# CX350/CX4000 Control Using PTZ Control Protocol

Rev.3.00

January 25, 2022

# **Panasonic Corporation**

MEBD(Professional AV Category)

# **Revision History**

Date	Revision	Description
2020/05/01	Rev.1.00	1st Release
2021/05/27	Rev.2.00	Added the corresponding command
2022/01/25	Rev.3.00	Added the corresponding command  • QSE:77, view.cgi, get_state, set_rtmp_param, set_srt_info  Corrected the response value of the QID command

# TABLE OF CONTENTS

кe	evision History	2
1	Scope	4
2	Conformance Notation	4
3	Introduction	4
4	Command details	
•	4.1 Pan-tilt head control	
	4.1.1 Power On/Stanby	
	4.1.2 Lens Operations	
	4.1.3 Tally	
	4.2 Camera control	
	4.2.1 Lens operations	
	4.2.2 Color Bars setting	
	4.2.3 Scene file setting	
	4.2.4 Shutter mode setting	
	4.2.5 Gain setting	
	4.2.6 Color settings	
	4.2.7 Chroma level setting	
	4.2.8 AWB/ABB setting	
	4.2.9 Detail setting	
	4.2.10Gamma setting	43
	4.2.11 Digital zoom settings	
	4.2.12Camera information acquisition	
	4.2.13Frequency settings	47
	4.2.14Knee settings	48
	4.2.15White Clip setting	51
	4.2.16OIS settings	52
	4.2.17Tally settings	52
	4.2.18SKIN TONE DETAIL settings	53
	4.3 Video transmission and network application control	54
	4.3.1 Device Information Acquisition	55
	4.3.2 JPEG-based Image Transmission	58
	4.3.3 Basic Settings Information Acquisition	59
	4.3.4 VideoOverIP Screen Information Acquisition	60
	4.3.5 Camera Status Acquisition	63
	4.3.6 Video Recording Start/End Control	64
	4.3.7 RTMP Stream Control	64
	4.3.8 RTMP Server Setting	65
	4.3.9 SRT Stream Control	65
	4.3.10SRT Streaming Settings	66

### 1 Scope

This document describes CX series cameras control using PTZ Control Protocol over HTTP from external terminal such as PC and PDA.

#### 2 Conformance Notation

The keywords "shall" and "shall not" indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted

The keywords, "should" and "should not" indicate that, among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others; or that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

The keywords "may" and "need not" indicate courses of action permissible within the limits of the document.

The keywords "optional" indicates that implementation is not necessarily required.

#### 3 Introduction

Applicable models

- · AG-CX350 Ver6.00 ~
- · AJ-UPX360 Ver6.00 ~
- AG-CX200 Ver6.00 ~
- · AJ-CX4000 Ver5.00 ~
- · AJ-UPX900 Ver5.00 ~

CX series cameras can be controlled using PTZ Control Protocol if **NDI HX mode** is on, or IP REMOTE is **ENABLE(HOLD)**. Also, for the AG-CX350/AJ-UPX360/AG-CX200, set the Auto/Manual switch on the camera body to **Auto**. PTZ Control Protocol use port 80. All commands return 404 responses, unless in NDI|HX mode or IP REMOTE is ENABLE(HOLD). Commands related to non-supported functions in CX series camera will respond with 404 Error.

Please also refer to the documents below for PTZ Camera Control Protocol.

https://eww.pass.panasonic.co.jp/pro-av/support/content/guide/DEF/HE50\_120\_IP/HDIntegratedCamera\_InterfaceSpecifications-E.pdf

 $https://eww.pass.panasonic.co.jp/pro-av/support/content/guide/DEF/UE150\_CGI/Supplement\_for\_Web\_Control-UE150E.pdf$ 

#### 4 Command details

This chapter presents the following details.

#### Pan-tilt head control

This interface controls the zoom, the focus and so on. These commands are called "pan-tilt head control commands" following HD/4K Integrated Camera Interface Specifications.

#### ② Camera control

This interface is concerned with the camera's lens control and image adjustments. These commands are called "camera control commands" following HD/4K Integrated Camera Interface Specifications.

3 Video transmission and network application control

This interface controls the start/stop of streaming, the start/stop of video recording and so on. These commands are called "Video transmission and network application control".

#### 4.1 Pan-tilt head control

The pan-tilt head control commands are in compliance with the HTTP1.1 communication specifications. Their format is given below.

# [Command format]

```
[Send]
```

http://[IP Address]/cgi-bin/aw\_ptz?cmd=[Command]&res=[Type]

where

XIP Address ...... IP address of camera at connection destination

※Command······ Details given in "Command" column in the command tables below

XType····· Fixed at "1"

[Receive] 200 OK "Command"

\*Command······ Response value of each command; set in the HTTP message body

#### Example: Zoom (Stop)

[Send]

http://192.168.0.10/cgi-bin/aw\_ptz?cmd=#Z50&res=1

[Receive]

200 OK "zS50"

\*\*Depending on the browser or middleware used, "#" may have to be converted to "%23" by ASCII conversion.
http://192.168.0.10/cgi-bin/aw\_ptz?cmd=%23Z50&res=1

Given below is the communication sequence which accords with the command format presented on the previous page.

#### [Sequence]

"PC1" is the control terminal in the sequence below.

Example: Zoom (Stop) control

Camera IP Address = 192.168.0.10

Command = Z50

The control to stop the pan-tilt operation is exercised from PC1. [200 OK "zS50"] is returned as the response from the camera. The control command and query command are available as the pan-tilt head control commands. Given below is the command sequence.

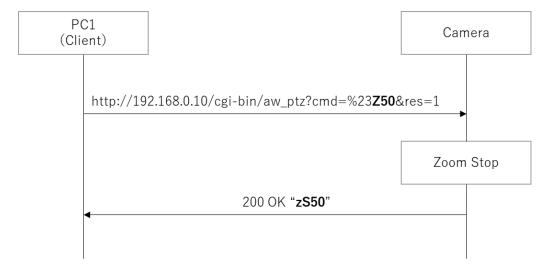


Figure 4.1.1-1 Command sequence of zoom speed control

For more details, please check the documents below for PTZ Camera Control Protocol. https://eww.pass.panasonic.co.jp/pro-av/support/content/guide/DEF/HE50\_120\_IP/HDIntegratedCamera\_InterfaceSpecifications-E.pdf

# 4.1.1 Power On/Stanby

CX series cameras cannot be turned On/Off by the PTZ Control Command. Only query command is supported.

Table 4.1.1.1 Power On/Stanby

Command name	Category	Command	Data value	Setting	Remarks
Power On/Stanby	Request	#O	None		• The response value is
query command	Response	p[Data]	1	Power On	always 1.

# 4.1.2 Lens Operations

#### 4.1.2.1 Zoom

These commands control the zooming (between Wide and Tele) of the camera lens and enable the current zoom position to be acquired.

Table 4.1.2.1 Zoom

Command name	Category	Command	Data value	Setting	Remarks
Zoom (position	Request	#GZ	None		※In the case of AJ-CX4000
control)	Response	gz[Data]	555h	Wide	/AJ-UPX900, the
query command			~	~	availability depends on the
			FFFh	Tele	lens.
Zoom (speed	Control	#Z[Data]	01	Wide Max. Speed	• Zooming speed to be
control)	Response	zS[Data]	~	~	controlled
control command			49	Wide Min. Speed	
			50	Zoom Stop Tele	※Not supported by the
			51	Min. Speed	AJ-CX4000/AJ-UPX900
			~	~	
			99	Tele Max. Speed	

#### 4.1.2.2 Focus

These commands control the focusing (between Near and Far) of the camera and enable the current focus position and focus adjustment speed to be acquired. They also enable On/Off for the auto focus to be controlled and the current auto focus On/Off status to be acquired. Commands which control the focusing are also described in section "4.2.1.1 Focus" of "4.2 Camera control".

Table 4.1.2.2 Focus

Command name	Category	Command	Data value	Setting	Remarks
Focus (position	Control	#AXF[Data]	555h	Near	Invalid when auto fucus
control command	Response	axf[Data]	~	~	is On
			F93h	Far(∞)	• When the value is F93h,
					it is set to infinity
					※Not supported by the
					AJ-CX4000/AJ-UPX900
Focus (position	Request	#AXF	None		The data value differs
control)	Response	axf[Data]	555h	Near	depending on the
query command			~	~	responses to the control
			FFFh	Far(over ∞)	command and query
					command
					If the value is greater
					than F93h, it is set to
					over infinity
					※In the case of
					AJ-CX4000/ AJ-UPX900,
					the availability depends on
					the lens.
Focus position	Request	#GF	None		
query command	Response	gf[Data]	555h	Near	
			~	~	
			FFFh	Far	
Focus (speed	Control	#F[Data]	01	Near Max. Speed	Focusing speed to be
control)	Response	fS[Data]	~	~	controlled
control command			49	Near Min. Speed	<ul> <li>Invalid when auto focus</li> </ul>
			50	Focus Stop	is On
			51	Far Min. Speed	
			~	~	※Not supported by the
			99	Far Max. Speed	AJ-CX4000/AJ-UPX900

Command name	Category	Command	Data value	Setting	Remarks
Auto focus	Control	#D1[Data]	0	Off(Manual)	※Not supported by the
On/Off control	Response	d1[Data]	1	On(auto)	AJ-CX4000/AJ-UPX900
command					
Auto focus	Request	#D1	None	Off(Manual)	※Not supported by the
On/Off query	Response	d1[Data]	0	On(auto)	AJ-CX4000/AJ-UPX900
command			1		

#### 4.1.2.3 Iris

These commands control the iris (between Close and Open) of the camera and enable the current iris position to be acquired. In addition they enable Auto/Manual control of the iris and the current iris Auto/Manual statuses to be acquired. Commands which control the iris are alse described in section "4.2.1.2 Iris" of "4.2 Camera control".

