

4K Multi-purpose Camera Interface Specifications

AW-UB10/UB50

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1.Introduction

This manual describes the external interface specifications which are applicable when the AW-UB10/AW-UB50 is operated.

2.Configuration outline

This manual has the following general configuration.

① Overview of the external interface

It is possible to control the zoom, focus and white balance adjustments.

It is also possible to acquire the gain and other camera information by initiating queries.

The various functions are employed for the operations with the camera using HTTP which is the host protocol of TCP.

For further details, refer to chapter 3.

② Camera information update notification

The local terminal is notified of the values of the gain and other settings which have been changed at another terminal or other terminals so that it can acquire the camera information.

This feature is useful when one camera is controlled by a multiple number of terminals, and when the setting for enabling update notifications to be received has been established, the information which has been changed by other terminals can be acquired.

For further details, refer to chapter 4.

③ Camera information batch acquisition

The camera information can be acquired in batch form. Since there is no need to query each and every camera information item when this feature is used, the feature is useful when all the camera information is required such as at startup.

For further details, refer to chapter 5.

④ Error return

An error whether ER1, ER2 or ER3 is returned when an error has been generated by a command in ① above or when the AWB result contains an error.

For further details, refer to chapter 6.

⑤ Menu list and command correspondence table

This table which summarizes AW-UB10/AW-UB50 menu list and commands related to each menu item.

For further details, refer to chapter 7.

3. Communication method

The camera can be controlled by serial communication and IP communication respectively

3-1. IP communication

▼ Send format

`http://[IP Address]/cgi-bin/aw_cam?cmd=[Command]&res=[Type]`

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

※CommandDetails given in “Command” column in Chapter 7

※Type.....Fixed at “1”

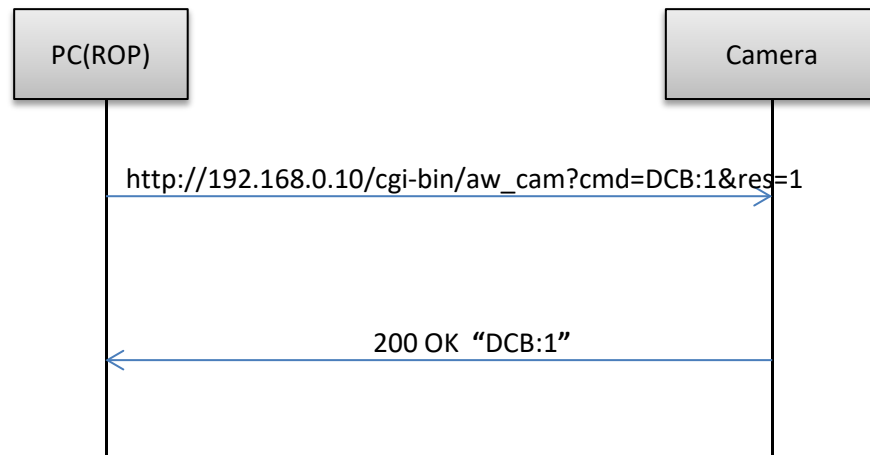
▼ Receive format

200 OK “**Command**”

※Command...Response value of each command;
set in the HTTP message body

See more detail in Chapter 7 for the error communication sequence
for the transmitted command

▼ Sequence



【Restrictions】

1. When using the pan-tilt head control commands, send the commands with a gap of 40 ms between each command. Given below is the sequence.
2. Keep-Alive cannot be set with HTTP connections.
Connect and disconnect are performed each time a command is sent or received.
3. Some settings and conditions may restrict the effects of other settings (✕ including those with exclusive control conditions).
4. Send the commands which change the settings only at the point in time when the changes are required. (Do not send them at regular intervals.)

4.Update notification

The following restrictions apply to camera operations that are performed using HTTP communication and that have been described in the previous chapters:

- A) Even when a camera setting is changed by one terminal, the other terminals will not know that the setting has been changed unless they send the query command to the camera.
- B) In the case of a AWB execution or other control commands that take time to be processed, it is necessary to wait until the processing is completed for the response.

By sending information autonomously from the camera to the terminals, it is possible to do the following:

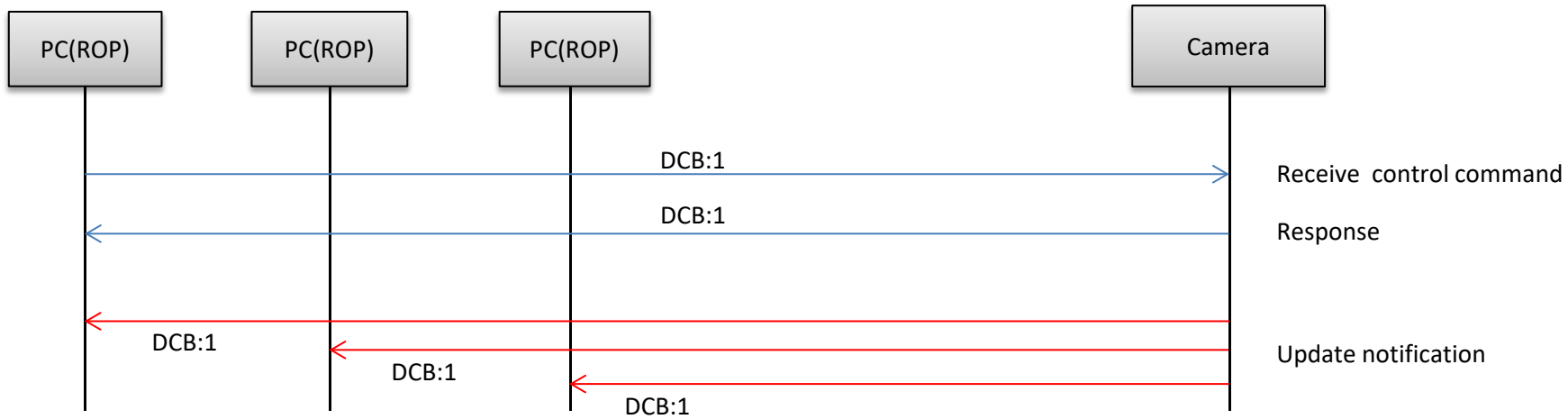
- A) When a camera setting is changed by one terminal, the other terminals are notified of the setting change immediately.
- B) With a control command that takes time to be processed, the HTTP response is returned as soon as the command has been received, and separate notification of the processing result is given as soon as the processing is completed.

These functions are referred to as the camera information update notification function.

This chapter uses the term “update notification” to refer to this function

4-1.Update notification sequence

When the settings of the camera have been changed from the local terminal (PC1), the changes are also posted by an update notification separately from the HTTP response to the command.



Some commands do not display update notifications. Please refer to 7. Command List.

All update notification will be sent when the parameters of multiple commands have changed due to command control.

4-2.Data format for update notifications

The update notification is given to the TCP port on the terminal whose number was specified using the update notification start command by TCP protocol communication.

A breakdown of the data received is given below.

【Receive data】

Reserve (22Byte)	Size (2Byte)	Reserve (4Byte)	Update notification information (Variable length: Max. 504 bytes)	Reserve (24Byte)
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The updated information is set in “Update notification information” of the receive data format.

