit

Contents

1. Introduction

1.1. Purpose of this manual

This manual is written about the external control interface function for the HD visual communication unit (Referred to as "HDVC" hereinafter) Ver 4.20.

1.2. Writing materials

There are no writing materials to refer.

Writing Name	Version	File Link	Note

1.3. Products

There are VC1300 and VC1600.

1.4. Sharing information

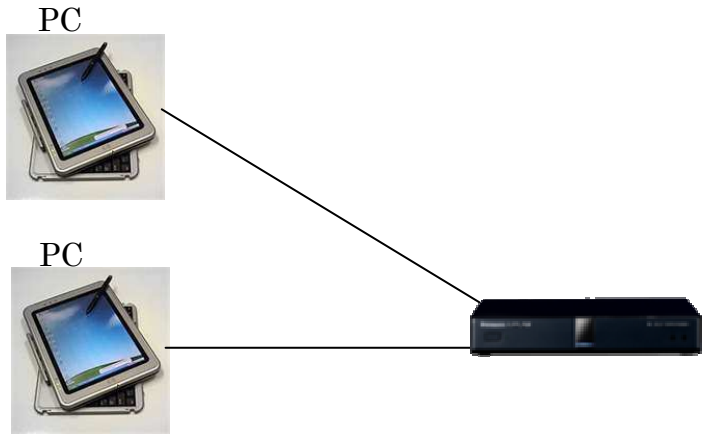
PSN & a person who is permitted to share by PSN Only.

2. External control outline

2.1. System construction

On the external control interface, it is possible to acquire the HDVC status or control HDVC with PC which is loaded the exclusive application. This function is connected via IP.

When you use this function, you need to open the HDVC's port with CLI beforehand.



2.2. Function's mapping

The external control interface's function exist 2 main functions.

・CLI executive function(CLI executive function is the command line interface. The function operates HDVC by carrying out CLI via network.)

・Remote control emulation function(The function emulates remote control operation)

CLI executive function is a function operates HDVC with using commands. Remote control emulation function is a function emulates each remote control button with GUI mode, and activates it as same as a remote control.

Different functions are available depends on HDVC activation mode. HDVC activation modes are as follows. See the Chapter 4 for detail.

・GUI mode：mode which can operate GUI by a remote control.

・PC mode ：mode which mainly carries out the external control interface command.
(Cannot use a remote control)

ex) Remote control emulation is possible to use with GUI mode only.

3. Preparation for the external control interface function (CLI)

To use this function, the following confirmations/settings are needed with CLI beforehand. See the manual (Settings) for PC settings with using CLI. In addition, when you use this function, port 80 is opened which need to be careful on the security. Regarding necessary items settings except following contents, see user's guide (settings) and set up with a remote control on GUI mode.

(1) Mode setting confirmation for using the external control interface.

Carry out ">confui get", in case 0(=CLI)/1(=GUI)/2(=PC) doesn't set up necessary mode, execute necessary mode setting as follows.

> confui set 1 : use on GUI mode

> confui set 2 : use on PC mode

(2) Confirmation for the connection mode setting.

Carry out ">connectmode get", set up the following command if "0 (IP mode) / 1 (NGN mode) / 2 (Nat Traversal Service mode) " are not set up. (Below is an example)

> connectmode set 0

*NGN mode is for Japan only.

(3) Confirmation for the standby mode setting.

Carry out "> standbyinfo get", and the following command if it is chosen except "timeout 0".

> standbyinfo set timeout 0

(4) Setting for the auto answer.

Carry out "> incoming get", set up the following command if it is chosen except " 0 (manual answer) / 1 (Auto answer) ".

> incoming set 1(or 0)

(5) Confirmation for the Call Limit time setting.

Carry out "> duration get", and the following command if it is chosen except "limit 0".

> duration set limit 0

(6) HTTP default access propriety setting

Carry out "> httpenable get", and the following command if it is chosen except "1".

> httpenable set defenable 1

(7) Setting for current day and time.

Carry out "> date get", set up right time if there is wrong information.

> date set *YYYY-MM-DD*T*hh:mm:ss* (YYYY:Year, MM:Month, DD:Day, hh:Hour, mm:Minute, ss:Second)

(8) Network settings

*When you change the network setting, you need to carry out "service stop" beforehand.

(8)-1. IP mode

*In case setting is done by the GUI mode, confirm whether set it up right or not.

Carry out "> network get auto", confirm the network setting. (0: Manual / 1:Auto)

1) When you set up the network setting (0:Manual), carry out the following commands.

> network set auto 0

> network set ip ***VALUE***

> network set netmask ***VALUE***

> network set gw ***VALUE***

> dns set auto 0

> dns set primary ***VALUE***

> dns set secondary ***VALUE***

2) When you set up the network setting (1:Auto), carry out the following commands.

> network set auto 1

> dns set auto < 0 or 1 >

When you set up (0:manual) at the dns,

> dns set primary ***VALUE***

> dns set secondary ***VALUE***

(8)-2. Nat Traversal Service mode

*In case setting is done by the GUI mode, confirm whether set it up right or not.

Carry out "> natnetwork get auto", confirm the network setting. (0:Manual / 1:Auto)

1) When you set up the network setting (0:Manual), carry out the following commands.

> natnetwork set auto 0

> natnetwork set ip ***VALUE***

> natnetwork set netmask ***VALUE***

> natnetwork set gw ***VALUE***

> natwanport set auto < 0 or 1 >

When you set up (0:manual) at the natwanport,

> natwanport set [artp1 ***VALUE***] [artp2 ***VALUE***] [artp3 ***VALUE***]
[artcp1 ***VALUE***] [artcp2 ***VALUE***] [artcp3 ***VALUE***]
[vrtp1 ***VALUE***] [vrtp2 ***VALUE***] [vrtp3 ***VALUE***]
[vrtcp1 ***VALUE***] [vrtcp2 ***VALUE***] [vrtcp3 ***VALUE***]}

> natdns set auto 0

> natdns set primary ***VALUE***

> natdns set secondary ***VALUE***

2) When you set up the network setting (1:Auto), carry out the following commands.

> natnetwork set auto 1

> natdns set auto < 0 or 1 >

When you set up (0:manual) at the natdns,

> natdns set primary ***VALUE***

> natdns set secondary ***VALUE***

> natwanport set auto 1

(9) Setting for device name.

Carry out "> devinfo get name", and the following command if it is set up right names.

> devinfo set name *VALUE*

(10) Touch panel login password setting (to change)

Carry out "> tpcpasswd set *VALUE*", change the password.

* When it is set up a default password, change to unpredictable password.

(11) Setting for the initial setting

(11)-1. IP mode

Carry out "> initstate get", and the following command if it is chosen except "1" or "4".

> initstate set <1 or 4>

(1: IP mode network setting is done,

4: IP/Nat Traversal Service mode settings are all done)

*NGN mode is for Japan only.

(11)-2. Nat Traversal Service mode、IP/NAT Traversal Mode

Carry out "> initstate get", and the following command if it is chosen except 3 or 4.

> initstate set <3 or 4>

(3: Nat Traversal Service mode network setting is done,

4: IP／Nat Traversal Service mode setting are done.)

(12) Save the setting value

After above settings are done,

Carry out "> syssave".

When you are all done, reboot the unit.

4. Management method

4.1. Judge the command propriety

When HDVC activate GUI mode, All CLI command and Remote control emulation are available.
If you use external IF in GUI mode, Limitation are exist. Refer 9 about limitation.
When HDVC activate PC mode, All CLI command without remote control emulation are available.

4.2. CGI parameter

4.2.1. Format

It basically sends CLI command as a character string includes parameter by POST method from PC application. However, it is used GET method for downloading log files.
Format for POST data is shown as below.
Character code for POST data is the UTF-8.
See chapter 12 for the HTTP sample.

POST DATA FORMAT

No.	Content	Identified Character	Explanation
1	Command character	cgicmd	Character strings for the CLI command and the parameter. Combine an identified character and a command with "=" such as "cgicmd=curlayout".

4.2.2. Example for the POST character strings

It shows POST character strings' example.

① Command
"curlayout get"
↓
② POST character strings
cgicmd=**curlayout get**

4.3. CGI execution result

4.3.1. Format

CLI command execution result outputs as a XML 1.0 text information.

XML data character is the UTF-8.

Return code which is included to command retrieve value becomes the LF (0x0A).

XML format of using CGI execution result is shown on below chart.

XML Format

No.	Item/Name	Classification	Explanation
1	Total conclusion	Element	Element name is “returns” as a fixed character. When several command results are shown, it is surely inserted as a total conclusion.
2	CGI result	Element	Element name is “cgireturn” as a fixed character.
2.1	Return value	Element	Element name is “ret” as a fixed character. Return the CGI execution parameter irregulation or the CGI internal error. Since it is returned except [0:normal], the command execution result is not guaranteed which should not refer the PC application.
3.1	CLI command execution result(1)	Element	Element name is “cmdreturn” as a fixed character
3.1.1	CLI command(1)	Attribute	Attribute name is “param” as a fixed character.
		Attribute Value	CLI command (1)’s command name and parameter in execution.
3.1.2	CLI command(1) return value	Element	Element name is “ret” as a fixed character.
		Value	CLI command (1) return value. Character is the decimal notation.
3.1.3	CLI command(1) retrieve value	Element	Element name is “val” as a fixed character.
		Value	CLI command(1) retrieve value. Command which does not have a retrieve value exist the element, and shows a blank.
:		:	:
3.n	CLI command execution result(n)	Element	Element name is “cmdreturn” as a fixed character.
3.n.1	CLI command (n)	Attribute	Attribute name is “param” as a fixed character.
		Attribute Value	CLI command (n)’s command name and the parameter in execution.
3.n.2	CLI command(n) return value	Element	Element name is “ret” as a fixed character.
		Value	CLI command (n)’s return value. Character is the decimal notation.
3.n.3	CLI command(n) retrieve value	Element	Element name is “val” as a fixed character.
		Value	CLI command(n) retrieve value. Command which does not have a retrieve value exist the element, and shows a blank.

Note） In case of regular polling, several execution results are returned for a command execution.

4.3.2. Special character strings conversion

Special character in XML converts a based on XML1.0 regulations. Character string in the execution result XML converts a based on the XML regulations. It is avoid collapsing XML format which is included command execution result output's character strings. PC application can convert to the displayed character with using normal XML library. Conversion characters are shown on the below chart.

Examples for the Conversion Character

No.	Displayed character	Notation on the XML
1	<	<
2	>	>
3	&	&

4.3.3. XML data example

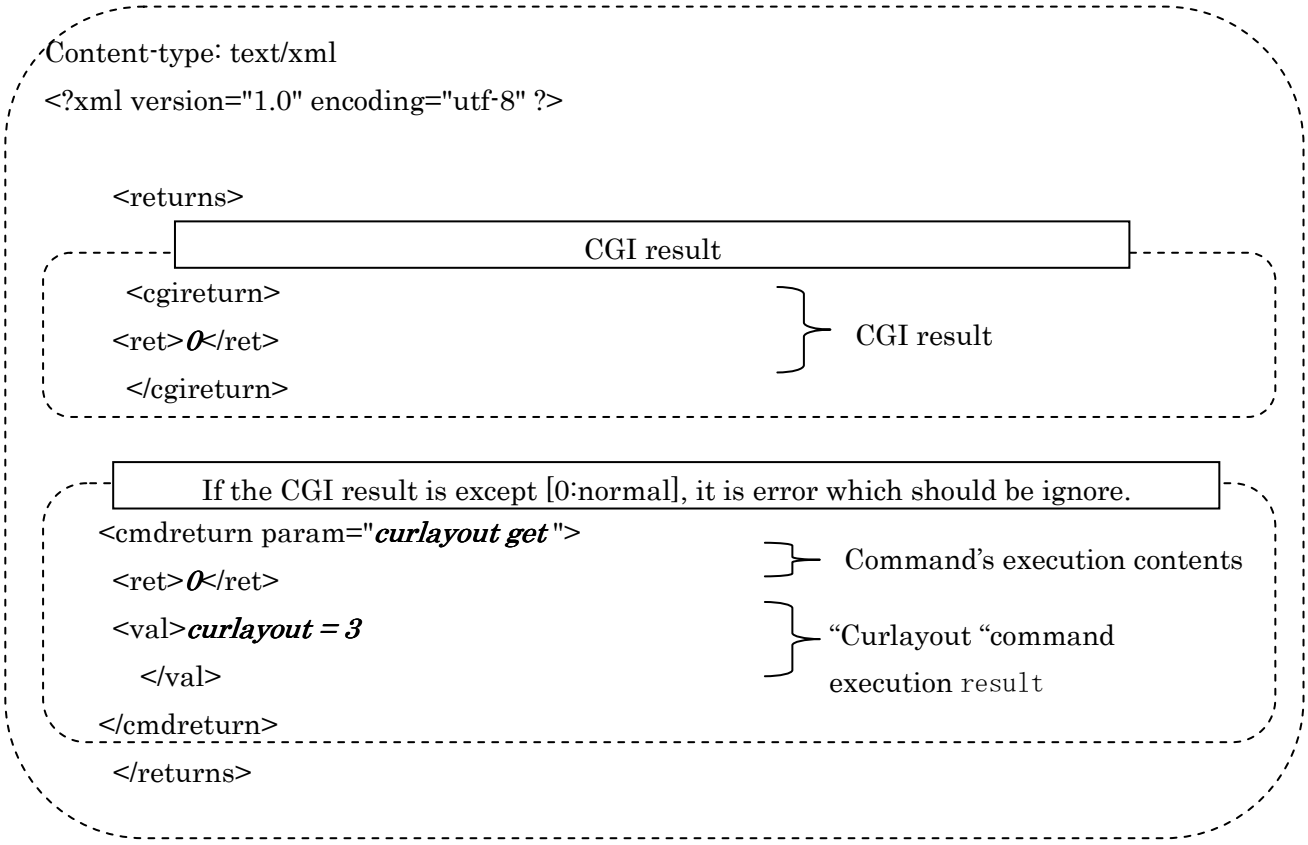
It is shown the XML data example.

1) Command

Carry out the following command by CGI.

・"curlayout get"

2) CGI execution result



4.4. Authentication method

Authentication is used the digest authentication method.

When it required CGI execution to a unit from PC application, it returns the response code “401”with the digest authentication method from unit HTTP server to PC application which requires the authentication, therefore PC application need to send account and password. Account and password are used as same as login.

In addition, the digest authentication is different from login, it is used for every CGI execution.

（1）In case of digest authentication is successful

For the authentication requirement from a unit, CLI command are possible to use when PC sends right account and password and success to certified.