Table 4.1.2.3 Iris

Command name	Category	Command	Data value	Setting	Remarks
Iris position	Control	#1	01	Iris Close	If the Iris mode is
control command	Response	iC[Data]	~	~	Auto, the camera
			99	Iris Open	reply an error
					response.
Iris position	Request	#I	None		
query command	Response	iC[Data]	01	Iris Close	
			~	~	
			99	Iris Open	
Iris position	Control	#AXI[Data]	555h	Iris Close	
control command	Response	axi[Data]	~	~	
			FFFh	Iris Open	
Iris position	Request	#AXI	None		
query command	Response	axi[Data]	555h	Iris Close	
			~	~	
			FFFh	Iris Open	
Iris position	Request	#GI	None		

Command name	Category	Command	Data	Setting	Remarks
Communa name	Outogory	Command	value	octting	Remarks
Auto/Manual	Response	gi[Data1][Data2]	[Data1]		
query command			555h	Iris Close	
			~	~	
			FFFh	Iris Open	
			[Data2]		
			0	Manual Iris	
			1	Auto Iris	
Auto Iris On/Off	Control	#D3[Data]	0	Manual Iris	
control command	Response	d3[Data]	1	Auto Iris	
Auto Iris On/Off	Request	#D3	None		
query command	Response	d3[Data]	0	Manual Iris	
			1	Auto Iris	

# 4.1.3 **Tally**

These commands control the tally On/Off of the camera and enable the current tally On/Off to be acquired. Commands which control the tally settings are alse described in section "4.2.17 Tally settings" of "4.2 Camera control".

Table 4.1.3.1 Tally

Command name	Category	Command	Data value	Setting	Remarks
R-Tally On/Off	Control	#DA[Data]	0	R-Tally Off	
control command	Response	dA[Data]	1	R-Tally On	
R-Tally On/Off	Request	#DA	None		
query command	Response	dA[Data]	0	R-Tally Off	
			1	R-Tally On	

#### 4.2 Camera control

The camera control commands are based on the HTTP1.1 communication specifications. Their format is given below.

#### [Command format]

[Send]

http://[IP Address]/cgi-bin/aw\_cam?cmd=[Command]&res=[Type]

where

XIP Address ...... IP address of camera at connection destination

\*Command :----- Details given in "Command" column in the command tables below

\*Type····· Normally "1" (but "0" for the AWB[OWS] and ABB[OAS] commands)

[Receive] 200 OK "Command"

\*Command······ Response value of each command; set in the HTTP message body

There is no response in the case of an AWB or ABB command whose Type is 0.

**Example:** Focus setting = Auto

[Send]

http://192.168.0.10/cgi-bin/aw\_cam?cmd=OAF:0&res=1

[Receive]

200 OK "OAF:0"

Given below is the sequence used when communication has been performed in accordance with the command format described on the previous page.

#### [Sequence]

"PC1" is the control terminal in the sequence below.

Example: Focus setting = Auto

Camera IP Address = 192.168.0.10

Command = OAF:1

Auto focus control is performed from PC1, and [200 OK "OAF:1"] is returned as the response. Both a control command and query command are available as the camera control commands. Given below is the command sequence.

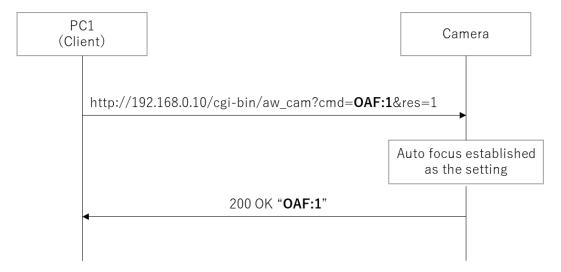


Figure 4.1.3-1 Camera control command sequence

For more details, please check the documents below for PTZ Camera Control Protocol.

 $https://eww.pass.panasonic.co.jp/pro-av/support/content/guide/DEF/HE50\_120\_IP/HDIntegratedCamera\_InterfaceSpecifications-E.pdf$ 

#### 4.2.1 Lens operations

#### 4.2.1.1 Focus

These commands exercise Auto/Manual control of the focusing and one-touch auto focus control of the camera. Commands which control the focusing are alse described in section "4.1.2.2 Focus" of "4.1 Pan-tilt head control"

Table 4.2.1.1 Focus

Command name	Category	Command	Data value	Setting	Remarks
Focus	Control	OAF:[Data]	0	Manual	※Not supported by the
Auto/Manual	Response	OAF:[Data]	1	Auto	AJ-CX4000/AJ-UPX900
control command					
Focus	Request	QAF	None		※Not supported by the
Auto/Manual	Response	OAF:[Data]	0	Manual	AJ-CX4000/AJ-UPX900
query command			1	Auto	
One-touch focus	Control	OSE:69:[Data]	1	One Touch AF	One-touch focus On
control command	Response	OSE:69:1			control
					※Not supported by the
					AJ-CX4000/AJ-UPX900

#### 4.2.1.2 Iris

These commands control the iris (between Close and Open) of the camera and enable the current iris position to be acquired. They also enable iris Auto/Manual to be controlled and the iris Auto/Manual status to be checked. Commands which control the iris are alse described in section "4.1.2.3 Iris" of "4.1 Pan-tilt head control".

Table 4.2.1.2 Iris

Command name	Category	Command	Data value	Setting	Remarks
Iris Auto/Manual	Control	ORS:[Data]	0	Manual	This command restores
control command	Response	ORS:[Data]	1	Auto	the held manual iris setting when control is switched from Auto to Manual.

Command name	Category	Command	Data value	Setting	Remarks
Iris Auto/Manual	Request	QRS	None		
query command	Response	ORS:[Data]	0	Manual	
			1	Auto	
Picture level	Control	OSD:48:[Data]	00h	-50	
Auto Iris offset	Response	OSD:48:[Data]	~	~	
control command			31h	-1	
			32h	0	
			33h	+1	
			~	~	
			64h	+50	
Picture level	Request	QSD:48	None		
Auto Iris offset	Response	OSD:48:[Data]	00h	-50	
query command			~	~	
			31h	-1	
			32h	0	
			33h	+1	
			~	~	
			64h	+50	
Iris volume	Control	ORV:[Data]	000h	Close	Iris volume control(Manual)
control command	Response	ORV:[Data]	~	~	
			3FFh	Open	
Iris volume	Request	QRV	None		Iris volume status request
query command	Response	ORV:[Data]	000h	Close	
			~	~	
			3FFh	Open	
	Request	QSD:4F	None		Iris volume status request
	Response	OSD:4F:[Data]	00h	Close	
			~	~	
			FFh	Open	
Auto iris speed	Control	OSJ:01:[Data]	0h	Slow	※Not supported by the
control command	Response	OSJ:01:[Data]	1h	Normal	AJ-CX4000/AJ-UPX900
			2h	Fast	
Auto iris speed	Request	QSJ:01	None		※Not supported by the
query command	Response	OSJ:01:[Data]	0h	Slow	AJ-CX4000/AJ-UPX900
			1h	Normal	
			2h	Fast	
Auto iris window	Control	OSJ:02:[Data]	0h	Normal1	
control command	Response	OSJ:02:[Data]	1h	Normal2	
			2h	Center	

Command name	Category	Command	Data value	Setting	Remarks
Auto iris window	Request	QSJ:02	None		
query command	Response	OSJ:02:[Data]	0h	Normal1	
			1h	Normal2	
			2h	Center	

# 4.2.1.3 ND filter setting

These commands control the ND filter of the camera, and they enable the ND filter status to be acquired.

Table 4.2.1.3 ND filter setting

Command name	Category	Command	Data value	Setting	Remarks
ND filter	Control	OFT:[Data]	0	Through	※Not supported by the
control command	Response	OFT:[Data]	1	1/4	AJ-CX4000/AJ-UPX900
			2	1/16	
			3	1/64	
ND filter	Request	QFT	None		
query command	Response	OFT:[Data]	0	Through	
			1	1/4	
			2	1/16	
			3	1/64	
			15	NG	

#### 4.2.2 Color Bars setting

These commands enable color bar/camera to be switched, the color bar setup to be set and the current settings to be acquired.

Table 4.2.2.1 Color Bars

Command name	Category	Command	Data value	Setting	Remarks
Color bar/Camera	Control	DCB:[Data]	0	Camera	
control command	Response	DCB:[Data]	1	Color Bars	
Color bar/Camera	Request	QBR	None		
Query command	Response	OBR:[Data]	0	Camera	
			1	Color Bars	

# 4.2.3 Scene file setting

These commands specify the scene files of the camera and enable the settings of the currently selected scene file to be acquired.

Table 4.2.3.1 Scene file setting

Command name	Category	Command	Data value	Setting	Remarks
Scene file	Control	XSF:[Data]	0	Scene1	
control command	Response	XSF:[Data]	1	Scene2	
			2	Scene3	
			3	Scene4	
			4	Scene5	
			5	Scene6	
Scene file	Request	QSF	None		
query command	Response	OSF:[Data]	0	Scene1	
			1	Scene2	
			2	Scene3	
			3	Scene4	
			4	Scene5	
			5	Scene6	

# 4.2.4 Shutter mode setting

These commands control the shutter of the camera and enable the currently set shutter mode to be acquired.

