XC Control Protocol Specifications

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Revision	Release Date	Location	Changes
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001	Jul. 21, 2021	-	Added description about preset control Added support information for CR-N500/CR-N300 firmware 1.1.0 Added support information for EOS C500 Mark II / EOS C300 Mark III
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008	Jul. 22, 2024	-	Added support information for RC-IP1000

Chapter 1. Introduction

This document specifies the XC control protocol, which is one of the Canon remote camera XC protocols.
With the XC control protocol, you can acquire information from the Canon remote camera and remote camera controller, and control them.

1.1. Use of this Document

This document is for developers of peripheral equipment and applications using the Canon remote camera. Use of this document requires knowledge of application development.
Note that the term “remote camera” as used in this document refers to any device that supports the XC control protocol.
In other words, “remote camera” refers to video production equipment, video cameras for professional use, and remote camera controller in addition to Canon remote cameras.

1.2. Models and Firmware Versions

This document applies to the combinations of models and firmware versions listed below. As a general rule, the entire text of this document applies only to these combinations, unless otherwise specified.

Table 1. Combinations of Models and Firmware Versions to which This Document Applies

Model Category	Model	Firmware Version
Remote Cameras	CR-N700	1.3.0
	CR-N500	1.4.0
	CR-N300	1.4.0
	CR-N100	1.0.0
	CR-X300	1.2.0
Cinema Cameras (CINEMA EOS SYSTEM)	EOS C500 Mark II (hereinafter C500mk2)	1.1.2.1
	EOS C400 (hereinafter C400)	1.0.0.0
	EOS C300 Mark III (hereinafter C300mk3)	1.0.8.1
	EOS C70 (hereinafter C70)	1.0.9.1
Pro Camcorder	XF605	1.0.4.1
Remote Camera Controller	RC-IP1000	1.1.0

The product-specific specifications are described in 'Model Specific Information' of this document.

1.2.1. Precautions for Session/Control Privileges and Related Items

In 'Sessions and Access Privileges' and 'Session Control' of this document, “User Type” based on “Session”, “Control Privileges”, and their acquisition is described in many pages. However, with remote cameras, almost all the information acquisition and camera control is possible regardless of the "presence or absence of session," with the exception of a few. Also, all the information acquisition and camera control are possible regardless of "control rights". There is also no restriction by the user type.[1]
Thus, except for special cases where session-based operation or camera control privileges are necessary, it is recommended to skip reading this part because it is unnecessary information for normal information acquisition or camera control.

[1] No information acquisition or camera control can be performed when the user right restriction is set on the remote camera side.

Chapter 2. Protocol Overview

The XC control protocol provides camera control with respect to the remote camera and information acquisition from the remote camera. The XC control protocol is provided as an HTTP service of the remote camera.

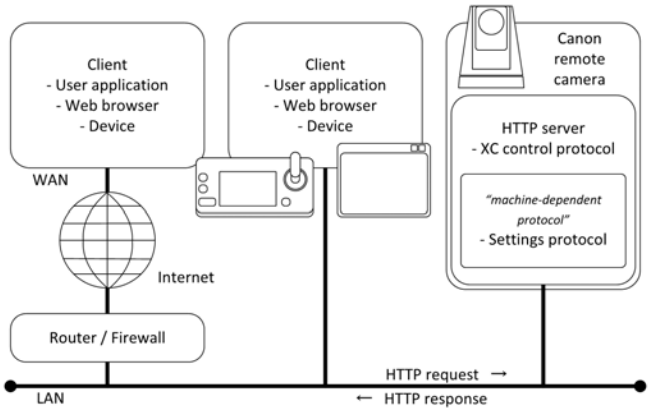

Figure 1. XC control protocol concept diagram

Chapter 3. XC Control Protocol Specifications

3.1. Interface Specifications

The interface specifications of the XC control protocol are described in the following order.

- Request format and content
- Response format and content, and list of status codes
- Protocol command configuration, syntax format
- User access management function, session/sessionless and function execution privileges

3.1.1. Request

In the XC control protocol, XC control commands are used to perform camera control. The XC control command is received by the HTTP server of the remote camera as an HTTP request.

The XC control protocol is not dependent on a specific HTTP version.
The remote cameras supported by this document are HTTP/1.1 and HTTP/2-compliant.
GET or POST can be used as the HTTP method.
The URI is made up of a XC control command or parameter that starts with "/-wvhttp-01-/". With the exception of the starting "wvhttp", the URI and message body are not case-sensitive.

Syntax:

```
GET /-wvhttp-01-/<Command>[?<ParameterList>…] HTTP/1.1
```

3.1.1.1. HTTP Request Header

The following is the HTTP request header field related to the operation of the XC control protocol. All other HTTP request headers are ignored.

- Authorization
- Connection
- Content-Length
- If-Modified-Since[1]

3.1.2. Response

Under the XC control protocol, image data and camera status information are sent from the HTTP

server of the remote camera as an HTTP response.

Response:

```
HTTP/1.1 200 OK
Date: <Time stamp>
Server: vb
accept-ranges: none
cache－control: no-cache
pragma: no-cache
x-frame-options: sameorigin
expires: thu, 01 dec 1970 00:00:00 gmt
x-content-type-options: nosniff
x-xss-protection: 1; mode-block
Connection: keep-alive
livescope-status: 0
Content-Length: <Message body length>
content-type: <Message body mime-type>
<Blank line>
<Message body>
```

3.1.2.1. HTTP Status

The execution result of the HTTP protocol of the XC control command is returned with an HTTP status. The main return values and meanings are described below.

Table 2. List of Returned HTTP Statuses

HTTP Status	Description
200 OK	Requestwas processed normally.
304 Not Modified	Datais not modified.
400 Bad Request	Requestis invalid.
401 Unauthorized	Userauthentication failed.
404 Not Found	Resourcecorresponding to the requested URI does not exist.
411 Length Required	Content-Lengthis not specified.
500 Internal Server Error	Requestdenied due to internal processing error.
503 Service Unavailable	Requestdenied due to temporary overload.

3.1.2.2. Livescope Status

Livescope status is an independent extension field that indicates the execution result of the XC control command. If the Livescope status indicates an abnormality, "200 OK" is returned as the HTTP status. The return values and meanings are described below.

Table 3. List of Returned Livescope Statuses

Livescope Status	Description
0	Processednormally.
301 No Camera Control Right	Requestdenied due to no issuing of the control privilege request.
302 Camera is not available	Cameraspecified with <Camera> parameter does not exist.
303 Camera is not controllable	Cameracannot be controlled due to a camera abnormality.
401 Unknown Operator	Undefinedcommand specified.
403 Invalid Parameter Value	Invalidparameter value specified.
404 Operation Timeout	Commandexecution not completed even at response time limit.
406 Parameter Missing	Mandatoryparameter not specified.
407 Invalid Request	Invalidsession function requested.
408 Conflict	Exclusiveoperation requested.
409 Conflict	Recordingstream requested while migrating video to external memory.
410 Invalid Data	Invalid data was specified.
411 Data Not Found	Specified data does not exist.
501 Unknown Connection ID	Specifiedsession does not exist.
503 Too many clients	Maximumnumber of connections exceeded.
507 Insufficient Privilege	Cannotaccess due to access privilege.
508 Request Refused	Requestdenied due to temporary connection limit of camera.
509 Standby	Access limited during standby state.
510 Switching Standby	Access limited during transition from normal stateto standby state.
511 Switching Idle	Access limited during restoration from standbystate to normal state.

3.1.3. Protocol Configuration

3.1.3.1. Command List

The following are the functions provided by the XC control protocol and the corresponding commands.

Table 4. Commands and Functions of XC Control Protocol

Commands	Functions	Support requirement
open.cgi	Thiscreates a session.	Optional
close.cgi	This closesa session.	Optional
claim.cgi[2]	Thisrequests camera control privileges.	Optional
yield.cgi[2]	Thisreleases camera control privileges.	Optional
session.cgi	Thisretrieves and changes a session-specific attribute.	Optional
info.cgi	This isused to obtain camera information.	Mandatory
control.cgi	This is usedto control a camera or presets.	Mandatory
menu.cgi	This is used to control thecamera's menu, etc.	Optional
image.cgi	This isused to retrieve a JPEG still image.	Optional
video.cgi	This isused to retrieve a video stream.	Optional
thumbnail.cgi	This isused to retrieve a thumbnail image.	Optional
meta.cgi	This isused to obtain metadata related to focus.	Optional
preset/set	Thispreset-stores camera control parameters.	Optional
trace/set	Thisrecords traces.	Optional
trace/control	Thisplaybacks traces.	Optional
standby.cgi	This isused to perform standby transition/restoration.	Optional
configuration.cgi	This isused to make monitoring and assist settings	Optional
configuration/userlut	Registering,deleting, and resetting User LUTs	Optional
cpfile/set	Controlcustom picture	Optional
cpfile/lookfile	Registerand delete Look File	Optional

- **Not all the commands are supported** by each model of the remote cameras.
- Commands with "Mandatory" in the Support requirement column are always supported (info.cgi and control.cgi only).
- Commands with "Optional" in the Support requirement column are supported by some models.
- The support information of the optional commands of each models is described in 'Model Specific Information'.
- Regarding mandatory requirements info.cgi and control.cgi, the supported parameters vary depending on the model.

3.1.3.2. Protocol Syntax

A XC control command is made up of a command and parameter. The following are the syntax conditions when specifying a command and parameter.

- The parameter is in the format "<Name>=<Value>".
- The parameter is specified with the “&” separator in the URI query string.
- The parameter performs URL encoding.
- The parameter name and value may be partially abbreviated with the “[...]” notation.[3]
- There are no limitations in the order of parameter specification.[4]

Example:

```
http://192.168.100.1/-wvhttp-01-/image.cgi?pan=1000&tilt=1000
```

NOTE	The XC control protocol does not support pipelining even when conforming with HTTP/1.1.

3.1.4. Sessions and Access Privileges

3.1.4.1. Client and Session Management

The XC control protocol can be used in two ways: session-based, in which a session is created and a series of command operations are performed; and sessionless, in which a command operation is performed per each request and response.
The following types of clients are available when using the XC control protocol session-based and sessionless.

- Session-based
  - Normal session
    In a normal session, the session ID is specified and a series of command operations are performed.
  - Video-less session
    In a video-less session, a session is created without using the video transmission function and without selecting a video stream. Other functions are the same as during a normal session.
- Sessionless
  - Event stream - client
    An event stream - client is a client that makes a request to get an information item (info.cgi), in which the stream method is selected, without creating a session.

- Video stream - client
  A video stream - client is a client that gets a video stream (video.cgi) without creating a session.
- Sessionless camera control
  Sessionless camera control is a client that performs camera control (control.cgi, menu.cgi) without creating a session.

3.1.4.2. User Type of User Access Control Function

The user access control function of the remote camera manages the authentication information of administrators and authorized users. A user with anonymous access that does not require authentication is called a guest user.

- Guest user: Does not require authentication and is not registered to the user list.
- Authorized user: Requires user authentication and is registered to the user list.
- Administrator: Requires authentication as an administrator.

The user access control function manages and controls the remote camera operation privileges for each of these three types of user. The administrator can configure and change the control privileges for guest and authorized users.

Table 5. Relationship between User Type, Granted Privileges, and Configurable Privilege Type

User Type	Overview of Granted Privileges	Configurable Privilege Type
Guestuser	* According to videotransmission and camera control privilege settings for guest users * Use commandspermitted for guest users	* Video transmissionand camera control not available * Video transmissiononly available * Video transmissionand general camera control available
Authorized user	* According to videotransmission and camera control privilege settings for authorized users * Use commandspermitted for authorized users	* Video transmissionand camera control not available * Video transmissiononly available * Video transmissionand general camera control available * Video transmissionand privileged camera control available

User Type	Overview of Granted Privileges	Configurable Privilege Type
Administrator	* No restrictions onvideo transmission or camera control due to privilege settings * Use commands thatcan only be operated with administrator authorities * Use exclusivecommands as an administrator	∗ No restrictions due to privilege settings

3.1.4.3. Privilege Settings and Session Priority

In a XC control protocol session, camera control privilege settings are applied according to the user access control function. The value indicating the level of the camera control privileges in a XC control protocol session is called the priority. Camera control privileges can be obtained preferentially by a session with higher priority.
Sessions interrupted by a higher priority session must forfeit camera control privileges.

NOTE For details on obtaining and forfeiting camera control privileges, see 'Camera Control Privilege Request [claim.cgi]'.

3.1.4.4. Creating a Session and Applied Restrictions

A XC control protocol session is created with a session creation request (open.cgi). The type of session (general, privileged, or administrator) is determined by the “priority” parameter specified when the session is created.

- The type of session (general or privileged) is determined by “priority” parameter specified to the session creation request command.
- Session connection time is limited by the setting of the model specific “Maximum connection time”.
- Number of simultaneous session connections is limited by the model specific “Maximum number of clients”.
- The administrator session is limited to only one, and there are no restrictions on the session connection time or number of connections.

Table 6. Session Privilege Types and Their Features

Session Type	Description
General session	Session connection time is limited by “Maximum connection time”. Numberof simultaneous session connections is limited by “Maximum number of connections”.

Session Type	Description
Privileged session	Session connection time is unlimited. Numberof simultaneous session connections is limited by “Maximum number ofconnections”.
Administrator session	Session connection time is unlimited. Numberof simultaneous session connections is limited to 1.

3.1.4.5. User Types and Creatable Session Types

In a XC control protocol session, the session types that can be created are limited according to the user type.

Table 7. Relationship between User Types and Creatable Session Types

User Type	Creatable Session Type
Guest user	* Can only create a general session
Authorized user	* Can create a general session * Can create a privileged session with privileged camera control
Administrator	* Can create a general session * Can create a privileged session * Can create an administrator session

3.1.4.6. Closing a Session

A XC control protocol session can be closed with a session close request (close.cgi), and the connection held by the sessionless client ceases to exist when the HTTP connection is disconnected.
In addition to this external connection close operation based on a client request, the connection can be closed on the remote camera side as below.

- When the connection time limit is exceeded
- When there is no request granting a session ID within the prescribed time after a session is created

3.1.4.7. Limits on the Number of Clients

In addition to the limit on the number of connections during a normal XC control protocol session, the following limits on the number of connections also apply to session-based clients and sessionless clients.

- Session-based
  - Normal session

Number of simultaneous normal session connections is limited by the model specific “Maximum number of clients”.

- Video-less session
  The number of simultaneous connections during a video-less session is different from that of a normal session and is limited as the number of connections of a video-less session. It is managed as the total of the number of video-less session connections, sessionless event stream client connections, and sessionless video stream connections.

- Sessionless
  - Event stream - client
    The number of simultaneous sessionless event stream client connections is managed as the total of the number of video-less session connections, sessionless event stream client connections, and sessionless video stream connections.
  - Video stream - client
    The number of simultaneous sessionless video stream client connections is managed as the total of the number of video-less session connections, sessionless event stream client connections, and sessionless video stream connections.
  - Sessionless camera control
    This function does not use a stream, so there is no limit to the number of simultaneous connections.

NOTE	That an administrator session is not included in normal sessions. Note that the execution of a request to get a single information item (info.cgi) with the stream method not specified does not include the number of connections.

3.1.4.8. Session-based Access Privileges by Function

The following are the XC control protocol commands that can be operated according to the privileges configured for a session-based user.

Table 8. XC Control Command Access Privileges by Session-based User

User Type	Set Privileges	Session Control		Video	Information	Camera Control
		open **close** **session**	**claim** **yield**	**image** **video**	**info** **meta**	**control** **etc...** [5]

User Type	Set Privileges	Session Control		Video	Information	Camera Control
Guest user	×: Video transmission ×: Camera control	General (Limited)[6]	×	×	■	×
	■: Video transmission ×: Camera control	General (Limited)[6]	×	■ (Limited)[7]	■	×
	■: Video transmission ■: Camera control General	General (Limited)[6]	General (Limited)[8]	■ (Limited)[7]	■	General[9]
Authorized user	×: Video transmission ×: Camera control	General (Limited)[6]	×	×	■	×
	■: Video transmission ×: Camera control	General (Limited)[6]	×	■ (Limited)[7]	■	×
	■: Video transmission ■: Camera control General	General (Limited)[6]	General (Limited)[8]	■ (Limited)[7]	■	General[9]
	■: Video transmission ■: Camera control privileged	privileged (Unlimited)[6]	privileged (Unlimited)[8]	■ (Unlimited)[7]	■	privileged[9]
Administrator	∗ No restrictions due to privilege settings	General (Limited)[6]	General (Limited)[8]	■ (Limited)[7]	■	General[9]
		privileged/Admin (Unlimited)[6]	privileged/Admin (Unlimited)[8]	■ (Unlimited)[7]	■	privileged/Admin[9]

Legend:
■: Available; ×: Unavailable (no privilege); -: Unavailable (session required) General: camera control; Privileged: privileged camera control; Admin: administrator authorities

3.1.4.9. Sessionless Access Privileges by Function

The following are the XC control protocol commands that can be operated according to the privileges configured for a sessionless user.

Table 9. XC Control Command Access Privileges by Sessionless User

User Type	Set Privileges	Session Control		Video	Information	Camera Control
		open close session	claim yield	image video	info meta	control etc... [5]
Guest user	×: Video transmission ×: Camera control	-	-	×	■	×
	■: Video transmission ×: Camera control	-	-	■ (Unlimited) [10]	■	×
	■: Video transmission ■: Camera control General	-	-	■ (Unlimited) [10]	■	General[11]
Authorized user	×: Video transmission ×: Camera control	-	-	×	■	×
	■: Video transmission ×: Camera control	-	-	■ (Unlimited) [10]	■	×
	■: Video transmission ■: Camera control General	-	-	■ (Unlimited) [10]	■	General[11]
	■: Video transmission ■: Camera control privileged	-	-	■ (Unlimited) [10]	■	privileged [12]
Administrator	∗ No restrictions due to privilege settings	-	-	■ (Unlimited) [10]	■	privileged [12]

Legend:
■: Available; ×: Unavailable (no privilege); -: Unavailable (session required) General: camera control; Privileged: privileged camera control; Admin: administrator authorities

3.2. Command Specifications

This describes the XC control protocol command specifications.
The following is the notation used in this document.

Notation - List of Information Item Attributes:

The information items have different behavior depending on whether it is an item that can only be referenced, an item that can be referenced and updated, or an item that provides event notification when updated.
This behavior is called an attribute, and the attribute information is abbreviated as shown below.

Table 10. Attribute Notation of Information Items

Attribute	Attribute Value	Description
Canbe referenced	G	Indicatesan item that can be referenced with info.cgi
Canbe controlled	C	Indicatesan item that can be updated with control.cgi
Session-specificitem	P	Thisis a session-specific value. Indicates an item that does not affect changesto other items
Updatenotification item	U	Indicatesan item whereby the update provides event notification with info.cgi

NOTE Items that can be executed in a privileged session or higher are listed as “privileged”, and items that can be executed only in an administrator session are listed as “admin” in the attribute value column.

Notation - List of Subscript Abbreviations of Array Information Items:

The array subscripts are abbreviated as shown below for the items selected in an array as information items.
Some items may have a valid value range that varies according to the model.

Table 11. Subscript Abbreviations of Array Information Items

Abbreviation 1	Abbreviation 2	Valid Value	Description
<Camera>	<c>	1	Camera number
<Video>	<v>	1...3	Video stream number
<Preset>	<p>	1...100	Preset number (only when a preset is valid)

Abbreviation 1	Abbreviation 2	Valid Value	Description
<Trace>	<t>	1...10	Trace number (only when a trace is valid)
<Input>	<i>	1...2	Contact input terminal number
<Output>	<o>	1...2	Contact output terminal number
<Audio>	<a>	1	Number of audio input terminals
<cUstom picture>	<u>	1...	Number of custom picture
No regulation	<k>	1...2	Crop region number

NOTE As the number of cameras is fixed at 1, <Camera> and <c> are not used and may appear as follows.
e.g. c.1.status:=<string> Camera controllable status

Notation - List of Information Item Types:

The type information of information items is abbreviated as shown below.