The data received from the camera has a variable length.

The size of the update notification information is the value obtained by subtracting 8 bytes from the “Size” area setting.

• “Update notification information” data length = “Size” – 8 bytes

【Update notification information format】

[CR][LF][Command response format][CR][LF]

※ [CR]:0x0d、[LF]:0x0a

ex) Color bar: On

[CR][LF]DCB:1[CR][LF]

4-3.Procedure of start/end of the update notifications reception

To receive an update notification via IP, you must perform the update notification reception start process in advance.

At a time like this, the number of the TCP port on the terminal for receiving the update notification (having the update notification sent) is specified.

① Update notification receive start step

example) When reception is to be started with “192.168.0.10” used as the IP address of the camera

`http://192.168.0.10/cgi-bin/event?connect=start&my_port=31004&uid=0`

※ my_port … Number of the TCP port on the terminal (any port)

【Update notification receive start sequence】

The update notification receive start command is sent from the terminal where the update notifications are to be received.

“204 No Content” is returned from the camera which has received the command.



【Caution】

Proceed with the update notification receive start step when communication has been cut off because the LAN cable has been disconnected, for example.

② Update notification receive end step

To close the application of the client, the update notification receive end step must be taken without fail.

example) When reception is to be ended with "192.168.0.10" used as the IP address of the camera

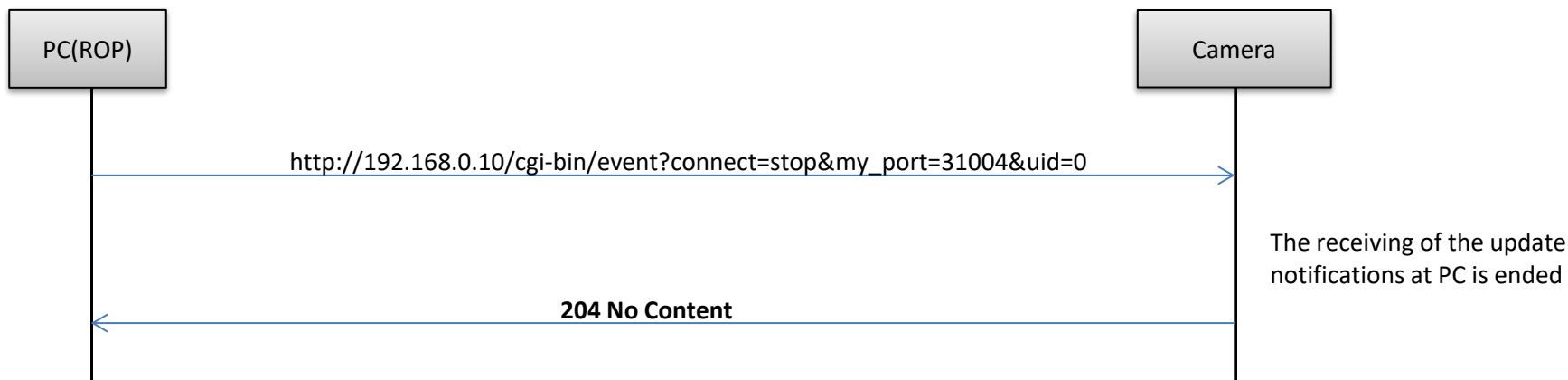
`http://192.168.0.10/cgi-bin/event?connect=stop&my_port=31004&uid=0`

※ my_port ... Number of the TCP port on the terminal

【Update notification receive end sequence】

The update notification receive end command is sent from the terminal which has received the update notifications.

"204 No Content" is returned from the camera which received the command.



③ Registered number of update notifications

You can query the number of external devices (RP remote controller etc.) connected to the camera with the following command.

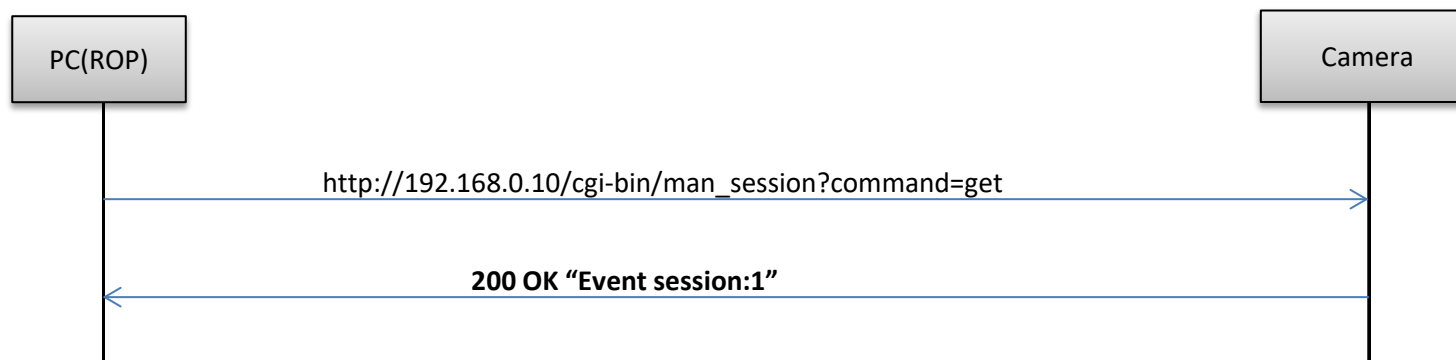
The number of connected device increases with the procedure to start receiving update notifications and decreases the procedure to start receiving update notifications. The number of connected device also decreases when it can not communicate with the device.

Number of terminals which can receive update notifications at the same time: 5

When the remote camera controller is connected, it is counted as one unit.

example) When the IP address of the camera is "192.168.0.10" and you want to request registered number.

`http://192.168.0.10/cgi-bin/man_session?command=get`



5.Special sequences

Update notifications are sometimes sent at times other than when the settings or statuses of the camera have been changed. Some cases are presented below.

It is assumed that the update notification start command has been sent to all the terminals in the sequence and that the terminals can receive the update notifications from the camera.

5-1. ALARM Information

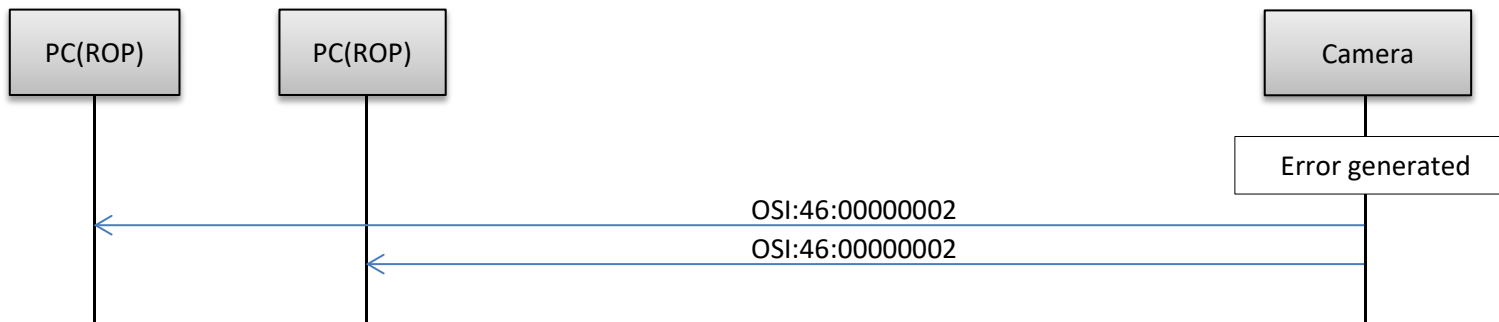
When the camera detects an anomaly, it will send an ALARM notification (OSI:46).