Table 4.2.4.1 Shutter mode setting

Command name	Category	Command	Data value	Setting	Remarks
Auto shutter limit	Control	OSD:BF:[Data]	2	1/100	※Not supported by the
control command	Response	OSD:BF:[Data]	3	1/120	AJ-CX4000/AJ-UPX900
			4	1/250	
Auto shutter limit	Request	QSD:BF	None		※Not supported by the
query command	Response	OSD:BF:[Data]	2	1/100	AJ-CX4000/AJ-UPX900
			3	1/120	
			4	1/250	

# 4.2.5 Gain setting

These commands enable the gain settings of the camera to be established and the current settings to be acquired.

Table 4.2.5.1 Gain settings

Command name	Category	Command	Data value	Setting	Remarks
Gain	Control	OGU:[Data]	02h	-6dB	<ul> <li>Value can be set in</li> </ul>
control command	Response	OGU:[Data]	~	~	increments of 1dB
			05h	-3dB	• For the AG-CX350/
			~	~	AJ-UPX360/
			08h	0dB	AG-CX200, to control
			~	~	AGC ON/OFF, set the
			11h	9dB	Auto/Manual switch
			~	~	on the camera body to
			1Ah	18dB	Auto
			~	~	• If 02h to 32h is set
			32h	42dB	when AGC is ON, the
			80h	Auto(AGC ON)	operation is the same
			81h	Manual(AGC OFF)	as when 81h is set

Command name	Category	Command	Data	Setting	Remarks
			value		
Gain	Request	QGU	None		
query command		OGU:[Data]	02h	-6dB	
			~	~	
			05h	-3dB	
			~	~	
			08h	0dB	
			~	~	
			11h	9dB	
			~	~	
			1Ah	18dB	
			~	~	
			32h	42dB	
			80h	Auto(AGC ON)	
AGC maximum	Control	OSD:69:[Data]	0	3dB	
gain value	Response	OSD:69[Data]	1	6dB	
control command			2	12dB	
			3	18dB	
AGC maximum	Request	QSD:69	None		
gain value query	Response	OSD:69:[Data]	0	3dB	
command			1	6dB	
			2	12dB	
			3	18dB	

# 4.2.6 Color settings

# 4.2.6.1 R/B gain settings

These commands control the R/B gain levels of the camera, and they enable the current settings to be acquired.

Table 4.2.6.1 R/B gain settings

Command name	Category	Command	Data value	Setting	Remarks
R gain	Control	ORI:[Data]	000h	-200	
control command	Response	ORI:[Data	~	~	
			096h	0	
			~	~	
			12Ch	+200	
R gain	Request	QRI	None		
query command	Response	ORI:[Data]	000h	-200	
			~	~	
			096h	0	
			~	~	
			12Ch	+200	
R gain	Control	OSG:39:[Data]	738h	-200	
control command	Response	OSG:39:[Data]	~	~	
			800h	0	
			~	~	
			8C8h	+200	
R gain	Request	QSG:39	None		
query command	Response	OSG:39	738h	-200	
			~	~	
			800h	0	
			~	~	
			8C8h	+200	
B gain	Control	OBI:[Data]	000h	-200	
control command	Response	OBI:[Data]	~	~	
			096h	0	
			~	~	
			12Ch	+200	
B gain	Request	QBI	None		
query command	Response	OBI:[Data]	000h	-200	
			~	~	
			096h	0	
			~	~	
			12Ch	+200	

Command name	Category	Command	Data value	Setting	Remarks
B gain	Control	OSG:3A:[Data]	738h	-200	
control command	Response	OSG:3A:[Data]	~	~	
			800h	0	
			~	~	
			8C8h	+200	
B gain	Request	QSG:3A	None		
query command	Response	OSG:3A:[Data]	738h	-200	
			~	~	
			800h	0	
			~	~	
			8C8h	+200	

# 4.2.6.2 R/B pedestal setting

These commands control the R/B pedestal values of the camera, and they enable the current settings to be acquired.

Table 4.2.6.2 R/B pedestal settings

Command name	Category	Command	Data value	Setting	Remarks
R pedestal	Control	ORP:[Data]	032h	-100	Setting cannot be
control command	Response	ORP:[Data]	~	~	changed if V-Log has
			096h	0	been selected as the
			~	~	Color Setting.
			0FAh	+100	
R pedestal	Request	QRP	None		
query command	Response	ORP:[Data]	032h	-100	
			~	~	
			096h	0	
			~	~	
			0FAh	+100	
B pedestal	Control	OBP:[Data]	032h	-100	Setting cannot be
control command	Response	OBP:[Data]	~	~	changed if V-Log has
			096h	0	been selected as the
			~	~	Color Setting.
			0FAh	+100	

Command name	Category	Command	Data value	Setting	Remarks
B pedestal	Request	QBP	None		
query command	Response	OBP:[Data]	032h	-100	
			~	~	
			096h	0	
			~	~	
			0FAh	+100	
Master pedestal	Control	OSJ:0F:[Data]	738h	-200	Setting cannot be
control command	Response	OSJ:0F:[Data]	~	~	changed if V-Log has
			800h	0	been selected as the
			~	~	Color Setting.
			8C8h	+200	
Master pedestal	Request	QSJ:0F	None		
query command	Response	OSJ:0F:[Data]	738h	-200	
			~	~	
			800h	0	
			~	~	
			8C8h	+200	
G pedestal	Control	OSJ:10:[Data]	032h	-100	Setting cannot be
control command	Response	OSJ:10:[Data]	~	~	changed if V-Log has
			096h	0	been selected as the
			~	~	Color Setting.
			0FAh	+100	
G pedestal	Request	QSJ:10	None		
query command	Response	OSJ:10:[Data]	032h	-100	
			~	~	
			096h	0	
			~	~	
			0FAh	+100	
Pdestal Offset	Control	OSJ:11:[Data]	0	Off	Setting cannot be
control command	Response	OSJ:11:[Data]	1	On	changed if V-Log has
					been selected as the
					Color Setting.
Pedestal Offset	Request	QSJ:11	None		-
query command	Response	OSJ:11:[Data]	0	Off	1
			1	On	

# 4.2.6.3 Color matrix settings

These commands control the color matrix of the camera, and they enable the current settings to be acquired.

Table 4.2.6.3 Color matrix setting

Command name	Category	Command	Data value	Setting	Remarks
Color matrix	Control	OSE:31:[Data]	0	NORMAL1	<ul> <li>Setting cannot be</li> </ul>
control command	Response	OSE:31:[Data]	1	NORMAL2	changed if V-Log has
			2	FULO.	been selected as the
			3	CINELIKE	Color Setting.
					※Not supported by the
					AJ-CX4000/AJ-UPX900
Color matrix	Request	QSE:31	None		※Not supported by the
query command	Response	OSE:31:[Data]	0	NORMAL1	AJ-CX4000/AJ-UPX900
			1	NORMAL2	
			2	FULO.	
			3	CINELIKE	
Linear matrix R-G	Control	OSD:A4:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
control command	Response	OSD:A4:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Linear matrix R-G	Request	QSD:A4	None		
query command	Response	OSD:A4:[Data]	41h	-63	
			~	~	
			80h	0	
			~	~	
			BFh	+63	
		_			
Linear matrix R-B	Control	OSD:A5:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
control command	Response	OSD:A5:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
		005.45			
Linear matrix R-B	Request	QSD:A5	None		

Command name	Category	Command	Data value	Setting	Remarks
query command	Response	OSD:A5:[Data]	41h	-63	
			~	~	
			80h	0	
			~	~	
			BFh	+63	
Linear matrix G-R	Control	OSD:A6:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
control command	Response	OSD:A6:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
	_		BFh	+63	
Linear matrix G-R	Request	QSD:A6	None	0.0	
query command	Response	OSD:A6:[Data]	41h	-63	
			~	~	
			80h	0	
			~	~	
	0 1 1	000 47 [0 + ]	BFh	+63	0.111
Linear matrix G-B	Control	OSD:A7:[Data]	41h	-63	Setting cannot be
control command	Response	OSD:A7:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~ D.C.la	~	Color Setting.
Line and marketing C. D.	D	000.47	BFh	+63	
Linear matrix G-B	Request	QSD:A7	None	C2	
query command	Response	OSD:A7:[Data]	41h	-63	
			~ 00h	~	
			80h	0	
			~ BFh	+63	
Linear matrix B-R	Control	OSD:A8:[Data]	41h	-63	Setting cannot be
control command	Response	OSD:A8:[Data]	4111 ~	-03	changed if V-Log has
Control Command	Nesponse	OSD.Ao.[Data]	80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	Color Octung.
Linear matrix B-R	Request	QSD:A8	None	1 00	
query command	Response	OSD:A8:[Data]	41h	-63	
12.2.7 55		552.7.61[5616]	~	~	
			80h	0	
			~	~	
			BFh	+63	
Linear matrix B-G	Control	OSD:A9:[Data]	41h	-63	Setting cannot be

Command name	Category	Command	Data value	Setting	Remarks
control command	Response	OSD:A9:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Linear matrix B-G	Request	QSD:A9	None		
query command	Response	OSD:A9:[Data]	41h	-63	
			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:86:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
R GAIN/	Response	OSD:86:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:86	None		
R GAIN/	Response	OSD:86:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:87:[Data]	41h	-63	Setting cannot be
R PHASE	Response	OSD:87:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:87	None		
R PHASE	Response	OSD:87:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:9C:[Data]	41h	-63	Setting cannot be
R_R_YI GAIN/	Response	OSD:9C:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:9C	None		