Unit CGI outputs as the CGI execution result for the CLI command execution result.

（2）In case of digest authentication is failed

“401” is returned as a response code when wrong account or password were sent, or were not sent anything during the authentication requirement from a unit.

4.5. CGI program

It carries out with sending CGI execution parameter as necessary to the following URL from PC application.

URL is shown as follows.

http:// unit IP address/(cgi program name)

Unit CGI cgi program name is shown as follows. It needs to be careful that only download file uses “get”.

No.	Operation	URL(CGI Program)	Method	Note
1	Login	pcLogin.cgi	POST	
2	Logout	pcLogout.cgi	POST	
3	(periodic retrieve)	pcPollInfo.cgi	POST	Out of the external control interface specification (reference)See chapter 11.
4	Various commands	pcCmdExec.cgi	POST	
5	Contact List download	pcDlAddr.cgi	GET	
6	Call history download	pcDlLog.cgi	GET	classification : cnf
7	Fault log download	pcDlLog.cgi	GET	classification : alm
8	Administration log download	pcDlLog.cgi	GET	classification : ope
9	Operation log download	pcDlLog.cgi	GET	classification : inf
10	One lump data download	pcDlLogAll.cgi	GET	
11	Address book upload	pcUlAddr.cgi	POST	
12	Configuration data	pcUlXml.cgi	POST	
13	Profile upload	pcUlProfile.cgi	POST	
14	Encryption data upload	pcUlSecConf.cgi	POST	

4.6. HTTP response / Management result

When this CGI carried out, the following HTTP responses are replied.

Factor	HTTP status
Success	200
Fail to certificate	403
Non-login	551
Login to another system	552
Session timeout	553
Fail to get IP address at unit side	554
Busy call, and so on	561
Upload file failure, etc.	562
Request error （uploaded request style failure）	571
Size error (uploaded file size failure)	572
Internal error	500

*From 551 to 572 is used in download or upload only.

In addition, on each external control interface command which is for upload or except upload, management result is returned by the XML as a CGI execution result except HTTP response. Management result list is shown on below chart.

Value	Meaning	Explanation/Handling
0	Normal end	
1000	Management mode error	It is returned when the unit management mode does not set up the PC mode. Confirm unit setting value.
1001	Environment variable retrieve failure	It is returned when the environment variable at the unit CGI side（certified account/password, PC IP address, etc.）does not acquire. It is possible to have a trouble on the unit.
1002	CGI execution requirement PC does not login	It is returned when various command CGI carried out before carry out the CGI login. Confirm whether the login CGI carries out, or CGI execution result has a failure.
1003	Number of Login failure	It is returned when it carries out the login CGI with 2 PCs, carry out the login CGI or logout CGI from different IP's PC within 30 seconds. Confirm whether other PC logins or not.
1004	Session timeout	It is returned when the CGI does not carry out more than 30 seconds after login. Confirm whether various command CGIs（especially, regular management command） does not carry out more than 30 seconds.
2000	POST data size failure	It is returned the Content-Length header value is set except number value or isn't set anything. Confirm the value which is set on the Content-Length header.
2001	POST data size failure	It is returned when the Content-Length header value exceed. Confirm the set value to the Content-Length header.
2002	POST data retrieve failure	It is returned when a unit could not acquire the CGI execution parameter. Confirm whether the CGI execution parameter is set.
3000	CLI command error (not permitted command)	It is returned when commands which do not correspond to this interface are sent as a CGI execution parameter. Confirm whether corresponded command is set to the CGI execution parameter.
3001	CLI command execution command failure	It is returned when the CLI command could not carry out. Confirm whether corresponded command is set include parameter to the CGI execution parameter.
4000	Response size failure	It is returned when the CGI execution result output failed. It might have a failure on the unit.
9999	Other failures	It is returned when some errors can not specify from 1000 to 3001. It might have a failure on the unit.

4.7. Error during command execution

In case error occurred during command execution, this code is set up on XML. It shows error during command execution as follows.

Value(DEC)	Value(HEX)	Meaning	Explanation/Procedure
2147487745 2147487747 2147487753 2147487754 2147487755 2147487756 2147487757 2147487758	80001001 80001003 80001009 8000100A 8000100B 8000100C 8000100D 8000100E	Fatal error	Fatal error occurs at inside. System reset is necessary.
2147487746	80001002	Wrong parameter	Execution parameter has an error.
2147487748	80001004	No existing command	The command is not existing
2147487749	80001005	Command unavailable	There is not able to executive the command under condition. Confirm condition and try again.
2147487750	80001006	No access permission	It is not permitted to access specified command.
2147487759	8000100F	Not executable	The command is not supported.
2147487760	80001010	It is not activated	Need activation for carrying out the function
2147487761	80001011	Not executable on this model	This model does not support this command.
2147491841	80002001	Video source duplication	Specified video source is in use
2147491843	80002003	Session change is impossible.	Session change notice failed.
2147491845	80002005	Not SIP registered	It has not registered SIP yet.
2147491846	80002006	Site addition failure	Addition of another site is failed.
2147491847	80002007	License port over	The number of licenses port exceeds.
2147491851	8000200B	Network disconnect	Network disconnected
2147491852	8000200C	Wrong address (own IP)	It is calling to own unit.
2147491853	8000200D	Address duplication	Multipoint call address is duplicated.
2147491854	8000200E	Wrong bandwidth	Specified bandwidth has an error.
2147491855	8000200F	Not get domain name	It has not gotten domain name.
2147491859	80002013	Entry restriction of profile	Not connected due to entry restriction of profile.
2147491860	80002014	Wrong address	Address is wrong
2147491861	80002015	Sending content of single stream is not available	Content sharing by single stream is not available during dual stream.

4.8. Command list

Chapter & Section		Command name	-Ver4.15	Ver4.20	Ver4.25 Ver4.30
6 CLI commands					
6.1 Get commands					
6.1.1	Unit version retrieve	version	✔	✔	✔
6.1.2	Firmware ID retrieve	fdlfwid	✔	N/A	✔
6.1.3	Current value of connection mode retrieve	curconnectmode	✔	✔	✔
6.1.4	Incoming call setting retrieve	incoming	✔	✔	✔
6.1.5	Forced-reply setting retrieve	guiforcereply	✔	N/A	✔
6.1.6	NAT Traversal Service information retrieve	natsrv	✔	✔	✔
6.1.7	Conference Profile retrieve	profile	✔	✔	✔
6.1.8	Contents share information retrieve	changecontent	✔	✔	✔
6.1.9	AV connection state retrieve	avstate	✔	✔	✔
6.1.10	Screen layout information retrieve	curlayout	✔	✔	✔
6.1.11	PinP status retrieve	displaypip	✔	✔	✔
6.1.12	Master sound volume retrieve	mastervol	✔	✔	✔
6.1.13	Microphone state retrieve	micstate	✔	✔	✔
6.1.14	System management state retrieve	state	✔	✔	✔
6.1.15	Collect conference information	confinfo	✔	✔	✔
6.1.16	Confirmation for the camera control propriety (Collect each function)	camerastate	✔	✔	✔
6.1.17	Confirmation for the camera control propriety (Collect all functions in once)	camerastate	✔	✔	✔
6.1.18	Aspect ratio retrieve	aspect	✔	✔	✔
6.1.19	CPn retrieve	cpnlayout	✔	✔	✔
6.1.20	Site name display status retrieve	sitename	✔	✔	✔
6.1.21	Audio mixture status retrieve	audiofmute	✔	✔	✔
6.1.22	Specified site for audio mixture retrieve	audiomixsite	N/A	N/A	✔
6.1.23	MCU operation mode retrieve	mcumode	N/A	N/A	✔
6.1.24	Statics information retrieve	statinfo	✔	✔	✔
6.1.25	Static information retrieve： sub stream	dualstatinfo	✔	✔	✔
6.1.26	Standby state retrieve	standbystate	✔	✔	✔
6.1.27	Communicating encoder information retrieve	videoencodeinfo	✔	✔	✔
6.1.28	Activation Information retrieve	actinfo	N/A	N/A	✔
6.1.29	IPv4 address of LAN1 retrieve	curnetwork	N/A	N/A	✔
6.1.30	IPv4 address of LAN2 retrieve	network2	N/A	N/A	✔
6.1.31	IPv6 address of LAN1 retrieve	curv6network	N/A	N/A	✔
6.1.32	IPv6 address of LAN2 retrieve	cruv6network2	N/A	N/A	✔
6.1.33	IPv4 DNS retrieve	curdns	N/A	N/A	✔
6.1.34	IPv6 DNS retrieve	v6dns	N/A	N/A	✔
6.1.35	Network status of LAN1 retrieve	nwstate	N/A	N/A	✔
6.1.36	Network status of LAN2 retrieve	nwstate2	N/A	N/A	✔
6.1.37	IP address of WAN retrieve	curwanip	N/A	N/A	✔
6.2 Setting commands					
6.2.1	Layout Settings	layout	✔	✔	✔
6.2.2	Master volume settings	mastervol	✔	✔	✔
6.2.3	Microphone mute settings	mictoggle	✔	✔	✔
6.2.4	Main stream image exchange	changemainstream	✔	✔	✔
6.2.5	Contents sharing starts/changes/ends	changecontent	✔	✔	✔
6.2.6	PinP setting	displaypip	✔	✔	✔

6.2.7	CPn setting	cpnlayout	✔	✔	✔
6.2.8	Site name display setting	sitename	✔	✔	✔
6.2.9	Audio mixture setting	audiofmute	✔	✔	✔
6.2.10	Specified site for audio mixture setting	audiomixsite	N/A	N/A	✔
6.2.11	Specified position setting	profilesitesel	N/A	N/A	✔
6.2.12	MCU operation mode setting	mcumode	N/A	N/A	✔
6.2.13	Aspect ratio settings	aspect	✔	✔	✔
6.2.14	Profile setting	profile	✔	✔	✔
6.2.15	Main display exchange	mainmember	✔	✔	✔
6.2.16	System reset	sysreset	✔	✔	✔
6.2.17	System stop(Power off)	sysstop	✔	✔	✔
6.3 Commands for Camera control					
6.3.1	Pan tilt control	cameramove	✔	✔	✔
6.3.2	Zoom control	camerazoom	✔	✔	✔
6.3.3	Recalling registered preset	camerapresetcall	✔	✔	✔
6.3.4	Preset registration	camerapresetstore	✔	✔	✔
6.3.5	Temporarily prohibition for camera control from other site	cameraoccupy	✔	✔	✔
6.3.6	Camera setting instruction	cameracecinfo	✔	✔	✔
6.3.7	Focus mode setting	camerafocusmode	✔	✔	✔
6.3.8	Focus position setting	camerafocusarea	✔	✔	✔
6.3.9	Focus level adjustment	camerafocuslevel	✔	✔	✔
6.3.10	White balance setting	camerawbalance	✔	✔	✔
6.3.11	Brightness mode setting	camerabrightmode	✔	✔	✔
6.3.12	Brightness level setting	camerabrightlevel	✔	✔	✔
6.3.13	Backlight repair Setting	camerabacklight	✔	✔	✔
6.3.14	Digital zoom setting	cameradigzoom	✔	✔	✔
6.3.15	Trimming zoom setting	camerapinp	✔	✔	✔
6.3.16	Flicker setting	cameraflicker	✔	✔	✔
6.3.17	Camera setting value acquirement	camerainfo	✔	✔	✔
6.3.18	Camera initialization	camerainit	✔	✔	✔
6.4 Commands for communication					
6.4.1	Start conference, Add terminal	invitemember	✔	✔	✔
6.4.2	End conference, Leave terminal	dropmember	✔	✔	✔
6.4.3	Connection response	invitememrsp	✔	✔	✔
6.4.4	DTMF sending	senddtmf	✔	✔	✔
6.4.5	Session ID acquirement	callsessionid	✔	✔	✔
7 Remote control emulation					
	Remote control emulation	button	✔	✔	✔
8 Upload/Download					
8.1 Download					
8.1.1	Download Call history		✔	✔	✔
8.1.2	Download other histories		✔	✔	✔
8.1.3	Download contact list		N/A	N/A	✔
8.1.4	Log Download in a lump		✔	✔	✔
8.2 Upload					
8.2.1	Upload contact list		✔	✔	✔
8.2.2	Configuration data upload		✔	✔	✔
8.2.3	Profile upload		✔	✔	✔
8.2.4	Encryption data upload		N/A	N/A	✔

5. Login/Logout

5.1. Login

Carry out “pcLogin.cgi” for login, “pcLogout.cgi” for logout from the PC.

Login needs execution before carry out each function. If you do not carry out login, connection information which a unit holds does not update, therefore command interface does not accept unit CGI.

Login name, Password, and Max simultaneous login number.

・Login : touchpc
・Password : HDVC_tchpc (Default value. It is possible to change by CLI.)
・Max simultaneous login number : 2

Max account number is 2. It is not possible to login simultaneously more than that.
This interface function non-operation timeout is 30 seconds. When it does not receive anything for 30 seconds, it is automatically logout.
Input character’s limit is as follows.
・ASCII code from 0x20 to 0x7e.(However, except multiple byte characters.)
・Prohibit to use '&', '<', '>', and ','.

Command Name	Login
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	<returns> <cgireturn> <ret>0</ret> </cgireturn> </returns>
Response value	
Other explanations	1) After successfully login, it can be carried out various commands. 2) “ret” comes to success (0) with successful login. 3) After login, status comes to logout without carry out various commands for 30 seconds which needs to login again. 4) MAX simultaneous login number has already exceeded with other system, execution result comes to fail (except 0). 5) If you login again in login, the execution result comes to success (0).

5.2. Logout

Command Name	Logout
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	<returns> <cgireturn> <ret>0</ret> </cgireturn> </returns>
Response value	
Other explanations	1) Carry out in logout. 2) “ret” comes to success(0) with successful logout. 3) “ret” comes to fail (except 0) with logout failure. 4) Carry out in logout, execution result comes to success (0).