Table 12. Type Notation of Information Items

Type	Type Value	Description
Character string [ASCII]	<string>	ASCIIcharacter string. Also includes multiple element joint type.[13]
Character string [UTF-8]	<unicode>	Indicates a UTF-8 encoded multibyte characterstring type.
Signed integer	<int>	Indicates a signed decimalinteger type.
Fixed point number	<fixed>	Indicates a signed decimalfixed point number type.

Notation - Value Range of Information Items:

For values, ranges, and selection items, the minimum and maximum values within all supported products are described. However, the models within those ranges may not exist.

e.g. When the models within the value range exist

Specifications of model A

Parameter Value	Type/Range	Attribute	Description
c.1.xx	10...**100**	GC-U	Integer with a range of 10 to 100

Specifications of model B

Parameter Value	Type/Range	Attribute	Description
c.1.xx	10...**50**	GC-U	Integer with a range of 10 to 50

Description in this chapter

Parameter Value	Type/Range	Attribute	Description
c.1.xx	10...100	GC-U	Integer with a range of 10 to 100

e.g. When the models within the value range do not exist

Specifications of model A

Parameter Value	Type/Range	Attribute	Description
c.1.yy	**10**...100	GC-U	Integer with a range of 10 to 100

Specifications of model B

Parameter Value	Type/Range	Attribute	Description
c.1.yy	50...**200**	GC-U	Integer with a range of 50 to 200

Description in this chapter

Parameter Value	Type/Range	Attribute	Description
c.1.yy	10...200	GC-U	Integer with a range of 10 to 200

Notation - Model Specific Information:

If the specifications for each product differ from those listed in this chapter, the differences are listed in 'Model Specific Information'.
If model names are written in the column 'Model Specific Information', the function of the models are expanded or added, or the functions are limited.

3.2.1. Session Control

In the XC control protocol, obtaining camera control privileges or obtaining video stream is managed for each session individually created. With remote cameras, creating sessions are not mandatory because almost all camera control and information acquisition can be accessed sessionlessly, except for some camera control parameters.
However, it is necessary to create a session to use all functions of the XC control protocol because, for example, in session-based information acquisition, it is possible to use the function to receive event notification when a difference occurs during a continuous connection.

3.2.1.1. Creating a Session [open.cgi]

This creates a XC control protocol session.

- The type of general or privileged session is determined according to the priority specification.
- The content of the video to be obtained in the session is determined by the video stream specification.
- The video stream can be selected with either of two methods: by specifying the video codec, video size, and other video parameters, or by specifying the video stream number. Video parameter specifications (v) make provision for backwards compatibility. In comparison, video stream number specifications (w) are more sophisticated. Therefore, if new parameters are used during stream selection, the use of a video stream number specification (w) is recommended.
- It is possible to create a session without performing a video transmission by specifying “Invalid”.

When a session is created successfully, the session ID, user privilege, remaining time, priority, and selected video stream information (only when specified) are returned as a response.

3.2.1.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-
/open.cgi?[s.priority=<Value>][&v=<Value>][&w=<Value>][&w.<Video>.frate=<Value>]
```

Preconditions and precautions:

- The session lifetime varies depending on the priority, but privileged and administrator sessions are unlimited. Guest users are limited by the model specific “Maximum connection time”.
  However, if after a session is created, there is no request (video.cgi, image.cgi, info.cgi, control.cgi, etc.) granting a session ID within the prescribed time (60 seconds), that session is cleared regardless of the privileges.
- It is limited by the model specific “Maximum number of clients”. If the maximum number of connections is exceeded, the session is not created, and 503 is returned as the Livescope status response.
- The administrator session has no restrictions on the connection time or number of connections. However, if a separate administrator session has already been established, the connection is denied, and 408 is returned as the Livescope status response.
- For video parameter specification (v), if there is no stream that conforms to the specified video size, a stream with a video size that is close to the specified value and is one size lower is selected.

- If both the video parameter specification (v) and video stream number specification (w) are specified when selecting a video stream, the video parameter specification (v) has priority. Even if neither are specified, the video parameter specification (v) takes priority and the video codec is jpg.
- A session with no video stream (“video-less”) can also be created. However, a video stream must be specified for an administrator session.

Parameters:

Parameter	Value Type/Range	Description
[s.]priority	0...50	Specifies thesession priority.[14]
v	<video parameter>null	Selects thestream by the video parameter.[15][16] Video-less session when “null” is specified.
w	1...3	Selects the stream by thevideo stream number.[16] Specifies a video stream numberthat can be referenced with info.cgi.
w.<Video>.frate	100...30000	Specifies the video streamframe rate. Unit: Numberof frames per 1000 seconds Specify at the same time as w. Ignored if w is notspecified.
comparable	admin	When admin is selected in this item, realm of the HTTP responseheader returns"Administrator"in the case of a privileged session[14].

3.2.1.1.2. Response

The response content for open.cgi varies depending on whether the video parameter specification (v) or video stream number specification (w) was specified. The following shows the response content and status value returned when an error occurs.

A. Successful response [video parameter specification (v)]

```
HTTP Code   : 200 OK
Content-Type    : text/plain;charset=utf-8
Livescope-Status    : 0
MessageBody :
<Parameter>:=<Value>
<Parameter>==<Value>

s:=8a96-c09b18f0
s.authority.audio:= disabled
s.authority.control:= enabled
s.authority.video:=enabled
```

```
s.origin:=192.168.100.1:80
s.duration:=0
s.priority:=0
v:=jpg:1920x1080:3:30000
```

Return value:

Return value	Value Type/Range	Description
s	<string>	Session ID
s.authority.audio	disabled, enabled	Audio device privilege
s.authority.control	disabled, enabled	Camera control privilege
s.authority.video	disabled, enabled	Video distributionprivilege
s.origin	<IPaddress>:<port>	Camera IP address and HTTP port number[17]
s.duration	0...<Maximum connection time>	Remaining session connection time[18] Unit:Second0:Unlimited
s.priority	0...50	Session priority
v	<video parameter>	Video parameter of selected stream[19] Notreturned if video-less (v=null) is specified.
v.<Video>.cbr	64...16384	Selected video stream target bit rateUnit: kbps[20]

B. Successful response [video stream number specification (w)]

```
HTTP Code   : 200 OK
Content-Type    : text/plain;charset=utf-8
Livescope-Status    : 0
MessageBody :

<Parameter>:=<Value>
<Parameter>==<Value>

s:=8a96-c09b18f0
s.authority.audio:= disabled
s.authority.control:= enabled
s.authority.video:=enabled

s.origin:=192.168.100.1:80
s.duration:=0
s.priority:=0
w:=1
w.1.type==h264
w.1.size==480x270
w.1.quality==0
w.1.frate==1000
```

```
w.1.crop==off
```

Return value:

Return value	Value Type/Range	Description
s	<string>	Session ID
s.authority.audio	disabled,enabled	Audio device privilege
s.authority.control	disabled,enabled	Camera control privilege
s.authority.video	disabled,enabled	Video distributionprivilege
s.origin	<IPaddress>:<port>	Camera IP address and HTTP port number
s.duration	0...	Remaining session connection time Unit:Second 0:Unlimited
s.priority	0...50	Session priority
w	1...3	Selected video stream number[21]
w.<Video>.type	jpg,h264, h265	Selected video stream video codec
w.<Video>.type.profile	baseline, main,high	Selected video stream profile[22]
w.<Video>.kind	overview	By selected video stream video type
w.<Video>.size	<videowidth>x<video height>	Selected video stream size
w.<Video>.quality	1...10	Selected video stream Q valueLowquality 1 ←→10 Highquality
w.<Video>.cbr	64...16384	Selected video stream target bit ratefotnote:[It is returned when the video codec of <video parameter> is "h264".] Units:kbps
w.<Video>.frate	100...30000	Selected video stream frame rateUnit:Number of frames per 1000 seconds
w.<Video>.crop	offon	Enable/disable digital PTZ

C. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A guest user requested a privileged oradministrator session. ! An authorized user requested anadministrator session.

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified. ! A video stream number (w) outside the validrange was specified.
407 Invalid Request	Invalidsession function requested. ! An invalid video stream number (w) was specified. ! A video-less (v=null) administrator session was requested.
408 Conflict	An exclusive operation was requested. ! An administrator session was requested andexcluded to an existing session.
503 Too many clients	Maximum number of connectionsexceeded.[23] ! A session that exceeds the maximum number ofconnections was requested.
507 Insufficient Privilege	Cannot access due to access privilege.

3.2.1.2. Closing a Session [close.cgi] (Optional)

This closes a XC control protocol session.

3.2.1.2.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/close.cgi?s=<SessionID>
```

Preconditions and precautions:

- A guest user cannot close a privileged session.
- A guest user or authorized user cannot close an administrator session.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID (Mandatory)

3.2.1.2.2. Response

A. Successful response

HTTP Code : 200 OK Content-Type : text/plain;charset=utf-8 Livescope-Status : 0 MessageBody :

```
OK
```

B. Error response

HTTP status return value:

HTTP Status	Meaning
401Unauthorized	Userauthentication failed. ! A guest user requested a privileged or administrator session. ! An authorized user requested the closing of an administratorsession.

Livescope status return value:

Livescope Status	Meaning
406 Parameter Missing	Mandatory parameter not specified. ! Mandatory parameter or session ID(s) notspecified.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.1.3. Camera Control Privilege Request [claim.cgi]

This is used to obtain camera control privileges. The priority of the session determines whether camera control privileges can be obtained and the assigned time of the control privileges.

- Camera control privilege request for a general session
  - The assigned time of the camera control privileges is limited by the set camera control time.[24]
  - If a general session has already obtained control privileges, a control privilege request from the same general session is queued until the previous session releases control privileges or the assigned time for camera control privileges has elapsed.
  - Control privileges are assigned to queued control privilege requests in the order they

were requested.

- When obtaining control privileges, in addition to using the result of the control privilege request, info.cgi can also be used to obtain notification of a change in the status of an information item.
- The number of sessions queued to obtain camera control privileges is managed by the set the maximum camera control queue length. If a control privilege request exceeds the camera control queue length, a failure response is returned.

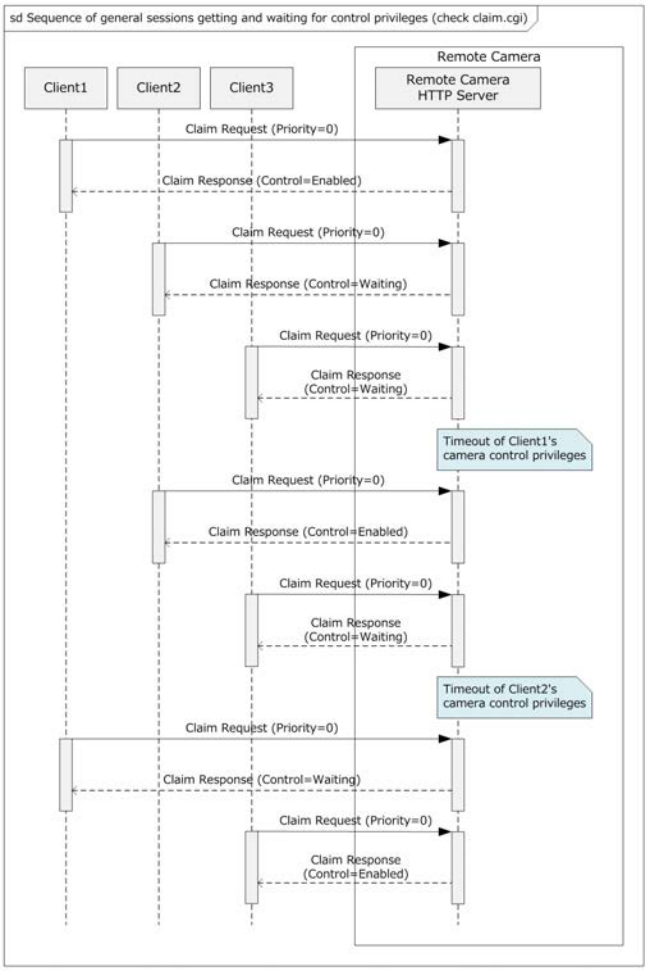

Figure 2. Sequence of General Sessions Getting and Waiting for Camera Control Privileges (Check claim.cgi)

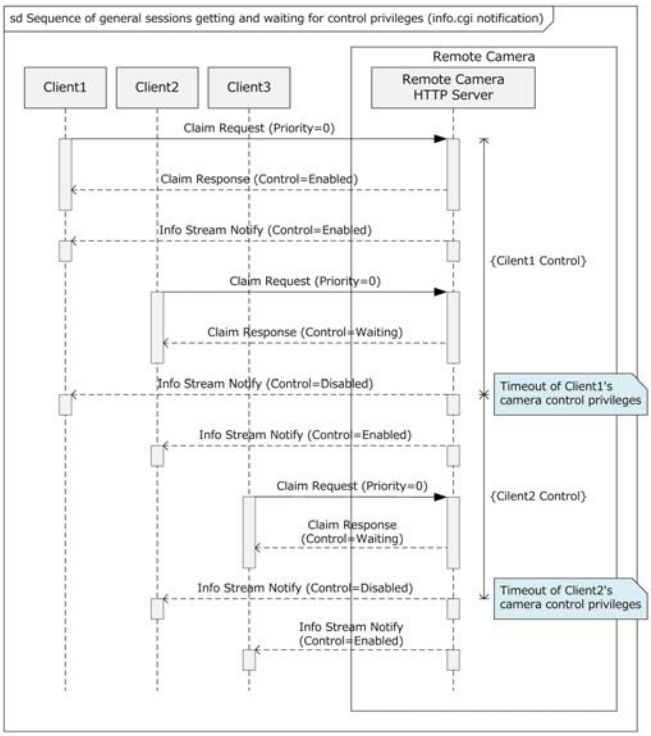

Figure 3. Sequence of General Sessions Getting and Waiting for Camera Control Privileges (info.cgi Notification)

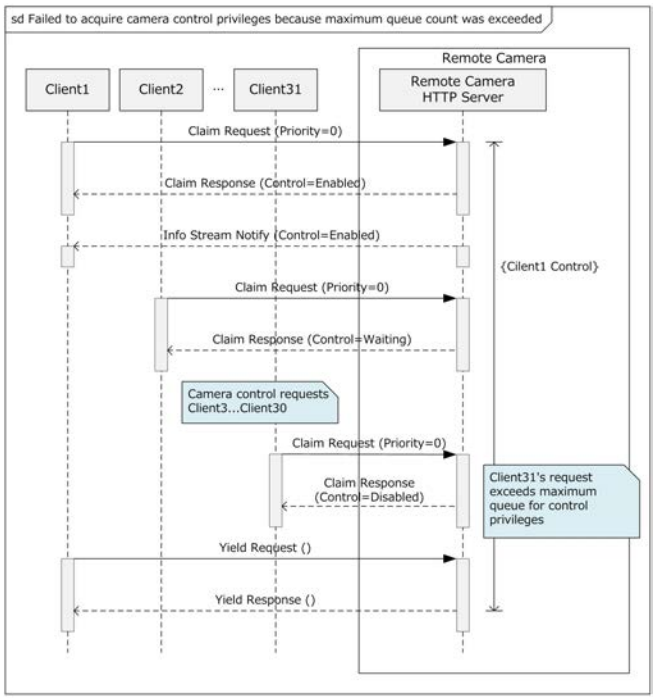

Figure 4. Failed to Acquire Camera Control Privileges Because Maximum Queue Count Was Exceeded

- Camera control privilege request for a privileged session
  - In a privileged session, session management in which control privilege requests are queued, as in a general session, is not performed, and instead, the higher priority privileged session obtains control privileges. In this case, the control privileges of the session that had previously obtained control privileges are forfeited.

- Control privileges can also be obtained when a session with the same priority requests control privileges.
- If a privileged session requests control privileges, all queued control privilege requests of general sessions fail.

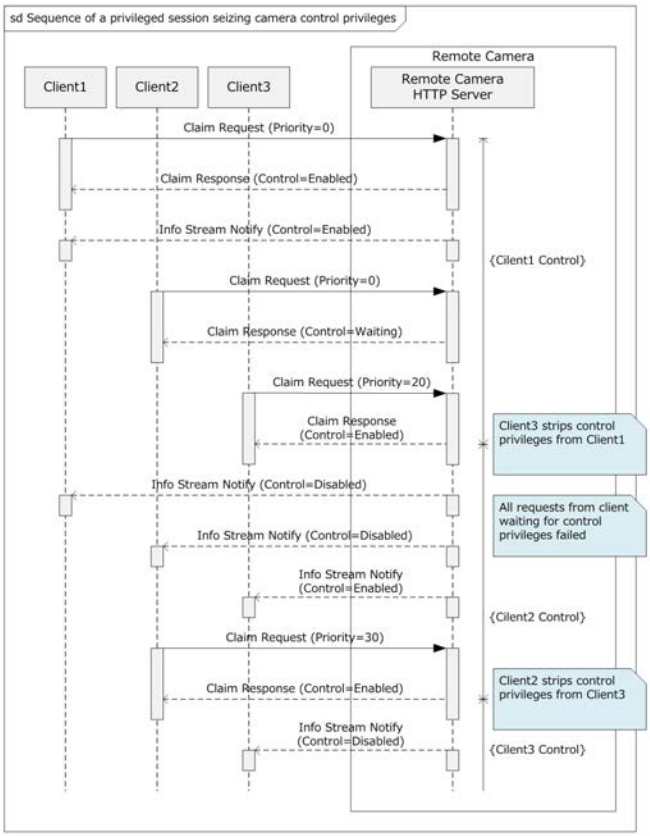

Figure 5. Sequence of a Privileged Session Seizing Camera Control Privileges

3.2.1.3.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/claim.cgi?s=<SessionID>
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID (Mandatory)

3.2.1.3.2. Response

A. Successful response [Change in control privileges status of own session due to control privilege request]

The following is the response when the status of the control privileges changes as a result of a processed control privilege request.

e.g. Before control privilege request = disabled → After control privilege request = enabled or waiting

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
s.control:=enabled:20000
```

Return value:

Return value	Value Type/Range	Description
s.control	enabled [:<assigned time>], waiting [:<standby time>]	Camera control privileges status of own session[25] Unit: Millisecond

B. Successful response [No change in control privileges status of own session due to control privilege request]

The following is the response when the status of the control privileges does not change even when a control privilege request is processed.

e.g. Before control privilege request = disabled →
After control privilege request = disabled (failed to obtain control privileges)
Before control privilege request = waiting →
After control privilege request = waiting (continuing to wait)

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
s.control==disabled
```

Return value:

Return value	Value Type/Range	Description
s.control	enabled[:<assigned time>], waiting[:<standby time>], disabled	Camera control privileges status of own session[26] Unit: Millisecond

C. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! Specified session ID(s) does not have camera control privileges.

Livescope status return value:

Livescope Status	Meaning
406 Parameter Missing	Mandatory parameter not specified. ! Mandatory parameter or session ID(s) not specified.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.1.4. Releasing Camera Control Privileges [yield.cgi]

This releases camera control privileges. If waiting to obtain camera control privileges, this cancels the wait status.

- When releasing control privileges, in addition to using the result of the control privilege release, info.cgi can also be used to obtain notification of a change in the status of an information item.

3.2.1.4.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/yield.cgi?s=<SessionID>
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID (Mandatory)

3.2.1.4.2. Response

A. Successful response [Change in control privileges status of own session due to control privilege release]

The following is the response when the status of the control privileges changes as a result of a processed control privilege release with respect to the privileges status before release of control privileges.

e.g. Before control privilege release = enabled or waiting → After control privilege release = disabled

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
s.control:=disabled
```

Return value: (*The specified parameter determines whether "==" or ":=" is returned as the return value.)

Return value	Value Type/Range	Description
s.control	disabled	Camera control privileges status of own session

B. Successful response [No change in control privileges status of own session due to control privilege release]

The following is the response when the status of the control privileges does not change even when a control privilege release is processed with respect to the privileges status before release of control privileges.

e.g. Before control privilege release = disabled → After control privilege release = disabled

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
s.control==disabled
```

Return value: (*The specified parameter determines whether “==” or “:=” is returned as the return value.)