If the anomaly is resolved, it will send a No Error notification (0x00000000) only once.

If no anomaly is detected, no notification will be sent.

【Sequence of ALARM Information Notification】

When the camera detects an anomaly, it notifies each terminal with ALARM information.



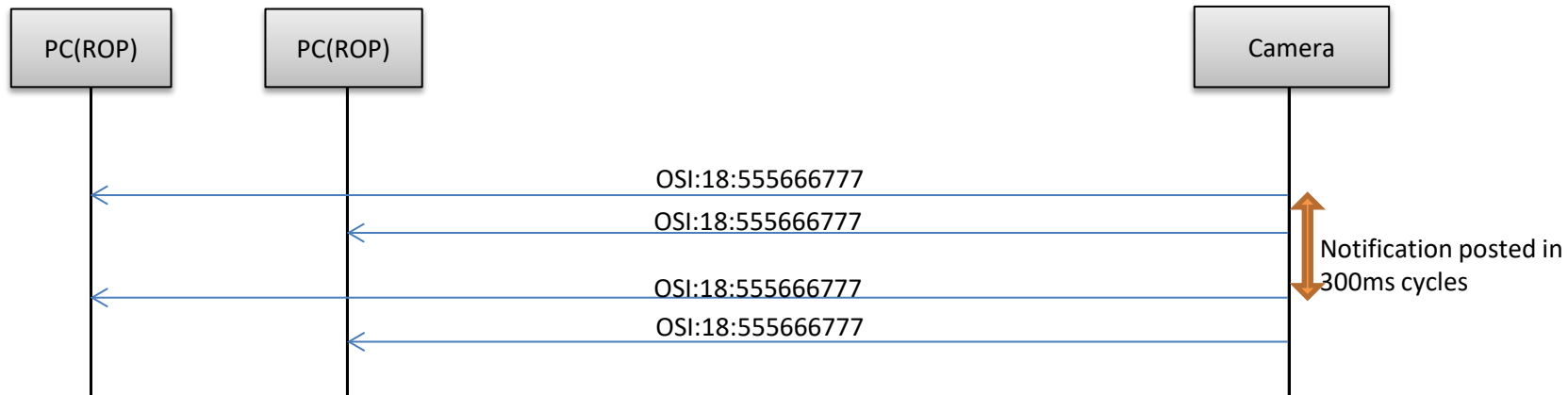
5-2.Lens Information

The notification will be sent every 300 milliseconds in case there is a change in the lens information.

Notification	Lens information
Request Zoom/Focus/Iris Position OSI:18:[ZZZ]:[FFF]:[III]	ZZZ Zoom position FFF Focus position III Iris position (Expressed in 3 digits each)
IRIS CONTROL Position ORV:[Data]	Data Iris position
REQUEST IRIS F NO. OIF:[Data]	Data F-number

【Lens Information Notification Sequence】

When the camera detects a change in the lens information, it will notify each device of the updated lens information.



5-3.AWB execution

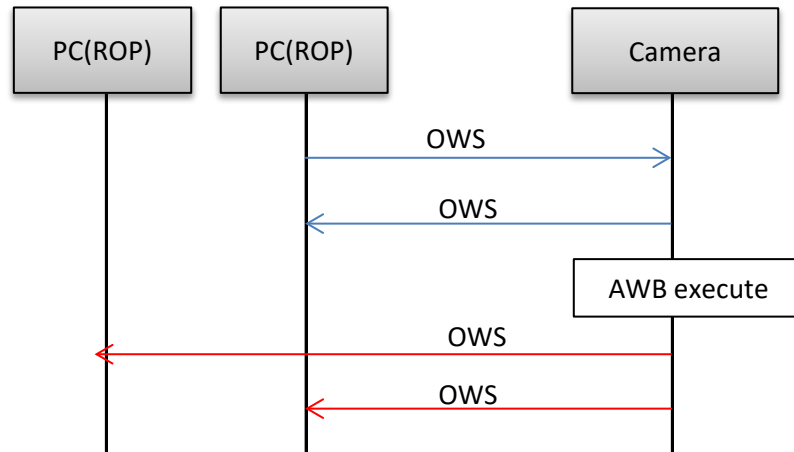
This command sends the execution results as an update notification when execution of AWB has been completed by the camera.

Notification	Remarks
OWS	AWB execution successful

【AWB execution sequence】

As soon as the AWB execution command is received, return response, and as soon as the AWB execution is completed, "OWS" is posted separately as the update notification.

IP



5-4.Camera information batch acquisition

All the information of the camera can be acquired together as a batch.

【Command format】

[send]

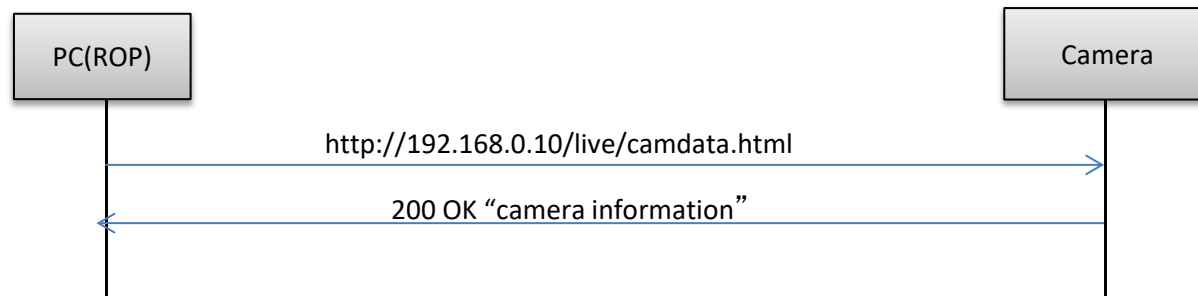
http://[IP Address]/live/camdata.html

[receive]

200 OK "Camera information"

[See chapter 7 for detail of camera information](#)

【Sequence】

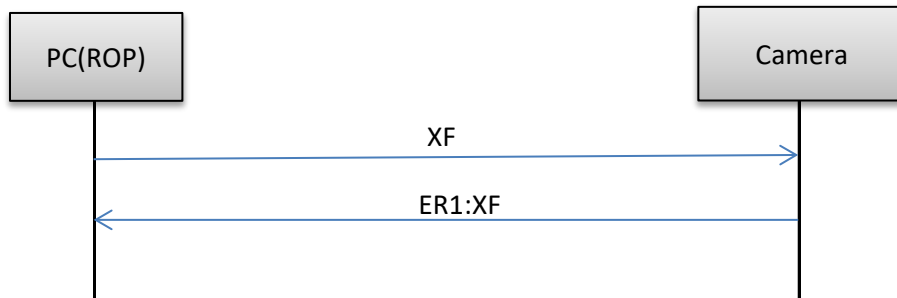


6. Error return

The three errors ER1, ER2 and ER3 below are returned in response to control or query commands by the camera.