6. CLI commands

6.1. Get commands

6.1.1. Unit version retrieve

Command Name	Unit Version Retrieve
CGI execution parameter	cgicmd= version get
Examples for CGI execution result (Response value XML)	<cmdreturn param="version get"> <ret>0</ret> <val>version = 4.20 </val> </cmdreturn>
Response value	Version notation method : ×.×× [additional information]
Other explanations	

6.1.2. Firmware ID retrieve

Command Name	Firmware ID Retrieve
CGI execution parameter	cgicmd= fdlfwid get
Examples for CGI execution result (Response value XML)	<cmdreturn param="fdlfwid get"> <ret>0</ret> <val>fwid = 00-04-00-00 </val> </cmdreturn>
Response value	00-04-00-00 : KX-VC1300JP 00-05-00-00 : KX-VC1600JP 02-04-00-00 : KX-VC1300CH 02-05-00-00 : KX-VC1300CH 06-04-00-00 : KX-VC1300(Global, SX) 06-05-00-00 : KX-VC1300(Global, SX)
Other explanations	

6.1.3. Current value of connection mode retrieve

Command Name	Connection Mode Retrieve
CGI execution parameter	cgicmd= curconnectmode get
Examples for CGI execution result (Response value XML)	<cmdreturn param="curconnectmode get"> <ret>0</ret> <val>curconnectmode = 0 </val> </cmdreturn>
Response value	0=IP mode, 1=N/A, 2=NAT Traversal mode, 3=IP/NAT Traversal mode
Other explanations	

6.1.4. Incoming call setting retrieve

Command Name	Incoming Call Setting Retrieve
CGI execution parameter	cgicmd=incoming get
Examples for CGI execution result (Response value XML)	<cmdreturn param="incoming get"> <ret>0</ret> <val>incoming = 1 </val> </cmdreturn>
Response value	0 : manual answer,1 : Auto answer
Other explanations	

6.1.5. Forced-reply setting retrieve

Command Name	Forced-reply Setting Retrieve
CGI execution parameter	cgicmd=guiforcereply get
Examples for CGI execution result (Response value XML)	<cmdreturn param="guiforcereply get"> <ret>0</ret> <val>guiforcereply = 1 </val> </cmdreturn>
Response value	0 : Disable, 1 : Enable
Other explanations	If incoming setting is set to "1:auto" and guiforcereply setting is set to "1", when an incoming call comes at other than the home screen, HDVC responds automatically its incoming call without displaying the incoming confirmation pop-up.

6.1.6. NAT Traversal Service information retrieve

Command Name	NAT Traversal Service Information Retrieve
CGI execution parameter	cgicmd= natsrv get
Examples for CGI execution result (Response value XML)	<cmdreturn param=”natsrv get”> <ret>0</ret> <val>state = 1 expirydate = 20160513 </val> </cmdreturn>
Response value	state(in the service registration) 0 : Unregistered, expire the registration（more than 6 months） 1 : Registration is completed 2 : Registration is not completed 3 : Expire the registration（within 6 months） expire date(expire date for the service) YYYYMMDD / blank character strings
Other explanations	

6.1.7. Conference Profile retrieve

Command Name	Current conference Profile retrieve
CGI execution parameter	cgicmd= profile get
Examples for CGI execution result (Response value XML)	<cmdreturn param="profile get"> <ret>0</ret> <val>profile = 1 </val> </cmdreturn>
Response value	Return current profile number. Available in active state only.
Other explanations	

6.1.8. Contents share information retrieve

Command Name	Contents share information retrieve
CGI execution parameter	cgicmd= changecontent get
Examples for CGI execution result (Response value XML)	<cmdreturn param="changecontent get"> <ret>0</ret> <val>main = cam1 sub = pc </val> </cmdreturn>
Response value	
Other explanations	Available in active state only. ・Example 《Normal conference》 main = cam1 sub = 《Contents share(Single stream)》 main = pc sub = 《Contents share(Dual stream)》 main = cam1 sub = cam2 《Non-communication》 main = cam1 sub = 《Non-communication Video source is switched to Sub Camaera.》 main = cam2 sub =

6.1.9. AV connection state retrieve

Command Name	AV Connection State Retrieve
CGI execution parameter	cgicmd=avstate get n
Examples for CGI execution result (Response value XML)	<cmdreturn param="avstate get terminalinfo vinhdmi1 vinhdmi2 vinhdmipc vinvga vouthdmi1 vouthdmi2 vouthdmi3 vouthdmi micnum"> <ret>0</ret> <val>terminalinfo = 0 vinhdmi1 = 0 vinhdmi2 = 0 vinhdmipc =0 vinvga = 0 vouthdmi1 = 0 vouthdmi2 = 0 vouthdmi3 = 0 vouthdmi = 0 micnum = 5 </val> </cmdreturn>
Response value	When it is “n=teminalinfo”, Input video terminal inquiry Response value 0=HDMI main 1=HDMI sub 2=PC When it is “n=vinhdmi1”, HDMI1 input state inquiry Response value 0=non-connect 1=connect When it is “n=vinhdmi2”, HDMI2 input state inquiry Response value 0=non-connect 1=connect When it is “n=vinhdmipc”, VGA input state inquiry Response value 0=non-connect 1=connect When it is “n=vinvga”, VGA input state inquiry Response value 0=non-connect 1=connect When it is “n=vouthdmi1”, HDMI output state inquiry Response value 0=non-connect 1=connect When it is “n=vouthdmi2”, HDMI output state inquiry Response value 0=non-connect 1=connect When it is “n=vouthdmi3”, HDMI output state inquiry Response value 0=non-connect 1=connect When it is “n=vouthdmi”, HDMI output state inquiry Response value 0=non-connect 1=connect When it is “n=micnum”, Total microphone number including Digital microphone, (Maximum is 5), Analog microphone (Maximum 1), and head-set microphone (Maximum 1) Response value from 0 to 7 (total microphone number)
Other explanations	

6.1.10. Screen layout information retrieve

Command Name	Screen Layout Information Retrieve
CGI execution parameter	cgicmd=curlayout get
Examples for CGI execution result (Response value XML)	<cmdreturn param="curlayout get "> <ret>0</ret> <val>curlayout = 30 </val> </cmdreturn>
Response value	30:Other site Main camera, Own main camera (*1)(*2) 31:Own main camera, Other site camera (*1)(*2) 32:Other site Main camera, Other site Main camera(*1) 33:Own content, Other site Main camera(*1)(*2) 34:Other site Main camera、Own content (*1) 35:Own content, Own content (*1) 36:Own content, Own main camera (*1) 37:Own main camera, Own content (*1) 38:Own main camera, Own main camera (*1) 39:Other site content, Own main camera (*1)(*2) 40:Own main camera, Other site content (*1) 41:Other site content, Other site content (*1) 42:Other site content, Other site Main camera (*1) 43:Other site Main camera, Other site content (*1) 101:Side by Side Own content +Other site(*2) 102:Side by Side Other site content+Own main camera (*2) 103:Side by Side Own content+Own main camera (*2) 104:Side by Side Other site content+Other site Main camera(*2) 105:Side by Side Other site＋Own main camera (*2) 201:P and P Own content+Other site Main camera(*2) 202:P and P Own content+Own main camera(*2) 203:P and P Other site+Own main camera (*2) 204:P and P Other site content+Other site (*2) 205:P and P Other site content+Own main camera (*2) *1) Output HDMI1、OutputHDMI2 *2) HDMI1
Other explanations	

6.1.11. PinP status retrieve

Command Name	PinP status retrieve
CGI execution parameter	cgicmd=displaypip get
Examples for CGI execution result (Response value XML)	<cmdreturn param="displaypip get"> <ret>0</ret> <val>pattern = 1 </val> </cmdreturn>
Response value	1st parameter: Display location 0:Non-display(No PinP) 1:Upper right 2:Lower right 3:Lower left 4:Upper left
Other explanations	Available at conference only

6.1.12. Master sound volume retrieve

Command Name	Master Audio Volume Retrieve
CGI execution parameter	cgicmd=mastervol get level
Examples for CGI execution result (Response value XML)	<cmdreturn param="mastervol get level"> <ret>0</ret> <val>level = 20 </val> </cmdreturn>
Response value	From 0 to 20
Other explanations	Retrieve initial value for the master audio volume

6.1.13. Microphone state retrieve

Command Name	Microphone State Retrieve
CGI execution parameter	cgicmd=micstate get
Examples for CGI execution result (Response value XML)	<cmdreturn param="micstate get"> <ret>0</ret> <val>micstate = 1 </val> </cmdreturn>
Response value	0=microphone is mute 1=microphone is activate
Other explanations	

6.1.14. System management state retrieve

Command Name	System Management State(Trouble Information) Retrieve
CGI execution parameter	cgicmd=state get unit
Examples for CGI execution result (Response value XML)	<cmdreturn param="state get unit"> <ret>0</ret> <val>unit = shutdown </val> </cmdreturn>
Response value	init : initialization shutdown : shutdown active : available to operate outOfService : out of service（under maintenance） majorAlarm : a failure fatal : a fatal failure versionUp : a version upgrade versionUpFin : finish version upgrade
Other explanations	Logout except the active.

6.1.15. Collect conference information

Command Name	Collect Conference Information
CGI execution parameter	cgicmd=confinfo <m> m:Session ID 0x07000001-0x0700000a,0x08000001-0x0800000a 0x07000101-0x0700010a,0x08000101-0x0800010a Session ID is optional parameter. Session ID is valid only during conference.
Examples for CGI execution result (Response value XML)	No session ID <cmdreturn param="confinfo"> <ret>0</ret> <val>num = 3 1 0x07000001<¥n> 2 0x07000002<¥n> 3 0x07000003<¥n> </val> </cmdreturn> Valid session ID <cmdreturn param="confinfo 0x07000001"> <ret>0</ret> <val>0x07000001 sip:192.168.172.140 NULL state = 3 dtmf = off<¥n> num = 0 </val> </cmdreturn>
Response value	num=Number of site Session ID:0x07000001-0x0700000a,0x08000001-0x0800000a 0x07000101-0x0700010a,0x08000101-0x0800010a SIP-URI [character strings] SIP-DisplayName [character strings] Communication state(state) 0: non-communication 1: Calling

	2: Incoming call 3:Conference 4: Sending the sharing content 5: Receiving the sharing content Or, receiving H.239 dualstream 6: Disconnection However, it is “0” in the self-diagnosis. DTMF propriety（dtmf) on: valid(available to carry out) off: invalid(impossible to carry out) However, "off" fixes for connecting the own system. [non-communication] state = 0<¥n> num = 0<¥n> [Multicast] state = 3<¥n> num = 0<¥n>
Other explanations	- If the system management status retrieve result is “available to operate”, command can carry out. - Session ID 0x07000001-0x0700000a : SIP outgoing (including NAT traversal) 0x08000001-0x0800000a : H.323 outgoing 0x07000101-0x0700010a : SIP incoming (including NAT traversal) 0x08000101-0x0800010a : H.323incoming

6.1.16. Confirmation for the camera control propriety (Collect each function)

Command Name	Collect the Camera State (Collect each function)
CGI execution parameter	cgicmd=camerastate get n
Examples for CGI execution result (Response value XML)	<cmdreturn param="camerastate get pan "> <ret>0</ret> <val> pan= 1 </val> </cmdreturn>
Response value	When it is “n=pan”, 0=not available to use pan 1=available to use pan When it is “n=tilt”, 0=not available to use tilt 1=available to use tilt When it is “n=zoom”, 0=not available to use zoom 1=available to use zoom n=presetcall 0=not available to use preset call 1=available to use preset call n=presetstore 0=not available to use preset registration 1=available to use preset registration n=focusmode 0=not available to change focus mode 1=available to changefocus mode n=focusarea 0=not available to change focus position 1=available to change focus position

	n=wbalance 0=not available to adjust white balance 1=availanle to adjust white balance n=bright 0=not available to adjust brightness 1=available to adjust brightness n=backlight 0=not available to repair back light 1=available to repair backlight n=digitalzoom 0=not available to use digital zoom 1=available to use digital zoom n=pinp 0=not available to use magnifier 1=available to use magnifier n=flicker 0=not available to use flicker correction 1=available to use flicker correction n=initial 0=not available to use camera initialization 1=available to use camera initialization n=menu 0=OSD menu control unavailable 1=OSD menu control available
Other explanations	Judge whether the own site camera which input image is available to control.

6.1.17. Confirmation for the camera control propriety (Collect all functions in once)

Command Name	Collect the Camera State (Collect all functions in once) from <V3.0>
CGI execution parameter	cgicmd=camerastate get
Examples for CGI execution result (Response value XML)	<cmdreturn param="camerastate get"> <ret>0</ret> <val> pan= 1 tilt= 1 zoom= 1 presetcall= 1 presetstore= 1 focusmode= 1 focusarea= 1 wbalance= 1 bright= 1 backlight= 1 digitalzoom= 1 pinp= 1 flicker= 1 initial= 1 menu=1 </val> </cmdreturn>
Response value	Retrieved Value(val) : pan=0 or 1 0=not available to use pan 1=available to use pan tilt=0 or 1 0=not available to use tilt 1=available to use tilt zoom=0 or 1

	0=not available to use zoom 1=available to use zoom presetcall=0 or 1 0=not available to use preset call 1=available to use preset call presetstore=0 or 1 0=not available to use preset registration 1=available to use preset registration focusmode=0 or 1 0=not available to change focus mode 1=available to change focus mode focusarea=0 or 1 0=not available to change focus position 1=available to change focus position wbalance=0 or 1 0=not available to adjust white balance 1=available to adjust white balance bright=0 or 1 0=not available to adjust brightness 1=available to adjust brightness backlight=0 or 1 0=not available to repair backlight 1=available to repair backlight digitalzoom=0 or 1 0=not available to use digital zoom 1=available to use digital zoom pinp=0 or 1 0=not available to use magnifier 1=available to use magnifier flicker=0 or 1 0=not available to use flicker correction 1=available to use flicker correction initial=0 or 1 0=not available to use camera initialization 1=available to use camera initialization menu 0=OSD menu control unavailable 1=OSD menu control available
Other explanations	Judge whether the own site camera which input image is available to control. Throw away about a line which starts from undefined character string in retrieved value.

6.1.18. Aspect ratio retrieve

Command Name	Aspect Ratio Retrieve
CGI execution parameter	cgicmd= aspect get
Examples for CGI execution result (Response value XML)	<cmdreturn param="aspect get"> <ret>0</ret> <val>mode = 1 </val> </cmdreturn>
Response value	Aspect ratio is returned to the following. 0(=Auto),1(=16:9),2(=4:3)
Other explanations	It is valid under the following condition. ・Connecting with interoperability/MCU system ・displaying other party image

6.1.19. CPn retrieve

Command Name	CPn retrieve
CGI execution parameter	cgicmd=cpnlayout get
Examples for CGI execution result (Response value XML)	<cmdreturn param="cpnlayout get"> <ret>0</ret> <val>cpn =6 </val> </cmdreturn>
Response value	cpn:0(auto),1,2,4,6,8,9,10,
Other explanations	Available at conference

6.1.20. Site name display status retrieve

Command Name	Site name display status retrieve
CGI execution parameter	cgicmd=sitename get
Examples for CGI execution result (Response value XML)	<cmdreturn param="sitename get"> <ret>0</ret> <val>sitename =0 </val> </cmdreturn>
Response value	0:OFF(Not display site name) 1:ON(Display site name)
Other explanations	Available at conference

6.1.21. Audio mixture status retrieve

Command Name	Audio mixture status retrieve
CGI execution parameter	cgicmd=audiofmute get
Examples for CGI execution result (Response value XML)	<cmdreturn param="audiofmute get"> <ret>0</ret> <val> mixingaudio = 0 </val> </cmdreturn>
Response value	0: Mixture audio (Audio level higher 4 sites) 1: Own site audio only 2: Mixture audio of specified sites (Max.4 sites)
Other explanations	・Available at conference ・"2" is available at Ver4.25 or later. ・Previous command name was "Voice force mute status retrieve".