Return value	Value Type/Range	Description
s.control	disabled	Camera control privileges status of own session

C. Error response

Livescope status return value:

Livescope Status	Meaning
406 Parameter Missing	Mandatory parameter not specified. ! Mandatory parameter or session ID(s) not specified.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.1.5. Changing Session Attributes [session.cgi]

This retrieves a XC control protocol session-specific attribute or changes a specific attribute.

- A session-specific attribute can be used to change the priority and video stream.
- Changes to the session priority affect the XC control command access privileges and camera control privileges.
- The size and frame rate of the video to be retrieved in the session can be changed by changing the video stream attributes.
- The video stream can be selected with either of two methods: by specifying the video codec, video size, and other video parameters, or by specifying the video stream number.

When a session attribute is changed successfully, the changed priority and changed video stream information are returned as a response.

3.2.1.5.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-
/session.cgi?s=<SessionID>[&s.priority=<Value>][&v=<Value>][&w=<Value>][&w.<Video>.frate=<Value>]
```

Preconditions and precautions:

- If the session priority is lowered to a general session, the session may be disconnected due to the limitation of the model specific “Maximum connection time”.
- If the session priority is lowered to a level where there are no camera control privileges, the camera control privileges are forfeited.
- If the session priority is lowered and there is a session requesting camera control privileges at a higher priority, the camera control privileges are forfeited.
- For video parameter specification (v), if there is no stream that conforms to the specified video size, a stream with a video size that is close to the specified value and is one size lower is selected.
- If both the video parameter specification (v) and video stream number specification (w) are specified when selecting a video stream, the video parameter specification (v) has priority. Even if neither are specified, the video parameter specification (v) takes priority and the video codec is jpg.
- When the image.cgi or video.cgi video retrieval command is being executed for the video parameter specification (v), changes to the video codec of the video stream are denied, and 408 is returned as the Livescope status response.
- When the image.cgi or video.cgi video retrieval command is being executed for the video stream number specification (w), changes are only permitted to the type between JPEG video streams. If H.264 is specified, changes are denied, and 408 is returned as the Livescope status response.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID (Mandatory)
[s.]priority	0...50	Specifies the session priority.[14] "0" when omitted (generalsession).
v	<video parameter>	Selects the stream by the video parameter.[15][16]
w	1...3	Selects the stream by the video streamnumber.[16] Specifies a videostream number that can be referenced with info.cgi.
w.<Video>.frate	100...30000	Specifies the videostream frame rate. Unit:Number of frames per 1000 seconds Specifyat the same time as w. Ignoredif w is not specified.

3.2.1.5.2. Response

The response content for session.cgi varies depending on whether the video parameter specification (v) or video stream number specification (w) was specified. The following shows the response content and status value returned when an error occurs.

A. Successful response [video parameter specification (v)]

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
s.priority:=0
v:=jpg:1920x1080:3:30000
```

Parameters:

Parameter	Value Type/Range	Description
s	0...50	Changed session priority
v	<video parameter>	Video parameter of changed stream[19]

B. Successful response [video stream number specification (w)]

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
s.priority:=0
w:=5
w.1.type==h264
w.1.size==480x270
w.1.quality==0
w.1.frate==1000
w.1.crop==off
```

Return value: (*The specified parameter determines whether “==” or “:=” is returned as the return value.)

Return value	Value Type/Range	Description
s.priority	0...50	Changed session priority
w	1...3	Changed video stream number
w.<Video>.type	jpg, h264, h265	Changed video stream video codec
w.<Video>.type.profile	baseline, main, high	Selected video stream profile[27]
w.<Video>.kind	overview	By selected video stream video type
w.<Video>.size	<videowidth>x<videoheight>	Changed video stream size
w.<Video>.quality	1...10	Changed video stream Q value Lowquality 1←→ 10High quality
w.<Video>.cbr	64...16384	Changed video stream target bit rate[27] Unit: kbps
w.<Video>.frate	100...30000	Changed video stream frame rate Unit:Number of frames per 1000 seconds

C. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A guest user requested a privileged session.

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalidparameter value specified. ! A video stream number (w) outside the validrange was specified.
406 Parameter Missing	Mandatoryparameter not specified. ! Mandatory parameter or session ID(s) not specified.
407 Invalid Request	Invalidsession function requested. ! An invalid video stream number (w) was specified.

Livescope Status	Meaning
408 Conflict	Anexclusive operation was requested. ! A change in the video stream was specified with the videoparameter specification (v) while the video retrievalcommand was being executed. ! A change in the video stream to a format other than JPEG wasspecified with the video stream number specification(w) while thevideo retrieval command was being executed.
501 Unknown Connection ID	Specifiedsession does not exist. ! Invalid session ID(s) specified.

3.2.2. Information Acquisition

The information acquisition commands of remote cameras under XC control protocol are described below.

3.2.2.1. Information Acquisition [info.cgi]

This is used to obtain various remote camera information. Select whether to acquire information from a session-based or sessionless client. In addition, as needed, select the method for issuing the command and acquiring the result and the method for receiving notification each time there is a change in information in a camera due to the stream format.

- Session-based - Issuing a request as needed
  - At the initial information acquisition after the camera is started, all requested items are returned immediately as a response.
  - At all subsequent information acquisitions, items are returned as a response only when those items are different from the initial response content. If there is no difference at the time of the information acquisition request, the response is queued until a difference exists.
  - "timeout" parameter can be used to specify the response time limit.
- Sessionless - Issuing a request as needed
  - All requested items are returned immediately as a response for each information acquisition request.
- Stream format specification
  - It is possible to select the stream format for both session-based and sessionless clients. The server push mode using "multipart/x-mixed-replace" MIME type is used for the response format.
- Response format
  - At the initial information acquisition after the camera is started, all requested items are

returned immediately as a response.

- Thereafter, an information acquisition request is not performed, and items are repeatedly returned as a response only when those items are different from the previous response content.
- There is only one format for the response for info.cgi : “item name:=value”.
- The following shows the behavior of info.cgi for each usage.

When the stream format is not specified in a sessionless case, all requested items are returned immediately as a response for each information acquisition request.

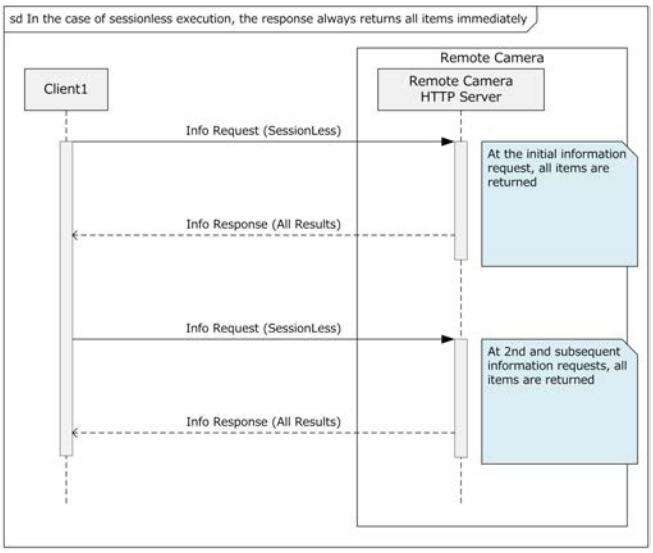

Figure 6. In the Case of Sessionless Execution, the Response Always Returns All Items Immediately

When the stream format is not specified in a session-based case, in all subsequent information acquisitions, items are returned as a response only when those items are different from the initial response content.

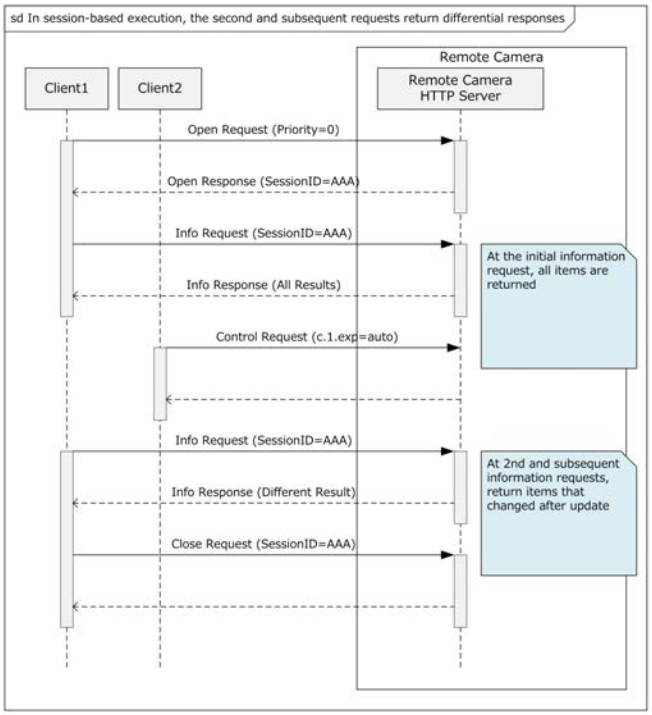

Figure 7. In Session-Based Execution, the Second and Subsequent Requests Return Differential Responses

When the stream format is not specified in a session-based case, in all subsequent information acquisitions, if there is no difference at the time of the information acquisition request, the response is queued until a difference exists.

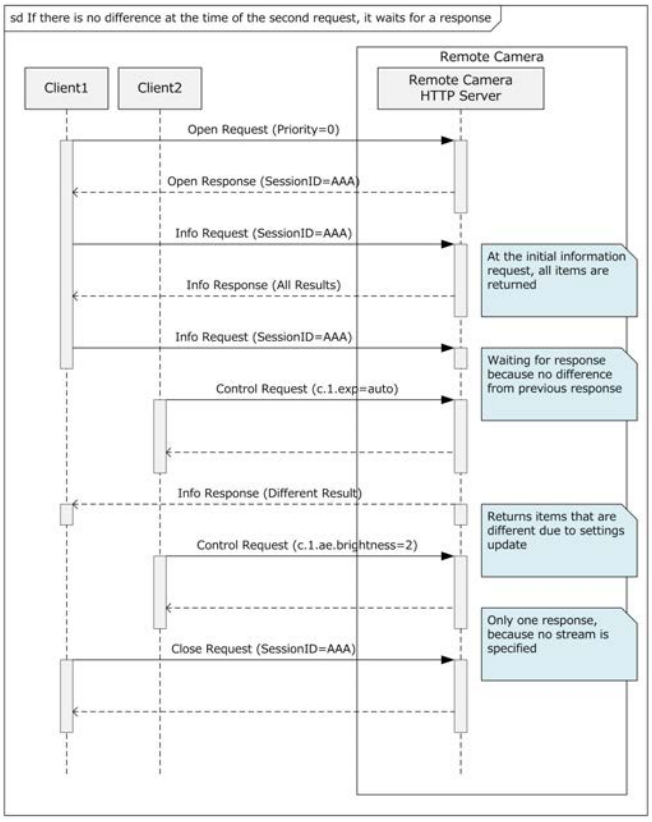

Figure 8. If There Is No Difference at the Time of the Second Request, It Waits for a Response

When the stream format is specified, at the initial information acquisition after the camera is started, all requested items are returned immediately as a response.
Thereafter, an information acquisition request is not performed, and items are repeatedly returned as a response only when those items are different from the previous response content.

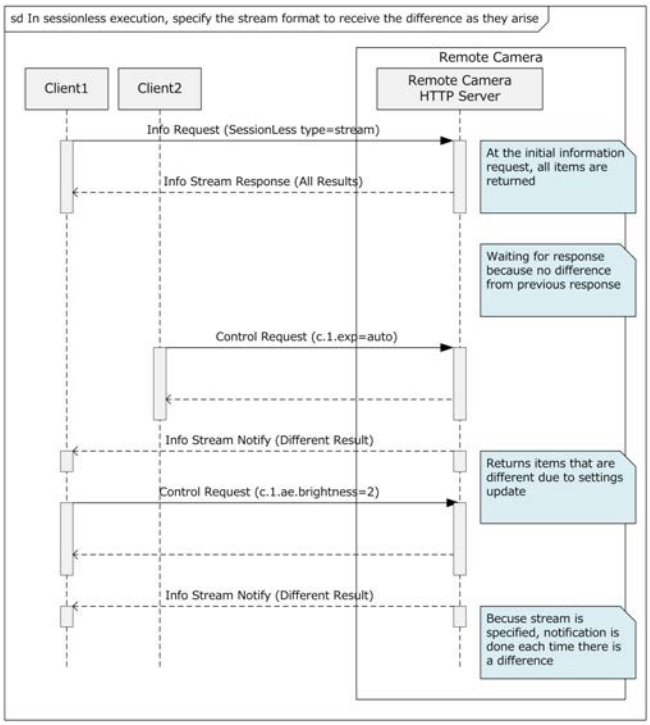

Figure 9. In Sessionless Execution, Specify the Stream Format to Receive the Differences as They Arise

"timeout" specification can be used to specify the response time limit. When the response time limit specified with "timeout" elapses, only the "timestamp" item, which indicates that the time limit timed out, is returned as a response.

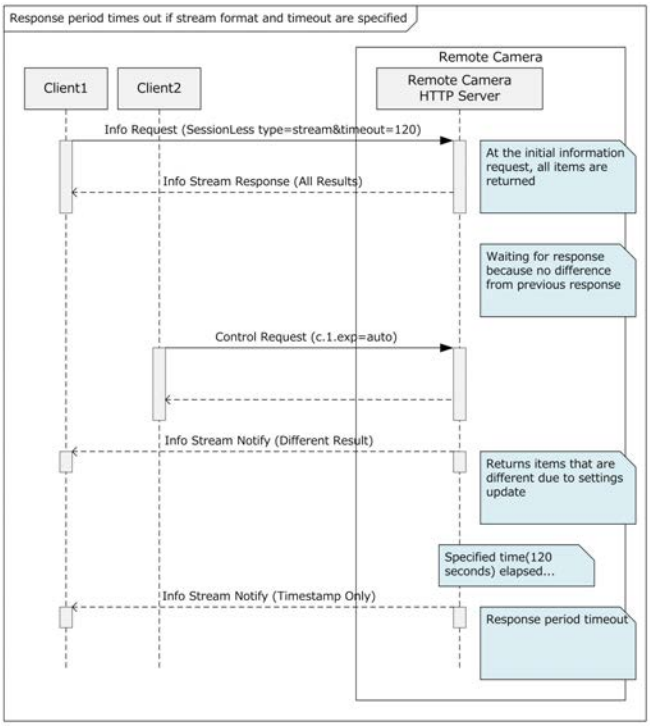

Figure 10. Response Period Times Out If Stream Format and Timeout Are Specified

3.2.2.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/info.cgi?[s=<sessionID>][&item=<Value>]
[&type=<Value>][&timeout=<Value>]···
```

Preconditions and precautions:
* A request cannot be executed multiple times in the same session, and if attempted, 408 is returned as the Livescope status response.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
item	<itemname 1> [,<itemname 2>...]	Specifies the information item to be acquired.[28] When thespecification is omitted, all the items are specified.

Parameter	Value Type/Range	Description
type	stream	Response format specification stream: Sends data in stream format In the stream format, all the data is transmitted first and any difference is transmittedfrom the camera later sequentially.
timeout	<int>	Response timelimit specification Unit: Second
interval	0,33, 100, 200, 500, 1000	Minimum intervalof performing notification of pan position/tilt position/zoom position duringthe PTZ operation Unit:Millisecond "0"= No notification "0" whenomitted

3.2.2.1.2. Response

The response format for information acquisition is "item name:=value".

- The initial response for information acquisition returns all items, while the second and subsequent responses specifying a session return only the items that have changed. In both cases, the "item name:=value" format is returned.

A. Successful response [normal]

This indicates the initial response of an information acquisition or a response when a command is issued as needed.