Command name	Category	Command	Data value	Setting	Remarks
R_R_YI GAIN/	Response	OSD:9C:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:9D:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
R_R_YI PHASE	Response	OSD:9D:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:9D	None		
R_R_YI PHASE	Response	OSD:9D:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:88:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
R_YI GAIN/	Response	OSD:88:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:88	None		
R_YI GAIN/	Response	OSD:88:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:89:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
R_YI PHASE	Response	OSD:89:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Requset	QSD:89	None		
R_YI PHASE	Response	OSD:89:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:9E:[Data]	41h	-63	Setting cannot be

Command name	Category	Command	Data value	Setting	Remarks
R_YI_YI GAIN/	Response	OSD:9E:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:9E	None		
R_YI_YI GAIN/	Response	OSD:9E:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:9F:[Data]	41h	-63	Setting cannot be
R_YI_YI PHASE	Response	OSD:9F:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:9F:[Data]	None		
R_YI_YI PHASE	Response	OSD:9F:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:8A:[Data]	41h	-63	Setting cannot be
YI GAIN/	Response	OSD:8A:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:8A	None		
YI GAIN/	Response	OSD:8A:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:8B:[Data]	41h	-63	Setting cannot be
YI PHASE	Response	OSD:8B:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:8B	None		

Command name	Category	Command	Data value	Setting	Remarks
YI PHASE	Response	OSD:8B:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:8C:[Data]	41h	-63	Setting cannot be
YI_G GAIN/	Response	OSD:8C:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:8C	None		
YI_G GAIN/	Response	OSD:8C:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:8D:[Data]	41h	-63	Setting cannot be
YI_G PHASE	Response	OSD:8D:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:8D	None		
YI_G PHASE	Response	OSD:8D:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:8E:[Data]	41h	-63	Setting cannot be
G GAIN/	Response	OSD:8E:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:8E	None		
G GAIN/	Response	OSD:8E:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:8F:[Data]	41h	-63	Setting cannot be

Command name	Category	Command	Data value	Setting	Remarks
G PHASE	Response	OSD:8F:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:8F	None		
G PHASE	Response	OSD:8F:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:90:[Data]	41h	-63	Setting cannot be
G_Cy GAIN/	Response	OSD:90:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:90	None		
G_Cy GAIN/	Response	OSD:90:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:91:[Data]	41h	-63	Setting cannot be
G_Cy PHASE	Response	OSD:91:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:91	None		
G_Cy PHASE	Response	OSD:91:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:92:[Data]	41h	-63	Setting cannot be
Cy GAIN/	Response	OSD:92:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:92	None		

Command name	Category	Command	Data value	Setting	Remarks
Cy GAIN/	Response	OSD:92:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:93:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
Cy PHASE	Response	OSD:93:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:93	None		
Cy PHASE	Response	OSD:93:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:94:[Data]	41h	-63	Setting cannot be
Cy_B GAIN/	Response	OSD:94:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:94	None		
Cy_B GAIN/	Response	OSD:94:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:95:[Data]	41h	-63	Setting cannot be
Cy_B PHASE	Response	OSD:95:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:95	None		
Cy_B PHASE	Response	OSD:95:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:96:[Data]	41h	-63	Setting cannot be

Command name	Category	Command	Data value	Setting	Remarks
B GAIN/	Response	OSD:96:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:96	None		
B GAIN/	Response	OSD:96:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:97:[Data]	41h	-63	<ul> <li>Setting cannot be</li> </ul>
B PHASE	Response	OSD:97:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:97	None		
B PHASE	Response	OSD:97:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:80:[Data]	41h	-63	Setting cannot be
B_Mg GAIN/	Response	OSD:80:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:80	None		
B_Mg GAIN/	Response	OSD:80:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:81:[Data]	41h	-63	Setting cannot be
B_Mg PHASE	Response	OSD:81:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:81	None		

Command name	Category	Command	Data value	Setting	Remarks
B_Mg PHASE	Response	OSD:81:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:82:[Data]	41h	-63	Setting cannot be
Mg GAIN/	Response	OSD:82:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:82	None	0.0	
Mg GAIN/	Response	OSD:82:[Data]	41h	-63	
SATURATION			~	~	
query command			80h	0	
			~	~	
0.1	0 1 1	000 00 [0 + ]	BFh	+63	0.11
Color correction	Control	OSD:83:[Data]	41h	-63	Setting cannot be
Mg PHASE	Response	OSD:83:[Data]	~	~	changed if V-Log has
Control command			80h	0	been selected as the
			~ BFh	~ +63	Color Setting.
Color correction	Poguest	QSD:83	None	+03	
	Request	OSD:83:[Data]	41h	-63	
Mg PHASE query command	Response	USD.63.[Data]	4111	-03	
query command			~ 80h	~	
			0011	0	
			~ BFh	+63	
Color correction	Control	OSD:84:[Data]	41h	-63	Setting cannot be
Mg_R GAIN/	Response	OSD:84:[Data]	~	~	changed if V-Log has
SATURATION	ПСЗРОПЗС	00D.04.[Data]	80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	Color Cotting.
Color correction	Request	QSD:84	None	. 55	
Mg_R GAIN/	Response	OSD:84:[Data]	41h	-63	
SATURATION	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:85:[Data]	41h	-63	Setting cannot be

Command name	Category	Command	Data value	Setting	Remarks
Mg_R PHASE	Response	OSD:85:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:85	None		
Mg_R PHASE	Response	OSD:85:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:9A:[Data]	41h	-63	Setting cannot be
Mg_R_R GAIN/	Response	OSD:9A:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:9A	None		
Mg_R_R GAIN	Response	OSD:9A:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSD:9B:[Data]	41h	-63	Setting cannot be
Mg_R_R PHASE	Response	OSD:9B:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSD:9B	None		
Mg_R_R PHASE	Response	OSD:9B:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSJ:1C:[Data]	41h	-63	Setting cannot be
YI_YI_G GAIN/	Response	OSJ:1C:[Data]	~	~	changed if V-Log has
SATURATION			80h	0	been selected as the
control command			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSJ:1C	None		

Command name	Category	Command	Data value	Setting	Remarks
YI_YI_G GAIN/	Response	OSJ:1C:[Data]	41h	-63	
SATURATION	'		~	~	
query command			80h	0	
			~	~	
			BFh	+63	
Color correction	Control	OSJ:1D:[Data]	41h	-63	Setting cannot be
YI_YI_G PHASE	Response	OSJ:1D:[Data]	~	~	changed if V-Log has
control command			80h	0	been selected as the
			~	~	Color Setting.
			BFh	+63	
Color correction	Request	QSJ:1D	None		
YI_YI_G PHASE	Response	OSJ:1D:[Data]	41h	-63	
query command			~	~	
			80h	0	
			~	~	
			BFh	+63	
Adaptive Matrix	Control	OSJ:4F:[Data]	0	OFF	Setting cannot be
control command	Response	OSJ:4F:[Data]	1	ON	changed if V-Log has
					been selected as the
					Color Setting.
Adaptive Matrix	Request	QSJ:4F	None		
query command	Response	OSJ:4F	0	OFF	
			1	ON	

# 4.2.7 Chroma level setting

These commands enable the chroma level of the camera to be set the current setting to be acquired.

Table 4.2.7.1 Chroma level setting

Command name	Category	Command	Data value	Setting	Remarks
Chroma level	Control	OSD:B0:[Data]	00h	OFF	Setting cannot be
control command	Response	OSD:B0:[Data]	1Dh	-99%	changed if V-Log has
			~	~	been selected as the
			80h	0	Color Setting.
			~	~	
			E3h	99%	
Chroma level	Request	QSD:B0	None		
query command	Response	OSD:B0:[Data]	00h	OFF	
			1Dh	-99%	
			~	~	
			80h	0	
			~	~	
			E3h	99%	
Chroma Phase	Control	OSJ:0B:[Data]	61h	-31	Setting cannot be
control command	Response	OSJ:0B:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			9Fh	+31	
Chroma Phase	Request	QSJ:0B	None		
query command	Response	OSJ:0B:[Data]	61h	-31	
			~	~	
			80h	0	
			~	~	
			9Fh	+31	

# 4.2.8 AWB/ABB setting

These commands select the AWB mode of the camera, execute AWB/ABB and enable the current AWB mode status to be acquired.

Table 4.2.8.1 AWB/ABB setting

Command name	Category	Command	Data value	Setting	Remarks
AWB execution	Control	ows	None		There is no response
control command					which supports this
					control command.
					*This command expects res = 0, but if sent with res = 1, it returns "OWS" as the response value.
AWB Mode	Control	OAW:[Data]	0	ATW	When the power is
control command	Response	OAW:[Data]	1	А	turned off or the
			2	В	controller is
			3	VAR	removed, it returns to
			4	3200K	the setting value of
			5	5600K	the physical switch
					of the camera.
AWB Mode	Request	QAW	None		
query command	Response	OAW:[Data]	0	ATW	
			1	А	
			2	В	
			3	VAR	
			4	3200K	
			5	5600K	
	Control	OAS	None		There is no response
					which supports this
					control command.
ABB execution					* This command
control command					expects res = 0, but if
					sent with res = 1, it
					returns "OAS" as the
					response value.