6.1.22. Specified site for audio mixture retrieve

Command Name	Specified site for audio mixture retrieve
CGI execution parameter	cgicmd=audiomixsite get
Examples for CGI execution result (Response value XML)	<cmdreturn param="audiomixsite get"> <ret>0</ret> <val> num = 4 0 0x08000101 0x07000003 0x08000004 </val> </cmdreturn>
Response value	num: number of specified sites for mixture audio sessionid: each session id of above sites 0x07000001-0x0700000a, 0x07000101-0x0700010a, 0x08000001-0x0800000a, 0x08000101-0x0800010a, 0(own site)
Other explanations	・Available at conference ・If setting value of audiofmute command is not “2”, “0”is returned as a value of “num”.

6.1.23. MCU operating mode retrieve

Command Name	MCU operating mode retrieve
CGI execution parameter	cgicmd= mcumode get
Examples for CGI execution result (Response value XML)	<cmdreturn param="mcumode get"> <ret>0</ret> <val>mcumode = 1</val> </cmdreturn>
Response value	0: Discussion mode (Same operation as ever) 1: Presentation mode
Other explanations	Available at conference

6.1.24. Statics information retrieve

Command Name	Statics Information Retrieve
CGI execution parameter	cgicmd=statinfo <id m|index n> m:id(Session ID) 0x07000001-0x0700000a,0x08000001-0x0800000a 0x07000101-0x0700010a,0x08000101-0x0800010a n:index(Table index) 0-8
Examples for CGI execution result (Response value XML)	<cmdreturn param="statinfo 1"> <ret>0</ret> <val>0x07000101 sip:192.168.0.106 0 0 2000 0 0 0 202 202 202 112 112 112 1616 607 0 1792 64 126 0 64 1920 1080 0 1920 1080 3000 0 48 Panasonic KX-VC600 3.21 Rev1 (Profile=5,4,3,2,1)<¥n></val> </cmdreturn>
Response value	If id is indicated, index can't indicate simultaneously. If index is indicated, id can't indicate simultaneously.

	・See below for the information in detail. Session ID SIP-URI or H.323 name, H.323 extension number [Character strings] Connect mode(IP mode:0,NAT Traversal mode:2) Communication type(SIP:0,H.323:1) Arbitrated IP rate [kbps] Arbitrated Video rate [kbps] for H.323 only Arbitrated Audio rate [kbps] for H.323 only Encryption(No:0,Yes:1) Arbitration receive codec (Video[Main stream]) *1 Arbitration send codec (Video[Main stream]) *1 Using send codec (Video[Main stream]) *1 Arbitration receive codec(Audio) *1 Arbitration send codec(Audio) *1 Using send codec(Audio) *1 Video receiving rate [kbps] : average 5 seconds (including IP header) Video receiving packet (receiving number every 5 seconds) Video receiving packet loss (receiving number every 5 seconds) Video sending rate [kbps] Audio receiving rate [kbps] : average 5 seconds (including IP header) Audio receiving packet (receiving number every 5 seconds) Audio receiving packet loss (receiving number every 5 seconds) Audio sending rate[kbps] Horizontal resolution for sending side Vertical resolution for sending side Sending frame rate (sending side is 0.) Horizontal resolution for receiving side Vertical resolution for receiving side Receiving frame rate (100 times value of the real frame rate) Frequency (connecting with interoperability is 0) UserAgent byte [byte](*from 0 to 512 [byte]) UserAgent [character strings] (character code is the UTF-8.) ・Statics information cannot retrieve in case of disconnecting AVQoS during command execution in middle of ending conference. ・SIP-URI is set up a thing which conference is established.（It is not influenced each parameter changing of Re-INVITE/UPDATE.） *1 Video method 202=H.264 High Profile (Non-Interleaved) 203=H.264 Baseline Profile (Single NAL Unit) 204=H.264 Baseline Profile (Non-Interleaved) 205=H.261 206=H.263 207=H.263+ 208=H.263++ Audio method 105=AAC-LD (128kbps) 109=AAC-LD (32kbps) 110=AAC-LD (Auto) 111=G.722（QoS disable） 112=G.722.1 Annex C (48kbps) 113=G.722.1 (32kbps) 114=G.722.1C Annex C (24kbps) 115=G.711 (μ-law) 116=G.711 (A-law)

	117=G.722(QoS enable) *Style examples ・sip:192.168.172.140 Session ID=0x07000101, SIP-URI=sip:192.168.172.140, Connecting mode=IP mode, Communication type=SIP, Arbitrated IP rate=2000, Arbitrated Video rate=0, Arbitrated Audio rate=0, Encryption=No, Arbitrated receive video codec(Main)=H.264 High Profile, Arbitrated send video codec=H.264 High Profile, Using send codec=H.264 High Profile, Arbitrated receive audio codec=G.722(QoS enable), Arbitrated send audio codec=G.722(QoS enable), Using send audio codec =G.722(QoS enable), Video receiving rate=1656, Video receiving packet=605, Video receiving packet loss=30, Video sending rate=1776, Audio receiving rate=80, Audio receiving packet=125, Audio receiving packet loss=5, Audio sending rate=80, Horizontal resolution for sending side=1920, Vertical resolution for sending side=1080, Sending frame rate=0, Horizontal resolution for receiving side=1920, Vertical resolution for receiving side=1080, Receiving frame rate=30, Frequency=0, UserAgent byte=48, UserAgent=" Panasonic KX-VC600 3.21 Rev1 (Profile=5,4,3,2,1)" 0x07000101 sip:192.168.172.140 0 0 2000 0 0 0 202 202 202 117 117 117 1656 605 10 1776 80 125 5 80 1920 1080 0 1920 1080 3000 0 48 Panasonic KX-VC600 3.21 Rev1 (Profile=5,4,3,2,1)<¥n> 【In case of UserAgent byte is 0.】 ・UserAgent number of byte=0, UserAgent=none 0x07000101 sip:192.168.172.140 0 0 2000 0 0 0 202 202 202 117 117 117 1656 605 10 1776 80 125 5 80 1920 1080 0 1920 1080 3000 0 0<¥n>
Other explanations	・During “operation is available”, it is possible to carry out commands. ・It is possible to carry out on “on conference” only. ・Statics information (info) for each site repeats a number of points. ・Statics information value comes to 0 because collected information is not exist for 5 seconds after communication starts. ・Fixed value is returned during Multicast.

6.1.25. Static information retrieve: sub stream

Command Name	Statics Information Retrieve : sub stream
CGI execution parameter	cgicmd=dualstatinfo <id m|index n> m:id(Session ID) 0x07000001-0x0700000a,0x08000001-0x0800000a 0x07000101-0x0700010a,0x08000101-0x0800010a n:index(Table index) 0-8
Examples for CGI execution result (Response value XML)	<cmdreturn param=" dualstatinfo "> <ret>0</ret> <val>0x07000001 204 204 105 105 105 2000 3000 30 1500 5000 4 1024 768 6000 60 <¥n></val> </cmdreturn>
Response value	If id is indicated, index can't indicate simultaneously. If index is indicated, id can't indicate simultaneously.

	・See below for the information in detail. MCU site [Endpoint is transmitting dual stream.] Session ID Arbitrated receive codec (Video[Main stream]) *1 (Fixed value : 0) Arbitrated send codec (Video[Main stream]) *1 (Fixed value : 0) Using send codec (Video[Main stream]) *1 Video receiving rate [kbps] : average 5 seconds (including IP header) Video receiving packet (receiving number every 5 seconds) Video receiving packet loss (receiving number every 5 seconds) Video sending rate [kbps] (Fixed value : 0) Horizontal resolution for sending side (Fixed value : 0) Vertical resolution for sending side (Fixed value : 0) Sending frame rate (100 times value of the real frame rate) (Fixed value : 0) Horizontal resolution for receiving side Vertical resolution for receiving side Receiving frame rate (100 times value of the real frame rate) Frequency (Fixed value : 0) [MCU site is transmitting dual stream.] Session ID Arbitrated receive codec (Video[Main stream]) *1 (Fixed value : 0) Arbitrated send codec (Video[Main stream]) *1 Using send codec (Video[Main stream]) *1 Video receiving rate [kbps] : average 5 seconds (including IP header) (Fixed value : 0) Video receiving packet (receiving number every 5 seconds) (Fixed value : 0) Video receiving packet loss (receiving number every 5 seconds) (Fixed value : 0) Video sending rate [kbps] Horizontal resolution for sending side Vertical resolution for sending side Sending frame rate (100 times value of the real frame rate) (Fixed value : 0) Horizontal resolution for receiving side (Fixed value: 0) Vertical resolution for receiving side (Fixed value: 0) Receiving frame rate (100 times value of the real frame rate) Frequency (Fixed value : 0) Non-MCU site [Endpoint is transmitting dual stream.] Session ID Arbitrated receive codec (Video[Main stream]) *1 (Fixed value : 0) Arbitrated send codec (Video[Main stream]) *1 Using send codec (Video[Main stream]) *1 Video receiving rate [kbps] : average 5 seconds (including IP header) (Fixed value : 0) Video receiving packet (receiving number every 5 seconds) (Fixed value : 0) Video receiving packet loss (receiving number every 5 seconds) (Fixed value : 0) Video sending rate [kbps]

	Horizontal resolution for sending side Vertical resolution for sending side Sending frame rate (100 times value of the real frame rate) (Fixed value : 0) Horizontal resolution for receiving side (Fixed value : 0) Vertical resolution for receiving side (Fixed value : 0) Receiving frame rate (100 times value of the real frame rate) (Fixed value : 0) Frequency (Fixed value : 0) [MCU site is transmitting dual stream.] Session ID Arbitrated receive codec (Video[Main stream]) *1 Arbitrated send codec (Video[Main stream]) *1 (Fixed value : 0) Using send codec (Video[Main stream]) *1 (Fixed value : 0) Video receiving rate [kbps] : average 5 seconds (including IP header) Video receiving packet (receiving number every 5 seconds) Video receiving packet loss (receiving number every 5 seconds) Video sending rate [kbps] (Fixed value : 0) Horizontal resolution for sending side (Fixed value : 0) Vertical resolution for sending side (Fixed value : 0) Sending frame rate (100 times value of the real frame rate) (Fixed value : 0) Horizontal resolution for receiving side Vertical resolution for receiving side Receiving frame rate (100 times value of the real frame rate) Frequency (Fixed value : 0) *1 : Codec information: Refer statinfo command Example -In case of Internal MCU site [Endpoint (0x07000001) is transmitting dual stream.] SessionID = 0x07000001, Negotiated received video codec = H.264 Baseline Profile (Non-Interleaved), Negotiated transmitted video codec = 0, Actual transmitted video codec = 0, Received video rate = 1352, Received video packet number = 374, Received Video packet loss number = 0, Transmitted video rate = 0, Transmitted picture width = 0, Transmitted picture height = 0, Transmitted video rate = 0, Received picture width = 1280, Received picture height = 720, Received frame rate = 30, Video frequency = 0 0x07000001 204 0 0 1352 374 0 0 0 0 0 1280 720 3000 0 [MCU site is transmitting dual stream.] SessionID = 0x07000001, Negotiated received video codec = 0, Negotiated transmitted video codec = H.264 Baseline Profile (Non-Interleaved), Actual transmitted video codec = H.264 Baseline Profile (Non-Interleaved), Received video rate = 0, Received video packet number = 0, Received Video packet loss number = 0, Transmitted video rate = 1368, Transmitted picture width = 1920, Transmitted picture height = 1080, Transmitted video rate = 0, Received picture width = 0, Received picture height = 0, Received frame rate = 0, Video frequency = 0 0x07000001 204 204 204 0 0 0 2000 3000 30 2000 1024 768 3000 0 0 0 0

	-In case of Endpoint [Endpoint is transmitting dual stream.] SessionID = 0x07000001, Negotiated received video codec = 0, Negotiated transmitted video codec = H.264 Baseline Profile (Non-Interleaved), Actual transmitted video codec = H.264 Baseline Profile (Non-Interleaved), Received video rate = 0, Received video packet number = 0, Received Video packet loss number = 0, Transmitted video rate = 1368, Transmitted picture width = 1280, Transmitted picture height = 720, Transmitted video rate = 0, Received picture width = 0, Received picture height = 0, Received frame rate = 0, Video frequency = 0 0x07000001 0 204 204 0 0 0 1360 1280 720 0 0 0 0 0 [MCU site is transmitting dual stream.] SessionID = 0x07000001, Negotiated received video codec = H.264 Baseline Profile (Non-Interleaved), Negotiated transmitted video codec = 0, Actual transmitted video codec = 0, Received video rate = 1368, Received video packet number = 364, Received Video packet loss number = 0, Transmitted video rate = 0, Transmitted picture width = 0, Transmitted picture height = 0, Transmitted video rate = 0, Received picture width = 1920, Received picture height = 1080, Received frame rate = 30, Video frequency = 0 0x07000001 204 0 0 1368 364 0 0 0 0 0 1920 1080 3000 0
Other explanations	・ The conditions to execute commands are same as “6.1.20 static information retrieve” ・ Not available during Multicast.

6.1.26. Standby state retrieve

Command Name	Standby State Retrieve
CGI execution parameter	cgicmd=standbystate get
Examples for CGI execution result (Response value XML)	<cmdreturn param="standbystate get "> <ret>0</ret> <val>standbystate = 0 </val> </cmdreturn>
Response value	0 : Normal（Not standby state） 1 : Screen standby state
Other explanations	In case unit is GUI mode, enable to retrieve whether standby state by this command. To recover from screen standby, send the standby KeyID with “7. remote control emulation procedure”.