HTTP Code：200 OK
Content-Type：text/plain;charset=utf-8
Livescope-Status：0
MessageBody：

```
timestamp=196.144
realtime=1713318672.352
s.action.list:=save
s.system.status:=idle
s.epoch:=Wed, 17 Apr 2024 10:48:44 +0900
s.hardware:=Canon CR-N700
s.hardware.id:=114
s.hardware.address:=************
s.hardware.maxsize:=3840x2160
s.firmware:=1.4.0
s.protocol:=7.0.0
s.maxsize:=3840x2160
```

```
v.list:=h264:1920x1080:0:59940,jpg:1280x720:6:14980
v.h264.cbr:=20000
w.maxsize:=1920x1080
w.count:=3
w.1.status:=enabled
w.1.type:=h264
w.1.type.profile:=high
w.1.kind:=overview
w.1.size:=1920x1080
w.1.quality:=0
w.1.cbr:=20000
w.1.frate.min:=100
w.1.frate.max:=59940
w.1.crop:=off
w.2.status:=enabled
w.2.type:=h264
w.2.type.profile:=high
w.2.kind:=overview
w.2.size:=640x360
w.2.quality:=0
w.2.cbr:=6000
w.2.frate.min:=100
w.2.frate.max:=29970
w.2.crop:=off
w.3.status:=enabled
w.3.type:=jpg
w.3.kind:=overview
w.3.size:=1280x720
w.3.quality:=6
w.3.frate.min:=100
w.3.frate.max:=14980
w.3.crop:=off
c:=1
c.count:=1
c.1.type:=Canon CR-N700
c.1.status:=enabled
c.1.platform.status:=initialized
c.1.platform.error:=0
c.1.name.utf8:=Camera
c.1.shooting:=fullauto
c.1.shooting.list:=fullauto,manual
c.1.exp:=auto
c.1.exp.list:=auto,manual
c.1.ae.brightness:=0
c.1.ae.brightness.min:=-8
c.1.ae.brightness.max:=8
c.1.ae.brightness.list:=-8,-7,-6,-5,-4,-3,-2,-1,0,1,2,3,4,5,6,7,8
c.1.me.brightness:=0
c.1.me.brightness.min:=-8
c.1.me.brightness.max:=8
c.1.ae.photometry:=center
c.1.ae.photometry.list:=center,spotlight,backlight
c.1.me.photometry:=center
c.1.me.photometry.list:=center,spotlight,backlight
c.1.ae.resp:=1
```

```
c.1.ae.resp.min:=0
c.1.ae.resp.max:=2
c.1.me.resp:=1
c.1.me.resp.min:=0
c.1.me.resp.max:=2
c.1.me.diaphragm.mode:=auto
c.1.me.diaphragm.mode.list:=auto,manual
c.1.me.diaphragm.increment:=4
c.1.me.diaphragm.increment.list:=3,4
c.1.me.diaphragm.fine:=off
c.1.me.diaphragm.fine.list:=off,on
c.1.me.diaphragm:=280
c.1.me.diaphragm.list:=280,320,340,370,400,440,450,480,520,560,620,670,730,800,870,950,1000,1100
c.1.me.diaphragm.shift.min:=-100
c.1.me.diaphragm.shift.max:=100
c.1.me.iris:=250
c.1.me.iris.min:=108
c.1.me.iris.max:=250
c.1.me.fno:=280
c.1.me.diaphragm.restrict:=on
c.1.me.diaphragm.restrict.list:=off,on
c.1.me.shutter.mode:=auto
c.1.me.shutter.mode.list:=auto,speed,slow,clearscan,angle,off
c.1.me.shutter.increment:=4
c.1.me.shutter.increment.list:=3,4
c.1.me.shutter:=60
c.1.me.shutter.list:=60,75,90,100,120,150,180,210,250,300,360,420,500,600,720,840,1000,1200,1400,1
700,2000
c.1.me.clearscan:=5994
c.1.me.clearscan.min:=5994
c.1.me.clearscan.max:=199800
c.1.me.clearscan.shift.min:=-100
c.1.me.clearscan.shift.max:=100
c.1.me.angle:=18000
c.1.me.angle.list:=36000,24000,21600,18000,12000,9000,6000,4500,3000,2250,1500,1125
c.1.me.shutter.restrict:=off
c.1.me.shutter.restrict.list:=off,on
c.1.ae.flickerreduct:=off
c.1.ae.flickerreduct.list:=off,auto
c.1.me.flickerreduct:=off
c.1.me.flickerreduct.list:=off,auto
c.1.me.isogain.mode:=gain
c.1.me.isogain.mode.list:=iso,gain
c.1.me.gain.mode:=auto
c.1.me.gain.mode.list:=auto,manual
c.1.me.gain.increment:=normal
c.1.me.gain.increment.list:=normal,fine
c.1.me.gain:=-10
c.1.me.gain.min:=-60
c.1.me.gain.max:=210
c.1.me.gain.list:=-60,-55,-50,-45,-40,-35,-30,-25,-20,-15,-10,-
5,0,5,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110,115,120,125,130,135,140,14
5,150,155,160,165,170,175,180,185,190,195,200,205,210
c.1.me.gain.boost:=off
c.1.me.gain.boost.list:=off,on
```

```
c.1.me.gain.highsensitive:=off
c.1.me.gain.highsensitive.list:=off,on
c.1.me.gain.shockless:=off
c.1.me.gain.shockless.list:=off,high,normal,low
c.1.ae.gainlimit.max:=210
c.1.ae.gainlimit.max.min:=-60
c.1.ae.gainlimit.max.max:=210
c.1.ae.gainlimit.max.list:=-60,-55,-50,-45,-40,-35,-30,-25,-20,-15,-10,-
5,0,5,10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110,115,120,125,130,135,140,14
5,150,155,160,165,170,175,180,185,190,195,200,205,210
c.1.me.gainlimit.max:=210
c.1.me.gainlimit.max.min:=-60
c.1.me.gainlimit.max.max:=210
c.1.me.iso.mode:=auto
c.1.me.iso.mode.list:=auto,manual
c.1.me.iso:=200
c.1.me.iso.list:=200,250,320,400,500,640,800,1000,1250,1600,2000,2500,3200,4000,5000,6400,8000,100
00,12800
c.1.me.iso.increment:=3
c.1.me.iso.increment.list:=1,3
c.1.me.isolimit.max:=12800
c.1.me.isolimit.max.list:=200,250,320,400,500,640,800,1000,1250,1600,2000,2500,3200,4000,5000,6400
,8000,10000,12800
c.1.lenscorrect.diffraction:=off
c.1.lenscorrect.diffraction.list:=off,on
c.1.dn.mode:=manual
c.1.dn.mode.list:=manual
c.1.dn:=off
c.1.dn.list:=off,on
c.1.dn.reccolor:=white
c.1.dn.reccolor.list:=white
c.1.colorbar:=off
c.1.colorbar.list:=off,on
c.1.nd.mode:=manual
c.1.nd.mode.list:=manual
c.1.nd.filter:=0
c.1.nd.filter.list:=0,400,1600,6400
c.1.wb:=auto
c.1.wb.list:=auto,manual,wb_a,wb_b,daylight,tungsten,kelvin
c.1.wb.action.list:=one_shot_a,one_shot_b
c.1.wb.value:=220-252
c.1.wb.kelvin.increment:=mired
c.1.wb.kelvin.increment.list:=kelvin,mired
c.1.wb.kelvin:=4880
c.1.wb.kelvin.list:=2000,2020,2040,2060,2080,2110,2130,2150,2170,2200,2220,2250,2270,2300,2330,235
0,2380,2410,2440,2470,2500,2530,2560,2600,2630,2670,2700,2740,2780,2820,2860,2900,2940,2990,3030,3
080,3130,3200,3230,3280,3330,3390,3450,3510,3570,3640,3700,3770,3850,3920,4000,4080,4170,4300,4350
,4440,4550,4650,4760,4880,5000,5130,5260,5410,5600,5710,5880,6060,6300,6450,6670,6900,7140,7410,76
90,8000,8330,8700,9090,9520,10000,10530,11110,11760,12500,13330,14290,15000
c.1.wb.kelvin.cc:=2
c.1.wb.kelvin.cc.min:=-20
c.1.wb.kelvin.cc.max:=20
c.1.wb.resp:=1
c.1.wb.resp.min:=0
c.1.wb.resp.max:=2
```

```
c.1.wb.shockless:=off
c.1.wb.shockless.list:=off,on
c.1.wb.awbhold:=off
c.1.wb.awbhold.list:=off,on
c.1.cp.list:=normal1_bt709,widedr_bt709,standard_bt709,clog3,pq,hlg,eos_standard,eos_neutral,canon
709_bt709,user
c.1.gamma:=normal_bt709
c.1.gamma.list:=clog3_cgamut,clog3_bt2020,clog3_bt709,pq_bt2020,hlg_bt2020,widedr_bt2020,widedr_bt
709,normal_bt2020,normal_bt709,standard_bt709,canon709_bt709
c.1.colormatrix:=video
c.1.colormatrix.list:=video,neutral,production_camera
c.1.lookfile:=off
c.1.lookfile.list:=off,on
c.1.lookfile.name:=
c.1.lookfile.before.gamma:=widedr_bt709
c.1.lookfile.before.hlgcolor:=vivid
c.1.lookfile.before.over100:=through
c.1.lookfile.after.gamma:=cp
c.1.lookfile.after.gamma.list:=cp,sdr_bt709,sdr_bt2020,hdr_pq_bt2100,hdr_hlg_bt2100
c.1.hlgcolor:=vivid
c.1.hlgcolor.list:=vivid,bt2100
c.1.blacklevel:=0
c.1.blacklevel.min:=-250
c.1.blacklevel.max:=250
c.1.blacklevel.red:=0
c.1.blacklevel.red.min:=-250
c.1.blacklevel.red.max:=250
c.1.blacklevel.green:=0
c.1.blacklevel.green.min:=-250
c.1.blacklevel.green.max:=250
c.1.blacklevel.blue:=0
c.1.blacklevel.blue.min:=-250
c.1.blacklevel.blue.max:=250
c.1.blackgamma:=0
c.1.blackgamma.min:=-50
c.1.blackgamma.max:=50
c.1.blackgamma.range:=0
c.1.blackgamma.range.min:=-20
c.1.blackgamma.range.max:=50
c.1.blackgamma.point:=0
c.1.blackgamma.point.min:=-20
c.1.blackgamma.point.max:=50
c.1.lowkeysaturation:=off
c.1.lowkeysaturation.list:=off,on
c.1.lowkeysaturation.level:=0
c.1.lowkeysaturation.level.min:=-50
c.1.lowkeysaturation.level.max:=50
c.1.knee:=on
c.1.knee.list:=off,on
c.1.knee.automatic:=on
c.1.knee.automatic.list:=off,on
c.1.knee.slope:=0
c.1.knee.slope.min:=-35
c.1.knee.slope.max:=50
c.1.knee.point:=95
```

```
c.1.knee.point.min:=50
c.1.knee.point.max:=109
c.1.knee.saturation:=0
c.1.knee.saturation.min:=-10
c.1.knee.saturation.max:=10
c.1.nr.mode:=auto
c.1.nr.mode.list:=manual,auto
c.1.nr.spatialfilter:=0
c.1.nr.spatialfilter.min:=0
c.1.nr.spatialfilter.max:=12
c.1.nr.framecorrelation:=0
c.1.nr.framecorrelation.min:=0
c.1.nr.framecorrelation.max:=3
c.1.ac:=0
c.1.ac.min:=-10
c.1.ac.max:=50
c.1.ac.detailfreq:=0
c.1.ac.detailfreq.min:=-8
c.1.ac.detailfreq.max:=8
c.1.ac.coringlevel:=0
c.1.ac.coringlevel.min:=-30
c.1.ac.coringlevel.max:=50
c.1.ac.limit:=0
c.1.ac.limit.min:=-50
c.1.ac.limit.max:=50
c.1.skindetail.level:=0
c.1.skindetail.level.min:=0
c.1.skindetail.level.max:=3
c.1.skindetail.hue:=0
c.1.skindetail.hue.min:=-16
c.1.skindetail.hue.max:=16
c.1.skindetail.chroma:=16
c.1.skindetail.chroma.min:=0
c.1.skindetail.chroma.max:=31
c.1.skindetail.area:=16
c.1.skindetail.area.min:=0
c.1.skindetail.area.max:=31
c.1.skindetail.ylevel:=16
c.1.skindetail.ylevel.min:=0
c.1.skindetail.ylevel.max:=31
c.1.colormatrix.gain:=0
c.1.colormatrix.gain.min:=-50
c.1.colormatrix.gain.max:=50
c.1.colormatrix.phase:=0
c.1.colormatrix.phase.min:=-18
c.1.colormatrix.phase.max:=18
c.1.colormatrix.rg:=0
c.1.colormatrix.rg.min:=-50
c.1.colormatrix.rg.max:=50
c.1.colormatrix.rb:=0
c.1.colormatrix.rb.min:=-50
c.1.colormatrix.rb.max:=50
c.1.colormatrix.gr:=0
c.1.colormatrix.gr.min:=-50
c.1.colormatrix.gr.max:=50
```

```
c.1.colormatrix.gb:=0
c.1.colormatrix.gb.min:=-50
c.1.colormatrix.gb.max:=50
c.1.colormatrix.br:=0
c.1.colormatrix.br.min:=-50
c.1.colormatrix.br.max:=50
c.1.colormatrix.bg:=0
c.1.colormatrix.bg.min:=-50
c.1.colormatrix.bg.max:=50
c.1.wb.shift.rgain:=0
c.1.wb.shift.rgain.min:=-50
c.1.wb.shift.rgain.max:=50
c.1.wb.shift.ggain:=0
c.1.wb.shift.ggain.min:=-50
c.1.wb.shift.ggain.max:=50
c.1.wb.shift.bgain:=0
c.1.wb.shift.bgain.min:=-50
c.1.wb.shift.bgain.max:=50
c.1.colorcorrection.area:=off
c.1.colorcorrection.area.list:=off,area_a,area_b,area_ab
c.1.colorcorrection.a.phase:=0
c.1.colorcorrection.a.phase.min:=0
c.1.colorcorrection.a.phase.max:=31
c.1.colorcorrection.a.chroma:=16
c.1.colorcorrection.a.chroma.min:=0
c.1.colorcorrection.a.chroma.max:=31
c.1.colorcorrection.a.area:=16
c.1.colorcorrection.a.area.min:=0
c.1.colorcorrection.a.area.max:=31
c.1.colorcorrection.a.ylevel:=16
c.1.colorcorrection.a.ylevel.min:=0
c.1.colorcorrection.a.ylevel.max:=31
c.1.colorcorrection.a.revision.level:=0
c.1.colorcorrection.a.revision.level.min:=-50
c.1.colorcorrection.a.revision.level.max:=50
c.1.colorcorrection.a.revision.phase:=0
c.1.colorcorrection.a.revision.phase.min:=-18
c.1.colorcorrection.a.revision.phase.max:=18
c.1.colorcorrection.b.phase:=0
c.1.colorcorrection.b.phase.min:=0
c.1.colorcorrection.b.phase.max:=31
c.1.colorcorrection.b.chroma:=16
c.1.colorcorrection.b.chroma.min:=0
c.1.colorcorrection.b.chroma.max:=31
c.1.colorcorrection.b.area:=16
c.1.colorcorrection.b.area.min:=0
c.1.colorcorrection.b.area.max:=31
c.1.colorcorrection.b.ylevel:=16
c.1.colorcorrection.b.ylevel.min:=0
c.1.colorcorrection.b.ylevel.max:=31
c.1.colorcorrection.b.revision.level:=0
c.1.colorcorrection.b.revision.level.min:=-50
c.1.colorcorrection.b.revision.level.max:=50
c.1.colorcorrection.b.revision.phase:=0
c.1.colorcorrection.b.revision.phase.min:=-18
```

```
c.1.colorcorrection.b.revision.phase.max:=18
c.1.over100:=through
c.1.over100.list:=through,clip,press
c.1.is:=on1
c.1.is.list:=off,on1,on2
c.1.focus:=auto
c.1.focus.list:=auto,manual
c.1.focus.action.list:=far,near,stop
c.1.focus.target.action.list:=prev,next
c.1.focus.value:=1255
c.1.focus.value.min:=0
c.1.focus.value.max:=2048
c.1.focus.restrict:=off
c.1.focus.restrict.list:=off,on
c.1.focus.speed:=39
c.1.focus.speed.min:=0
c.1.focus.speed.max:=63
c.1.focus.auto:=continuous
c.1.focus.auto.list:=continuous,afboosted
c.1.focus.auto.speed:=1
c.1.focus.auto.speed.min:=0
c.1.focus.auto.speed.max:=2
c.1.focus.frame.1:=auto
c.1.focus.frame.1.list:=auto,large,small
c.1.focus.frame.1.x:=5000
c.1.focus.frame.1.x.min:=0
c.1.focus.frame.1.x.max:=9999
c.1.focus.frame.1.y:=5000
c.1.focus.frame.1.y.min:=0
c.1.focus.frame.1.y.max:=9999
c.1.focus.frame.1.width:=7999
c.1.focus.frame.1.height:=7499
c.1.focus.detect:=facecatch
c.1.focus.detect.list:=off,faceonly,facecatch
c.1.focus.detect.eye:=off
c.1.focus.detect.eye.list:=off,on
c.1.focus.detect.faceae:=off
c.1.focus.detect.faceae.list:=off,on
c.1.focus.auto.track:=off
c.1.focus.auto.track.list:=off,on
c.1.focus.auto.track.mode:=mode1
c.1.focus.auto.track.mode.list:=mode1,mode2
c.1.focus.auto.track.frame.x.min:=0
c.1.focus.auto.track.frame.x.max:=9999
c.1.focus.auto.track.frame.y.min:=0
c.1.focus.auto.track.frame.y.max:=9999
c.1.focus.auto.resp:=1
c.1.focus.auto.resp.min:=0
c.1.focus.auto.resp.max:=2
c.1.zoom:=7300
c.1.zoom.status:=0
c.1.zoom.d:=570
c.1.zoom.mode:=off
c.1.zoom.mode.list:=off,dzoom,mag
c.1.zoom.dzoom:=100
```

```
c.1.zoom.mag:=100
c.1.zoom.mag.list:=100,150,300,600
c.1.zoom.diameter:=100
c.1.zoom.min:=570
c.1.zoom.max:=7300
c.1.zoom.limit.min:=570
c.1.zoom.limit.max:=7300
c.1.zoom.speed.min:=0
c.1.zoom.speed.max:=127
c.1.pan:=0
c.1.pan.status:=0
c.1.pan.min:=-17000
c.1.pan.max:=17000
c.1.pan.limit.min:=-17000
c.1.pan.limit.max:=17000
c.1.pan.speed.mode.list:=manual,auto1,auto2
c.1.pan.speed.min:=10
c.1.pan.speed.max:=10000
c.1.pan.speed.ratio.min:=1
c.1.pan.speed.ratio.max:=1000
c.1.pan.ramp:=1
c.1.pan.ramp.min:=0
c.1.pan.ramp.max:=2
c.1.tilt:=0
c.1.tilt.status:=0
c.1.tilt.min:=-3000
c.1.tilt.max:=9000
c.1.tilt.limit.min:=-3000
c.1.tilt.limit.max:=9000
c.1.tilt.speed.mode.list:=manual,auto1,auto2
c.1.tilt.speed.min:=10
c.1.tilt.speed.max:=10000
c.1.tilt.speed.ratio.min:=1
c.1.tilt.speed.ratio.max:=1000
c.1.tilt.ramp:=1
c.1.tilt.ramp.min:=0
c.1.tilt.ramp.max:=2
c.1.erotate:=0
c.1.erotate.list:=0,18000
u:=1
u.count:=20
u.1.name:=BT.709 Normal
u.1.protect:=on
u.1.protect.list:=off,on
...
u.20.name:=User20
u.20.protect:=off
u.20.protect.list:=off,on
p:=1
p.count:=100
p.status:=0
p.action.list:=stop
p.ptztime.min:=2000
p.ptztime.max:=99000
p.ptzspeed.min:=1
```

```
p.ptzspeed.max:=100
p.ptzspeed.saved.list:=on
p.freeze.list:=off,on
p.freeze.default:=off
p.1.name.utf8:=home
p.1.thumbnail.id:=
p.1.content:=enabled
p.1.content.ptz:=enabled
p.1.content.focus:=enabled
p.1.content.exp:=enabled
p.1.content.wb:=enabled
p.1.content.is:=enabled
p.1.content.cp:=enabled
p.1.content.lenscorrect:=enabled
p.1.pan.speed:=10000
p.1.tilt.speed:=10000
p.1.zoom.speed:=19
p.1.ptz.speed:=100
...
p.100.name.utf8:=
p.100.thumbnail.id:=
p.100.content:=disabled
p.100.content.ptz:=disabled
p.100.content.focus:=disabled
p.100.content.exp:=disabled
p.100.content.wb:=disabled
p.100.content.is:=disabled
p.100.content.cp:=disabled
p.100.content.lenscorrect:=disabled
t:=0
t.count:=10
t.status:=idle
t.1.name.utf8:=
t.1.thumbnail.id:=
t.1.recorded:=off
t.1.time:=0
...
t.10.name.utf8:=
t.10.thumbnail.id:=
t.10.recorded:=off
t.10.time:=0
a.count:=0
i.count:=0
o.count:=0
f.tally:=off
f.tally.list:=off,on
f.tally.mode:=preview
f.tally.mode.list:=preview,program
f.standby:=idle
f.standby.list:=idle,standby
f.output.list:=output1:12g-sdi,output2:hdmi_3g-sdi
f.output1.videoinfo:=3840x2160:59940:P
f.output2.videoinfo:=1920x1080:59940:P
m.menu.type:=0
m.menu.type.list:=0
```

```
m.onscreen:=off
m.onscreen.list:=off,on
m.output1.onscreen:=off
m.output1.onscreen.list:=off,on
m.output2.onscreen:=off
m.output2.onscreen.list:=off,on
k.count:=2
k.output1.crop:=overview
k.output1.crop.list:=overview
k.output2.crop:=overview
k.output2.crop.list:=overview,crop1,crop2
k.1.crop.size:=1920x1080
k.1.crop.frame.x:=5000
k.1.crop.frame.x.min:=0
k.1.crop.frame.x.max:=9999
k.1.crop.frame.y:=5000
k.1.crop.frame.y.min:=0
k.1.crop.frame.y.max:=9999
k.1.crop.frame.width:=5000
k.1.crop.frame.width.min:=1333
k.1.crop.frame.width.max:=10000
k.1.crop.frame.height:=5000
k.2.crop.size:=1920x1080
k.2.crop.frame.x:=5000
k.2.crop.frame.x.min:=0
k.2.crop.frame.x.max:=9999
k.2.crop.frame.y:=5000
k.2.crop.frame.y.min:=0
k.2.crop.frame.y.max:=9999
k.2.crop.frame.width:=5000
k.2.crop.frame.width.min:=5000
k.2.crop.frame.width.max:=5000
k.2.crop.frame.height:=5000
monitoring.output1.lut:=off
monitoring.output1.lut.list:=off,on
monitoring.output1.lut.type:=
monitoring.output1.lut.type.list:=
monitoring.output1.userlut1.name:=USERLUT1
monitoring.output1.userlut1.colorspace:=
monitoring.output1.userlut1.colorspace.list:=gamut_bt709,gamut_bt2020,none
monitoring.output1.userlut1.range:=
monitoring.output1.userlut1.range.list:=full,narrow
monitoring.output1.userlut1.lut.name:=
monitoring.output1.userlut2.name:=USERLUT2
monitoring.output1.userlut2.colorspace:=
monitoring.output1.userlut2.colorspace.list:=gamut_bt709,gamut_bt2020,none
monitoring.output1.userlut2.range:=
monitoring.output1.userlut2.range.list:=full,narrow
monitoring.output1.userlut2.lut.name:=
monitoring.output1.userlut3.name:=USERLUT3
monitoring.output1.userlut3.colorspace:=
monitoring.output1.userlut3.colorspace.list:=gamut_bt709,gamut_bt2020,none
monitoring.output1.userlut3.range:=
monitoring.output1.userlut3.range.list:=full,narrow
monitoring.output1.userlut3.lut.name:=
```

```
monitoring.output1.userlut4.name:=USERLUT4
monitoring.output1.userlut4.colorspace:=
monitoring.output1.userlut4.colorspace.list:=gamut_bt709,gamut_bt2020,none
monitoring.output1.userlut4.range:=
monitoring.output1.userlut4.range.list:=full,narrow
monitoring.output1.userlut4.lut.name:=
monitoring.output2.viewassist:=off
monitoring.output2.viewassist.list:=off,on
monitoring.output2.viewassist.type:=
monitoring.output2.viewassist.type.list:=
monitoring.output1.clog.range:=full
monitoring.output1.clog.range.list:=full,narrow
monitoring.output2.clog.range:=full
monitoring.output2.clog.range.list:=full,narrow
monitoring.output1.hdr.range:=narrow
monitoring.output1.hdr.range.list:=full,narrow
monitoring.output2.hdr.range:=narrow
monitoring.output2.hdr.range.list:=full,narrow
monitoring.hlgcolor:=vivid
monitoring.hlgcolor.list:=vivid,bt2100
monitoring.hdrtosdrgain:=-30
monitoring.hdrtosdrgain.list:=-75,-70,-65,-60,-55,-50,-45,-40,-35,-30,-25,-20,-15,-10,-
5,0,5,10,15,20,25,30,35,40,45,50,55,60,65,70,75
monitoring.osd.framedisplay:=off
monitoring.osd.framedisplay.list:=displevel1_2,displevel1,displevel2,off
monitoring.osd.displevel:=displevel1
monitoring.osd.displevel.list:=displevel1,displevel2
monitoring.osd.displevel1:=all
monitoring.osd.displevel1.list:=all,all_frame
monitoring.osd.displevel2:=recinfo
monitoring.osd.displevel2.list:=recinfo,funcmenu
monitoring.output1.osd.opacity:=off
monitoring.output1.osd.opacity.list:=off,on
monitoring.output2.osd.opacity:=off
monitoring.output2.osd.opacity.list:=off,on
monitoring.output1.osd.opacity.level:=750
monitoring.output1.osd.opacity.level.list:=250,375,500,625,750
monitoring.output2.osd.opacity.level:=750
monitoring.output2.osd.opacity.level.list:=250,375,500,625,750
assist.output1.focusguide:=off
assist.output1.focusguide.list:=off,on
assist.output2.focusguide:=off
assist.output2.focusguide.list:=off,on
assist.output1.skindetail:=off
assist.output1.skindetail.list:=off,on
assist.output2.skindetail:=off
assist.output2.skindetail.list:=off,on
assist.output1.colorcorrection:=off
assist.output1.colorcorrection.list:=off,area_a,area_b
assist.output2.colorcorrection:=off
assist.output2.colorcorrection.list:=off,area_a,area_b
assist.output1.peaking:=off
assist.output1.peaking.list:=off,on
assist.output2.peaking:=off
assist.output2.peaking.list:=off,on
```

```
assist.peaking.type:=peaking1
assist.peaking.type.list:=peaking1,peaking2
assist.peaking.peaking1.color:=white
assist.peaking.peaking1.color.list:=white,red,yellow,blue
assist.peaking.peaking1.gain:=8
assist.peaking.peaking1.gain.min:=0
assist.peaking.peaking1.gain.max:=15
assist.peaking.peaking1.freq:=2
assist.peaking.peaking1.freq.min:=1
assist.peaking.peaking1.freq.max:=4
assist.peaking.peaking2.color:=red
assist.peaking.peaking2.color.list:=white,red,yellow,blue
assist.peaking.peaking2.gain:=15
assist.peaking.peaking2.gain.min:=0
assist.peaking.peaking2.gain.max:=15
assist.peaking.peaking2.freq:=1
assist.peaking.peaking2.freq.min:=1
assist.peaking.peaking2.freq.max:=4
assist.output1.marker:=off
assist.output1.marker.list:=off
assist.output2.marker:=off
assist.output2.marker.list:=off
assist.marker.center:=off
assist.marker.center.list:=yellow,blue,green,red,black,gray,white,off
assist.marker.center.type:=cross1
assist.marker.center.type.list:=cross1,cross2,dot1,dot2
assist.marker.horizontal:=off
assist.marker.horizontal.list:=yellow,blue,green,red,black,gray,white,off
assist.marker.vertical:=off
assist.marker.vertical.list:=yellow,blue,green,red,black,gray,white,off
assist.marker.grid:=off
assist.marker.grid.list:=yellow,blue,green,red,black,gray,white,off
assist.marker.aspect:=off
assist.marker.aspect.list:=yellow,blue,green,red,black,gray,white,mask100,mask75,mask50,mask25,off
assist.marker.aspect.ratio:=4:3
assist.marker.aspect.ratio.list:=4:3,13:9,14:9,16:9,1.375:1,1.66:1,1.75:1,1.85:1,1.90:1,2.35:1,2.3
9:1,9:16,custom
assist.marker.aspect.custom:=256
assist.marker.aspect.custom.min:=100
assist.marker.aspect.custom.max:=999
assist.marker.safearea:=off
assist.marker.safearea.list:=yellow,blue,green,red,black,gray,white,mask100,mask75,mask50,mask25,o
ff
assist.marker.safearea.basis:=whole_picture
assist.marker.safearea.basis.list:=whole_picture,aspect_marker
assist.marker.safearea.type:=side_length_9500
assist.marker.safearea.type.list:=side_length_8000,side_length_8800,side_length_9000,side_length_9
300,side_length_9500,area_8000,area_9000,area_9250,area_9500
```