Command name	Category	Command	Data value	Setting	Remarks
Color temperature (increment) control command	Control Response	OSI:1E:[Data] OSI:1E:[Data]	1h ~ Ah	1 ~ 10	<ul> <li>Increment from the current color temperature value.</li> <li>If the WB setting is PRESET 3200K or PRESET 5600K, The VAR setting will chang in the background.</li> </ul>
Color temperature (decrement) control command	Control	OSI:1F:[Data] OSI:1F:[Data]	1h ~ Ah	1 ~ 10	Decrement from the current color temperature value.     If the WB setting is PRESET 3200K or PRESET 5600K, The VAR setting will chang in the background.
Color temperature query command	Request	QSI:20 OSI:20:[Data1]: [Data2]	Nones [Data1] 00000h ~ FFFFFh [Data2] 0h 1h	0K ~ 1048575K Valid Invalid	<ul> <li>Returns the current color temperature value in [Data1].</li> <li>If the ATW setting is ON, "1h: Invalid" is returned in [Data2].</li> <li>The range is 2000K ~ 15000K</li> </ul>
ATW Speed control command	Control Response	OSI:25:[Data] OSI:25:[Data]	0 1 2	Normal Slow Fast	

Command name	Category	Command	Data value	Setting	Remarks
ATW Speed	Request	QSI:25	None		
query command	Response	OSI:25:[Data]	0	Normal	
			1	Slow	
			2	Fast	
AWB gain offset	Control	OSJ:0C:[Data]	0h	Off	
control command	Response	OSJ:0C:[Data]	1h	On	
AWB gain offset	Request	QSJ:0C	None		
query command	Response	OSJ:0C:[Data]	0h	Off	
			1h	On	
ATW Target R	Control	OSJ:0D:[Data]	76h	-10	
control command	Response	OSJ:0D:[Data]	~	~	
			80h	0	
			~	~	
			8Ah	+10	
ATW Target R	Request	QSJ:0D	None		
query command	Response	OSJ:0D:[Data]	76h	-10	
			~	~	
			80h	0	
			~	~	
			8Ah	+10	
ATW Target B	Control	OSJ:0E:[Data]	76h	-10	
control command	Response	OSJ:0E:[Data]	~	~	
			80h	0	
			~	~	
			8Ah	+10	
ATW Target B	Request	QSJ:0E	None		
query command	Response	OSJ:0E:[Data]	76h	-10	
			~	~	
			80h	0	
			~	~	
			8Ah	+10	
•					

Command name	Category	Command	Data value	Setting	Remarks
AWB COLOR	Control	OSJ:48:[Data]	1h	1	<ul> <li>If the WB setting is</li> </ul>
TEMPERATURE	Response	OSJ:48:[Data]	~	~	PRESET 3200K or
INC			Ah	10	PRESET 5600K, The
control command					VAR setting will
					chang in the
					background.
AWB COLOR	Control	OSJ:49:[Data]	1h	1	If the WB setting is
TEMPERATURE	Response	OSJ:49:[Data]	~	~	PRESET 3200K or
DEC			Ah	10	PRESET 5600K, The
control command					VAR setting will
					chang in the
					background.
AWB COLOR	Request	QSJ:4A	None		<ul> <li>Returns the current</li> </ul>
TEMPERATURE	Response	OSJ:4A:[Data1]:	[Data1]		color temperature
query command		[Data2]	00000h	0K	value in [Data1].
			~	~	If the ATW setting is
			FFFFFh	1048575K	ON, "1h: Invalid" is
			[Data2]	V 1: 1	returned in [Data2].
			0h	Valid	• The range is 2000K ~
AWB R Gain	Control	OCIAD(Data)	1h 670h	Invalid -400	15000K
control command		OSJ:4B:[Data] OSJ:4B:[Data]		-400	<ul> <li>If the WB setting is PRESET, this</li> </ul>
control command	Response	USJ:4B:[Data]	~ 800h	~ 0	command returns
			~	~	400 responses.
			990h	400	400 (63)0(1363.
			33011	400	
AWB R Gain	Request	QSJ:4B	None		If the WB setting is
query command	Response	OSJ:4B:[Data]	670h	-400	PRESET, this
			~	~	command returns
			800h	0	400 responses.
			~	~	
			990h	400	
AWB B Gain	Control	OSJ:4C:[Data]	670h	-400	If the WB setting is
control command	Response	OSJ:4C:[Data]	~	~	PRESET, this
			800h	0	command returns
			~	~	400 responses.
			990h	400	

Command name	Category	Command	Data value	Setting	Remarks
AWB B Gain	Request	QSJ:4C	None		
query command	Response	OSJ:4C:[Data]	670h	-400	If the WB setting is
			~	~	PRESET, this
			800h	0	command returns
			~	~	400 responses.
			990h	400	
AWB G Axis	Control	OSJ:4D:[Data]	670h	-400	If the WB setting is
control command	Response	OSJ:4D:[Data]	~	~	PRESET, this
			800h	0	command returns
			~	~	400 responses.
			990h	400	
AWB G Axis	Request	QSJ:4D	None		If the WB setting is
query command	Response	OSJ:4D:[Data]	670h	-400	PRESET, this
			~	~	command returns
			800h	0	400 responses.
			~	~	
			990h	400	

## 4.2.9 Detail setting

Table 4.2.9.1 Detail setting

Command name	Category	Command	Data value	Setting	Remarks
Detail	Control	ODT:[Data]	0	Off	Setting cannot be
control command	Response	ODT:[Data]	1	On	changed if V-Log has been selected as the Color Setting.
Detail	Request	QDT	None		
query command	Response	ODT:[Data]	0	Off	
			1	On	

Command name	Category	Command	Data value	Setting	Remarks
V Detail Level	Control	OSD:A1:[Data]	79h	-7	Setting cannot be
control command	Response	OSD:A1:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			87h	7	
V Detail Level	Request	QSD:A1	None		
query command	Response	OSD:A1:[Data]	79h	-7	
			~	~	
			80h	0	
			~	~	
			87h	7	
Detail frequency	Control	OSD:A2:[Data]	79h	-7	Setting cannot be
control command	Response	OSD:A2:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			87h	7	
Detail frequency	Requset	QSD:A2	None		
query command	Response	OSD:A2:[Data]	79h	-7	
			~	~	
			80h	0	
			~	~	
			87h	7	
Master detail	Control	OSA:30:[Data]	61h	-31	Setting cannot be
control command	Response	OSA:30:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			9Fh	+31	
Master detail	Request	QSA:30	None		
query command	Response	OSA:30:[Data]	61h	-31	
1,20., 00		20,00.[Data]	~	~	
			80h	0	
			~	~	
			9Fh	+31	
			2	. 51	

Command name	Category	Command	Data value	Setting	Remarks
Detail Gain(+)	Control	OSA:38:[Data]	61h	-31	Setting cannot be
control command	Response	OSA:38:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			9Fh	+31	
Detail Gain(+)	Request	QSA:38	None		
query command	Response	OSA:38:[Data]	61h	-31	
			~	~	
			80h	0	
			~	~	
			9Fh	+31	
Detail Gain(-)	Control	OSA:39:[Data]	61h	-31	Setting cannot be
control command	Response	OSA:39:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			9Fh	+31	
Knee aperture level	Control	OSG:3F:[Data]	00h	0	Setting cannot be
control command	Response	OSG:3F:[Data]	~	~	changed if V-Log has
			05h	5	been selected as the
					Color Setting.
Knee aperture level	Request	QSG:3F	None		
query command	Response	OSG:3F:[Data]	00h	0	
			~	~	
			05h	5	
Detail coring	Control	OSJ:12:[Data]	00h	0	<ul> <li>Setting cannot be</li> </ul>
control command	Response	OSJ:12:[Data]	~	~	changed if V-Log has
			3Ch	60	been selected as the
					Color Setting.
Detail coring	Requset	QSJ:12	None		
query command	Response	OSJ:12:[Data]	00h	0	
			~	~	
			3Ch	60	
Level depend	Control	OSJ:13:[Data]	00h	0	Setting cannot be
control command	Response	OSJ:13:[Data]	~	~	changed if V-Log has
			3Ch	60	been selected as the
					Color Setting.

Command name	Category	Command	Data value	Setting	Remarks
Level depend	Request	QSJ:13	None		
query command	Response	OSJ:13:[Data]	79h	-7	
			~	~	
			80h	0	
			~	~	
			87h	7	

## 4.2.10 Gamma setting

These commands control the Gamma of the camera and enable the current settings to be acquired.

Table 4.2.10.1 Gamma setting

Command name	Category	Command	Data value	Setting	Remarks
Gamma type	Control	OSE:72:[Data]	0	HD	Setting cannot be
control command	Response	OSE:72:[Data]	1	SD	changed if V-Log has
			2	FILMLIKE1	been selected as the
			3	FILMLIKE2	Color Setting.
			4	FILMLIKE2	
			5	FILM-REC	
			6	VIDEO-REC	
			7	HLG	
Gamma type	Request	QSE:72	None		
query command	Response	OSE:72:[Data]	0	HD	
			1	SD	
			2	FILMLIKE1	
			3	FILMLIKE2	
			4	FILMLIKE2	
			5	FILM-REC	
			6	VIDEO-REC	
			7	HLG	
Gamma	Control	OSA:6A:[Data]	67h	0.30	Setting cannot be
control command	Response	OSA:6A:[Data]	~	~	changed if V-Log has
			6Ch	0.35	been selected as the
			~	~	Color Setting.
			80h	0.55	
			~	~	
			94h	0.75	
Gamma	Request	QSA:6A	None		
query command	Response	OSA:6A:[Data]	67h	0.30	
			~	~	
			6Ch	0.35	
			~	~	
			80h	0.55	
			~	~	
			94h	0.75	