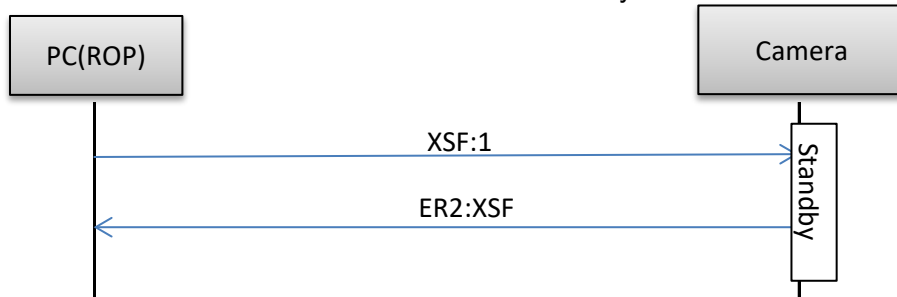
▼ER1 (unsupported command)

This error is generated when a command which is not supported by the camera has been received by the camera
example) When the non-existent "XF" command is executed for the camera



▼ER2 (busy status)

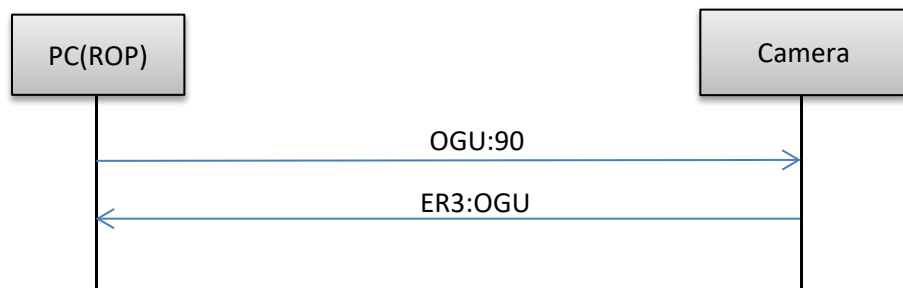
This error is generated during Standby (Power Off) or at other times when the camera is in the busy status.



▼ER3 (outside acceptable range)

This error is generated when the data value of a command is outside the acceptable range.

example) The “OGU (gain setting)” command was executed with a data value of “90” which is outside the acceptable range.



7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
Scene	SCENE FILE LOAD	✓	✓	XSF:[Data]	XSF:[Data]	QSF	OSF:[Data]	XSF:[Data]	OSF:[Data]	<Control> 1 - 8 9 <Request> 0 1 - 7 8	<Control> SCENE1 - SCENE8 OFF <Request> SCENE1 SCENE2 - SCENE8 OFF	http://192.168.0.10/cgi-bin/aw_cam?cmd=XSF:1&res=1	
	SCENE FILE STORE	✓	✓	OSL:90:[Data]	OSL:90:[Data]	-	-	OSL:90:[Data]		1 - 8	SCENE1 - SCENE8	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSL:90:1&res=1	
Brightness	PICTURE LEVEL	✓	✓	OSD:48:[Data]	OSD:48:[Data]	QSD:48	OSD:48:[Data]	OSD:48:[Data]	OSD:48:[Data]	29h - 32h - 38h	-9 - 0 - 9	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:48:32&res=1	
SHUTTER	AUTO SHUTTER	✓	✓	OSL:2E:[Data]	OSL:2E:[Data]	QSL:2E	OSL:2E:[Data]	OSL:2E:[Data]	OSL:2E:[Data]	0 1	OFF ON	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSL:2E:1&res=1	
SHUTTER	SHUTTER MODE	✓	✓	OSG:5A:[Data]	OSG:5A:[Data]	QSG:5A	OSG:5A:[Data]	OSG:5A:[Data]	OSG:5A:[Data]	0 1	STEP SYNCHRO	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSG:5A:1&res=1	
SHUTTER	SHUTTER SPEED INC	✓	✓	OSJ:04:[Data]	OSJ:04:[Data]	-	-	OSJ:04:[Data]		01h - 64h	1 - 100	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:04:01&res=1	Increase the selectable SHUTTER SPEED by [Data] steps. An update notification for OSJ:06 will be sent.
SHUTTER	SHUTTER SPEED DEC	✓	✓	OSJ:05:[Data]	OSJ:05:[Data]	-	-	OSJ:05:[Data]		01h - 64h	1 - 100	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:05:01&res=1	Decrease the selectable SHUTTER SPEED by [Data] steps. An update notification for OSJ:06 will be sent.
SHUTTER	SHUTTER SPEED	✓	✓	-	-	QSJ:06	OSJ:06:[Data]		OSJ:06:[Data]	0002h - 3E80h	1/2 - 1/16000	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:06&res=1	
SHUTTER	SYNCHRO SCAN INC	✓	✓	OSJ:07:[Data]	OSJ:07:[Data]	-	-			01h - 64h	1 - 100	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:07:01&res=1	Increase the selectable SYNCHRO SCAN by [Data] steps. An update notification for OSJ:09 will be sent.
SHUTTER	SYNCHRO SCAN DEC	✓	✓	OSJ:08:[Data]	OSJ:08:[Data]	-	-			01h - 64h	1 - 100	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:08:01&res=1	Decrease the selectable SYNCHRO SCAN by [Data] steps. An update notification for OSJ:09 will be sent.
SHUTTER	SYNCHRO SCAN	✓	✓	-	-	QSJ:09	OSJ:09:[Data]	OSJ:09:[Data]	OSJ:09:[Data]	000F0h - 009C0h	24.0 [Hz] - 250.9 [Hz]	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:09&res=1	

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
GAIN	GAIN	✓	✓	OSL:25:[Data]	OSL:25:[Data]	OSL:25	OSL:25:[Data]	OSL:25:[Data]	OSL:25:[Data]	<<AW-UB10>> <Control> (INC) p* (DEC) m* *: min:1, max:100 <Request> 02h - 08h - 46h	<<AW-UB10>> <Control> -6dB - 0dB - 62dB (2 dB increments) <Request> -6dB - 0dB - 62dB (2 dB increments)	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSL:25:p1&res=1	The control is limited to INC/DEC (OSL:25:p*/OSL:25:m*). In the Data section, use p* for INC control, where * is the STEP value (ranging from 1 to 100). In the Data section, use m* for DEC control, where * is the STEP value (ranging from 1 to 100).
GAIN	AGC	✓	✓	OSL:26:[Data]	OSL:26:[Data]	OSL:26	OSL:26:[Data]	OSL:26:[Data]	OSL:26:[Data]	0 1	OFF ON	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSL:26:1&res=1	
GAIN	AGC MAX GAIN	✓	✓	OSL:EF:[Data]	OSL:EF:[Data]	OSL:EF	OSL:EF:[Data]	OSL:EF:[Data]	OSL:EF:[Data]	<Control> (INC) p* (DEC) m* *: min:1, max:100 00h 06h 0Ch 12h 18h 1Eh 24h 26h (UB50 Only) 2Ah 2Ch (UB10 Only) 2Eh (UB50 Only) 30h 32h 36h	<Control> Auto 6dB 12dB 18dB 24dB 30dB 36dB 38dB (UB50 Only) 42dB 44dB (UB10 Only) 46dB (UB50 Only) 48dB 50dB (UB10 Only) 54dB (UB50 Only)	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSL:EF:p1&res=1	The control is limited to INC/DEC (OSL:EF:p*/OSL:EF:m*). In the Data section, use p* for INC control, where * is the STEP value (ranging from 1 to 100). In the Data section, use m* for DEC control, where * is the STEP value (ranging from 1 to 100).