Return value:

Return Value	Value Type/Range	Description
timestamp	<sec.>.<ms> *<fixed>	Remote camera specific time (Totaltime from camera start)
realtime	<sec.>.<ms> *<fixed>	Remote camera actual time (Secondsfrom Greenwich Mean Time)

B. Successful response [Stream format specification]

This indicates the content of the different response when the stream format was specified.

HTTP Code ：200 OK
Content-Type ：multipart/x-mixed-replace;boundary=boundary
Livescope-Status ：0
MessageBody ：

```
--boundary
Content-Type: text/plain; charset=utf-8
Content-Length: <DataLength>
timestamp=4091.450
realtime=1380159728.596
s.epoch:=Thu, 26 Sep 2013 08:34:24 +0900
s.hardware:=Canon CR-N500

--boundary
Content-Type: text/plain; charset=utf-8
Content-Length: <DataLength>
timestamp=<Second.MSecond>
realtime=<Second.MSecond>
c.1.zoom:=5070
--boundary

--boundary
Content-Type: text/plain; charset=utf-8
Content-Length: <DataLength>
timestamp=<Second.MSecond>
realtime=<Second.MSecond>
--boundary--
```

NOTE Only the "timestamp" item is returned for the final response.

C. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalidparameter value specified. ! A value other than a seconds value isspecified to the "timeout"parameter.
408 Conflict	Anexclusive operation was requested. ! Information acquisition was requested multiple times at the sametime during the same session.
501 Unknown Connection ID	Specifiedsession does not exist. ! Invalid session ID(s) specified.

3.2.2.1.3. Acquired Parameters

There are many parameters that can be acquired with info.cgi, and they will be described in APPENDIX ‘Parameter list of info.cgi/control.cgi/configuration.cgi’.
However, parameters that can be acquired by info.cgi related to the remote camera controller are described in "info.cgi Parameter Specifications" of the Model Specific Information related to the RC-IP1000.

3.2.2.2. Camera Control

The camera control commands under XC control protocol are described below.

3.2.2.3. Camera Control [control.cgi]

This is used to control a camera or a tally lamp of remote cameras. A control request for multiple items can be included in one command.[29]
With a remote camera(narrowly defined), video production equipment, and video cameras for professional use, sessionless access is possible for almost all controls, except for some camera control parameters. Also, all camera controls can be performed without control privileges.
Also with a remote camera controller, sessionless access is possible for almost all controls, except for some camera control parameters.

- Angle of View Linkage
  - Some models support the angle of view linkage function.
  - This function adjusts the operating speed according to the angle of view of the zoom as a Pan/Tilt speed adjustment function.
  - This function has the following three operation modes.
  - The operation mode will be "auto2" when there is no designation.

Table 13. Operation Modes

Operation Mode	Description
manual	This mode operates at a constant speed. Pan/Tilt operation is performed at a specified speed regardless of the zoom viewing angle.
auto2 (default)	In this mode, the Pan/Tilt operation speed changes according to the zoom viewing angle. The operation speed is faster at the wide angle side and slower at the telephotoside. The speed specified by the ratio to the horizontal angle of view is regardedas the speed at the wide angle end, and operation is performed at a speed corresponding to the angle of view.
auto1	Similar to auto2,in this mode, the Pan/Tilt operation speed changes according to the zoom viewing angle. The operation speed is specified by the ratio to the horizontal angle of view.

NOTE The operation mode can be specified by the following parameters of control.cgi. c.<c>.pan.speed.mode, c.<c>.pan.speed.mode.pos, c.<c>.pan.speed.mode.dir, c.<c>.tilt.speed.mode, c.<c>.tilt.speed.mode.pos, c.<c>.tilt.speed.mode.dir

3.2.2.3.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-
/control.cgi?[s=<sessionID>][&s.priority=<Priority>][&<Name>=<Value>]…
```

Preconditions and precautions:

- If camera control privileges cannot be obtained immediately with a sessionless control request, camera control is not performed, and 301 is returned as the Livescope status response.
- Depending on the camera operation status, while the camera is executing control.cgi, a status update notification may be sent from info.cgi multiple times.
- The actual camera movement position or setting value may not match the position or value specified with control instructions such as pan, tilt, zoom, focus, and parameters about color compentation. Confirm the actual movement position or setting value with info.cgi.
- If a control item is not specified in the command, 406 is returned as the Livescope status response.
- If an item other than the pan, tilt, or zoom speed is not specified for the control item with a

sessionless control request, 406 is returned as the Livescope status response.

- "-0" is specified with a control request by the pan, tilt or zoom difference (magnification), 403 is returned as the Livescope status response.
- A session ID specification has priority over a priority specification.

3.2.2.3.2. Response

The item value of the processing result of the specified control item is returned for the response to the control request. There are two different formats for the returned response: “item name:=value”and “item name==value”.

- “item name:=value” indicates an item changed as a result of a processed control request.
- “item name==value” indicates an item not changed as a result of a processed control request.

A. Successful response [normal]

HTTP Code：200 OK
Content-Type：text/plain;charset=utf-8
Livescope-Status：0
MessageBody：

```
p=1
p.ptztime=10000
```

NOTE	Normally, only the result of the item is returned for the control request specified to the parameter. The above is an example of a response, and not all items are returned with one control request.

B. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A user without privileged camera control requested control that requires privileges. ! A user other than an administrator requested control that requires administrator authorities.

Livescope status return value:

Livescope Status	Meaning
301 No Camera Control Right	Request denied due to no issuing of the control privilege request. ! Unable to obtain camera control privileges with the priority specification request.
401 Unknown Operator	Undefined command specified.
403 Invalid Parameter Value	Invalid parameter value specified. ! A value that does not match the type was specified to the parameter. ! “-0” was specified with the differential position (magnification) specification for pan, tilt, or zoom.
406 Parameter Missing	Mandatory parameter not specified. ! Control item not specified to the parameter. ! An item other than pan, tilt, and zoom speed was not specified with the priority specification request.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.2.3.3. Commands (Preset Control)

Control of executing presets saved in the remote camera and stopping presets that are running is also performed using control.cgi.
Preset saving will be described in ‘Saving Preset [preset/set]’.

Syntax:

```
http://<ipaddress>/-wvhttp-01-
/control.cgi?[s=<sessionID>][&priority=<Value>][&p=<Value>][&p.ptztime=<Value>][&p.ptzspeed=<Value
>][&p.action=stop][&p. ptzspeed.saved=on] [&p.freeze=on][&camno.target=<value>]…
```

Preconditions and precautions:

- If p.ptztime or p.ptzspeed, p.ptzspeed.saved=on is specified when p is specified, preset movement will start and end simultaneously with PTZ. If p.ptztime and p.ptzspeed are specified at the same time, p.ptztime is used.
- If p.ptzspeed.saved=on is specified when p is specified, PTZ will preset move at the speed saved in p.<p>.ptzspeed. If p.ptzspeed.saved=on and p.ptztime or p.ptzspeed are specified at the same time, p.ptztime or p.ptzspeed is used.
- If p.ptztime, p.ptzspeed, or p.ptzspeed.saved=on are not specified when p is specified, PTZ will move presets at the speed saved in p.<p>.pan.speed, p.<p>.tilt.speed, and p.<p>.zoom.speed, respectively.

- If p.freeze is not specified when p is specified, operation is based on the model specific “still image output (default)” setting value.
- camno.target is valid only when controlling the remote camera controller.

3.2.2.3.4. Response (Preset Control)

A. Successful response [Normal]

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
p=1
p.ptztime=10000
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
401 Unknown Operator	Undefined command specified. Mandatory parameter not specified.
403 Invalid Parameter Value	Invalid parameter value specified. ! A value that does not match the type was specified to the parameter.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.2.3.5. Command (Custom Picture Control)

control.cgi is also used to control the switching of Custom Picture saved in the remote camera. Saving and resetting custom pictures is explained in ‘Custom picture setting [cpfile/set]’.

Syntax:

```
http://<ipaddress>/-wvhttp-01-/control.cgi?[s=<sessionID>][&priority=<Value>][&u=<Value>]…
```

3.2.2.3.6. Response (Custom Picture Control)

A. Successful response [normal]

HTTP Code ：200 OK

Content-Type ：text/plain;charset=utf-8
Livescope-Status ：0
MessageBody ：

```
u=1
u.1.protect=on
u.1.name=normal_bt709
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
401 Unknown Operator	Undefined command specified. Mandatory parameter not specified.
403 Invalid Parameter Value	Invalid parameter value specified. ! A value that does not match the type was specified to the parameter.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.2.3.7. Control Parameters

Since there are many kinds of parameters that can be controlled by control.cgi (including preset control and custom picture control), they are explained in APPENDIX‘Parameter list of info.cgi/control.cgi/configuration.cgi’.
However, parameters that can be acquired by control.cgi related to the remote camera controller are described in "control.cgi Parameter Specifications" of the Model Specific Information related to the RC-IP1000.
For preset control, see "Preset Information [p]", and for custom picture control, see "Custom Picture Information [u]" in the same list.

3.2.2.4. Menu Control [menu.cgi]

This is used to control the remote camera’s menu settings, etc. A control request for multiple items can be included in one command.[30]

3.2.2.4.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/menu.cgi?[s=<sessionID>] [&<Name>=<Value>][&output=<Value>]···
```

Preconditions and precautions:

- While menu.cgi is being executed by the camera, depending on the operating condition of the camera, status update notification from info.cgi may be performed in multiple steps.
- If a control item is not specified in the command, 406 is returned as the Livescope status of the response.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
cmd	up, down, left, right, enter, cancel	Provides instructions for operating the menu, such as moving the cursor and confirming/canceling settings.
onscreen	off, on	Controls the onscreen superimposition of video output.
output	output1, output2...	When set with onscreen, it specifies the output terminal for onscreen superimposition. * If unspecified, all the output terminals are subject to control. * Output terminal information, output<N>, can be acquired from f.output.list.
type	0...3	Controls the display of various setting screens. 0: None 1: MENU screen 2: Custom Picture screen 3: FUNC screen * Values acquired from m.menu.type.list of info.cgi can be specified

3.2.2.4.2. Response

The item value of the processing result of the specified control item is returned for the response to the control request. There are two different formats for the returned response: “item name:=value” and “item name==value”.

- “item name:=value” indicates an item changed as a result of a processed control request.
- “item name==value” indicates an item not changed as a result of a processed control request.

This indicates the content of the response.

A. Successful response [normal]

HTTP Code : 200 OK Content-Type : text/plain;charset=utf-8 Livescope-Status : 0 MessageBody :

```
<Parameter>:=<Value>
<Parameter>==<Value>


m.menu.type:=1
```

NOTE	Normally, only the result of the item is returned for the control request specified to the parameter.

B. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A user without privileged camera control requested control that requires privileges. ! A user other than an administrator requested control that requires administrator authorities.

Livescope status return value:

Livescope Status	Meaning
401 Unknown Operator	Undefined command specified.
403 Invalid Parameter Value	Invalid parameter value specified. ! A value that does not match the type was specified to the parameter.
406 Parameter Missing	Mandatory parameter not specified. ! Control item not specified to the parameter.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.3. Video Retrieval

The camera video image data retrieval commands for the XC control protocol, image.cgi for still image retrieval and video.cgi for video stream retrieval are described below.

3.2.3.1. Still Image Retrieval [image.cgi]

This is used to retrieve a JPEG still image. You can select a method from using a video stream

selected for a session-based client and specifying a video stream to a command for a sessionless client.

- Session-based
  - This uses the video stream settings of a session specified with a session ID. Video parameter specification (v) and video stream number specification (w) are also ignored.[31]
  - If the video stream setting of the specified session is H.264 or H.265, it is changed automatically to JPEG.[32]
- Sessionless
  - The content of the video to be retrieved is determined by the video stream specification.
  - The video stream can be selected with either of two methods: by specifying the video codec, video size, and other video parameters, or by specifying the video stream number. Video parameter specifications (v) make provision for backwards compatibility. In comparison, video stream number specifications (w) are more sophisticated. Therefore, if new parameters are used during stream selection, the use of a video stream number specification (w) is recommended.

3.2.3.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/image.cgi?[s=<SessionID>][&v=<Value>][&w=<Value>]
```

Preconditions and precautions:

- This command cannot be used when transmitting a video stream with video.cgi. If this command is requested, it is not executed, and 408 is returned as the Livescope status response.
- The video codec specifies the JPEG video stream for both the video parameter specification (v) and video stream number specification (w). If a format other than JPEG is specified, 403 is returned as the Livescope status response.
- For video parameter specification (v), if there is no stream that conforms to the specified video size, a stream with a video size that is close to the specified value and is one size lower is selected.
- If both the video parameter specification (v) and video stream number specification (w) are specified when selecting a video stream, the video parameter specification (v) has priority. Even if neither are specified, the video parameter specification (v) takes priority and the video codec is jpg.
- Frame rate cannot be specified with this command. Use video.cgi to specify frame rate.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
v	<video parameter>	Selects the stream by the video parameter.[16][33]
w	1...3	Selects the stream by the video stream number.[16] Specifies a video stream number that can be referenced with info.cgi.

3.2.3.1.2. Response

A. Successful response

HTTP Code : 200 OK
Content-Type : image/jpeg
Livescope-Status : 0
Livescope-Frame-Number: <JPEG data serial number>footnote[Livescope-Frame-Number is an extension field unique to XC control protocol similar to Livescope-Status. A serial number is assigned in the order the still image request commands are received, and this can be used for sequence control on the client side.] MessageBody :

```
<JpegImageData>
```

B. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A user without video transmission privileges requested video transmission.

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified. ! A format other than JPEG was specified with the video parameter specification (v). ! A format other than JPEG was specified with the video stream number specification (w). ! A video stream number (w) outside the valid range was specified. ! “-0” was specified with the differential position (magnification) specification for pan, tilt, or zoom.
404 Operation Timeout	Command execution not completed even at response time limit. ! Unable to generate images.
406 Parameter Missing	Mandatory parameter not specified. ! Mandatory parameter or session ID(s) not specified.
407 Invalid Request	Invalid session function requested. ! An invalid video stream number (w) was specified.
408 Conflict	An exclusive operation was requested. ! Still image retrieval was requested while executing a video stream retrieval command.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

NOTE

As a usage method during session specification, JPEG still images can be continually requested, which is useful for applications compiling a pseudo-video. In sessionless mode, this is useful for applications retrieving one JPEG still image. Still image requests during the same session are processed in the order they are received with this command, and Livescope frame numbers are assigned and returned in that order.