6.1.27. Communicating encoder information retrieve

Command Name	Communicating Encoder Information Retrieve
CGI execution parameter	cgicmd=videoencodeinfo
Examples for CGI execution result (Response value XML)	<cmdreturn param=" videoencodeinfo "> <ret>0</ret> <val>1 202 1920x1080 1500<¥n> 2 0 0 0<¥n></val> </cmdreturn>
Response value	・See below for the information in detail. Encoder number:1,2 Video Encoder 202=H.264 High Profile (Non-Interleaved) 203=H.264 Baseline Profile (Single NAL Unit) 204=H.264 Baseline Profile (Non-Interleaved) 205=H.261 206=H.263 207=H.263+ 208=H.263++ Sending resolution Sending frame rate (Fixed value : 0)
Other explanations	・During “operation is available”, it is possible to carry out commands. ・It is possible to carry out on “on conference” only. ・Not available during Multicast.

6.1.28. Activation Information retrieve

Command Name	Activation Information retrieve
CGI execution parameter	cgicmd=actinfo get n n=info : function with/without information n=mask : mask information
Examples for CGI execution result (Response value XML)	<cmdreturn param="actinfo get"> <ret>0</ret> <val>info = 0x0000038a mask = 0x00000380 </val> </cmdreturn>
Response value	info : 0x00000000 - 0x3FFFFFFF *Below is bit operation. 0 : Disable, 1 : Enable ---------- bit0 : always 0 bit1 : always 1 bit2 : always 0 bit3 : always 1 bit4 : always 0 bit5 : always 0 bit6 : always 0 ---------- bit7 : Multicast ---------- bit8 : 4 Points Built-in MCU ----------

	bit9 : Mobile Connection ---------- mask : 0x00000000 - 0x3FFFFFFF *Below is bit operation. ---------- bit0 - 6 : always 0 ---------- bit7 : effective bit for info parameter ---------- bit8 : effective bit for info parameter ---------- bit9 : effective bit for info parameter ----------
Other explanations	

6.1.29. IPv4 address of LAN1 retrieve

Command Name	IPv4 address of LAN1 retrieve
CGI execution parameter	cgicmd=curnetwork get n n = ip : IPv4 address n = netmask : Subnet mask n = gw : Default gateway
Examples for CGI execution result (Response value XML)	<cmdreturn param=" curnetwork get "> <ret>0</ret> <val> ip = 192.168.0.100 netmask = 255.255.255.0 gw = 192.168.0.1 </val> </cmdreturn>
Response value	ip : IPv4 address netmask : Subnet mask gw: Default gateway
Other explanations	

6.1.30. IPv4 address of LAN2 retrieve

Command Name	IPv4 address of LAN2 retrieve
CGI execution parameter	cgicmd=network2 get n n = state : Use of LAN2 n = ip : IPv4 address n = netmask : Subnet mask
Examples for CGI execution result (Response value XML)	<cmdreturn param=" network2 get "> <ret>0</ret> <val> state = 1 ip = 192.168.100.100 netmask = 255.255.255.0 </val> </cmdreturn>
Response value	state : Use of LAN2 0 : Not use LAN2 1 : Use LAN2

	ip : IPv4 address netmask : Subnet mask
Other explanations	KX-VC1600 only It is not possible to set the network address that is the same as LAN1. When not in use or when not is set, the return value is blank.

6.1.31. IPv6 address of LAN1 retrieve

Command Name	IPv6 address of LAN1 retrieve
CGI execution parameter	cgicmd=curv6network get n n = ip : IPv6 address n = plen : Plefix length n = local : Link Local address n = gw : Default gateway
Examples for CGI execution result (Response value XML)	<cmdreturn param="curv6network get "> <ret>0</ret> <val> ip = plen = local = gw = </val> </cmdreturn>
Response value	ip : IPv6 address plen : Plefix length local : Link local address gw: Default gateway
Other explanations	When not in use or when not is set, the return value is blank.

6.1.32. IPv6 address of LAN2 retrieve

Command Name	IPv6 address of LAN2 retrieve
CGI execution parameter	cgicmd=curv6network2 get n n = ip : IPv6 address n = plen : Plefix length n = local : Link Local address
Examples for CGI execution result (Response value XML)	<cmdreturn param="curv6network2 get "> <ret>0</ret> <val> ip = plen = local = </val> </cmdreturn>
Response value	ip : IPv6 address plen : Plefix length local : Link local address
Other explanations	KX-VC1600 only When not in use or when not is set, the return value is blank.

6.1.33. IPv4 DNS retrieve

Command Name	IPv4 DNS retrieve
CGI execution parameter	cgicmd=curdns get n n = primary : Primary DNS server n = secondary : Secondary DNS server n = domain : Domain name
Examples for CGI execution result (Response value XML)	<cmdreturn param="curdns get "> <ret>0</ret> <val>primary = 8.8.8.8 secondary = domain = </val> </cmdreturn>
Response value	primary : Primary DNS server secondary : Secondary DNS server domain : Domain name
Other explanations	When not is set, the return value is blank.

6.1.34. IPv6 DNS retrieve

Command Name	IPv6 DNS retrieve
CGI execution parameter	cgicmd=v6dns get n n = primary : Primary DNS server n = secondary : Secondary DNS server
Examples for CGI execution result (Response value XML)	<cmdreturn param="v6dns get "> <ret>0</ret> <val>primary = secondary = </val> </cmdreturn>
Response value	primary : Primary DNS server secondary : Secondary DNS server
Other explanations	When not is set, the return value is blank.

6.1.35. Network status of LAN1 retrieve

Command Name	Network status of LAN1 retrieve
CGI execution parameter	cgicmd=nwstate get n n = link : Link status n = interface : Interface status
Examples for CGI execution result (Response value XML)	<cmdreturn param=" nwstate get "> <ret>0</ret> <val>link = 0 if = 1 </val> </cmdreturn>
Response value	link : Link status 0 : link down 1 : link up if : Interface status 0 : interface down 1 : interface up
Other explanations	

6.1.36. Network status of LAN2 retrieve

Command Name	Network status of LAN2 retrieve
CGI execution parameter	cgicmd=nwstate2 get n n = link : Link status n = interface : Interface status
Examples for CGI execution result (Response value XML)	<cmdreturn param=" nwstate2 get "> <ret>0</ret> <val>link = 0 if = 1 </val> </cmdreturn>
Response value	link : Link status 0 : link down 1 : link up if : Interface status 0 : interface down 1 : interface up
Other explanations	

6.1.37. IP address of WAN retrieve

Command Name	IP address of WAN retrieve
CGI execution parameter	cgicmd=curwanip get
Examples for CGI execution result (Response value XML)	<cmdreturn param=" curwanip get "> <ret>0</ret> <val> curwanip = </val> </cmdreturn>
Response value	curwanip : IP address of WAN
Other explanations	In case of ipauto = 1, automatic acquired IP address is returned. If the address was not able to get in the automatic acquisition, a blank is returned. In case of ipauto = 0, manually configured IP address is returned.

6.2. Setting commands

6.2.1. Layout Settings

Command Name	Layout Setting
CGI execution parameter	cgicmd=layout (set pattern n) n : 30~205
Examples for CGI execution result (Response value XML)	<cmdreturn param="layout"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・ It is possible to carry out commands during “possible to operate” and “conference”. ・ Not available during Multicast. .Meaning of “n” is as follows. 30:Other site Main camera, Own main camera (*1)(*2) 31:Own main camera, Other site camera (*1)(*2) 32:Other site Main camera, Other site Main camera(*1) 33:Own content, Other site Main camera(*1)(*2) 34:Other site Main camera、Own content (*1) 35:Own content, Own content (*1) 36:Own content, Own main camera (*1) 37:Own main camera, Own content (*1) 38:Own main camera, Own main camera (*1) 39:Other site content, Own main camera (*1)(*2) 40:Own main camera, Other site content (*1) 41:Other site content, Other site content (*1) 42:Other site content, Other site Main camera (*1) 43:Other site Main camera, Other site content (*1) 101:Side by Side Own content +Other site(*2) 102:Side by Side Other site content+Own main camera (*2) 103:Side by Side Own content+Own main camera (*2) 104:Side by Side Other site content+Other site Main camera(*2) 105:Side by Side Other site＋Own main camera (*2) 201:P and P Own content+Other site Main camera(*2) 202:P and P Own content+Own main camera(*2) 203:P and P Other site+Own main camera (*2) 204:P and P Other site content+Other site (*2) 205:P and P Other site content+Own main camera (*2) *1) Output HDMI1、OutputHDMI2 *2) HDMI1 In case of MCU activation, Other site means mixture display. Include own content layout pattern enables while sub camera/PC input to HDVC Include other site content layout pattern enable while receiving dual stream.

6.2.2. Master volume settings

Command Name	Volume Setting
CGI execution parameter	cgicmd=mastervol set n m n : up down m : 0-20 (Indicate volume value)
Examples for CGI execution result (Response value XML)	<cmdreturn param="mastervol set down 1"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・In case of exceeding maximum of level value on current setting which changes to the maximum, in case of exceeding minimum which changes the minimum.

6.2.3. Microphone mute settings

Command Name	Microphone Mute Setting
CGI execution parameter	cgicmd=mictoggle
Examples for CGI execution result (Response value XML)	<cmdreturn param="mictoggle"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Microphone mute ON/OFF are changed with toggle. ・It is possible to carry out commands during “possible to operate”, “sleep”, and “in conference”.

6.2.4. Main stream image exchange

Command Name	Main stream image exchange while sending dualstream
CGI execution parameter	cgicmd= changemainstream <start|stop>
Examples for CGI execution result (Response value XML)	<cmdreturn param=" changemainstream start"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Only execute dual stream sending. ・<<In case of input sub stream image to main stream image>> changemainstream start ・<<In case of main stream back to main camera>> changemainstream stop

6.2.5. Contents sharing starts/changes/ends

Command Name	Contents Sharing Settings

CGI execution parameter	cgicmd=changecontent {start|stop} {cam2|pc}
Examples for CGI execution result (Response value XML)	<cmdreturn param="changecontent start cam2"> <ret>0</ret> <val>OK changing the contents</val> </cmdreturn>
Response value	
Other explanations	・Indicate start,stop ・Indicate cam2(sub camera),personal computer(pc) ・This command enables while communication between Panasonic HDVC series. 《In case of The HDVC is not communicating》 Exchange main input image （Same activation as [vsource]. The HDVC don't send DTMF(*10 or *11)) 《In case of single stream》 The HDVC send contents image to use main stream (Same as former content share) This time, The HDVC send DTMF(*10 or *11) 《In case of dual stream》 The HDVC send indicated contents image(cam2 or pc) to use sub stream. The HDVC don't send DTMF(*10 or *11)

6.2.6. PinP setting

Command Name	PinP setting
CGI execution parameter	cgicmd= displaypip set pattern m m (Display location) 0: Non-display(No PinP) 1: Upper right, 2: Lower right, 3: Lower left, 4:Upper left
Examples for CGI execution result (Response value XML)	<cmdreturn param=”displaypip set pattern 1”> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Available at conference *It is depends on current layout Whether PinP activate or not. ・Not available at dual monitor setting (use HDMI1/HDMI2).

6.2.7. CPn setting

Command Name	CPn setting
CGI execution	cgicmd= cpnlayout set n

parameter	n(分割数 0 means auto.):0,1,2,4,6,8,9,10
Examples for CGI execution result (Response value XML)	<cmdreturn param="cpnlayout set 4"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Available at conference. ・Not available during Multicast. ・If command indicate CPn=0(auto), CPn change automatically depend on number of connection site.

6.2.8. Site name display setting

Command Name	Site name display setting
CGI execution parameter	cgicmd= sitename set n n=0:OFF (Not display site name), 1:ON (Display site name)
Examples for CGI execution result (Response value XML)	<cmdreturn param="sitename set 1"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Available at conference ・'Site name display' means below. Whether the HDVC add site name at mixture image of sites or not, When the HDVC activate MCU behavior ・Not available during Multicast.

6.2.9. Audio mixture setting

Command Name	Audio mixture setting
CGI execution parameter	cgicmd= audiofmute set n n= 0: Mixture audio (Audio level higher 4 sites) 1: Own site audio only 2: Mixture audio of specified sites (Max. 4 sites)
Examples for CGI execution result (Response value XML)	<cmdreturn param="audiofmute set 1"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Available at conference ・When "1" is set at MCU site, Only MCU site's audio is sent to other site. ・Specified sites are set as following. 1) Specified sites and audio mixture setting are set in a profile. or 2) During conference specified sites are set by audiomixsite command and "2" is set by this audiofmute command. ・"2" is available at Ver4.25 or later. ・Previous command name was "Voice force mute setting".

6.2.10. Specified site for audio mixture setting

Command Name	Specified site for audio mixture setting

CGI execution parameter	cgicmd= audiomixsite set num n SessionID1 [SessionID2] [SessionID3] [SessionID4] n: number of specified sites for audio mixture (1-4) SessionID1- 4: Session ID 0x07000001-0x0700000a, 0x07000101-0x0700010a, 0x08000001-0x0800000a, 0x08000101-0x0800010a, 0 (own site)
Examples for CGI execution result (Response value XML)	<cmdreturn param="audiomixsite set num 4 0 0x08000101 0x070000003 0x080000004"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Available at conference ・During conference specified sites are set by this audiomixsite command and “2” is set by audiofmute command.

6.2.11. Specified position setting

Command Name	Specified position setting
CGI execution parameter	cgicmd= profilesitesel num n id m1 m2 ... m20 n: number of site (1- Maximum site for connection) m1-m20: Selected site id of a profile (1-20, space separated)
Examples for CGI execution result (Response value XML)	<cmdreturn param="profilesitesel num 3 id 1 5 12"> <ret>0</ret> </val> </cmdreturn>
Response value	
Other explanations	・Not Available at conference ・If main position setting of a profile is “Specified position”, select sites for specified position. ・”id” information is obtained from site setting of a profile set by profile command. ・If site information is not registered at specified id, its id is ignored. ・If main position setting is “Specified position” and this command is not executed, connectable number site is used from ID = 1 at the profile. ・”0” as “num” becomes an error. ・If a value specified by “num” is different from the number of id, it becomes an error.

6.2.12. MCU operation mode setting

Command Name	MCU operation mode setting
CGI execution parameter	cgicmd=mcumode set n n: 0=discussion mode, 1=presentation mode
Examples for CGI execution result (Response value XML)	<cmdreturn param="mcumode set 1> <ret>0</ret> </val> </cmdreturn>
Response value	
Other explanations	・Available at conference

6.2.13. Aspect ratio settings

Command Name	Aspect Ratio Settings
CGI execution parameter	cgicmd= aspect set mode n n : 0(=Auto),1(=16:9),2(=4:3)
Examples for CGI execution result (Response value XML)	<cmdreturn param=”aspect set mode 1”> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	・Available at conference and 1:1 connection.