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks	
		AW-UB10	AW-UB50	Control	Response	Request	Response							
WHITE BALANCE	AWB	✓	✓	OWS	OWS	—	—			See chapter 5 for AWB execution sequence		http://192.168.0.10/cgi-bin/aw_cam?cmd=OWS&res=1		
WHITE BALANCE	WHITE BALANCE MODE	✓	✓	OAW:[Data]	OAW:[Data]	OAW	OAW:[Data]	OAW:[Data]	OAW:[Data]	<Control> 0 1 2 4 5 9 F <Request> 0 2 3 4 5 9 F	<Control> ATW AWB A AWB B PRESET 3200K PRESET 5600K VAR other <Request> ATW AWB A AWB B PRESET 3200K PRESET 5600K VAR other		http://192.168.0.10/cgi-bin/aw_cam?cmd=OAW:1&res=1	
WHITE BALANCE	W. BAL VAR INC	✓	✓	OS1:1E:[Data]	OS1:1E:[Data]	—	—	OS1:1E:[Data]		1h Ah	Inc 1 Inc 10	http://192.168.0.10/cgi-bin/aw_cam?cmd=OS1:1E:1&res=1	Increase the selectable W. BAL VAR by [Data] steps. An update notification for OS1:20 will be sent.	
WHITE BALANCE	W. BAL VAR DEC	✓	✓	OS1:1F:[Data]	OS1:1F:[Data]	—	—	OS1:1F:[Data]		1h Ah	Dec 1 Dec 10	http://192.168.0.10/cgi-bin/aw_cam?cmd=OS1:1F:1&res=1	Decrease the selectable W. BAL VAR by [Data] steps. An update notification for OS1:20 will be sent.	
WHITE BALANCE	W. BAL VAR	✓	✓	—	—	OS1:20	OS1:20:[Data1]:[Data2]	OS1:20:[Data1]:[Data2]	OS1:20:[Data1]:[Data2]	[Data1] 009C4h 02710h [Data2] 0h	[Data1] 2500K 10000K Valid	http://192.168.0.10/cgi-bin/aw_cam?cmd=OS1:20:007D0&res=1		
WHITE BALANCE	R GAIN	✓	✓	OSG:39:[Data]	OSG:39:[Data]	OSG:39	OSG:39:[Data]	OSG:39:[Data]	OSG:39:[Data]	738h - 800h - 8C8h	-200 - 0 - 200	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSG:39:800&res=1		
WHITE BALANCE	B GAIN	✓	✓	OSG:3A:[Data]	OSG:3A:[Data]	OSG:3A	OSG:3A:[Data]	OSG:3A:[Data]	OSG:3A:[Data]	738h - 800h - 8C8h	-200 - 0 - 200	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSG:3A:800&res=1		
PED	MASTER PEDESTAL	✓	✓	OSJ:0F:[Data]	OSJ:0F:[Data]	OSJ:0F	OSJ:0F:[Data]	OSJ:0F:[Data]	OSJ:0F:[Data]	7F1h - 800h - 80Fh	-15 - 0 - +15	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:0F:800&res=1		
PED	R PEDESTAL	✓	✓	OSG:4C:[Data]	OSG:4C:[Data]	OSG:4C	OSG:4C:[Data]	OSG:4C:[Data]	OSG:4C:[Data]	738h - 800h - 8C8h	-200 - 0 - 200	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSG:4C:800&res=1		
PED	G PEDESTAL	✓	✓	OSG:4D:[Data]	OSG:4D:[Data]	OSG:4D	OSG:4D:[Data]	OSG:4D:[Data]	OSG:4D:[Data]	738h - 800h - 8C8h	-200 - 0 - 200	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSG:4D:800&res=1		
PED	B PEDESTAL	✓	✓	OSG:4E:[Data]	OSG:4E:[Data]	OSG:4E	OSG:4E:[Data]	OSG:4E:[Data]	OSG:4E:[Data]	738h - 800h - 8C8h	-200 - 0 - 200	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSG:4E:800&res=1		

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
DTL	MASTER DETAIL	✓	✓	OSA:30:[Data]	OSA:30:[Data]	OSA:30	OSA:30:[Data]	OSA:30:[Data]	OSA:30:[Data]	76h - 80h - 8Ah	-10 - 0 - 10	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSA:30:80&res=1	
SKIN DTL	SKIN TONE DETAIL	✓	✓	OSA:40:[Data]	OSA:40:[Data]	OSA:40	OSA:40:[Data]	OSA:40:[Data]	OSA:40:[Data]	0 1	OFF ON	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSA:40:0&res=1	
SKIN DTL	SKIN DETAIL EFFECT	✓	✓	OSD:A3:[Data]	OSD:A3:[Data]	QSD:A3	OSD:A3:[Data]	OSD:A3:[Data]	OSD:A3:[Data]	80h - 9Fh	0 - 31	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A3:80&res=1	
KNEE	KNEE MODE	✓	✓	OSA:20:[Data]	OSA:20:[Data]	QSA:20	OSA:20:[Data]	OSA:20:[Data]	OSA:20:[Data]	0 1 2	Off Manual Auto	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSA:20:0&res=1	
KNEE	KNEE MASTER POINT	✓	✓	OSA:20:[Data]	OSA:20:[Data]	QSA:20	OSA:20:[Data]	OSA:20:[Data]	OSA:20:[Data]	4Ah - 80h - 86h (Control at 0.5 STEP)	80.00% - 93.50% - 107.00% (Control at 0.5 STEP)	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSA:20:4A&res=1	The setting range is in increments of 0.25 STEP, but control is performed using only values at 0.5 STEP intervals. Values like ".25" and ".75" do not exist as setting values.
KNEE	KNEE MASTER SLOPE	✓	✓	OSA:24:[Data]	OSA:24:[Data]	QSA:24	OSA:24:[Data]	OSA:24:[Data]	OSA:24:[Data]	00h - 63h	0 - 99	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSA:24:0&res=1	
DNR	DNR LEVEL	✓	✓	OSL:EB:[Data]	OSL:EB:[Data]	QSL:EB	OSL:EB:[Data]	OSL:EB:[Data]	OSL:EB:[Data]	<Control> (INC) p* (DEC) m* * : min:1, max:100	<Control> -5 - 0 - 5	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSL:EB:pi&res=1	The control is limited to INC/DEC(OSL:EB;p*/OSL:EB:m*). In the Data section, use p* for INC control, where * is the STEP value (ranging from 1 to 100). In the Data section, use m* for DEC control, where * is the STEP value (ranging from 1 to 100).
MATRIX	Matrix (R-G)	✓	✓	OSD:A4:[Data]	OSD:A4:[Data]	QSD:A4	OSD:A4:[Data]	OSD:A4:[Data]	OSD:A4:[Data]	41h - 80h - BFh	-63 - 0 - 63	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A4:80&res=1	
MATRIX	Matrix (R-B)	✓	✓	OSD:A5:[Data]	OSD:A5:[Data]	QSD:A5	OSD:A5:[Data]	OSD:A5:[Data]	OSD:A5:[Data]	41h - 80h - BFh	-63 - 0 - 63	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A5:80&res=1	
MATRIX	Matrix (G-R)	✓	✓	OSD:A6:[Data]	OSD:A6:[Data]	QSD:A6	OSD:A6:[Data]	OSD:A6:[Data]	OSD:A6:[Data]	41h - 80h - BFh	-63 - 0 - 63	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A6:80&res=1	
MATRIX	Matrix (G-B)	✓	✓	OSD:A7:[Data]	OSD:A7:[Data]	QSD:A7	OSD:A7:[Data]	OSD:A7:[Data]	OSD:A7:[Data]	41h - 80h - BFh	-63 - 0 - 63	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A7:80&res=1	
MATRIX	Matrix (B-R)	✓	✓	OSD:A8:[Data]	OSD:A8:[Data]	QSD:A8	OSD:A8:[Data]	OSD:A8:[Data]	OSD:A8:[Data]	41h - 80h - BFh	-63 - 0 - 63	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A8:80&res=1	
MATRIX	Matrix (B-G)	✓	✓	OSD:A9:[Data]	OSD:A9:[Data]	QSD:A9	OSD:A9:[Data]	OSD:A9:[Data]	OSD:A9:[Data]	41h - 80h - BFh	-63 - 0 - 63	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:A9:80&res=1	