3.2.3.2. Video Stream Retrieval [video.cgi]

This requests a video stream transmission. You can select a method from using a video stream selected for a session-based client and specifying a video stream to a command for a sessionless client.

- Session-based
  - This uses the video stream settings of a session specified with a session ID.
  - The video stream transmission continues until the session is ended by the session duration end or the client ends the session, or the HTTP connection is disconnected by the client.

- Sessionless
  - The content of the video to be retrieved is determined by the video stream specification.
  - The video stream can be selected with either of two methods: by specifying the video codec, video size, and other video parameters, or by specifying the video stream number. Video parameter specifications (v) make provision for backwards compatibility. In comparison, video stream number specifications (w) are more sophisticated. Therefore, if new parameters are used during stream selection, the use of a video stream number specification (w) is recommended.

The video stream transmission continues until the specified video transmission time has elapsed or the HTTP connection is disconnected by the client.

3.2.3.2.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-
/video.cgi?[s=<SessionID>][&v=<Value>][&w=<Value>][&w.<Video>.frate=<Value>][&duration=<Value>]
```

Preconditions and precautions:

- This command cannot be used while executing still image retrieval with image.cgi. If this command is requested, 408 is returned as the Livescope status response.
- For video parameter specification (v), if there is no stream that conforms to the specified video size, a stream with a video size that is close to the specified value and is one size lower is selected.
- If both the video parameter specification (v) and video stream number specification (w) are specified when selecting a video stream, the video parameter specification (v) has priority. Even if neither are specified, the video parameter specification (v) takes priority and the video codec is jpg.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
v	<video parameter>	Selects the stream by the video parameter.[16]
w	1...3	Selects the stream by the video stream number.[16] Specifies a video stream number that can be referenced with info.cgi.

Parameter	Value Type/Range	Description
w.<Video>.frate	100...30000	Specifies the video stream frame rate. Unit: Number of frames per 1000 seconds Specify at the same time as w. Ignored if w is not specified.
duration	0...<Maximum connection time>	Video send time specification[34] Unit: Second 0: Unlimited

3.2.3.2.2. Response

The response content of video.cgi varies depending on the specified video codec. The following shows the response content for both JPEG and H.264 and the status value returned when an error occurs. The response content of H.265 follows H.264.

A. Successful response [video codec: JPEG specification]

HTTP Code : 200 OK
Content-Type : multipart/x-mixed-replace;boundary=boundary
Livescope-Status : 0
MessageBody :

```
--boundary
Content-Type: image/jpeg
Content-Length: <ImageLength>

<JpegImageData 1>
--boundary
Content-Type: image/jpeg
Content-Length: <ImageLength>

<JpegImageData 2>
--boundary

...

--boundary
Content-Type: image/jpeg
Content-Length: <ImageLength>

<JpegImageData Last>
--boundary--
```

B. Successful response [video codec: H.264 specification]

HTTP Code : 200 OK

Content-Type : video/mp4
Livescope-Status : 0
MessageBody :

```
<H.264VideoData>
```

C. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A user without video transmission privileges requested video transmission.

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified. ! A video stream number (w) outside the valid range was specified.
407 Invalid Request	Invalid session function requested. ! An invalid video stream number (w) was specified. ! type=rec was specified to a stream of H.264 or 10 fps or higher.
408 Conflict	An exclusive operation was requested. ! Video stream retrieval was requested while executing a still image retrieval command. ! A video stream retrieval with multiple type=rec specifications was requested.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.4. Thumbnail Image Retrieval

The thumbnail image retrieval command thumbnail.cgi under XC control protocol is described below.

3.2.4.1. Thumbnail Image Retrieval [thumbnail.cgi](Optional)

Acquires JPEG still image thumbnails for presets and traces.

3.2.4.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/thumbnail.cgi?[s=<SessionID>][&p=<Value>][&t=<Value>]
```

Preconditions and precautions:

- If neither p nor t is specified, 406 is returned as the Livescope status response.
- If both p and t are specified, the t specification takes precedence.

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
p	1...100	Specifies the preset number of the preset thumbnail image to be acquired. Returns Livescope status 403 (Invalid Parameter Value) for numbers out of range.
t	1...10	Specifies the trace number of the trace thumbnail image to be acquired. Returns Livescope status 403 (Invalid Parameter Value) for numbers out of range.

3.2.4.1.2. Response

A. Successful response

HTTP Code ：200 OK
Content-Type ：image/jpeg
Livescope-Status ：0
MessageBody ：

```
<JpegImageData>
```

B. Error response

HTTP status return value:

HTTP Status	Meaning
401 Unauthorized	User authentication failed. ! A user without video transmission privileges requested video transmission.

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified.
406 Parameter Missing	Mandatory parameter not specified. ! Preset number(p) or trace number(t) not specified.
411 Data Not Found	Specified data does not exist.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.5. Metadata Acquisition

The metadata acquisition command meta.cgi related to focus positions under XC control protocol is described below.

3.2.5.1. Metadata Acquisition [meta.cgi]

This is used to acquire the positions of rectangles for the face, eyes, and object detected in the face-priority AF, face-only AF, eye detection, and object detection of the remote camera. In addition, metadata for a focus guide for notifying a user of the direction in which the focusing degree and the focus are matched when MF is set is acquired. Select whether to acquire information from a session-based or sessionless client.

3.2.5.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/meta.cgi?[s=<SessionID>][type=<Value>]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID

Parameter	Value Type/Range	Description
type	once, stream	Transmission format once: Latest metadata is transmitted. stream: Stream format metadata is transmitted. In the stream format, all the metadata is transmitted first and any difference is transmitted from the camera later sequentially.

3.2.5.1.2. Response

A. Successful response

This indicates the content of the response. Metadata is transmitted in the msgpack format.

HTTP Code : 200 OK
Content-Type : application/x-msgpack
Livescope-Status : 0
MessageBody :

```
{
 version: 3.0.0,    # metadata version
 timestamp: 569.647,        # time elapsed from power on [s]
 realtime: 1589940161.636,  # current time (local time)
 detect: [  # detected object
   {
     type: face,    # detection type (face)
     pos: {
       x: 9207, # X coordinate (0-9999)
       y: 9185, # Y coordinate (0-9999)
       w: 1152, # width (1-10000)
       h: 2048  # height (1-10000)
     },
     main: true,    # main face or not
     track: false   # tracking face or not
   },
   {
     type: eye, # detection type (eye)
     pos: {
       x: 9100, # X coordinate (0-9999)
       y: 9200, # Y coordinate (0-9999)
       w: 100,  # width (1-10000)
       h: 100   # height (1-10000)
     },
     main: true,    # main eye or not
     track: false   # tracking eye or not
   },
     type: object,  # detection type (object)
     pos: {
```

```
        x: 9100, # X coordinate (0-9999)
        y: 9200, # Y coordinate (0-9999)
        w: 100,  # width (1-10000)
        h: 100   # height (1-10000)
      },
      main: true,    # main object or not
      track: false   # tracking object or not
    },
  ],
  fguide: [  # focus guide, 1
    {
      status: true,  # focus guide valid or invalid (true, false)
      level: 0,  # focusing being done (0-2:2 is focusing)
      angle: 35, # focusing degree (0-60: 0 is focusing)
      dir: front,    # focus information (front: front pin, behind: back pin)
      pos: {
        x: 8192, # X coordinate (0-9999)
        y: 8192, # Y coordinate (0-9999)
        w: 1280, # width (1-10000)
        h: 1456  # height (1-10000)
      }
    }
  ]
}
```

Metadata:

Item	Sub Item	Sub-sub Item	Value Type/Range	Description
version			1.0.0...	Version of metadata

Item	Sub Item	Sub-sub Item	Value Type/Range	Description
detect				Faces, eyes, and objects detected Face: Max. 9, Eye: Max. 10, Object: Max. 10
	type		face, eye[35], object[35]	Detection type face: Indicates that this is a face detection frame eye: Indicates that this is an eye detection frame[35] object: Indicates that this is an object detection frame[35]
	pos	x	0...9999	x coordinate of detected face Center of rectangle
		y	0...9999	y coordinate of detected face Center of rectangle
		w	1...10000	Width of detected face
		h	1...10000	Height of detected face
	main		true, false	Wehter it is the main face/eye or not type: Always true for eye and object
	track		true, false	Whether it is tracking or not
	disp[36]	frame	true, false	Whether to display the frame or not
		arrow	true, false	Whether to display the direction arrows for the selection of the principal subject or not

Item	Sub Item	Sub-sub Item	Value Type/Range	Description
fguide				Focus guide (1 only)
	status		true, false	Enable/disable focus guide indication true: Enabled false: Disabled
	level		0...2	Whether focusing is being done 0: Focusing
	angle		0...60	Score of focusing 0: Focusing
	dir		front, behind	Focus information front: front pin behind: back pin
	pos	x	0...9999	x coordinate of focus guide Center of rectangle
		y	0...9999	y coordinate of focus guide Center of rectangle
		w	1...10000	Width of focus guide
		h	1...10000	Height of focus guide

B. Error response

Livescope status return value:

Livescope Status	Meaning
401 Unknown Operator	Undefined command specified.

3.2.6. Preset/Trace

Command preset/set for saving control parameters of the camera and commands trace/set and trace/control for recording/posturing traces are described below.
Note that there is no dedicated command for executing and stopping the saved preset. It is necessary to specify parameters "Preset Information [p]" by the camera control command control.cgi. For more information on the preset control commands, see ‘Commands (Preset Control)’ and for details on the parameter 'Preset Information [p]' related to preset control, see ‘Parameter list of info.cgi/control.cgi/configuration.cgi’.

3.2.6.1. Saving Preset [preset/set]

This is used to save the current camera angles such as pan, tilt, and zoom and a part or all of the camera control parameters such as focus and exposure as preset. The command is also used for deleting saved presets. Things that can be saved as preset include pan, tilt, zoom, focus, exposure, white balance, IS (image stabilizer), CP (image quality adjustment) , and lens correction.
If the preset number (p) is not specified, 406 is returned as the Livescope status. If setting of the preset name (name) fails, 403 is returned as the Livescope status, and the other parameters specified at the same time are not set.

3.2.6.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/preset/set?[s=<session-
id>][&p=<Value>][&name=<Value>][&cmd=delete][&all=<Value>][&thumbnail=<Value>]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
p	1...100	Preset number [Mandatory] Deletes the specified preset number when cmd=delete. Multiple preset numbers can be specified, separated by commas, in any order, with one comma allowed at the end. Returns livescope-status 403 (Invalid Parameter Value) for non commas and numbers, empty characters (,,), and numbers out of range.
name	<unicode>	Preset name (UTF-8) Null value specification or omission allowed.
cmd	delete	Control preset saving delete: Delete the preset specified by p. Ignores specifications other than p.[37]

Parameter	Value Type/Range	Description
all	enabled, disabled, ignored	All the parameters to be saved are saved as preset or deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. When "all" and parameters besides "all" are specified, the latter will be prioritized. "ignored" when omitted.
ptz	enabled, disabled	The PTZ parameter is saved/deleted. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.
focus	enabled, disabled, ignored	The focus parameter is saved/deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. "ignored" when omitted.
exp	enabled, disabled, ignored	The exposure parameter is saved/deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. "ignored" when omitted.
wb	enabled, disabled, ignored	The WB parameter is saved/deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. "ignored" when omitted.
is	enabled, disabled, ignored	The IS (image stabilizer) parameter is saved/deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. "ignored" when omitted.

Parameter	Value Type/Range	Description
cp	enabled, disabled, ignored	The CP (image quality adjustment) parameter is saved/deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. "ignored" when omitted.
lenscorrect	enabled, disabled, ignored	Saving/deleting lens correction parameters enabled: Save to preset disabled: Remove from preset ignored: Do nothing "ignored" when omitted.
pan.speed	c.<c>.pan.speed.min... c.<c>.pan.speed.max e.g. 10...10000	Pan speed If the parameter is omitted when "all=enabled" or "ptz=enabled" is specified, the maximum speed is set. If the parameter is omitted in other cases, the speed does not change.
tilt.speed	c.<c>.tilt.speed.min... c.<c>.tilt.speed.max e.g. 10...10000	Tilt speed If the parameter is omitted when "all=enabled" or "ptz=enabled" is specified, the maximum speed is set. If the parameter is omitted in other cases, the speed does not change.
zoom.speed	c.<c>.zoom.speed.min... c.<c>.zoom.speed.max e.g. 0...15	Zoom speed If the parameter is omitted when "all=enabled" or "ptz=enabled" is specified, the maximum speed is set. If the parameter is omitted in other cases, the speed does not change.
ptz.speed	p.<p>.ptzspeed.min... p.<p>.ptzspeed.max	Synchroized PTZ speed If omitted when "all=enabled" or "ptz=enabled" is specified, the maximum speed is set Do not change if omitted otherwise If pan.speed, tilt.speed, or zoom.speed are specified at the same time, ignore ptz.speed even if specified.

Parameter	Value Type/Range	Description
thumbnail	enabled, disabled, ignored	Generates a thumbnail image of the preset position. enabled: Generates a thumbnail image and stores it in the preset. disabled: Remove thumbnail image from preset ignored: Do nothing "ignored" when omitted.

3.2.6.1.2. Response

A. Successful response

This indicates the content of the response.

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
p:=1
p.1.name.utf8:=Preset1
p.1.content.ptz:=enabled
p.1.content.focus:=enabled
p.1.content.exp:=enabled
p.1.content.wb:=enabled
p.1.content.is:=enabled
p.1.content.cp:=enabled
p.1.content.lenscorrect:=enabled
p.1.pan.speed=<pan speed>
p.1.tilt.speed=<tilt speed>
p.1.zoom.speed=<zoom speed>
p.1.ptz.speed=<synchronized PTZ speed>
```

NOTE The pan, tilt, and zoom, and Synchronized PTZ speed are not included in the response in the case of p.<p>.content.ptz=disabled.

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified. ! Preset name setting failed.
406 Parameter Missing	Mandatory parameter not specified. ! Preset number not specified.

Livescope Status	Meaning
408 Conflict	An exclusive operation was requested. ! Execute preset/set before the preset save is complete.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.6.2. Recording Traces [trace/set] (Optional)

This is used to record traces (camera operation details and timing).
Start command (cmd=start) is sent to start recording at the current camera position, and stop command (cmd=stop) is sent to stop the recording. During a period from the start command to the stop command reception, the executed PTZ control and the manual focus control command are saved.
The contents recorded when the stop command is received are saved in the camera.
When recording is started (cmd=start), the current camera state can be specified as a start position, and the items to be saved can be selected from pan, tilt, zoom, focus, exposure, white balance, IS (image stabilizer), CP (image quality adjustment), and lens correction, or can be chosen from all of them..
Interrupt command (cmd=cancel) can be sent to stop the recording after it is started.
If cmd is omitted, or if trace number (t) is not specified during cmd=start or cmd=delete, 406 is returned as the Livescope status.
If a non-executable command is sent (for example, if the trace record start command is sent during the trace playback), 408 is returned as the Livescope status.
If setting of the name fails, 403 is returned, and the other parameters specified at the same time are not set. ====== Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/trace/set?[s=<session-
id>][&t=<Value>][&cmd=<Value>][&all=<Value>][&thumbnail=<Value>]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
t	1...10	Trace number [Mandatory] May be omitted for "cmd=stop" or "cmd=cancel”.

Parameter	Value Type/Range	Description
name	<unicode>	Trace name (UTF-8) Null value specification or omission allowed. The trace name can be set when specification of "cmd=start" or "cmd" is omitted.
cmd	start, stop, cancel, delete	This operates trace recording. start: This starts trace recording. stop: This stops trace recording (saves it in the camera). cancel: This interrupts trace recording (does not save it in the camera). delete: This deletes traces recording (the trace name also becomes a null value). When this is omitted, no trace recording operation is performed and only the trace name can be set.
all	enabled, disabled, ignored	All the parameters to be saved are saved to the trace start position or deleted from the trace start position. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.
ptz	enabled, disabled	The PTZ parameter is saved to the trace start position or deleted from the trace start position. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.
focus	enabled, disabled, ignored	The focus parameter is saved to the trace start position or deleted from the trace start position. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.

Parameter	Value Type/Range	Description
exp	enabled, disabled, ignored	The exposure parameter is saved/deleted. enabled: Saved to preset. disabled: Deleted from preset. ignored: Nothing happens. "ignored" when omitted.
wb	enabled, disabled, ignored	The WB parameter is saved to the trace start position or deleted from the trace start position. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.
is	enabled, disabled, ignored	The IS (image stabilizer) parameter is saved to the trace start position or deleted from the trace start position. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.
cp	enabled, disabled, ignored	The CP (image quality adjustment) parameter is saved to the trace start position or deleted from the trace start position. enabled: Saved to trace start position. disabled: Deleted from trace start position. When "all" and parameters besides "all" are specified, the latter will be prioritized. "disabled" when omitted.
lenscorrect	enabled, disabled, ignored	Save Lens Correction Parameters to Trace Start Position/Remove from Trace Start Position. enabled: Save at trace start position disabled: Delete from trace start position If "all" and other than "all" are specified at the same time, the latter takes precedence. "disabled" when omitted.

Parameter	Value Type/Range	Description
thumbnail	enabled, disabled, ignored	Generates a thumbnail image of Trace Start Position. enabled: Generates a thumbnail image and stores it in the trace. disabled: Remove thumbnail image from trace ignored: Do nothing "ignored" when omitted.

3.2.6.2.1. Response

A. Successful response

This indicates the content of the response.

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
t:=<t>
t.<t>.name.utf8:=<UTF-8 character string> *1
t.<t>.content.ptz:=<Value> *2
t.<t>.content.focus:=<Value> *2
t.<t>.content.exp:=<Value> *2
t.<t>.content.wb:=<Value> *2
t.<t>.content.is:=<Value> *2
t.<t>.content.cp:=<Value> *2
```

NOTE The trace name is returned during cmd=start or cmd=delete.
"ptz", "focus", "exp", "wb", "is", and "cp" are returned during cmd=start.

B. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified. ! Trace number outside specification rage. ! Trace name setting failed.
406 Parameter Missing	Mandatory parameter not specified. ! Trace number not specified in mandatory case.

Livescope Status	Meaning
408 Conflict	An exclusive operation was requested. ! Trace recording start command sent during trace playback.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.6.3. Trace Playback [trace/control] (Optional)

This is used to playback recorded traces (camera operation details and timing).
Preparation command (cmd=prepare) for moving to the camera position where the trace recording started, start command (cmd=start) for starting the trace playback, and stop command (cmd=stop) for stopping the trace playback are sent.
To correctly playback the recorded trace, a preparation command is mandatory beforehand, but this is not mandatory under the protocol. However, in such as case, there is no guarantee that the trace playback will be done correctly.
If trace number (t) is not specified during "cmd=prepare" or "cmd=start", 406 is returned as the Livescope status.
If trace number (t) of which no trace recording is performed is specified during "cmd=prepare" or "cmd=start", 403 is returned as the Livescope status.
If a command that cannot be executed by the camera is sent (for example, if the trace playback start command is sent during the trace recording), 408 is returned as the Livescope status.

3.2.6.3.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/trace/control?[s=<session-id>][&t=<Value>][&cmd=<Value>]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
t	1...10	Trace number [Mandatory] May be omitted for "cmd=stop".
cmd	prepare, start, stop	This operates trace playback. prepare: Moves to trace start position. start: Starts trace playback. stop: Stops trace playback.

3.2.6.3.2. Response

A. Successful response

This indicates the content of the response.

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
t:=<t>
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified. ! Trace number outside specification rage.
406 Parameter Missing	Mandatory parameter not specified. ! Trace number not specified to the parameter.
408 Conflict	An exclusive operation was requested. ! Trace playback command sent during trace recording.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.