6.2.14. Profile setting

Command Name	Profile setting
CGI execution parameter	cgicmd= profile set n n:0(=Default),1 - 20
Examples for CGI execution result (Response value XML)	<cmdreturn param=”profile set mode 1”> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	Choose conference profile This command is not available at conference.

6.2.15. Main display exchange

Command Name	Main display exchange
CGI execution parameter	mainmember set mode m id n
Examples for CGI execution result (Response value XML)	<cmdreturn param=”mainmember set mode 0 id 0x07000001”> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	m : mode 0: Site specified, 1: Voice activation1, 2: Voice activation2 (own site), 3: Voice activation2 (site specified) n:Session ID (0x07000001 - 0x0700000a, 0x08000001 - 0x0800000a, 0x07000101-0x0700010a,0x08000101-0x0800010a), 0(Own site) ・Available at conference ・Session ID can be obtained by confinfo command. ・Set own site to main display in case that mode is set to 0(Site Specified) and id is set to 0(Own site). ・Set highest voice level site to main display in case that mode is set to 1(Voice activation1). ・Set highest voice level site to 2nd priority location in case that mode is set to 2(Voice activation2(own site)). ・Set highest voice level site to 2nd priority location in case that mode is

	set to 2(Voice activation2(site specified)). “0” cannot be set as specified site. ・“3” is available at Ver4.25 or later. *) If own site image mute function enable, This command operation is shown as below 《Indicate site》 Even if the command indicate own site, The HDVC don't change own site to main screen. 《Voice activation 1》 Even if the highest voice level site is own site, The HDVC don't change own site to main screen. 《Voice activation 2(own site)》 Same operation as Voice activation 1. 《Voice activation 2(site specified)》 Operation is not different.

6.2.16. System reset

Command Name	System Reset
CGI executive parameter	sysreset
CGI executive result example (Response value XML)	<cmdreturn param=”sysreset”> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	Response shows whether it accepts command. It does not show the success of reset management.

6.2.17. System stop(Power off)

Command Name	System stop
CGI executive parameter	sysstop
CGI executive result example (Response value XML)	<cmdreturn param=”sysstop”> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	Available status are below active : available to operate outOfService : out of service（under maintenance） majorAlarm : a failure fatal : a fatal failure versionUpFin : finish version upgrade

6.3. Commands for Camera control

6.3.1. Pan tilt control

Command Name	Pan Tilt Control
CGI execution parameter	cgicmd=cameramove target n mode m direction l n : 0 (local site), 1 (opposite site) m : start, stop, adjust l : up, down, right, left
Examples for CGI execution result (Response value XML)	<cmdreturn param=" cameramove target 0 mode start direction up " > <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	It is executed for own site or other site camera which is inputting image. target : "0" shows own site. Other sites specify from target 1 to 9 in order to site which retrieved "detail information for each point" of "confinfo" command. mode : start : activation starts. (after activation starts, it continues to activate until indication of activation stop. (within the range of camera activation)) stop : activation stops. adjust : tiny activation (after activation starts, it stops immediately.) *It surely needs "stop" after "start". *It is possible to use "adjust" independently. Basically, "start" and "stop" are pair, but if you would like to turn opposite way during turning, it does not need to stop with stop command. direction : activated way

6.3.2. Zoom control

Command Name	Zoom Control
CGI execution parameter	cgicmd=camerazoom target n mode m direction l n : 0 (local site), 1 (opposite site) m : start, stop, adjust l : in, out
Examples for CGI execution result (Response value XML)	<cmdreturn param=" camerazoom target 0 mode start direction in"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanation	It is executed for own site or other site camera which is inputting image. target : "0" shows own site. Other sites specify from target 1 to 9 in order to site which retrieved

	"detail information for each point" of "confinfo" command. mode : start : activation starts. (after activation starts, it continues to activate until indication of activation stop. (within the range of camera activation)) stop : activation stops. adjust : tiny activation (after activation starts, it stops immediately.) *It needs "stop" after "start" surely. *It is possible to use "adjust" independently direction : in : zoom in out : zoom out

6.3.3. Recalling registered preset

Command Name	Recalling Registered Preset
CGI execution parameter	cgicmd=camerapresetcall target n number m n : 0 (local site), 1 (opposite site) m : from 1 to 9
Examples for CGI execution result (Response value XML)	<cmdreturn param=" camerapresetcall target 0 number 3"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	It is executed for own site or other site camera which is inputting image. target : "0" shows own site. Other sites specify from target 1 to 9 in order to site which retrieved "detail information for each point" of "confinfo" command.

6.3.4. Preset registration

Command Name	Preset Registration
CGI execution parameter	cgicmd=camerapresetstore number n n:from 1 to 9
CGI execution result example (Response value XML)	<cmdreturn param=" camerapresetstore number 1"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	Preset registration should be done on non-communication and it is executed for own site camera which is inputting image.

6.3.5. Temporarily prohibition for camera control from other site

Command Name	Temporarily prohibition for camera control from other site
CGI execution parameter	cgicmd=cameraoccupy n n:start, or end
CGI execution result example (Response value XML)	<cmdreturn param=" cameraoccupy start"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	It is executed for own site camera which is inputting image. A function which "Available to use (change)" was returned by confirmation for the camera control propriety, Focus mode focusmode Focus position focusarea Adjust white balance wbalance Adjust brightness bright Repair backlight backlight Digital zoom digitalzoom Trimming zoom pinp Flicker correction flicker In case retrieve and change setting, do after executed this command "cameraoccupy start", execute "cameraoccupy end" to complete.

6.3.6. Camera setting instruction

Command Name	Camera setting instruction
CGI execution parameter	cgicmd=cameracecinfo get
CGI execution result example (Response value XML)	<cmdreturn param="cameracecinfo get"> <ret>0</ret> <val></val> </cmdreturn>
Response value	
Other explanations	It is executed for own site camera which is inputting image. A function which "Available to use (change)" was returned by confirmation for the camera control propriety, Focus mode focusmode Focus position focusarea Adjust white balance wbalance Adjust brightness bright Repair backlight backlight Digital zoom digitalzoom Trimming zoom pinp Flicker correction flicker Instruct acquirement from setting camera. After execute this command, enable to confirm completion and retrieve setting value by camera information（camerainfo）.

6.3.7. Focus mode setting

Command Name	Focus Mode Setting
CGI execution parameter	cgicmd=camerafocusmode set n n: auto（Auto） or manual（Manual）
CGI execution result example (Response value XML)	<cmdreturn param="camerafocusmode set auto"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret) : 0:Successful, except 0 : Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information（camerainfo） .

6.3.8. Focus position setting

Command Name	Focus Position Setting
CGI execution parameter	cgicmd=camerafocusarea set n n: center（Center） or side（Both side）
CGI execution result example (Response value XML)	<cmdreturn param="camerafocusarea set center"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret) : 0:Successful, except 0 : Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information（camerainfo） .

6.3.9. Focus level adjustment

Command Name	Focus level adjustment
CGI execution parameter	cgicmd=camerafocuslevel target 0 mode m direction n m: start（start activation） , stop（stop activation） , adjust（tiny activation） n: specify moving direction for focus near（near） ,far（far）
CGI execution result example (Response value XML)	<cmdreturn param="camerafocuslevel target 0 mode start direction near"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret) : 0:Successful, except 0 : Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site camera which is inputting image. It enables to execute in case focus mode set up manual. mode : start : Start moving the focus （after started activation, it continues to move until the instruction

	which stops the activation (within the camera activation range).) stop : Stop moving the focus adjust : Tiny movement of focus (After started activation, stop immediately) ※After "start", "stop" is necessary ※"adjust" is available to use itself

6.3.10. White balance setting

Command Name	White Balance Setting
CGI execution parameter	cgicmd=camerawbalance set n n: auto(auto)、indoor1, indoor2 , sunny (sunny) , cloudy (cloudy) , onepush (calibrate) , exec (execute calibrate)
CGI execution result example (Response value XML)	<cmdreturn param="camerawbalance set auto"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret) : 0:Successful, except 0 : Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information (camerainfo) In case execute calibrate, white paper is necessary to face the camera. The execution might be taken 15 seconds maximum depends on camera model.

6.3.11. Brightness mode setting

Command Name	Brightness mode setting
CGI execution parameter	cgicmd=camerabrightmode set n n: auto(auto), manual (manual)
CGI execution result example (Response value XML)	<cmdreturn param="camerabrightmode set auto"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret) : 0:Successful, except 0 : Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information (camerainfo)

6.3.12. Brightness level setting

Command Name	Brightness Level Setting
CGI execution parameter	cgicmd=camerabrightlevel set n n: Specified direction down（to dark）, up（to bright）
CGI execution result example (Response value XML)	<cmdreturn param="camerabrightlevel set down"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret)： 0: Successful, except 0: Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. It is available only when bright mode setting sets up manual.

6.3.13. Backlight repair Setting

Command Name	Backlight Repair Setting
CGI execution parameter	cgicmd=camerabacklight set n n: off(off), on（on）
CGI execution result example (Response value XML)	<cmdreturn param="camerabacklight set off"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret)： 0: Successful, except 0: Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information（camerainfo）

6.3.14. Digital zoom setting

Command Name	Digital zoom setting
CGI execution parameter	cgicmd=cameradigzoom set n n: off(off), on（on）
CGI execution result example (Response value XML)	<cmdreturn param="cameradigzoom set off"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret)： 0: Successful, except 0: Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information（camerainfo）

6.3.15. Trimming zoom setting

Command Name	Trimming zoom Setting
CGI execution parameter	cgicmd=camerapinp set n n: 0(not-display), 1 (display)
CGI execution result example (Response value XML)	<cmdreturn param="camerapinp set 0"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret) : 0: Successful, except 0:Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information (camerainfo) Magnifier settings (magnifier position, zoom, display position) are not supported this interface. Unit sets up to GUI mode, and operate by a remote control.

6.3.16. Flicker setting

Command Name	Flicker correction setting
CGI execution parameter	cgicmd=cameraflicker set n n: off(切)、on(入)
CGI execution result example (Response value XML)	<cmdreturn param="cameraflicker set off"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value (ret): 0: Successful, except 0 : Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	It is executed for own site or other site camera which is inputting image. After execute this command, enable to confirm completion and retrieve setting value by camera information (camerainfo)

6.3.17. Camera setting value acquirement

Command Name	Camera Setting Value Acquirement
CGI execution parameter	cgicmd=camerainfo get n Individual function setting acquirement : set up following character strings to n. Focus mode focusmode Focus position focusarea White balance wbalance Brightness bright Backlight repair backlight Digital zoom digitalzoom Trimming zoom pinp Flicker correction flicker

	All function setting in a lump：not specified n
CGI execution result example (Response value XML)	<cmdreturn param="camerainfo get focusmode "> <ret>0</ret> <val> focusmode= 1 </val> </cmdreturn>
Response value	Return Value(ret)： 0:Successful　xx: managing setting（TBD） In case of other value Camera is not connected or not supported this function. Acquirement Value(val)： In case of individual function setting acquirement, it returns specified function from following. focusmode=0 or 1 0=focus mode：auto　1=focus mode：manual focusarea=0 or 1 0=focus position：center　1=focus position：both sides wbalance=0 ～ 5　white balance mode 0=auto　1=Outdoor (Sunny) 2=Outdoor (Cloudy) 3=Indoor1 4=Indoor2 5=Calibrate bright=0 or 1 0=brightness adjustment : normal　1=brightness adjustment : manual backlight=0 or 1 0=backlight repair: OFF　1=backlight repair: ON digitalzoom=0 or 1 0=digital zoom: OFF　1=digital zoom: ON pinp=0 or 1 0=Trimming zoom display: OFF　1=Trimming zoom display: ON flicker=0 or 1 0=flicker correction：OFF　1=flicker correction：ON
Other explanations	When the following function returns “available to use (change)”, Focus mode　focusmode Focus position　focusarea White balance　wbalance Brightness　bright Backlight repair　backlight Digital zoom　digitalzoom Trimming zoom　pinp Flicker correction　flicker In case of execute camera setting instruction (cameracecinfo) and camera individual function setting instruction, enable to confirm completion and retrieve setting value by camera information（camerainfo） When return value comes to “managing setting”, should execute this command after 500msec. (However, Please confirm with the specifications for executing calibrate of white balance.) Avoid reading the line which starts from undefined character strings in acquirement value.

6.3.18. Camera initialization

Command Name	Camera Initialization
CGI execution parameter	cgicmd=camerainit n n: cam1（HDMI main）, cam2（HDMI sub）
CGI execution result example (Response value XML)	<cmdreturn param="camerainit cam1"> <ret>0</ret> <val></val> </cmdreturn>
Response value	Return Value(ret)： 0: Successful, except 0: Fail (Mistake for specified parameter or camera without the function, etc.)
Other explanations	・Main or sub camera of own site is initialized which is back to factory default setting value. ・Duration for initialization depends on camera model. (References) VD130：about 3 seconds, VC2：about 1 second ・During executing this command, please don't execute other commands (or remote control operation) until initialization is completed.

6.3.19. Camera control command's procedure

After executed camera control command, the status comes to inquiry from HDVC to camera, it's difficult to response execution result instantly because information setting acquirement takes time. Mismatch status occurs if other site controls during above for taking time. Because of above, you must obey following procedure to using control commands for camera functions.

- Focus mode　camerafocusmode
- Focus position　camerafocusarea
- Focus level camerafocuslevel
- White balance　camerawbalance
- Brightness mode　camerabrightmode
- Brightness level　camerabrightlevel
- Backlight repair　camerabacklight
- Digital zoom　cameradigitalzoom
- Trimming zoom　camerapinp
- Flicker correction cameraflicker

6.3.19.1. Camera Function Settings

Setting with following sequences, and confirm execution result.

1. cameraoccupy start
2. cameracecinfo get
3. cameraXXXX　(Setting instruction by control commands for camera function.)
4. camerainfo get n　(n: specify target control)
5. cameraoccupy end

After done setting with procedure 3, confirm the status with procedure 4.

See each command specification for procedure 3: setting instruction details and procedure 4: specify n.

6.3.19.2. Acquire Camera Function Status

Setting with following sequences, and confirm execution result.

1. cameraoccupy start
2. cameracecinfo get
3. camerainfo get n (Specify target function)
4. cameraoccupy end

See each command specification for procedure 3: specify n.

6.3.20. Conditions for controlling other camera functions

・Don't execute other commands during above setting and acquiring sequence. In case of execute external control or standby by a remote control and switching the input, the activation is not guaranteed.