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
COLOR CORRECTION	COLOR CORRECTION B_Mg SATURATION	✓	✓	OSD:80:[Data]	OSD:80:[Data]	QSD:80	OSD:80:[Data]	OSD:80:[Data]	OSD:80:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:80&res=1	
COLOR CORRECTION	COLOR CORRECTION B_Mg PHASE	✓	✓	OSD:81:[Data]	OSD:81:[Data]	QSD:81	OSD:81:[Data]	OSD:81:[Data]	OSD:81:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:81&res=1	
COLOR CORRECTION	COLOR CORRECTION Mg SATURATION	✓	✓	OSD:82:[Data]	OSD:82:[Data]	QSD:82	OSD:82:[Data]	OSD:82:[Data]	OSD:82:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:82&res=1	
COLOR CORRECTION	COLOR CORRECTION Mg PHASE	✓	✓	OSD:83:[Data]	OSD:83:[Data]	QSD:83	OSD:83:[Data]	OSD:83:[Data]	OSD:83:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:83&res=1	
COLOR CORRECTION	COLOR CORRECTION Mg_R SATURATION	✓	✓	OSD:84:[Data]	OSD:84:[Data]	QSD:84	OSD:84:[Data]	OSD:84:[Data]	OSD:84:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:84&res=1	
COLOR CORRECTION	COLOR CORRECTION Mg_R PHASE	✓	✓	OSD:85:[Data]	OSD:85:[Data]	QSD:85	OSD:85:[Data]	OSD:85:[Data]	OSD:85:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:85&res=1	
COLOR CORRECTION	COLOR CORRECTION Mg_R_R SATURATION	✓	✓	OSD:9A:[Data]	OSD:9A:[Data]	QSD:9A	OSD:9A:[Data]	OSD:9A:[Data]	OSD:9A:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:9A&res=1	
COLOR CORRECTION	COLOR CORRECTION Mg_R_R PHASE	✓	✓	OSD:9B:[Data]	OSD:9B:[Data]	QSD:9B	OSD:9B:[Data]	OSD:9B:[Data]	OSD:9B:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:9B&res=1	
COLOR CORRECTION	COLOR CORRECTION R SATURATION	✓	✓	OSD:86:[Data]	OSD:86:[Data]	QSD:86	OSD:86:[Data]	OSD:86:[Data]	OSD:86:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:86&res=1	
COLOR CORRECTION	COLOR CORRECTION R PHASE	✓	✓	OSD:87:[Data]	OSD:87:[Data]	QSD:87	OSD:87:[Data]	OSD:87:[Data]	OSD:87:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:87&res=1	
COLOR CORRECTION	COLOR CORRECTION R_R_YI SATURATION	✓	✓	OSD:9C:[Data]	OSD:9C:[Data]	QSD:9C	OSD:9C:[Data]	OSD:9C:[Data]	OSD:9C:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:9C&res=1	
COLOR CORRECTION	COLOR CORRECTION R_R_YI PHASE	✓	✓	OSD:9D:[Data]	OSD:9D:[Data]	QSD:9D	OSD:9D:[Data]	OSD:9D:[Data]	OSD:9D:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:9D&res=1	
COLOR CORRECTION	COLOR CORRECTION R_YI SATURATION	✓	✓	OSD:88:[Data]	OSD:88:[Data]	QSD:88	OSD:88:[Data]	OSD:88:[Data]	OSD:88:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:88&res=1	