3.2.7. Standby

The standby transition/restoration command standby.cgi of cameras under the XC control protocol is described below.

3.2.7.1. Standby Transition/Restoration [standby.cgi]

This is used to change the camera status to the standby mode (power saving mode) or restores the status from the standby mode.
During the transition from the normal camera state to the standby camera state, during the standby mode, and during the restoration to the normal state from the standby state, camera behaviors and limitation of each state are as follows.

- During transition to standby mode
  - Video transmission (video.cgi, image.cgi) is stopped.
  - Notification on the standby state is sent to each application (info.cgi), and all the sessions

are deleted.

- When the standby restoration command is received, 510 is returned as the Livescope status.
- If the standby transition command is received again, it is ignored.
- Regarding receivable commands, refer to the following standby state.

- Standby state
  - Acceptable commands are open.cgi, close.cgi, session.cgi, info.cgi, and standby.cgi only.
  - When other commands are received, 509 is returned as the Livescope status.
  - Only the video-less session (v=null) can be accepted by open.cgi.
  - All the parameters are returned by info.cgi.
  - Command standby.cgi only accepts the restoration command from the standby state.
- Restoration from Standby
  - All the sessions are deleted.
  - When a standby transition command is received, 511 is returned as the Livescope status.
  - If the standby restoration command is received again, it is ignored.
- Normal state
  - Notification on restoration to the normal state is sent by info.cgi.
  - If the standby restoration command is sent, the success is returned.
  - When a standby transition command is received during backup, 408 is returned as Livescope status.

If the cmd parameter is not specified, 406 is returned as the Livescope status.

3.2.7.1.1. Commands

Syntax:

```
http://<ipaddress>/-wvhttp-01-/standby.cgi?[s=<session-id>][&cmd=<Value>]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID

Parameter	Value Type/Range	Description
cmd	standby, idle	This is used for transition to the standby state and restoration from the standby state [Mandatory]. standby: Transition to standby state. idle: Restoration from standby state.

3.2.7.1.2. Response

A. Successful response

This indicates the content of the response.

HTTP Code : 200 OK
Content-Type : text/plain;charset=utf-8
Livescope-Status : 0
MessageBody :

```
OK.
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
406 Parameter Missing	Mandatory parameter not specified. ! cmd parameter not specified.
408 Conflict	Exclusive operation requested ! A standby transition command was received during backup.
501 Unknown Connection ID	Specified session does not exist. ! Invalid session ID(s) specified.
509 Standby	Access limited during standby state. ! Command control.cgi received during standby state.
510 Switching Standby	Access limited during transition from normal state to standby state. ! Standby restoration command received during standby transition.
511 Switching Idle	Access limited during restoration from standby state to normal state. ! Standby transition command received during standby restoration.

3.2.8. Monitoring Assist

This is used for the configuration of Monitoring Assist and the registration, deletion, and total deletion of LUT.

3.2.8.1. Monitoring Assist Setting [configuration.cgi]

3.2.8.1.1. Command

Syntax:

```
http://<ipaddress>/-wvhttp-01-
/configuration.cgi?[s=<sessionID>][&s.priority=<Priority>][&<Name>=<Value>]…
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
s.priority	0...50	Session priority

3.2.8.1.2. Response

A. Successful response

The content of the response is as follows.

HTTP Code ：200 OK
Content-Type ：text/plain;charset=utf-8
Livescope-Status ：0
MessageBody ：

```
OK
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified
406 Parameter Missing	Mandatory parameter not specified.
408 Conflict	Exclusive operation requested

Livescope Status	Meaning
501 Unknown Connection ID	Specified session does not exist.

3.2.8.1.3. Control Parameters

Since there are many types of parameters that can be controlled by configuration.cgi, they are explained 'Parameter list of info.cgi/control.cgi/configuration.cgi'.

3.2.8.2. User LUT Setting [configuration/userlut]

3.2.8.2.1. Command

Registration

Syntax:

```
Method : POST
URI :
http://<ipaddress>/-wvhttp-01-/configuration/userlut?[s=<session-id>]
&cmd=register&number=<UserLutNumber>[&colorspace=<ColorSpace>][&range=<Range>][userlutname=<Value>
]

Multipart/form-data format
Content-Disposition: form-data; name="file"; filename="<userlutname>"
```

The filename= part also accepts the format filename*=utf-8'' "<userlut name>" (RFC6266)

Deletion

Syntax:

```
Method : POST or GET
URI :
http://<ipaddress>/-wvhttp-01-/configuration/userlut?[s=<session-id>]&cmd=unregister
&number=<UserLutNumber>
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
cmd	register, unregister	Registering/deleting User LUT settings register: Registration unregister: Deletion

Parameter	Value Type/Range	Description
number	1...4	User LUT number Can be specified only when cmd=register, unregister
colorspace	gamut_bt709, gamut_bt2020, none	Color space output by the corresponding User LUT Can be specified only when cmd=register
range	narrow, full	Corresponding User LUT output range Can be specified only when cmd=register
userlutname	<string>	User LUT name Can be specified only when cmd=register Only the User LUT name can be changed with monitoring.{output}.userlut{N}.name

3.2.8.2.2. Response

A. Successful response

The content of the response is as follows.

HTTP Code ：200 OK
Content-Type ：text/plain;charset=utf-8
Livescope-Status ：0
MessageBody ：

```
OK
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified
406 Parameter Missing	Mandatory parameter not specified.
408 Conflict	Exclusive operation requested
410 Invalid Data	Invalid data specified
501 Unknown Connection ID	Specified session does not exist.

3.2.9. Custom Picture

Command cpfile/set that saves and resets custom picture parameters are described below.
For custom picture control such as custom picture file selection and protection, the parameter "custom picture information [u]" is specified in the camera control command control.cgi. For details on custom picture control commands, see "3.2.3.1.5 Commands (custom picture control)", and for details on the parameter "custom picture information[u]" related to custom picture control, see ‘Parameter list of info.cgi/control.cgi/configuration.cgi’.

3.2.9.1. Custom Picture Setting [cpfile/set]

Save and reset custom picture control parameters. Use cmd=save to save and cmd=reset to reset.

3.2.9.1.1. Command

Syntax:

```
http://<ipaddress>/-wvhttp-01-/cpfile/set?[s=<session-id>] [&cmd=<Value>][&cpitem=<Value>]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
cmd	save, reset	Save and reset custom picture control parameters [required] save:Save reset:Reset
cpitem	normal1_bt709, widedr_bt709, standard_bt709, clog3, pq, hlg, eos_standard, eos_neutral, user	Only when cmd=reset [required] Reset the custom picture settings of the number specified by u to the settings specified by cpitem Specifiable values can be referenced in c.<c>.cp.list of info.cgi

3.2.9.1.2. Response

A. Successful response

The content of the response is as follows.

HTTP Code ：200 OK
Content-Type ：text/plain;charset=utf-8
Livescope-Status ：0

MessageBody ：

```
OK
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified
406 Parameter Missing	Mandatory parameter not specified.
408 Conflict	Exclusive operation requested
501 Unknown Connection ID	Specified session does not exist. ! Invalid session id(s) specified

3.2.9.2. Look File Setting [cpfile/lookfile]

Register and delete Look Files. Use cmd=register to register and cmd=unregister to delete.

3.2.9.2.1. Command

Look File registration

Syntax:

```
Method : POST
URI :
http://<ipaddress>/-wvhttp-01-/cpfile/lookfile?[s=<session-id>][&cmd=register][&gamma=<Value>]

Multipart/form-data format
Content-Disposition: form-data; name="file"; filename="<Look File name>"
```

The part for filename= also accepts the format filename*=utf-8'' "<userlut name>" (RFC6266)

Look File deletion

Syntax:

```
Method : POST or GET
URI :
http://<ipaddress>/-wvhttp-01-/cpfile/lookfile?[s=<session-id>] [&cmd=unregister]
```

Parameters:

Parameter	Value Type/Range	Description
s	<string>	Session ID
cmd	register, unregister	Registering/deleting Look File settings register: Registration unregister: Deletion
gamma	cp, sdr_bt709, sdr_bt2020, hdr_pq_bt2100, hdr_hlg_bt2100	Can be specified only when cmd=register Specifiable values of gamma/colorspace after applying Look File can be referred in c.<c>.lookfile.after.gamma.list

3.2.9.2.2. Response

A. Successful response

The content of the response is as follows.

HTTP Code ：200 OK
Content-Type ：text/plain;charset=utf-8
Livescope-Status ：0
MessageBody ：

```
OK
```

B. Error response

Livescope status return value:

Livescope Status	Meaning
403 Invalid Parameter Value	Invalid parameter value specified
406 Parameter Missing	Mandatory parameter not specified.
408 Conflict	Exclusive operation requested
410 Invalid Data	Invalid data specified
501 Unknown Connection ID	Specified session does not exist. ! Invalid session id(s) specified

[1] If-Modified-Since is referenced with a get still image command.

[2] To get or release the control privilege with claim.cgi or yield.cgi, a session must be started.

[3] Most parameters can be abbreviated under the XC control protocol. Parameters that cannot be abbreviated are indicated with “Mandatory”.

[4] If a parameter is specified multiple times, only the last specified parameter is used unless it is a parameter that can be specified multiple times.

[5] menu, preset, trace, standby, configuration, cpfile

[6] This refers to the session connection time, and “(Limited)” is limited by the model specific “Maximum connection time”.

[7] In cases of “(Limited)”, the video transmission time is limited by the session connection time.

[8] This refers to the camera control time, and “(Limited)” is limited by the model specific “Camera control time”.

[9] Functions permitted only in a privileged or administrator session, and functions permitted only in an administrator session. This is determined by the created session type.

[10] In sessionless cases, the video transmission time is not limited by the session connection time, so this is “(Unlimited)”. (*However, the video attribute has a restriction on sharing among sessionless clients.)

[11] In sessionless cases, camera control privileges are acquired and operated in the priority specified by commands. Even for users with privileged camera control, the usable functions are limited to the range of general camera control when the priority specified to Commands is a general value instead of a session.

[12] In sessionless cases, the usable functions are limited to the range of privileged camera control.

[13] “Multiple element joint type” is a character string with multiple elements joined with a delimiter as in "<IP address>:<port>".e.g. "192.168.100.1:80"

[14] The value ranges have the following meanings. 0: General session; 1 - 4: Reserved (if specified, it is treated as "5"); 5 - 50: Privileged session; *This is ignored when an administrator session is specified.

[15] Specify <video parameter> with the format shown below. <jpg or h264>[:<video width>[x<video height>[::<frame rate>]]] The video width and height are expressed in pixels. Specify the frame rate by the number of frames per 1000 seconds. e.g. "jpg:480x270::30000" *Do not specify <video width>, <video height>, and <frame rate> for H.264 data. e.g. "h264" *H.265 cannot be specified. If "h265" is specified, a 403 error will occur. Specify H.265 by w.<Video>.type. *For details on combinations that can be selected, see ‘H.264/H.265 Image Parameter Specifications’.

[16] Video parameter specifications (v) make provision for backwards compatibility. In comparison, video stream number specifications (w) are more sophisticated. Therefore, if new parameters are used during stream selection, the use of a video stream number specification (w) is recommended.

[17] The client protocol type determines whether to use IPv4 or IPv6 notation.If multiple addresses are defined, the manually configured ones have priority for return, and those not configured manually are returned in the order obtained, starting with the first address.IPv6 [<IPv6 Address>]:<port> e.g. "[3FFE:2A00:100:7031::1]:80"IPv4 <IPv4 Address>:<port> e.g. "192.168.100.1:80"

[18] The maximum value of the remaining session connection time is the model specific “Maximum connection time”.

[19] The video stream parameters are returned for <video parameter> with the format shown below. <jpg or h264>:<video width>x<video height>:<video quality>:<frame rate>

[20] It is returned when the video codec of <video parameter> is "h264".

[21] The video stream number is a subscript indicating the video stream shown with the continually returned item w.<Video>.

[22] It is returned when the video codec of <video parameter> is "h264" or "h265".

[23] The maximum number of connections is limited by the model specific “Maximum number of clients”.

[24] The camera control time is limited by the setting value of the model specific "Camera control time". However, unless another client has requested camera control privileges, control privileges can exceed the assigned time. The camera control time can also be set to an unlimited time.

[25] This shows the camera control privileges status of your own session. If "enabled" (or "waiting"), the remaining assigned time (or remaining standby time until privileges are obtained) is added in milliseconds only when both are limited. s.control:=enabled : Obtaining camera control privileges; s.control:=waiting : Waiting to obtain camera control privileges

[26] This shows the camera control privileges status of your own session. If "enabled" (or "waiting"), the remaining assigned time (or remaining standby time until privileges are obtained) is added in milliseconds only when both are limited. s.control:=enabled : Obtaining camera control privileges; s.control:=waiting : Waiting to obtain camera control privileges; s.control==disabled : Failed to obtain camera control privileges

[27] It is returned when the video codec of <video parameter> is "h264" or "h265".

[28] The names of information items are hierarchically organized and are specified with the following format.; item=c : Specify item c (camera) or lower to the acquisition target; item=c! : Exclude item c (camera) or lower from the acquisition target; The specification of information items can be enumerated, and in this case, the specified items are evaluated in the enumeration order. e.g. Specification with one item "info.cgi?item=s,c..."; e.g. Specification with multiple items "info.cgi?item=s&item=c..."; Specify the second numerical value that divides the information item by dot with *. item=p.*.content : p.1.content... p.2.content... ; Specify dot at the end of the information item. item=p.1.content. : p.1.content.ptz other than p.1.content, etc. The details of the return values of the information items are described in the information categories that follow.

[29] If control is requested for multiple items at one time, not all control may be executed as requested, depending on the camera operation status. In particular, it is important to note that control that performs mechanical operations, such as pan, tilt, and zoom operation, requires time until the operation is completed.To perform control requests separately, it is recommended that an interval of 30 ms or more be used between requests.

[30] If control is requested for multiple items at one time, not all control may be executed as requested, depending on the camera operation status.

[31] The following are examples of behavior that include specification of video parameter specification (v). First, create a XC control protocol session with the following command.http://<ipaddress>/-wvhttp-01-/open.cgi?v=jpg:480x270 Next, execute the following command. http://<ipaddress>/-wvhttp-01-/image.cgi?s=<SessionID>&v=jpg:1280x960 When these commands are executed, the static image of "v=jpg:480x270" specified with the first executed command, open.cgi, is obtained. The same result applies to video stream number specification (w).

[32] If a change in the settings occurs, notification is sent by an event using info.cgi. The changed setting is maintained even after image.cgi processing is completed and is not restored automatically to the original setting.

[33] Specify <video parameter> with the format shown below. <jpg or h264>[:<video width>[x<video height>[::<frame rate>]]] e.g. "jpg:480x270" *For details on combinations that can be selected, see 'H.264/H.265 Image Parameter Specifications'.

[34] The maximum value for the video send time is the maximum value of the session connection time. Session connection time is limited by the model specific "Maximum connection time".

[35] Not supported depending on the combinations of "model" and "version of metadata".

[36] Some models are not supported.

[37] For models that can execute "cmd=delete", this command is recommended for deleting presets.For other models that cannot execute "cmd=delete", the preset can be deleted by executing "all=disabled&name=&thumbnail=disabled".

Appendix A: Model Specific Information

A.1. CR-N700/N500/N300/X300-dependent Information

A.1.1. Command Specifications

The supported/not-supported information of CR-N700 / N500 / N300 / N100 /X300 with respect to each command under the XC control protocol is shown in the table below.

Table 14. Support for CR-N700 / N500 / N300 / N100 / X300 Commands under XC Control Protocol

Commands	Functions	Support requirement	Support
open.cgi	Thiscreates a session.	Optional	Supported
close.cgi	Thiscloses a session.	Optional	Supported
claim.cgi	Thisrequests camera control privileges.	Optional	Supported
yield.cgi	Thisreleases camera control privileges.	Optional	Supported

Commands	Functions	Support requirement	Support
session.cgi	Thisretrieves and changes a session-specific attribute.	Optional	Supported
info.cgi	Thisis used to obtain camera control privileges.	Mandatory	Supported
control.cgi	Thisis used to control a camera or presets.	Mandatory	Supported
menu.cgi	This is used to control the camera's menu, etc.	Optional	Not supported[1]
image.cgi	This is used to retrieve a JPEG still image.	Optional	Supported
video.cgi	This is used to retrieve a video stream.	Optional	Supported
thumbnail.cgi	This is used to retrieve a thumbnail image.	Optional	Supported[2]
meta.cgi	This is used to obtain metadata related to focus.	Optional	Supported
preset/set	This preset-stores camera control parameters.	Optional	Supported
trace/set	This records traces.	Optional	Supported
trace/control	This playbacks traces.	Optional	Supported
standby.cgi	This is used to perform standby transition/restoration.	Optional	Supported
configuration.cgi	Allows for making monitoring and assist settings	Optional	Not supported[1]
configuration/userlut	This is used to register, delete, and reset User LUT	Optional	Not supported[1]
cpfile/set	This is used to control custom picture	Optional	Not supported[1]
cpfile/lookfile	This is used to register and delete Look File	Optional	Not supported[1]

A.1.2. Parameter Specifications of info.cgi/control.cgi

CR-N700 / N500 / N300 / N100 / X300-dependent specifications of parameters info.cgi and control.cgi under the XC control protocol will be described in APPENDIX 'Parameter list of info.cgi/control.cgi/configuration.cgi' .

A.1.3. H.264/H.265 Image Parameter Specifications

The following are the H.264/H.265 image parameters that supported by the H.264/H.265 video transmission functions of CR-N700 / N500 / N300 / N100 / X300. Some parameters depend on the frame frequency of the remote camera, and the capture range changes.

Table 15. H.265 Image Parameters

Parameter	Value Range	Default Value
Video Resolution [pxl]	For frame frequency of 59.94 and 50 Hz: 1920x1080, 1280x720, 640x360 For frame frequency of 29.97, 23.98, and 25 Hz: 3840x2160, 1920x1080, 1280x720, 640x360	1920x1080
Frame Rate [fps]	For frame frequency of 59.94 Hz: 59.94, 29.97, 14.98, 4.99 For frame frequency of 29.97 Hz: 29.97, 14.98, 4.99 For frame frequency of 23.98 Hz: 23.98, 11.99, 5.99 For frame frequency of 50 Hz: 50.00, 25.00, 12.50, 5.00 For frame frequency of 25 Hz: 25.00, 12.50, 5.00	59.94
I Frame Interval [sec]	0.5, 1	1
Bit Rate Control	VBR, CBR	VBR
Target Bit Rate [Mbps]	1...80 Depends on the video resolution/frame rate.	20

Table 16. H.264 Image Parameters

Parameter	Value Range	Default Value
Video Resolution	640x360	640x360
Frame Rate [fps]	For frame frequency of 59.94 Hz: 59.94, 29.97, 14.98, 4.99 For frame frequency of 29.97 Hz: 29.97, 14.98, 4.99 For frame frequency of 23.98 Hz: 23.98, 11.99, 5.99 For frame frequency of 50 Hz: 50.00, 25.00, 12.50, 5.00 For frame frequency of 25 Hz: 25.00, 12.50, 5.00	29.97

Parameter	Value Range	Default Value
I Frame Interval [sec]	ALL I, 0.5, 1	1
Bit Rate Control	VBR, CBR	VBR
Target Bit Rate [Mbps]	1...10 Depends on the video resolution/frame rate.	6

A.2. C500mk2/C400/C300mk3/C70/XF605-dependent Information

A.2.1. Command Specifications

The supported/not-supported information with respect to each command under the XC control protocol is shown in the table below.