6.4. Commands for communication

6.4.1. Start conference, Add terminal

Command Name	Start conference(Start conference, Add terminal)
CGI execution parameter	Basic format cgicmd=invitemember dest p [mode m] [addrnum n] [bitrate o] p: Destination URI ・In case of use SIP server and communication type=0(SIP) Indicate IP address or SIP user name@SIP domain format ・In case of unused SIP server and communication type=0(SIP) Indicate IP address or conference room number@IP address ・In case of use gatekeeper and communication type=1(H323) are indicated below IP address Conference room number@IP address H.323 name H.323 extension number ・In case of unused gatekeeper and communication type=1(H323) are indicated below IP address SIP user name@SIP domain format ・In case of NAT Traversal Service, Indicate Terminal ID m: Communication type Indicate 0(SIP connection request),1(H.323 connection request) or 2(NAT Traversal Service) In case of omission 'm', The HDVC use indication priority setting value of configuration file. n: Entry number of address book If the 'n' indicated IP address instead of address book entry number, Indicate 'unwanted' to address register number. This parameter is optional. o: Total bitrate of audio and video.(kbps)256～18000 This parameter is optional If this parameter is omitted from the command, The HDVC chooses Lower bitrate between maximum bandwidth of contact list and system setting value/number of site. *) Bitrate include overhead of upper IP layer. Either IPv4 address or IPv6 address is available for the "IP address". IPv4 address format : decimal IPv6 address format : hexadecimal However if IPv6 state is disabled (v6network state = 0), SVAP_RET_ERR_DST_URI may be returned.
Examples for CGI execution result (Response value XML)	<cmdreturn param="invitemember dest 192.168.1.1 mode 1 addrnum 3 "> <ret>0</ret> <val>OK 0x07000001</val> </cmdreturn>
Response value	

Other explanations	・Return value is Session ID for execution result Session ID will be usable for related communication command. Example: disconnect request ・Not available during Multicast.

6.4.2. End conference, Leave terminal

Command Name	End conference(End conference, Leave terminal)
CGI execution parameter	Cgicmd=dropmember m [n] [o] [p] m: Activation mode all=all terminal disconnect、id=Leave individual terminal, uri= Leave individual terminal indicated by URI 《In case of indicate 'id'》 Session ID: Necessary URI : Unusable mode : Unusable 《In case of indicate 'uri' and set 'IP address' to URI》 Session ID : Unusable URI : Necessary mode : Possible to set (Optional) 《In case of indicate "uri" and set Terminal ID/UURL to URI》 Session ID: Unusable URI : Necessary mode : Necessary n: Session ID 0x07000001-0x0700000a,0x08000001-0x0800000a 0x07000101-0x0700010a,0x08000101-0x0800010a In case of m=id, This parameter is necessary. In case of m= without 'id', This parameter is unusable. o:DestinationURI In case of m=uri, This parameter is necessary. In case of m= without 'uri', This parameter is unusable. p:mode 0=SIP、1=H323、2=NAT Traversal Service I case of m=uri, This parameter is necessary. In case of m= without 'uri', This parameter is unusable. Either IPv4 address or IPv6 address is available for the "IP address".
Examples for CGI execution result (Response value XML)	<cmdreturn param="dropmember 0x07000001"> <ret>0</ret> <val>OK 0x07000001</val> </cmdreturn>
Response value	
Other explanations	・Available at conference, Incoming call ・Session ID can be obtained by callsessionid. ・Relationship between session ID and endpoint can be obtained by confinfo. ・If m=all, All terminals are disconnected include incoming call. ・Not available during Multicast.

6.4.3. Connection response

Command Name	Connection Response(Answer Incoming Call)
CGI execution parameter	cgicmd=invitememrsp n n：Session ID 0x07000001～0x0700000a、0x08000001～0x0800000a
Examples for CGI execution result (Response value XML)	<cmdreturn ="invitememrsp 0x07000001"> <ret>0</ret> <val>OK 0x07000001</val> </cmdreturn>
Response value	
Other explanations	・Session ID can be obtained by callsessionid. ・Relationship between session ID and endpoint can be obtained by confinfo. ・Not available during Multicast.

6.4.4. DTMF sending

Command Name	DTMF Sending
CGI execution parameter	cgicmd=senddtmf n vol m n：dtmfID m：from 0 to 63
Examples for CGI execution result (Response value XML)	<cmdreturn ="senddtmf 0 vol 63"> <ret>0</ret> </cmdreturn>
Response value	
Other explanations	・There is a case that “hold” of conference status acquirement is “1” and “DTMF propriety” of regular acquirement is “ON” as DTMF sending is available situation. ・It is possible to carry out in communicating with video conference system of other companies, and activating codec. ・In case of omit volume specification, it uses the value which specifies with “svap_config.xml” </AVConfig/DTMFOutbandVol> .

6.4.5. Session ID acquirement

Command Name	Session ID Acquirement
CGI execution parameter	cgicmd=callsessionid get
Examples for CGI execution result (Response value XML)	<cmdreturn =" callsessionid get"> <ret>0</ret> <val>callsessionid = 0x07000001 callsessionid = 0x07000002 </val> </cmdreturn>
Response value	Session ID 0x07000001～0x0700000a、0x08000001～0x0800000a 0x07000101～0x0700010a、0x08000101～0x0800010a
Other explanations	・Available to execute only the call status is communicating or receiving. ・Not available during Multicast. ・Enable to acquire whether current communication is SIP connection or H.323 connection. Use for requiring disconnection /response connection. ・Get all session information. ・Information includes incoming call session.

7. Remote control emulation

This command only activates on GUI mode.

Command Name	Remote Controller Emulation
CGI execution parameter	cgicmd=button n n=KeyID meanings parameter standby standby display fullscreen layout layout PC pc sub-camera subcamera end sharing maincamera menu menu start callstart end callend enter enter ← left → right ↑ up ↓ down home home back back blue blue red red green green yellow yellow zoom UP zoomup zoom DOWN zoomdown volume UP volumeup volume DOWN volumedown camera operation camera display status status Microphone off mute 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 0 0 * asterisk # sharp
Examples for CGI execution result (Response value XML)	<cmdreturn param=" button standby "> <ret>0</ret> <val></val> </cmdreturn>
Response value	

Other explanations	・It is impossible to carry out command except GUI mode. → SVAP_RET_ERR_NOTAVAILABLE (unavailable execution) ・In case of succeed to notice GUI, even though management result by GUI, it returns “SVAP_RET_SUCCESS”. (success) ・In case of operating self-diagnosis on this function, it is impossible to stop because session is disconnected. It needs to stop by a remote control, or wait for 10 minutes timeout. ・It is impossible to carry out commands in managing other button command. → Return “SVAP_RET_ERR_NOTAVAILABLE (unavailable execution)”. Button long push function is not supported. Use sysstop command When you want power off HDVC. The HDVC ascribes toneup/tonedown button of former remote controller to zoomup/zoomdown button.

8. Upload/Download

8.1. Download

8.1.1. Download Call history

Command Name	Download Call History
CGI execution parameter	kind=cnf
Examples for CGI execution result (Response value XML)	It is returned download file.
Response value	
Other explanations	Download file name : callhist.xml Not available during conference.

8.1.2. Download other histories

Command Name	Download Other Histories (Failure, Management, Operation History)
CGI execution parameter	kind=n n : alm shows failure history ope shows operation history inf shows management history
Examples for CGI execution result (Response value XML)	It is returned download file.
Response value	
Other explanations	"cgi" is different depending on acquiring Log. Download file name : alm_log.csv (fault log) ope_log.csv (administration log) inf_log.csv (operation log) Not available during conference.

8.1.3. Download contact list

Command Name	Download contact list
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	
Response value	
Other explanations	Not available during conference.

8.1.4. Log Download in a lump

<table>
<tr><th>Command Name</th><th>Log Download in a lump</th></tr>
<tr><td>CGI execution parameter</td><td>None</td></tr>
<tr><td>Examples for CGI execution result (Response value XML)</td><td></td></tr>
<tr><td>Response value</td><td></td></tr>
<tr><td>Other explanations</td><td>File name :
「 hdvclogall_V<v1>_<v2><v3>_Rev<n>_<IPaddress>_YYMMDD_24HHMISS.tar」
（v1＝major version 、v2＝minor version、v3＝revision、n＝1or2、IPaddress＝IP address of the own site、YYMMDD_24HHMISS＝date and hour）
IP address comes to the value of 0.0.0.0 in case not of getting IP address such as disconnecting LAN cable and so on

The file has the following files.
<table>
<tr><th>Log Name</th><th>File Name</th><th>Max. size (reference)</th></tr>
<tr><td>Call/answer history</td><td>callhist.xml</td><td>675kb</td></tr>
<tr><td>Failure history</td><td>alm_log.csv</td><td>100kb</td></tr>
<tr><td>Management history</td><td>inf_log.csv</td><td>125kb</td></tr>
<tr><td>Operation history</td><td>ope_log.csv</td><td>25kb</td></tr>
<tr><td>syslog</td><td>debug_log</td><td>5000kb</td></tr>
<tr><td>μ code log</td><td>ucode_log_0
ucode_log_1
ucode_log_2</td><td>100kb
(Total)</td></tr>
<tr><td>spares</td><td>mcast_log_0.csv
mcast_log_1.csv
mcast_log_2.csv
mcast_log_3.csv
mcast_log_4.csv
mcast_log_5.csv
mcast_log_6.csv
mcast_log_7.csv</td><td>704kb
(Total)</td></tr>
<tr><td>Configuration data</td><td>config.xml</td><td>50kb</td></tr>
<tr><td>Contact list</td><td>address.xml</td><td></td></tr>
<tr><td>Profile</td><td>profile.xml</td><td></td></tr>
<tr><td>Encryption data</td><td>sec_config.xml</td><td></td></tr>
<tr><td>Startup screen</td><td>startup.png</td><td></td></tr>
<tr><td>Multicast tree list</td><td>alm_config_lis.xml</td><td></td></tr>
<tr><td>AV MW related log</td><td>-</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
</table>
Not available during conference.</td></tr>
</table>

8.2. Upload

8.2.1. Upload contact list

Command Name	Upload contact list
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	<returns > <cgireturn> <ret>0</ret> </cgireturn> </returns>
Response value	
Other explanations	Not available during conference.

8.2.2. Configuration data upload

Command Name	Configuration data upload
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	<returns > <cgireturn> <ret>0</ret> </cgireturn> </returns>
Response value	
Other explanations	Not available during conference.

8.2.3. Profile upload

Command Name	Profile upload
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	<returns > <cgireturn> <ret>0</ret> </cgireturn> </returns>
Response value	
Other explanations	Not available during conference.

8.2.4. Encryption data upload

Command Name	Encryption data upload
CGI execution parameter	None
Examples for CGI execution result (Response value XML)	<returns > <cgireturn> <ret>0</ret> </cgireturn> </returns>
Response value	
Other explanations	Not available during conference.

9. Other notes

- It is not possible to use this interface during activate safe mode.
- Reboot is surely necessary in case of switching GUI mode and touch panel PC mode.
- When initial digest authentication is only shown POST on HDVC Web server, the connection is disconnected in case of 401 error comes to “Connection: close”. Management from Web browser basically starts from GET, it continues to use same connection which come to “Connection: Keep-Alive” on initial 401 error.

It shows other notes as follows.

No.	Note	Explanation
1	It does not activate PC application doubly.	It is impossible to double login from same PC. It should control PC application management for avoiding double activation.
2	Command congestion	It should control management to avoid command congestion from PC application.
3	Command continuous execution	If you carry out command continuously without interval, there is a case that comes to error.

In case of executing CLI function on GUI mode, there are following conditions.

- Don’t use a remote control and CLI command of external control IF together.
- When you import local site file or contact list from external control IF, it should operate after set up to remote maintenance by a remote control.
- To execute IP address change or self-diagnosis by a remote control, external control IF is disconnected.
- All commands which are offered by CLI function are only available on non-communication, home screen, and contents confirmation screen (when it switches to PC image, sub camera image). On any other screens (when screen is switched by a remote control), switching image input and calling/incoming call are not available.
- Layout commands are not available to execute from external control IF during communication or layout change by a remote control. (Error notification)
- vsource / cntsharereq commands from external control IF are not available to execute during communication or layout change by a remote control. (Error notification)
- cntsharereq / vsource / layout commands are not available to execute during communication or camera operation by a remote control.
- In spite of communication/non-communication, it’s not shift to switch input or standby during controlling camera with external control IF.

10. Notes on the PC application development

・It needs the following step to avoid connecting with HTTP wastefully during activate Virus Buster.

(1) It should be Keep-Alive for Connection header during requesting HTTP.

*Reference : In case of Visual Basic, current sample application has no problem because it comes to Keep-Alive as a default setting if you do not specify “close” on connection header.

(2) It should specify the activation for advance authentication during requesting HTTP, and send a packet with certificated information since 2nd times.

*Reference : It is possible to specify that sets up “True” on the PreAuthenticate property of WebRequest class during sending request in case of Visual Basic.

11. Periodic polling (Reference method)

It is undefined as a product method for external control interface, external control interface is packaging periodic polling function on system.

It is possible to acquire unit information regularly on periodic polling. Regular polling is activated with pcPollInfo execution from PC application. This CGI does not have execution parameter (POST data).

Below commands are internally carried out and reply the result by CGI execution.

Refer chapter 6 for each result detail.

Unit automatically becomes logout in case of no access for 30 seconds from PC application.

Therefore, it needs to carry out within 30 seconds which is required next regular management after received CGI execution result of regular management from PC application for avoiding automatically logout by regular management.

Content	Value	Note
System connection status (Microphone/camera)	+ terminalinfo + vinhdmi1 + vinhdmi2 + vinvga + vouthdmi + micnum	“avstate” command
Communication status	0: non-communication 1: Calling 2: Receiving call 3: Communication 4: Sending contents sharing 5: Receiving contents sharing 6: Disconnection	“confinfo” command
layout	From 3 to 205 (Layout patter number)	“curlayout get” command
volume	From 1 to 20	“mastervol” command

Microphone mute	0: OFF 1: ON	Keep information inside conference control (“confinfo” command))
Failure information	System management status	“state” command

12. HTTP sample

12.1. Login

It shows sample in login.