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
COLOR CORRECTION	COLOR CORRECTION R_YI PHASE	✓	✓	OSD:89:[Data]	OSD:89:[Data]	QSD:89	OSD:89:[Data]	OSD:89:[Data]	OSD:89:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:89:80&res=1	
COLOR CORRECTION	COLOR CORRECTION R_YI SATURATION	✓	✓	OSD:9E:[Data]	OSD:9E:[Data]	QSD:9E	OSD:9E:[Data]	OSD:9E:[Data]	OSD:9E:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:9E:80&res=1	
COLOR CORRECTION	COLOR CORRECTION R_YI PHASE	✓	✓	OSD:9F:[Data]	OSD:9F:[Data]	QSD:9F	OSD:9F:[Data]	OSD:9F:[Data]	OSD:9F:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:9F:80&res=1	
COLOR CORRECTION	COLOR CORRECTION YI SATURATION	✓	✓	OSD:8A:[Data]	OSD:8A:[Data]	QSD:8A	OSD:8A:[Data]	OSD:8A:[Data]	OSD:8A:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:8A:80&res=1	
COLOR CORRECTION	COLOR CORRECTION YI PHASE	✓	✓	OSD:8B:[Data]	OSD:8B:[Data]	QSD:8B	OSD:8B:[Data]	OSD:8B:[Data]	OSD:8B:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:8B:80&res=1	
COLOR CORRECTION	COLOR CORRECTION YI_YI_G SATURATION	✓	✓	OSJ:1C:[Data]	OSJ:1C:[Data]	QSD:1C	OSJ:1C:[Data]	OSJ:1C:[Data]	OSJ:1C:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:1C:80&res=1	
COLOR CORRECTION	COLOR CORRECTION YI_YI_G PHASE	✓	✓	OSJ:1D:[Data]	OSJ:1D:[Data]	QSD:1D	OSJ:1D:[Data]	OSJ:1D:[Data]	OSJ:1D:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:1D:80&res=1	
COLOR CORRECTION	COLOR CORRECTION YI_G SATURATION	✓	✓	OSD:8C:[Data]	OSD:8C:[Data]	QSD:8C	OSD:8C:[Data]	OSD:8C:[Data]	OSD:8C:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:8C:80&res=1	
COLOR CORRECTION	COLOR CORRECTION YI_G PHASE	✓	✓	OSD:8D:[Data]	OSD:8D:[Data]	QSD:8D	OSD:8D:[Data]	OSD:8D:[Data]	OSD:8D:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:8D:80&res=1	
COLOR CORRECTION	COLOR CORRECTION G SATURATION	✓	✓	OSD:8E:[Data]	OSD:8E:[Data]	QSD:8E	OSD:8E:[Data]	OSD:8E:[Data]	OSD:8E:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:8E:80&res=1	
COLOR CORRECTION	COLOR CORRECTION G PHASE	✓	✓	OSD:8F:[Data]	OSD:8F:[Data]	QSD:8F	OSD:8F:[Data]	OSD:8F:[Data]	OSD:8F:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:8F:80&res=1	
COLOR CORRECTION	COLOR CORRECTION G_Cy SATURATION	✓	✓	OSD:90:[Data]	OSD:90:[Data]	QSD:90	OSD:90:[Data]	OSD:90:[Data]	OSD:90:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:90:80&res=1	
COLOR CORRECTION	COLOR CORRECTION G_Cy PHASE	✓	✓	OSD:91:[Data]	OSD:91:[Data]	QSD:91	OSD:91:[Data]	OSD:91:[Data]	OSD:91:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:91:80&res=1	

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
COLOR CORRECTION	COLOR CORRECTION Cy SATURATION	✓	✓	OSD:92:[Data]	OSD:92:[Data]	QSD:92	OSD:92:[Data]	OSD:92:[Data]	OSD:92:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:92:80&res=1	
COLOR CORRECTION	COLOR CORRECTION Cy PHASE	✓	✓	OSD:93:[Data]	OSD:93:[Data]	QSD:93	OSD:93:[Data]	OSD:93:[Data]	OSD:93:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:93:80&res=1	
COLOR CORRECTION	COLOR CORRECTION Cy_B SATURATION	✓	✓	OSD:94:[Data]	OSD:94:[Data]	QSD:94	OSD:94:[Data]	OSD:94:[Data]	OSD:94:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:94:80&res=1	
COLOR CORRECTION	COLOR CORRECTION Cy_B PHASE	✓	✓	OSD:95:[Data]	OSD:95:[Data]	QSD:95	OSD:95:[Data]	OSD:95:[Data]	OSD:95:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:95:80&res=1	
COLOR CORRECTION	COLOR CORRECTION B SATURATION	✓	✓	OSD:96:[Data]	OSD:96:[Data]	QSD:96	OSD:96:[Data]	OSD:96:[Data]	OSD:96:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:96:80&res=1	
COLOR CORRECTION	COLOR CORRECTION B PHASE	✓	✓	OSD:97:[Data]	OSD:97:[Data]	QSD:97	OSD:97:[Data]	OSD:97:[Data]	OSD:97:[Data]	49h - 80h - B7h	-55 - 0 - 55	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSD:97:80&res=1	

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
LENS	Digital Extender Magnification	✓		OSJ:4E:[Data]	OSJ:4E:[Data]	OSJ:4E	OSJ:4E:[Data]	OSJ:4E:[Data]	0 2 3	Off x2.0 x4.0	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:4E:2&res=1		
LENS	Zoom(Tele)	✓		HZT	HZT	—	—	HZT	---	Move to tele	http://192.168.0.10/cgi-bin/aw_cam?cmd=HZT&res=1		
LENS	Zoom(Stop)	✓		HZS	HZS	—	—	HZS	---	Stop zoom	http://192.168.0.10/cgi-bin/aw_cam?cmd=HZS&res=1		
LENS	Zoom(Wide)	✓		HZW	HZW	—	—	HZW	---	Move to wide	http://192.168.0.10/cgi-bin/aw_cam?cmd=HZW&res=1		
LENS	Zoom Speed	✓		LZS:[Data]	LZS:[Data]	—	—	LZS:[Data]	0 9	Slow Fast	http://192.168.0.10/cgi-bin/aw_cam?cmd=LZS:0&res=1		
LENS	FOCUS MODE	✓	✓	OAF:[Data]	OAF:[Data]	OAF	OAF:[Data]	OAF:[Data]	0 1	MANUAL AUTO	http://192.168.0.10/cgi-bin/aw_cam?cmd=OAF:0&res=1		
LENS	Focus(Far)	✓	✓	HFF	HFF	—	—	HFF	---	Move to far	http://192.168.0.10/cgi-bin/aw_cam?cmd=HFF&res=1		
LENS	Focus(Near)	✓	✓	HFN	HFN	—	—	HFN	---	Stop Focus	http://192.168.0.10/cgi-bin/aw_cam?cmd=HFN&res=1		
LENS	Focus(Stop)	✓	✓	HFS	HFS:	—	—	HFS:	---	Move to Near	http://192.168.0.10/cgi-bin/aw_cam?cmd=HFS&res=1		
LENS	Focus Speed	✓	✓	LFS:[Data]	LFS:[Data]	—	—	LFS:[Data]	0 9	Slow Fast	http://192.168.0.10/cgi-bin/aw_cam?cmd=LFS:0&res=1		
IRIS	PUSH AUTO FOCUS	✓	✓	OSE:69:[Data]	OSE:69:[Data]	—	—	OSE:69:[Data]	1	PUSH AUTO	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSE:69:1&res=1		
IRIS	AUTO IRIS	✓	✓	ORS:[Data]	ORS:[Data]	ORS	ORS:[Data]	ORS:[Data]	0 1	OFF ON	http://192.168.0.10/cgi-bin/aw_cam?cmd=ORS:0&res=1		
IRIS	IRIS CONTROL	✓	✓	ORV:[Data]	ORV:[Data]	ORV	ORV:[Data]	ORV:[Data]	000h 3FFh	Close Open	http://192.168.0.10/cgi-bin/aw_cam?cmd=ORV:000&res=1		
IRIS	REQUEST IRIS F NO.	✓	✓	—	—	OIF	OIF:[Data]	—	08h(=8) 0Eh(=14) 1Ch(=28) 38h(=56) A0h(=160) FFh	F0.8 F1.4 F2.8 F5.6 F16 Close	http://192.168.0.10/cgi-bin/aw_cam?cmd=OIF&res=1		
LENS INFO	Request Zoom/Focus/Iris Position	✓	✓	—	—	OSI:18	OSI:18:[Data1]:[Data2]:[Data3]	—	OSI:18:[Data1]:[Data2]:[Data3]	[Data1] 555h FFFh [Data2] 555h FFFh [Data3] 555h FFFh	[Data1]Zoom Position Wide Tele [Data2]Focus Position Near Far [Data3]Iris Position Close Open	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSI:18&res=1	