Command name	Category	Command	Data value	Setting	Remarks
Black gamma	Control	OSA:07:[Data]	78h	-8	<ul> <li>Setting cannot be</li> </ul>
control command	Response	OSA:07:[Data]	~	~	changed if V-Log has
			80h	0	been selected as the
			~	~	Color Setting.
			88h	+8	
Black gamma	Request	QSA:07	None		
query command	Response	OSA:07:[Data]	78h	-8	
			~	~	
			80h	0	
			~	~	
			88h	+8	
Black gamma	Control	OSJ:1B:[Data]	1h	1	Setting cannot be
range	Response	OSJ:1B:[Data]	2h	2	changed if V-Log has
control command			3h	3	been selected as the
					Color Setting.
Black gamma	Request	QSJ:1B	None		
range	Response	OSJ:1B:[Data]	1h	1	
query command			2h	2	
			3h	3	
F-REC	Control	OSA:10:[Data]	0	200%	<ul> <li>Setting cannot be</li> </ul>
dynamic LVL	Response	OSA:10:[Data]	1	300%	changed if V-Log has
control command			2	400%	been selected as the
			3	500%	Color Setting, or
			4	600%	FILM-REC has not
					been selected as the
					Gamma Mode Sel.
F-REC	Request	QSA:10	None		
dynamic LVL	Response	OSA:10:[Data]	0	200%	
query command			1	300%	
			2	400%	
			3	500%	
			4	600%	

Command name	Category	Command	Data value	Setting	Remarks
F-REC black STR LVL control command	Control Response	OSA:0F:[Data] OSA:0F:[Data]	00h ~ 1Eh	0 ~ 30	Setting cannot be changed if V-Log has been selected as the Color Setting, or FILM-REC has not been selected as the Gamma Mode Sel.
F-REC black STR LVL query command	Request Response	QSA:0F OSA:0F:[Data]	None 00h ~ 1Eh	0 ~ 30	
V-REC Knee slope control command	Control	OSA:25:[Data] OSA:25:[Data]	7Ch ~ 80h ~ 83h	150% ~ 350% ~ 500%	(1step=50%)  • Setting cannot be changed if V-Log has been selected as the Color Setting, or VIDEO-REC has not been selected as the Gamma Mode Sel.
V-REC Knee slope query command	Request Response	QSA:25 OSA:25:[Data]	None 7Ch ~ 80h ~ 83h	150% ~ 350% ~ 500%	(1step=50%)
V-REC Knee point control command	Control Response	OSA:21:[Data] OSA:21:[Data]	62h ~ 80h ~ 9Eh ~ AFh	30% ~ 60% ~ 90% ~ 107%	Setting cannot be changed if V-Log has been selected as the Color Setting, or VIDEO-REC has not been selected as the Gamma Mode Sel.

Command name	Category	Command	Data value	Setting	Remarks
V-REC	Request	QSA:21	None		
Knee point	Response	OSA:21:[Data]	62h	30%	
query command			~	~	
			80h	60%	
			~	~	
			9Eh	90%	
			~	~	
			AFh	107%	

### 4.2.11 Digital zoom settings

These commands control the digital zoom of the camera, and they enable the digital zoom settings to be acquired.

Table 4.2.11.1 Digital zoom settings

Command name	Category	Command	Data value	Setting	Remarks
iZoom	Control	OSD:B3:[Data]	0	Off	※Not supported by the
control command	Response	OSD:B3:[Data]	1	On	AJ-CX4000/AJ-UPX900
iZoom	Request	QSD:B3	None		
query command	Response	OSD:B3:[Data]	0	Off	※Not supported by the
			1	On	AJ-CX4000/AJ-UPX900

# 4.2.12 Camera information acquisition

This command enables the camera information to be acquired.

Table 4.2.12.1 Camera information acquisition

Command name	Category	Command	Data value	Setting	Remarks
Model number	Request	QID	None		
query command	Response	OID:[Data]	In the case of	f the AG-CX350	
			AG-CX350		Model number of the camera
			In the case of	f the AJ-UPX360	
			AJ-UPX360		Model number of the camera
			In the case of	f the AG-CX200	
			AG-CX200		Model number of the camera
			In the case of	f the AJ-CX4000	
			AJ-CX4000		Model number of the camera
			In the case of the AJ-UPX900		
			AJ-UPX900		Model number of the camera

### 4.2.13 Frequency settings

This command enables the system frequency to be acquired.

Table 4.2.13.1 System frequency acquisition

Command name	Category	Command	Data value	Setting	Remarks
Frequency	Request	QSE:77	None		This command is only
query command	Response	OSE:77	0	59.94Hz	available in the following
			1	50.00Hz	versions and later:
					• AG-CX350 Ver7.00 ~
					• AJ-UPX360 Ver7.00 ~
					• AG-CX200 Ver7.00 ~
					• AJ-CX4000 Ver6.00 ~
					• AJ-UPX900 Ver6.00 ~

## 4.2.14 Knee settings

These commands control over Knee.

Table 4.2.14.1 Knee setting

Command name	Category	Command	Data value	Setting	Remarks
Knee Mode	Control	OSA:2D:[Data]	0	OFF	Setting cannot be
control command	Response	OSA:2D:[Data]	1	MANUAL	changed if V-Log has
			2	AUTO	been selected as the
					Color Setting.
					• Fohe AJ-CX4000/
					AJ-UPX900, when the
					power is turned off or the controller is
					removed, it returns to
					the setting value of
					the physical switch of
					the camera.
Knee Mode	Request	QSA:2D	None		
query command	Response	OSr	0	OFF	
		trA:2D:[Data]	1	MANUAL	
		221225	2	AUTO	(4
Master Knee	Control	OSA:20:[Data]	22h	70.00%	(1step=0.5%)
Point	Response	OSA:20:[Data]	~ 4 A L	~	0.111.
control command			4Ah	80.00%	Setting cannot be
			~ 80h	93.50%	changed if V-Log has been selected as the
			~	~	Color Setting.
			B6h	107.00%	Golor Gotting.
Master Knee	Request	QSA:20	None		
Point	Response	OSA:20:[Data]	22h	70.00%	(1step=0.5%)
query command			~	~	
			4Ah	80.00%	
			~	~	
			80h	93.50%	

Command name	Category	Command	Data value	Setting	Remarks
			~ B6h	~ 107.00%	
Master Knee	Control	OSA:24:[Data]	00h	0	Setting cannot be
Slope	Response	OSA:24:[Data]	~	~	changed if V-Log has
control command			63h	99	been selected as the Color Setting.
Master Knee	Request	QSA:24	None		
Slope	Response	OSA:24:[Data]	00h	0	
query command			~	~	
			63h	99	
Auto Knee	Control	OSG:97:[Data]	1	1	Setting cannot be
Response	Response	OSG:97:[Data]	~	~	changed if V-Log has
control command			8	8	been selected as the Color Setting.
Auto Knee	Request	QSG:97	None		
Response	Response	OSG:97:[Data]	1	1	
query command			~	~	
			8	8	
HLG Knee SW	Control	OSI:40:[Data]	0	OFF	Setting cannot be
control command	Response	OSI:40:[Data]	1	ON	changed if V-Log has been selected as the Color Setting.
HLG Knee SW	Request	QSI:40	None		
query command	Response	OSI:40:[Data]	0	OFF	
			1	ON	
HLG Knee point	Control	OSI:41:[Data]	1Ch	55.00	(1step=0.25%)
control command	Response	OSI:41:[Data]	~	~	Valid for 4 step units
			80h	80.00%	only: 1% increments
			~ D0h	~ 100.00%	<ul> <li>Setting cannot be changed if V-Log has been selected as the Color Setting.</li> </ul>
HLG Knee point	Request	QSI:41	None		

Command name	Category	Command	Data value	Setting	Remarks
query command	Response	OSI:41:[Data]	1Ch	55.00	(1step=0.25%)
			~	~	Valid for 4 step units
			80h	80.00%	only: 1% increments
			~	~	
			D0h	100.00%	
HLG Knee slop	Control	OSI:42:[Data]	00h	0	Setting cannot be
control command	Response	OSI:42:[Data]	~	~	changed if V-Log has
			64h	100	been selected as the
					Color Setting.
HLG Knee slop	Request	QSI:42	None		
query command	Response	OSI:42:[Data]	00h	0	
			~	~	
			64h	100	

# 4.2.15 White Clip setting

These commands control over White Clip.

Table 4.2.15.1 White Clip setting

Command name	Category	Command	Data value	Setting	Remarks
White Clip settings	Control	OSA:2E:[Data]	0	OFF	Setting cannot be
control command	Response	OSA:2E:[Data]	1	ON	changed if V-Log has
					been selected as the
					Color Setting.
White Clip settings	Request	QSA:2E	None		
query command	Response	OSA:2E:[Data]	0	OFF	
			1	ON	
White Clip Level	Control	OSA:2A:[Data]	00h	90%	When [Knee Mode] is
control command	Response		~	~	set to Auto and the
			13h	109%	White Clip value is
					changed, the Knee
					value will also
					change.
					Setting cannot be
					changed if V-Log has
					been selected as the
					Color Setting.
White Clip Level	Request	QSA:2A	None		
query command	Response	OSA:2A:[Data]	00h	90%	
			~	~	
			13h	109%	

## 4.2.16 OIS settings

These commands control over OIS.

Table 4.2.16.1 OIS settings

Command name	Category	Command	Data value	Setting	Remarks
OIS settings	Control	OIS:[Data]	0	Off	※Not supported by the
control command	Response	OIS:[Data]	1	On	AJ-CX4000/AJ-UPX900
OIS settings	Request	QIS	None		※Not supported by the
query command	Response	OIS:[Data]	0	Off	AJ-CX4000/AJ-UPX900
			1	On	

## 4.2.17 Tally settings

These commands perform ON/OFF controls for tallies.