12.1.1. PC→HDVC (First access)

It is a frame which PC sends first for login.

```
Hypertext Transfer Protocol
  POST /pcLogin.cgi HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): POST /pcLogin.cgi HTTP/1.1\r\n]
      [Message: POST /pcLogin.cgi HTTP/1.1\r\n]
      [Severity level: Chat]
      [Group: Sequence]
    Request Method: POST
    Request URI: /pcLogin.cgi
    Request Version: HTTP/1.1
  Host: 192.168.0.111\r\n
  User-Agent: Mozilla/5.0 (X11; U; Linux i686; ja; rv:1.9.0.5) Gecko/2008121911 CentOS/3.0.5-1.el5.centos Firefox/3.0.5\r\r
  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
  Accept-Language: ja,en;q=0.7,en-us;q=0.3\r\n
  Accept-Encoding: gzip,deflate\r\n
  Accept-Charset: Shift_JIS,utf-8;q=0.7,*;q=0.7\r\n
  Keep-Alive: 300\r\n
  Connection: keep-alive\r\n
  Content-Type: application/x-www-form-urlencoded\r\n
  Content-Length: 0\r\n
    [Content length: 0]
  \r\n
```

12.1.2. HDVC→PC (Reply 401 Unauthorized)

This time, it is chosen digest authentication but 401(Unauthorized) is replied as an authentication requirement from HDVC.

```
Hypertext Transfer Protocol
  HTTP/1.1 401 Unauthorized\r\n
    [Expert Info (Chat/Sequence): HTTP/1.1 401 Unauthorized\r\n]
      [Message: HTTP/1.1 401 Unauthorized\r\n]
      [Severity level: Chat]
      [Group: Sequence]
    Request Version: HTTP/1.1
    Response Code: 401
  Content-type: text/html; charset=iso-8859-1\r\n
  Accept-Ranges: bytes\r\n
  Connection: close\r\n
  WWW-Authenticate: Digest realm="HD Visual Communication Unit",nonce="5a52714ea9a12203792b0f0bd3e44e72e7dc7f34",opaque="24baa71f33
  \r\n
Line-based text data: text/html
  <HTML><HEAD><TITLE>401 Unauthorized</TITLE></HEAD>\n
  <BODY BGCOLOR="#cc9999"><H2>401 Unauthorized</H2>\n
  <HR>\n
  Authorization required for the requested URL.\n
  </BODY></HTML>\n
```

12.1.3. PC→HDVC (Send certificated information)

PC which received 401 needs to send certificated information for HDVC.

```
Hypertext Transfer Protocol
  POST /pcLogin.cgi HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): POST /pcLogin.cgi HTTP/1.1\r\n]
      [Message: POST /pcLogin.cgi HTTP/1.1\r\n]
      [Severity level: Chat]
      [Group: Sequence]
    Request Method: POST
    Request URI: /pcLogin.cgi
    Request Version: HTTP/1.1
  Host: 192.168.0.111\r\n
  User-Agent: Mozilla/5.0 (X11; U; Linux i686; ja; rv:1.9.0.5) Gecko/2008121911 CentOS/3.0.5-1.el5.centos Firefox/3.0.5\r\n
  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
  Accept-Language: ja,en;q=0.7,en-us;q=0.3\r\n
  Accept-Encoding: gzip,deflate\r\n
  Accept-Charset: Shift_JIS,utf-8;q=0.7,*;q=0.7\r\n
  Keep-Alive: 300\r\n
  Connection: keep-alive\r\n
  [truncated] Authorization: Digest username="touchpc", realm="HD Visual Communication Unit", nonce="5a52714ea9a12203792b0f0bd3e44e
  Content-Type: application/x-www-form-urlencoded\r\n
  Content-Length: 0\r\n
    [Content length: 0]
  \r\n
```

12.1.4. HDVC→PC (Reply 200OK)

HDVC replays 200OK if certificated information is right. Then, login is complete.

```
Hypertext Transfer Protocol
  HTTP/1.1 200 OK\r\n
    [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      [Message: HTTP/1.1 200 OK\r\n]
      [Severity level: Chat]
      [Group: Sequence]
    Request Version: HTTP/1.1
    Response Code: 200
  Connection: Keep-Alive\r\n
  Status: 200\r\n
  Content-Type: text/xml\r\n
  Content-length: 110\r\n
    [Content length: 110]
  \r\n
eXtensible Markup Language
  <?xml
    version="1.0"
    encoding="utf-8"
    ?>
  <returns>
    <cgireturn>
      <ret>
        0
        </ret>
      </cgireturn>
    </returns>
```

12.2. External control command execution

It shows HTTP sample during carry out external control command as follows

12.2.1. PC→HDVC (External control command execution)

It enters parameter (command) to data part, and send to HDVC.

In addition, this capture carries out except browser, header part has some differences in case of execution with browser.

```
Hypertext Transfer Protocol
  POST /pcCmdExec.cgi HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): POST /pcCmdExec.cgi HTTP/1.1\r\n]
        [Message: POST /pcCmdExec.cgi HTTP/1.1\r\n]
        [Severity level: Chat]
        [Group: Sequence]
      Request Method: POST
      Request URI: /pcCmdExec.cgi
      Request Version: HTTP/1.1
  Connection: Keep-Alive\r\n
  Content-Length: 18\r\n
      [Content length: 18]
  Content-Type: application/x-www-form-urlencoded\r\n
  Host: 192.168.0.111\r\n
  User-Agent: Apache-HttpClient/UNAVAILABLE (java 1.4)\r\n
  [truncated] Authorization: Digest username="touchpc", realm="HD Visual Communication Unit", nonce="0653714e56086d10033e9d6444c14e
  \r\n
Line-based text data: application/x-www-form-urlencoded
  cgicmd=version get
```

12.2.2. HDVC→PC (Reply execution result)

Execution result keeps at data part that is replied.

```
Hypertext Transfer Protocol
  HTTP/1.1 200 OK\r\n
    [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
        [Message: HTTP/1.1 200 OK\r\n]
        [Severity level: Chat]
        [Group: Sequence]
      Request Version: HTTP/1.1
      Response Code: 200
  Connection: Keep-Alive\r\n
  Status: 200\r\n
  Content-Type: text/xml\r\n
  Content-length: 211\r\n
      [Content length: 211]
  \r\n
Extensible Markup Language
  <?xml
      version="1.0"
      encoding="utf-8"
      ?>
  <returns>
    <cgireturn>
      <ret>
          0
          </ret>
        </cgireturn>
    <cmdreturn
        param="version get">
      <ret>
          0
          </ret>
      <val>
          version = 2.30 Beta3\n
          </val>
        </cmdreturn>
      </returns>
```

12.3. Download (Log)

It shows a sample of Log download.

12.3.1. PC→HDVC (Log requirement)

File is downloaded by GET. In case of GET, "? Parameter" is added after URL.

```
Hypertext Transfer Protocol
  GET /pcDlLog.cgi?kind=cnf HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): GET /pcDlLog.cgi?kind=cnf HTTP/1.1\r\n]
        [Message: GET /pcDlLog.cgi?kind=cnf HTTP/1.1\r\n]
        [Severity level: Chat]
        [Group: Sequence]
      Request Method: GET
      Request URI: /pcDlLog.cgi?kind=cnf
      Request Version: HTTP/1.1
  Host: 192.168.0.111\r\n
  User-Agent: Mozilla/5.0 (X11; U; Linux i686; ja; rv:1.9.0.5) Gecko/2008121911 CentOS/3.0.5-1.el5.centos Firefox/3.0.5\r\n
  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
  Accept-Language: ja,en;q=0.7,en-us;q=0.3\r\n
  Accept-Encoding: gzip,deflate\r\n
  Accept-Charset: Shift_JIS,utf-8;q=0.7,*;q=0.7\r\n
  Keep-Alive: 300\r\n
  Connection: keep-alive\r\n
  [truncated] Authorization: Digest username="touchpc", realm="HD Visual Communication Unit", nonce="7153714e39355cf03e7ceb58e9999f
  \r\n
```

12.3.2. HDVC→PC (Log data)

Following HTTP data is sent to PC by separating into several frames.

```
Hypertext Transfer Protocol
  Data (973 bytes)
      Data: 3c3f786d6c2076657273696f6e3d22312e302220656e636f...
      [Length: 973]
```

13. XML sample

13.1. Contact list

Contact list XML sample is shown as follows.

```
<?xml version="1.0" encoding="UTF-8"?>
<Book>
  <AddressVersion>2.00</AddressVersion>
  <NormalMode>
    <Address>
      <AddressNumber>1</AddressNumber>
      <AddressType>0</AddressType>
      <AddressName>テスト</AddressName>
      <AddressKana>テスト</AddressKana>
      <AddressURI>192.168.0.101</AddressURI>
      <SpeedDial>1</SpeedDial>
      <MaxBand>0</MaxBand>
      <Link1>-1</Link1>
      <Link2>-1</Link2>
      <Link3>-1</Link3>
      <CallType>0</CallType>
    </Address>
      :
    <Address>
      :
    </Address>
  </NormalMode></Book>
  <!--
    ** Address for the NGN mode **
  -->
  <NGNMode></NGNMode>
  <!--
    ** Address for the NAT Traversal mode **
  -->
  <NATMode></NATMode>
</Book>
```

Address book version

*It is different from system version.

Contact data.

These XML tags are remained but not used.

13.2. Call history

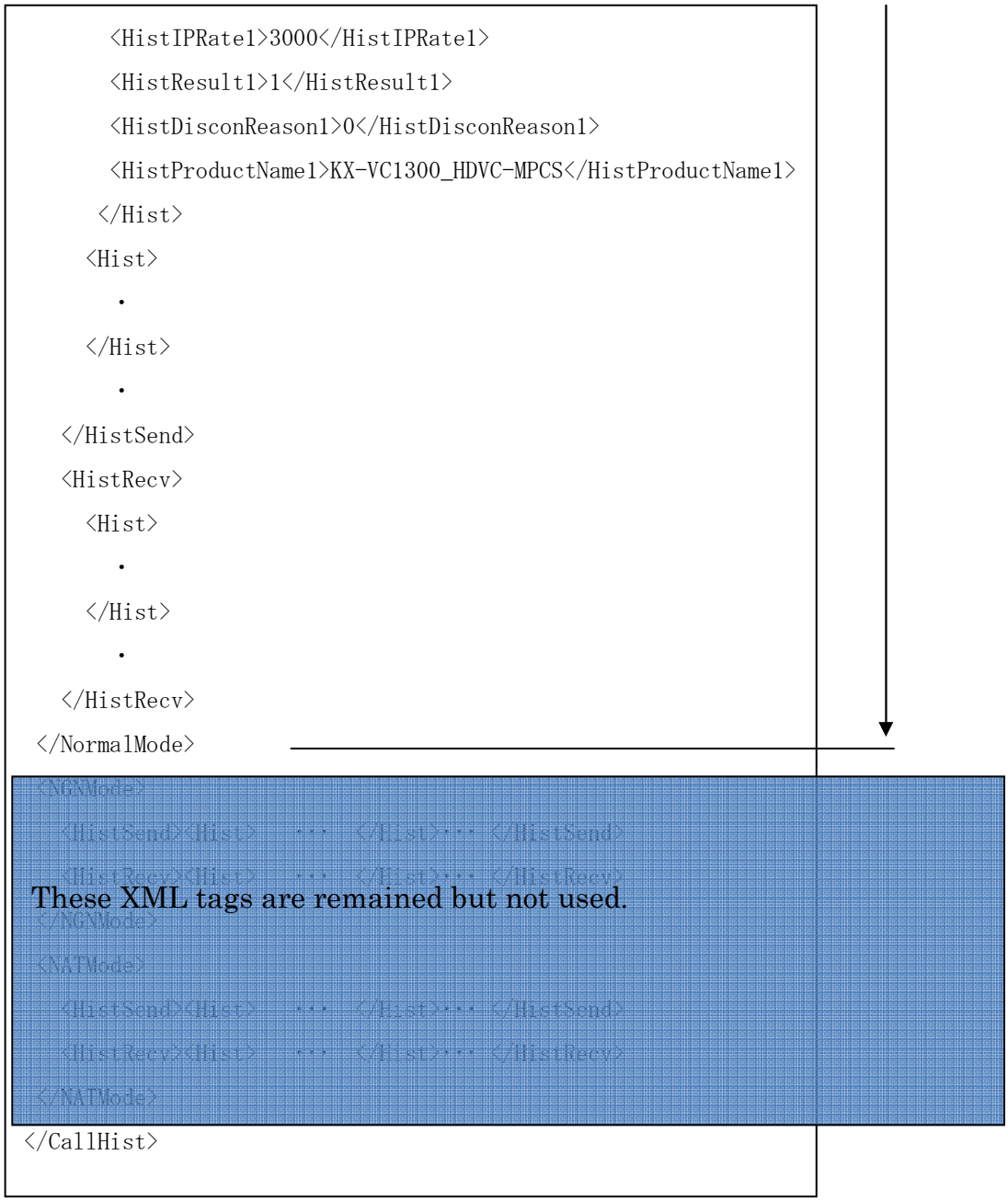
It shows call history XML sample as follows.

```
<?xml version="1.0" encoding="UTF-8"?>
<CallHist>
 <HistVersion>2.00</HistVersion>
   <Talktime>
     <StartDate>2014/10/14 14:00:03</StartDate>
     <TotalTalktime>124151</TotalTalktime>
     <TotalOutgoingCalls>18</TotalOutgoingCalls>
     <TotalIncomingCalls>2</TotalIncomingCalls>
     <ResetDate>2014/10/14 14:00:03</ResetDate>
     <PartialTalktime>124151</PartialTalktime>
     <PartialOutgoingCalls>18</PartialOutgoingCalls>
     <PartialIncomingCalls>2</PartialIncomingCalls>
   </Talktime>
 <NormalMode>
   <HistSend>
      <Hist>
        <HistNumber>1</HistNumber>
        <HistType>0</HistType>
        <HistTime>72</HistTime>
        <HistSessID>117440769</HistSessID>
        <HistDateSec>1413263154</HistDateSec>
        <HistDate>2014/10/14 14:05</HistDate>
        <HistSettingName>Test</HistSettingName>
        <HistConnectMode>0</HistConnectMode>
        <HistRemoteSitesNum>1</HistRemoteSitesNum>
        <HistCallType>0</HistCallType>
        <HistProfileID>0</HistProfileID>
        <HistProfileNo>0</HistProfileNo>
        <HistAddress1>sip:192.168.0.101</HistAddress1>
        <HistDispName1></HistDispName1>
        <HistEntryNo1>0</HistEntryNo1>
        <HistIPRate1>4500</HistIPRate1>
```

Call history version.
*It is different from system version.

Accumulation call data

Call history data


<HistIPRate1>3000</HistIPRate1>
<HistResult1>1</HistResult1>
<HistDisconReason1>0</HistDisconReason1>
<HistProductName1>KX-VC1300_HDVC-MPCS</HistProductName1>
</Hist>
<Hist>
</Hist>
</HistSend>
<HistRecv>
<Hist>
</Hist>
</HistRecv>
</NormalMode>
These XML tags are remained but not used.
</CallHist>