7. Command List

Category	Command name	Support		Command				Update notification	camdata.html	Data value	Setting	Usage example	Remarks
		AW-UB10	AW-UB50	Control	Response	Request	Response						
FORMAT	FREQUENCY	✓	✓	—	—	QSE:77	QSE:77:[Data]	—	QSE:77:[Data]	0 1 2	59.94Hz 50Hz 24Hz	http://192.168.0.10/cgi-bin/aw_cam?cmd=QSE:77&res=1	
FORMAT	FORMAT	✓	✓	—	—	QSA:87	QSA:87:[Data]	—	QSA:87:[Data]	Refer to [supplement] Settings for the format command		http://192.168.0.10/cgi-bin/aw_cam?cmd=QSA:87&res=1	
BARS	BAR	✓	✓	DCB:[Data]	DCB:[Data]	QBR	QBR:[Data]	DCB:[Data]	QBR:[Data]	0 1	Off On	http://192.168.0.10/cgi-bin/aw_cam?cmd=QCB:0&res=1	
BARS	BAR TONE	✓	✓	OSJ:27:[Data]	OSJ:27:[Data]	QSJ:27	OSJ:27:[Data]	OSJ:27:[Data]	OSJ:27:[Data]	0 1 2 3	Off Low Normal High	http://192.168.0.10/cgi-bin/aw_cam?cmd=OSJ:27:0&res=1	
TALLY	R_TALLY CONTROL	✓	✓	TLR:[Data]	TLR:[Data]	QLR	QLR:[Data]	TLR:[Data]	QLR:[Data]	0 1	Off On	http://192.168.0.10/cgi-bin/aw_cam?cmd=TLR:0&res=1	
	Y_TALLY CONTROL	✓	✓			QLY	OLY:[Data]	TLY:[Data]	TLY:[Data]	0 1	Off On	http://192.168.0.10/cgi-bin/aw_cam?cmd=OLY&res=1	When recording starts on the AW-UB10 or AW-UB50, it will be transmitted.
ERROR INFO	ERROR INFORMATION	✓	✓	—	—	QSI:46	QSI:46:[Data]		QSI:46:[Data]	0x00000000 (No Error) 0x00000001 (Fan Error) 0x00000002 (High Temperature) ※bit0:Fan Error. bit1:High Temperature		http://192.168.0.10/cgi-bin/aw_cam?cmd=QSI:46&res=1	
MODEL NUMBER	MODEL NUMBER	✓	✓	—	—	QID	QID:[Data]		QID:[Data]	AW-UB50 AW-UB10		http://192.168.0.10/cgi-bin/aw_cam?cmd=QID&res=1	
Menu	MENU ON/OFF	✓	✓	DUS:[Data]	DUS:[Data]	QUS	QUS:[Data]		QUS:[Data]	0 1	Off On	http://192.168.0.10/cgi-bin/aw_cam?cmd=DUS:0&res=1	
Menu	MENU CANCEL	✓	✓	DPG	DPG	—	—					http://192.168.0.10/cgi-bin/aw_cam?cmd=DPG&res=1	
Menu	MENU ENTER	✓	✓	DIT	DIT	—	—					http://192.168.0.10/cgi-bin/aw_cam?cmd=DIT&res=1	
Menu	MENU UP	✓	✓	DUP	DUP	—	—					http://192.168.0.10/cgi-bin/aw_cam?cmd=DUP&res=1	
Menu	MENU DOWN	✓	✓	DDW	DDW	—	—					http://192.168.0.10/cgi-bin/aw_cam?cmd=DDW&res=1	
Menu	MENU RIGHT	✓	✓	DRT	DRT	—	—					http://192.168.0.10/cgi-bin/aw_cam?cmd=DRT&res=1	
Menu	MENU LEFT	✓	✓	DLT	DLT	—	—					http://192.168.0.10/cgi-bin/aw_cam?cmd=DLT&res=1	

[supplement]Settings for the format command

Format (OSA:87)

Data value	Setting	AW-UB10	AW-UB50
4h	1080/59. 94i	-	✓
5h	1080/50i	-	✓
10h	1080/59. 94p	✓	✓
11h	1080/50p	✓	✓
14h	1080/29. 97p	✓	✓
15h	1080/25p	✓	✓
17h	3840x2160/29. 97p	✓	✓
18h	3840x2160/25p	✓	✓
19h	3840x2160/59. 94p	✓	✓
1Ah	3840x2160/50p	✓	✓
1Bh	3840x2160/23. 98p	✓	✓
21h	3840x2160/24p	✓	✓
22h	1080/24p	✓	✓
23h	1080/23. 98p	✓	✓
26h	1080/119. 88p	-	✓
27h	1080/100p	-	✓
90h	3328x2496/59. 94p	✓	✓
91h	3328x2496/50p	✓	✓
92h	3328x2496/48p	-	✓
93h	3328x2496/47. 95p	-	✓
94h	3328x2496/29. 97p	✓	✓
95h	3328x2496/25p	✓	✓
96h	3328x2496/24p	✓	✓
97h	3328x2496/23. 98p	✓	✓

[supplement]Settings for the format command

Format (OSA:87)

Data value	Setting	AW-UB10	AW-UB50
98h	4096x2160/59.94p	✓	✓
99h	4096x2160/50p	✓	✓
9Ah	4096x2160/48p	-	✓
9Bh	4096x2160/47.95p	-	✓
9Ch	4096x2160/29.97p	✓	✓
9Dh	4096x2160/25p	✓	✓
9Eh	4096x2160/24p	✓	✓
9Fh	4096x2160/23.98p	✓	✓
A0h	3680x2760/59.94p	✓	-
A1h	3680x2760/50p	✓	-
A2h	3680x2760/29.97p	✓	-
A3h	3680x2760/25p	✓	-
A4h	3680x2760/23.98p	✓	-
A5h	4128x2176/59.94p	-	✓
A6h	4128x2176/50p	-	✓
A7h	4128x2176/29.97p	-	✓
A8h	4128x2176/25p	-	✓
A9h	4128x2176/23.98p	-	✓
AAh	3536x2656/50p	-	✓
ABh	3536x2656/29.97p	-	✓
ACh	3536x2656/25p	-	✓
ADh	3536x2656/23.98p	-	✓
A Eh	5888x3312/29.97p	-	✓
AFh	5888x3312/25p	-	✓

[supplement]Settings for the format command

Format (OSA:87)

Data value	Setting	AW-UB10	AW-UB50
B0h	5888x3312/24p	-	✓
B1h	5888x3312/23.98p	-	✓
B2h	5376x3584/29.97p	-	✓
B3h	5376x3584/25p	-	✓
B4h	5952x3968/24p	-	✓
B5h	5952x3968/23.98p	-	✓
B6h	1080/48p	-	✓
B7h	1080/47.95p	-	✓
B8h	3840x2160/48p	-	✓
B9h	3840x2160/47.95p	-	✓