Table 4.2.17.1 Tally settings

Command name	Category	Command	Data value	Setting	Remarks
RED tally settings	Control	TLR:[Data]	0	Off	
control command	Response	TLR:[Data]	1	On	
RED tally settings	Request	QLR	None		
query command	Response	TLR:[Data]	0	Off	
			1	On	
GREEN tally settings	Control	TLG:[Data]	0	Off	
control command	Response	TLG:[Data]	1	On	
GREEN tally settings	Request	QLG	None		
query command	Response	OLG:[Data]	0	Off	
			1	On	

## 4.2.18 SKIN TONE DETAIL settings

These commands configure the skin tone detail settings and acquire the current setting values.

Table 4.2.18.1 SKIN TONE DETAIL settings

Command name	Category	Command	Data value	Setting	Remarks
SKIN TONE	Control	OSA:40:[Data]	0	Off	This command
DETAIL	Response	OSA:40:[Data]	1	On	controls SKIN TONE
control command					DTL A ON/OFF.
					This setting is OFF
					if V-Log has been
					selected as the Color
					Setting.
SKIN TONE	Request	QSA:40	None		
DETAIL	Response	OSA:40:[Data]	0	Off	
query command			1	On	
SKIN DETAIL	Control	OSD:A3:[Data]	80h	0	Setting cannot be
EFFECT	Response	OSD:A3:[Data]	~	~	changed if V-Log has
control command			9Fh	31	been selected as the
					Color Setting.
SKIN DETAIL	Request	QSD:A3	None		
EFFECT	Response	OSD:A3:[Data]	80h	0	
query command			~	~	
			9Fh	31	

### 4.3 Video transmission and network application control

The video transmission and network application control commands are in compliance with the HTTP1.1 communication specifications. Their format is given below.

#### [Command format]

\*Command······ Response value of each command; set in the HTTP message body

#### **Example:** Basic Settings Information Acquisition

[Send]

http://192.168.0.10/cgi-bin/get\_basic

[Receive]

200 OK

cam\_title = AG-CX350
plugin\_download = disable
plugin\_disp = 0

#### 4.3.1 Device Information Acquisition

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
Device information	/cgi-bin/getinfo	FILE	1	• 1(Fixed)
acquisition				

Usage example) Acquisition of user ID (during H264(1) transmission)

http://192.168.0.10/cgi-bin/getinfo?FILE=1

The response data is as shown below.

MAC=< Mac address >[CR][LF]

SERIAL = < Serial number > [CR][LF]

VERSION=< Firmware version >[CR][LF]

NAME=< Model name >[CR][LF]

SDrec=< Recording status >[CR][LF]

SDrec2=< Recording status >[CR][LF]

sAlarm=< Alarm status >[CR][LF]

sAUX=< Aux status >[CR][LF]

ePort=< Event notification port number >[CR][LF]

aEnable=< Audio mode>[CR][LF]

aEnc=< Audio enc >[CR][LF]

aBitrate=< Audio bit rate >[CR][LF]

aBitrate2=< Audio bit rate >[CR][LF]

aInterval=< Audio input interval >[CR][LF]

aOutInterval=< Audio output interval >[CR][LF]

aOutPort=< Audio output port >[CR][LF]

aOutStatus=< Audio output status >[CR][LF]

aOutUID=< Audio output UID >[CR][LF]

alnPort\_h264=< Audio with H.264/H.265 1st stream unicast port number >[CR][LF]

aInPort\_h264\_2=< Audio with H.264/H.265 2nd stream unicast port number >[CR][LF]

alnPort\_h264\_3=< Audio with H.264 3rd stream unicast port number >[CR][LF]

alnPort\_h264\_4=< Audio with H.264 4th stream unicast port number >[CR][LF]

sRtspMode\_h264=< Control mode H.264(1)/H.265(1) >[CR][LF]

```
sRtspMode_h264_2=< Control mode H.264(2)/H.265(2) >[CR][LF]
sRtspMode_h264_3=< Control mode H.264(3) >[CR][LF]
sRtspMode_h264_4=< Control mode H.264(4) >[CR][LF]
ImageCaptureMode=< limage Capture Mode >[CR][LF]
ratio=< Aspect ratio >[CR][LF]
Maxfps=< Max fps >[CR][LF]
StreamMode=< Stream mode >[CR][LF]
StreamEncode=< Encode Type>[CR][LF]
iTransmit_h264=< H.264/H.265 1st stream ON/OFF setting >
sDelivery_h264=< H.264/H.265 1st stream setting >[CR][LF]
iBitrate_h264=< H.264/H.265 1st stream bit rate >[CR][LF]
iResolution_h264=< H.264/H.265 1st stream resolution >[CR][LF]
iQuality_h264=< H.264/H.265 1st stream quality >[CR][LF]
iMultiAuto_h264=< Multicast auto H.264(1)/H.265 >[CR][LF]
iTransmit h264 2=< H.264/H.265 2nd stream ON/OFF setting >
sDelivery_h264_2=< H.264/H.265 2nd stream setting >[CR][LF]
iBitrate_h264_2=< H.264/H.265 2nd stream bit rate >[CR][LF]
iResolution h264 2=< H.264/H.265 2nd stream resolution >[CR][LF]
iQuality_h264_2=< H.264/H.265 2nd stream quality >[CR][LF]
iMultiAuto_h264_2=< Multicast auto H.264(2) >[CR][LF]
iTransmit_h264_3=< H.264 3rd stream ON/OFF setting >
sDelivery_h264_3=< H.264 3rd stream setting >[CR][LF]
iBitrate_h264_3=< H.264 3rd stream bit rate >[CR][LF]
iResolution_h264_3=< H.264 3rd stream resolution >[CR][LF]
iQuality_h264_3=< H.264 3rd stream quality >[CR][LF]
iMultiAuto_h264_3=< Multicast auto H.264(3) >[CR][LF]
iTransmit_h264_4=< H.264 4th stream ON/OFF setting >
sDelivery_h264_4=< H.264 4th stream setting >[CR][LF]
iBitrate_h264_4=< H.264 4th stream bit rate >[CR][LF]
iResolution_h264_4=< H.264 4th stream resolution >[CR][LF]
iQuality_h264_4=< H.264 4th stream quality >[CR][LF]
iMultiAuto_h264_4=< Multicast auto H.264(4) >[CR][LF]
```

The description of the response data is as shown below.

Item	Value of response	Remarks
MAC	XX-XX-XX-XX-XX	MAC address
SERIAL	XXXXXXXX	Product serial number
VERSION		Software version
NAME	XX-XXXX	• Product number e.g.)AG-CX350
SDrec	disable	Fixed value
SDrec2	disable	Fixed value
sAlarm	off	Fixed value
sAUX	off	Fixed value
ePort	31004	Fixed value
aEnable	off, in	off: Audio OFF
		· in: Audio ON(reception)
aEnc	2	Fixed value(2: AAC)
aBitrate	128, 96, 64	Bit rate setting of audio
aBitrate2	64	Fixed value
alnterval	20	Fixed value
aOutInterval	640	Fixed value
aOutPort	34004	Fixed value
aOutStatus	off	Fixed value
aOutUID	0	Fixed value
alnPort_h264	1024 to 50000	• H.264(1)/H.265 Audio recepttion port number
alnPort_h264_2	1024 to 50000	• H.264(2) Audio reception port number
alnPort_h264_3	1024 to 50000	• H.264(3) Audio reception port number
alnPort_h264_4	1024 to 50000	H.264(4) Audio reception port number
ImageCaptureMode	2m	Fixed value
ratio	16_9	Fixed value
Maxfps	30, 60	Max. frame rate
StreamMode	1	Fixed value
StreamEncode	1, 2	· 1: H.264
		• 2: H.265
iTransmit_h264	1	Fixed value
sDelivery_h264	uni,	• uni: Unicast(auto)
	multi,	• multi: Multicast
	uni_manual	• uni_manual Unicast(manual)
iBitrate_h264	Numeric value	Bit rate setting of H.264(1)/H.265
iQuality_h264	320, 640, 1280, 1920, 3840	Horizontal resolution setting of H.264(1)/H.265
iMultiAuto_h264	0	Fixed value
iTransmit_h264_2	see.H.264(1)	see.H264(1)
sDelivery_h264_2		

Item	Value of response	Remarks
iBitrate_h264_2		
iResolution_h264_2	see.H.264(1)	see.H.264(1)
iQuality_h264_2		
iMultiAuto_h264_2		
iTransmit_h264_3	see.H.264(1)	see.H264(1)
sDelivery_h264_3		
iBitrate_h264_3		
iResolution_h264_3		
iQuality_h264_3		
iMultiAuto_h264_3		
iTransmit_h264_4	see.H.264(1)	see.H264(1)
sDelivery_h264_4		
iBitrate_h264_4		
iResolution_h264_4		
iQuality_h264_4		
iMultiAuto_h264_4		

# 4.3.2 **JPEG-based Image Transmission**

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
JPEG image 1 shot	/cgi-bin/view.cgi	action	snapshot	Acquires one JPEG
request				image
				CX series cameras only
				support "snapshot".
				This command is only
				available in the
				following versions and
				later:
				• AG-CX350 Ver7.00 ~
				• AJ-UPX360 Ver7.00 ~
				• AG-CX200 Ver7.00 ~
				• AJ-CX4000 Ver6.00 ~
				• AJ-UPX900 Ver6.00 ~

#### [Note]

JPEG image 1shot

By repeating the processes of acquisition, display, and standby for a single JPEG image, a movie display can be realized.

The frame rate is decided according to the standby time in the software and hardware at the receivind side.

In the AJ-CX4000/AJ-UPX900, the resolution of JPEG images is fixed at 416 x 240. In the AG-CX350/AJ-UPX360/AG-200, the resolution of JPEG images is fixed by the camera settings. If the aspect ratio is 16: 9, it is fixed at 416 x 240, and if it is 4: 3, it is fixed at 320 x 240.

If the recording format is 4K, the image of the CX series logo will be output.

#### 4.3.3 Basic Settings Information Acquisition

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
Basic settings	/cgi-bin/get_basic			
information				
acquisition				

The response data is as shown below.

cam\_title = Camera title

plugin\_download = disable (Fixed value in the CX series)

plugin\_disp = 0 (Fixed value for CX series)

#### 4.3.4 VideoOverIP Screen Information Acquisition

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
VideoOverIP screen	/cgi-bin/get_video_ov			• The response is issued in a
information	er_ip			random order
acquisition				<ul> <li>If transmission to a specific</li> </ul>
				ch is not possible due to
				the specifications, the
				response for the desired ch
				is not returned
				Exampe) if transmission to
				h264(ch4) is not possible,
				h264_xxxxx_ch4 is not
				included in the response.

The response data is as shown below.

cam\_title = Camera title

livestart\_stream=h264/h264\_2/h264\_3/h264\_4/jpeg/jpeg\_2/jpeg\_3

jpeg\_quality=1/5

jpeg\_quality\_ch2=1/5

jpeg\_quality\_ch3=1/5

resol\_stream1=320/640/1280/1920/3840

resol\_stream2=320/640/1280

resol\_stream3=320/640/1280

jpeg\_transmit1=0/1

jpeg\_transmit2=0/1

jpeg\_transmit3=0/1

jpeg\_interval1=1/4/5/12/15(12.5)/24/30(25)

jpeg\_interval2=1/4/5/12/15(12.5)/24/30(25)

jpeg\_interval3=1/4/5/12/15(12.5)/24/30(25)

h264\_transmit\_ch1=0/1

h264\_transmit\_ch2=0/1

h264\_transmit\_ch3=0/1

h264\_transmit\_ch4=0/1

h264\_rtsp\_mode\_ch1=0/1

```
h264_rtsp_mode_ch2=0/1
```

h264\_resolution\_ch1=1920/3840

h264\_resolution\_ch2=320/640/1280/1920

h264\_resolution\_ch3=320/640/1280

h264\_resolution\_ch4=320/640/1280

h264\_f\_priority\_ch1=0/1/2

h264\_f\_priority\_ch2=0/1/2

h264\_f\_priority\_ch3=0/1/2

h264\_f\_priority\_ch4=0/1/2

h264\_framerate\_ch1=5/15(12.5)/24/30(25)/60(50)

h264\_framerate\_ch2=5/15(12.5)/24/30(25)/60(50)

h264\_framerate\_ch3=5/15(12.5)/30(25)

h264\_framerate\_ch4=5/15(12.5)/30(25)

h264\_bandwidth\_ch1 = Numeric value

h264\_bandwidth\_ch2 = Numeric value

h264 bandwidth ch3 = Numeric value

h264\_bandwidth\_ch4 = Numeric value

h264\_bandwidth\_min\_ch1 = Numeric value

h264\_bandwidth\_min\_ch2 = Numeric value

h264\_bandwidth\_min\_ch3 = Numeric value

h264\_bandwidth\_min\_ch4 = Numeric value

h264\_quality\_ch1=fine/low1/5

h264\_quality\_ch2=fine/low1/5

h264\_quality\_ch3=fine/low1/5

h264\_quality\_ch4=fine/low1/5

h264\_unimulti\_ch1=uni/multi/uni\_manual

h264\_unimulti\_ch2=uni/multi/uni\_manual

h264\_unimulti\_ch3=uni/multi/uni\_manual

h264\_unimulti\_ch4=uni/multi/uni\_manual

h264\_unicast\_port\_ch1 = Numeric value (1024 to 50000)

h264\_unicast\_port\_ch2 = Numeric value (1024 to 50000)

```
h264_unicast_port_ch3 = Numeric value (1024 to 50000)
h264_unicast_port_ch4 = Numeric value (1024 to 50000)
h264_unicast_audio_port_ch1 = Numeric value (1024 to 50000)
h264_unicast_audio_port_ch2 = Numeric value (1024 to 50000)
h264_unicast_audio_port_ch3 = Numeric value (1024 to 50000)
h264_unicast_audio_port_ch4 = Numeric value (1024 to 50000)
h264_multicast_addr_ch1=xxx.xxx.xxx.xxx
h264_multicast_addr_ch2=xxx.xxx.xxx.xxx
h264_multicast_addr_ch3=xxx.xxx.xxx.xxx
h264_multicast_addr_ch4=xxx.xxx.xxx.xxx
h264_multicast_port_ch1 = Numeric value (1024 to 50000)
h264_multicast_port_ch2 = Numeric value (1024 to 50000)
h264_multicast_port_ch3 = Numeric value (1024 to 50000)
h264_multicast_port_ch4 = Numeric value (1024 to 50000)
h264_multicast_ttl_ch1 = Numeric value (1 to 254)
h264_multicast_ttl_ch2 = Numeric value (1 to 254)
h264_multicast_ttl_ch3 = Numeric value (1 to 254)
h264_multicast_ttl_ch4 = Numeric value (1 to 254)
h265_transmit_ch1=0/1
h265_rtsp_mode_ch1=0
h265_resolution_ch1=3840
h265_framerate_ch1=24/30(25)
h265_bandwidth_ch1= Numeric value
h265_unimulti_ch1=uni/multi/uni_manual
h265_unicast_port_ch1= Numeric value (1024~50000)
h265_unicast_audio_port_ch1= Numeric value (1024~50000)
h265_multicast_addr_ch1=xxx.xxx.xxx.xxx
h265_multicast_port_ch1= Numeric value (1024~50000)
h265_multicast_ttl_ch1= Numeric value (1~254)
```

#### 4.3.5 Camera Status Acquisition

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
Camera status	/cgi-bin/get_state			This command is only
acquisition				available in the following
				versions and later:
				• AG-CX350 Ver7.00 ~
				• AJ-UPX360 Ver7.00 ~
				• AG-CX200 Ver7.00 ~
				• AJ-CX4000 Ver6.00 ~
				• AJ-UPX900 Ver6.00 ~

The response data is as shown below.

rec\_counter: hh:mm:ss Recording elapsed time. Fixed at "00:00:00" for the CX series.

ftp\_send: on/off Is FTP transfer in progress or not

play: on/off Is playback in progress or not

sd\_format: on/off Is SD card formatting in progress or not. Fixed at "off" for the CX series.

sd/sd2/ex1\_insert: on/off Has SD card been inserted or not

sd/sd2/ex1\_error: on/off Is SD card in error state or not.

sd/sd2/ex1\_rem: xx SD card remaining amount [Gbyte]. Fixed at "0.0" for the CX series.

sd/sd2/ex1\_org: yy SD card capacity [Gbyte]. Fixed at "0.0" for the CX series.

sd/sd2/ex1\_protect: on/off Is SD card in protect state or not.

## 4.3.6 Video Recording Start/End Control

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
MP4 recording to SD	/cgi-bin/sdctrl	save	start	start: Recording Start
card			end	end: Recording end
				This command is only available when the camera is ready for recording.

Usage example) Start recording to the SD card.

http://192.168.0.10/cgi-bin/sdctrl?save=start

#### 4.3.7 RTMP Stream Control

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
RTMP Stream	/cgi-bin/rtmp_ctrl	cmd	start	start: RTMP Stream Start
Control			stop	stop: RTMP Stream Stop
				This command is only available when RTMP is selected as the streaming protocol.

Usage example) Start RTMP Streaming.

http://192.168.0.10/cgi-bin/rtmp\_ctrl?cmd=start

## 4.3.8 RTMP Server Setting

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
RTMP Server Setting	/cgi-bin/set_rtmp_par	type	0	0: URL, Stream key
	am		1	concatenation
				1: URL, Stream key split
		url	String	ServerURL
		key	String	Stream Key
				*Optional if 0 is specified
				for type
				This command is only
				available when RTMP is
				selected as the streaming
				protocol.
				This command is only
				available in the following
				versions and later:
				• AG-CX350 Ver7.00 ~
				· AJ-UPX360 Ver7.00 ~
				• AG-CX200 Ver7.00 ~
				• AJ-CX4000 Ver6.00 ~
				· AJ-UPX900 Ver6.00 ~

### 4.3.9 SRT Stream Control

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
SRT Stream Control	/cgi-bin/srt_ctrl	cmd	start	start: SRT Stream Start
			stop	stop: SRT Stream Stop
				This command is only
				available when SRT
				CLIENT is selected as the
				streaming protocol.

Usage example) Start SRT Streaming.

http://192.168.0.10/cgi-bin/srt\_ctrl?cmd=start

# 4.3.10 SRT Streaming Settings

Method : GET

Command name	Command	Parameter name	Parameter value	Remarks
SRT Streaming	/cgi-bin/set_srt_info	mode	0	0: Client
Setting			1	1: Listener
				Only 0 is supported in the CX series
		dip_addr	*.*.* format	Destination IP address
		dport	Numeric number	Destination Port number
		encryption	0	Encryption method
			1	0: OFF
			2	1: AES-128
			3	2: AES-256
				3: AES-192
		passphrase	String	Passphrase
		streamid	String	Stream ID
				This command is only
				available when SRT
				CLIENT is selected as the
				streaming protocol.
				This command is only
				available in the following
				versions and later:
				• AG-CX350 Ver7.00 ~
				· AJ-UPX360 Ver7.00 ~
				• AG-CX200 Ver7.00 ~
				· AJ-CX4000 Ver6.00 ~
				· AJ-UPX900 Ver6.00 ~