Table 17. Support for C500mk2 / C400 / C300mk3 / C70 / XF605 Commands under XC Control Protocol

Command	Functions	Support requirement	Support
open.cgi	This creates a session.	Optional	Supported
close.cgi	This closes a session.	Optional	Supported
claim.cgi	This requests camera control privileges.	Optional	Not supported
yield.cgi	This releases camera control privileges.	Optional	Not supported
session.cgi	This retrieves and changes a session-specific attribute.	Optional	Supported
info.cgi	This is used to obtain camera information.	Mandatory	Supported
control.cgi	This is used to control a camera or presets.	Mandatory	Supported
menu.cgi	This is used to control the camera's menu, etc.	Optional	Supported
image.cgi	This is used to retrieve a JPEG still image.	Optional	Supported
video.cgi	This is used to retrieve a video stream.	Optional	Not supported
thumbnail.cgi	This is used to retrieve a thumbnail image.	Optional	Not supported
meta.cgi	This is used to obtain metadata related to focus.	Optional	Supported

Command	Functions	Support requirement	Support
preset/set	This preset-stores camera control parameters.	Optional	Supported
trace/set	This records traces.	Optional	Not supported
trace/control	This plays back traces.	Optional	Not supported
standby.cgi	This is used to perform standby transition/restoration.	Optional	Not supported
configuration.cgi	Sets monitoring and assist	Optional	Supported
configuration/userlut	This is used to register, delete, and reset User LUT	Optional	Not supported
cpfile /set	This is used to control custom picture	Optional	Not supported
cpfile/lookfile	This is used to register and delete Look File	Optional	Not supported

A.2.2. Parameter Specifications of info.cgi/control.cgi

C500mk2 / C400 / C300mk3 / C70 / XF605-dependent specifications of parameters info.cgi and control.cgi under the XC control protocol will be described in APPENDIX ‘Parameter list of info.cgi/control.cgi/configuration.cgi’ .

A.3. RC-IP1000-dependent Information

A.3.1. Command Specifications

The supported/not-supported information of RC-IP1000 with respect to each command under the XC control protocol is shown in the table below.

Table 18. Support for RC-IP1000 Commands under XC Control Protocol

Command	Functions	Support requirement	Support
open.cgi	This creates a session.	Optional	Not Supported
close.cgi	This closes a session.	Optional	Not Supported

Command	Functions	Support requirement	Support
claim.cgi	This requests camera control privileges.	Optional	Not supported
yield.cgi	This releases camera control privileges.	Optional	Not supported
session.cgi	This retrieves and changes a session-specific attribute.	Optional	Not Supported
info.cgi	This is used to obtain camera information.	Mandatory	Supported
control.cgi	This is used to control a camera or presets.	Mandatory	Supported
menu.cgi	This is used to control the camera's menu, etc.	Optional	Not Supported
image.cgi	This is used to retrieve a JPEG still image.	Optional	Not Supported
video.cgi	This is used to retrieve a video stream.	Optional	Not supported
thumbnail.cgi	This is used to retrieve a thumbnail image.	Optional	Not supported
meta.cgi	This is used to obtain metadata related to focus.	Optional	Not Supported
preset/set	This preset-stores camera control parameters.	Optional	Not Supported
trace/set	This records traces.	Optional	Not supported
trace/control	This plays back traces.	Optional	Not supported
standby.cgi	This is used to perform standby transition/restoration.	Optional	Not supported
configuration.cgi	Sets monitoring and assist	Optional	Not Supported
configuration/userlut	This is used to register, delete, and reset User LUT	Optional	Not supported
cpfile /set	This is used to control custom picture	Optional	Not supported
cpfile/lookfile	This is used to register and delete Look File	Optional	Not supported

A.3.2. Information Acquisition [info.cgi]

Acquire various information from the remote camera controller. Stream format not supported.

A.3.2.1. Command

Syntax:

```
http://<ipaddress>:<port>/-wvhttp-01-/info.cgi
```

Preconditions and precautions:

- In RC-IP1000, parameters cannot be specified, and all information is acquired at once.
- The port number must be entered.
  The port number is fixed: HTTP: 50080 HTTPS: 50443.

Parameters:

Parameter	Value Type/Range	Description
camno	1...camno.count	Selected camera number
camno.count	200	Maximum camera number selectable
f.assign.min	1	Minimum value of available assign number
f.assign.max	10	Maximum value of available assign number

A.3.2.2. Response

A. Successful response

Shows the response when the command is issued as needed.
Because the stream format is not supported, timestamp and realtime are not included in the return value.

HTTP Code ：200 OK
Content-Type ：text/plain;charset=utf-8
Livescope-Status ：0
MessageBody ：

```
camno:=1
camno.count:=200
f.assign.min:=1
f.assign.max:=10
```

A.3.3. Switching Control for Selected Camera [control.cgi]

A remote camera controller performs control for switching a camera to be selected.

A.3.3.1. Command

Syntax

```
http://<ipaddress>:<port>/-wvhttp-01-/control.cgi?[camno=<value>]
```

Preconditions and precautions:

- If the command uses other parameters together, an error is returned.
- The port number must be entered.
  The port number is fixed: HTTP: 50080 HTTPS: 50443.

Parameters:

Parameter	Value Type/Range	Description
camno	1...camno.count	Selected camera number

A.3.4. Assignment Control [control.cgi]

Executes the command assigned to the USER button on the remote camera controller.

A.3.4.1. Command

Syntax

```
http://<ipaddress>:<port>/-wvhttp-01-/control.cgi?[f.assign=<value>]
```

Preconditions and precautions:

- If the command uses other parameters together, an error is returned.
- The port number must be entered.
  The port number is fixed: HTTP: 50080 HTTPS: 50443.

Parameters:

Parameter	Value Type/Range	Description
f.assign	f.assign.min...f.assign.max	Assign number

A.3.5. Designated Camera Presets/Tally Lamp Control [control.cgi]

Perform preset/tally control for the camera designated by the designated camera number (camno.target).[3]
Whether or not the preset or tally can be controlled depends on the specification of the designated camera.

A.3.5.1. Command

Syntax

```
http://<ipaddress>:<port>/-wvhttp-01-
/control.cgi?[p=<value>][&p.ptztime=<value>][&p.ptzspeed=<value>]
[&p.action=stop][&p.ptzspeed.saved=on][&p.freeze=on][&f.tally=on/off][&f.tally.mode=<value>][&camn
o.target=<value>]
```

Preconditions and precautions:

- If the command uses other parameters together, an error is returned.
- The port number must be entered.
  The port number is fixed: HTTP: 50080 HTTPS: 50443.
- If the designated camera number (camno.target) is not specified, the selected camera on the remote camera controller side is controlled.
- Parameters delivered to the selected camera via the remote camera controller and values returned from the camera are limited to parameters beginning with "p." or "f.tally." The propriety of the control depends on the specification of the selected camera. The detailed specifications of each camera are described in APPENDIX ‘Parameter list of info.cgi/control.cgi/configuration.cgi’ .

Parameters:

Parameter	Value Type/Range	Description
camno.target	1...camno.count	Designated camera number[3] *If not specified, the value of selected camera number (camno) is used.

Parameter	Value Type/Range	Description
Parameters beginning with "p." e.g. p, p.count, p.action, p.ptzspeed, p.ptzspeed.saved, p.freeze…	See ‘Parameter list of info.cgi/control.cgi/configuration.cgi’ *Whether control is possible depends on the specification of the selected camera.	
Parameters beginning with "f.tally." e.g. f.tally, f.tally.mode…	See ‘Parameter list of info.cgi/control.cgi/configuration.cgi’ *Whether control is possible depends on the specification of the selected camera.	

[1] Supported by CR-N700.

[2] Not supported by CR-N100.

[3] The designated camera number does not have to match the selected camera number on the remote camera controller side, and can be set independently. However, if the designated camera number is not specified, the selected camera on the remote camera controller side is controlled.

Appendix B: APPENDIX

B.1. Fragmented MP4

The H.264/H.265 transmission function of remote cameras transmits image data in the fragmented MP4 format. A stream with only one video track can be handled, and this video stream forms a stream in the fragmented MP4 format. Namely, a moov header and moof header are created, and these are sent coupled with the picture data.

NOTE	A stream in the fragmented MP4 format conforms to 'ISO/IEC 14496-10' and 'ISO/IEC 14496-15'. For details on the moov and moof headers, see these documents.

- Fragment data structure
  The following shows the fragmented data structure of models supported by this document. In addition to the HTTP header, there are moov and moof headers, and picture data for the first fragment is sent for the mdat header.

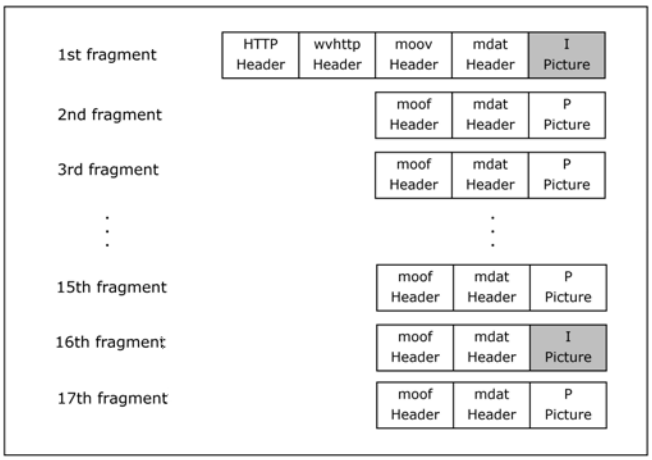

Figure 11. Fragment Data Structure within a Fragmented MP4 Format Stream

- moov header
  The moov header is transmitted only once at the start of the fragment transmission. This header mainly contains the initial setting items required for video playback. For example, the setting values for the video image size, frame rate, and time information are included in the moov header.
  In addition, the file size of the pictures transmitted together with the moov header is included in the stsz box, and the starting picture is always the I picture. The models supported by this document support H.264/H.265, and, therefore, [SPS], [PPS], and [VUI] fields are added to the moov header. All of these fields are within the [avcC] box.
- Time information at transmission start
  The current time (in seconds) is stored in [mvhd][tkhd] in the MP4 header at the start of transmission. This time varies for each client. This is not the video image capture time.

The starting point of the current time is 1900/01/01 00:00.

- SPS (Sequence Parameter Set) field
  SPS contains the profile and level for all sequences.
- PPS (Picture Parameter Set) field
  PPS contains information related to all pictures.
  However, PPS does not contain the setting value of the Q value.
- VUI (Video Usability Information) field
  VUI contains information on the aspect ratio, brightness, and color space.
- moof header
  The moof header contains the sequence number and frame type. The file size of the pictures transmitted together with the moof header is included in the trun box.
  When [first_sample_flags] in the trun box is 0x0, the starting picture of the fragment is the I picture; otherwise, it is the P picture.

B.2. Camera Search

For remote camera equipment search, the mDNS (Multicast DNS) function, which is specified in RFC6762, is supported.
mDNS notifies another host on the network of the host name and the IP address by multicast transmission of the IP address of the remote camera and the information of the host name that is automatically generated.
The automatically set host name is canon-<MACADDRESS>.local. The "MACADDRESS" the MAC address of the remote camera.
The multicast address uses the following in IPv4 and IPv6.

- IPv6 : ff02::fb
- IPv4 : 224.0.0.251

B.3. Parameter List of info.cgi/control.cgi/configuration.cgi

Parameters that can be acquired by info.cgi and parameters used for control by control.cgi are as follows.

- System information [s]
- Video information [v]
- Video information [w]
- Camera information [c]
- Light amount correction information [c]

- Color correction information [c]
- Custom picture information [u]
- IS/NR/Sharpness [c]
- Focus information [c]
- Zoom information [c]
- Pan/Tilt information [c]
- Preset information [p]
- Trace information [t]
- Audio device information [a]
- Contact input/output information [i/o]
- Tally lamp information [f]
- Standby information [f]
- Mode information [f]
- Video recording information [f]
- Timecode information [f]
- Assign button information [f]
- Wiper information [f]
- Output video information [f]
- Menu information [m]
- Crop information [k]
- Lens information [c]
- Alert information [b]

In addition, regarding the monitoring assist settings, there are the following types of parameters that can be obtained with info.cgi and parameters that are used for control with configuration.cgi.

- Monitoring settings [c]
- Assist setting [assist]

These parameters are described respectively in tables from the next page onwards. Note the following points.

- With info.cgi, parameters with attribute "G" can be acquired from the camera among the following parameters.
- With control.cgi and configuration.cgi, parameters with attribute "C" can be used to control

the camera among the following parameters.

- Follow the notation item in ‘Command Specifications’ for other information and notation method.
- If the parameter has information specific to the model, the model name is written in the column “Model Specific Information” and its details are written in “Value Type/Value Range” or “Description”.
- For the parameter specifications common to all XC control protocol compatible models regardless of the model, “-” is entered in the column “Model Specific Information”.
- If neither “-” nor model name is entered in the “Model Specific Information” column, the parameter is not supported.
- Parameters for which ae/me are defined (e.g., c.<c>.ae.brightness, c.<c>.me.brightness) are valid under the following conditions, respectively.
  - ae: : When c.<c>.exp = auto, av, tv
  - me : When c.<c>.exp = manual
- For the parameter specifying {output}, only the video output IF identifiers (output 1, output 2, …) obtained from f.output.list can be specified.
- For parameters where min/max/list can be obtained, control and status acquisition are possible within this range. The behavior, when a value outside the range is specified, depends on the camera specifications.
  - When min/max can be obtained: Setting value between min (minimum value) to max (maximum value)
  - When list can be obtained: The obtained setting value
- For parameters where min/max/list can be obtained, it is recommended to refer to parameters every time, rather than hard-coding the values directly.
  This enables to execute by a single code even when the value is different depending on the model or when the value is changed by the firmware upgrade of the remote camera since it is not necessary to change according to the model or the version on the client side.

Table 19 Parameters of info.cgi/control.cgi

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
System Information [s]	s	-	*<int >*	--P-	Session ID
System Information [s]	s.action	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from s.action.list	-C--	System action
System Information [s]	s.action.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	save	G--U	System action list save: Saves camera information in a batch
System Information [s]	s.system.status	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	idle, busy	G--U	System operation status idle: Idle state busy: Busy state
System Information [s]	s.origin	-	*<IP address >*:*<port number >* e.g. 192.168.10.1:80	--P-	Camera server IP address and port number
System Information [s]	s.duration	-	0…*<Maximum connection time >*	G-PU	Remaining session time * Unit: second 0: Unlimited * The maximum remaining connection time for a session is the model-specific "maximum connection time"
System Information [s]	s.priority	-	0...50	GCPU	Session priority 0: General session 1...4: Reserved (*) 5...50: Privileged session (*) If specified, it is treated as "5"
System Information [s]	s.control	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	enabled [:*<assigned time >*] | waiting [:*<standby time >*] | disabled e.g. enabled:500	G-PU	Indicates the state of camera control privileges Unit: millisecond enabled: Obtaining camera control privileges waiting: Waiting to obtain camera control privileges disabled: Failed to obtain camera control
System Information [s]	s.epoch	-	*<day of the week >*, *<day >* *<month >* *<year >* *<hour >*:*<minute >*:*<second >* *<time zone >* e.g. Wed, 24 Jun 2020 17:07:45 +0900	G--U	Start time
System Information [s]	s.hardware	-	e.g. CR-N500	G---	Model name
System Information [s]	s.hardware.id	-	e.g. 110	G---	Hardware ID
System Information [s]	s.hardware.address	-	e.g. 000085000000	G---	MAC address
System Information [s]	s.hardware.maxsize	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	3840x2160	G---	Maximum image size
System Information [s]	s.firmware	-	e.g. 1.0.0	G---	Firmware version
System Information [s]	s.protocol	-	e.g. 5.0.0	G---	Protocol version
System Information [s]	s.maxsize	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1920x1080 | 3840x2160	G--U	Maximum resolution
System Information [s]	s.power.source	C500mk2 C400 C300mk3 C70 XF605	dc | battery | checking	G--U	Power supply type dc: DC power supply battery: battery checking: Checking in progress, analysis in progress
System Information [s]	s.power.volt	C500mk2 C400 C300mk3 C70 XF605	e.g. 160 Null value if there is no information.	G--U	Power supply voltage value * The unit is the number of volts multiplied by 10 (100 mV units). Null value: No information

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
System Information [s]	s.power.minute	C500mk2 C400 C300mk3 C70 XF605	e.g. 50 Null value if there is no information.	G--U	Power supply time remaining * The unit is minutes (0 to 9999). Null value: No information
System Information [s]	s.power.percent	C500mk2 C400 C300mk3 C70 XF605	e.g. 50 Null value if there is no information.	G--U	Power supply remaining * The unit is % (0 to 100). Null value: No information
Video Information [v]	v	-	*<jpg|h264>*: *<video width>*x*<video height>*: *<video quality>*: *<frame rate>* e.g. h264:1920x1080:0:59940 e.g. jpg:1280x720:6:14980	G-PU	Stream being selected * *<video quality>* is a step value (Same as setting value: 1...10)
Video Information [v]	v.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	*<jpg|h264>: <video width>*x*<video height>: <video quality>: <frame rate>* e.g. h264:1920x1080:0:59940 e.g. jpg:1280x720:6:14980	G--U	Parameter list of video stream * *<video quality>* is 0: Fixed bit rate (CBR) 1…10: Variable bit rate (value is Q value)
		C500mk2 C400 C300mk3 C70 XF605	*<jpg>*: *<video width>*x*<video height>: <video quality>: <frame rate>* e.g. jpg:1024x576:8:29970		
Video Information [v]	v.h264.cbr	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	e.g. 15000	G--U	H.264 target bit rate * Unit: kbps
Video Information [w]	w	-	1...w.count	G-PU	Stream being selected
Video Information [w]	w.maxsize	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	3840x2160	G---	Maximum video size of stream
		C500mk2 C400 C300mk3 C70 XF605	1024x576		
Video Information [w]	w.count	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	3	G--U	Number of stream lists
		C500mk2 C400 C300mk3 C70 XF605	1		
Video Information [w]	w.<w>.status	-	enabled | disabled	G--U	Status of stream
Video Information [w]	w.<w>.type	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	jpg | h264 | h265	G--U	Stream video codec
		C500mk2 C400 C300mk3 C70 XF605	jpg		
Video Information [w]	w.<w>.type.profile	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	baseline | main | high	G--U	Profile of video codec baseline: Baseline profile main: Main profile high: High profile
Video Information [w]	w.<w>.kind	-	overview	G--U	By stream video type

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Video Information [w]	w.<w>.size	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	320x240 | 640x480 | 1280x960 | 320x180 | 640x360 | 1280x720 | 480x270 | 960x540 | 1920x1080	G--U	Video size of stream
		C500mk2 C400 C300mk3 C70 XF605	1024x576		
Video Information [w]	w.<w>.quality	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1…10	G--U	Q value of stream * Low quality 1 ←→ 10 High quality
		C500mk2 C400 C300mk3 C70 XF605	8		
Video Information [w]	w.<w>.cbr	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	64…16384	G--U	Stream target bit rate * Unit = kbps
Video Information [w]	w.<w>.frate	-	w.<w>.frate.min… w.<w>.frate.max	G-PU	Frame rate value of stream * Frame rate multiplied by 1000
Video Information [w]	w.<w>.frate.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	100	G--U	Minimum configurable stream frame rate value * Frame rate multiplied by 1000
		C500mk2 C400 C300mk3 C70 XF605	e.g. 29970 * w.<w>.frate.min and w.<w>.frate.max are the same value		
Video Information [w]	w.<w>.frate.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	30000	G--U	Maximum configurable stream frame rate value * Frame rate multiplied by 1000
		C500mk2 C400 C300mk3 C70 XF605	e.g. 29970 * w.<w>.frate.min and w.<w>.frate.max are the same value		
Video Information [w]	w.<w>.crop	-	off	G--U	If cropped or not
Camera Information [c]	c	-	1	G--U	Selected camera number * Always 1.
Camera Information [c]	c.count	-	1	G---	Number of cameras * Always 1.
Camera Information [c]	c.<c>.type	-	e.g. CR-N500	G---	Type of camera
Camera Information [c]	c.<c>.status	-	enabled | disabled	G--U	Camera controllable status * "disabled" is displayed immediately after startup. After initialization, "enabled" is displayed.
Camera Information [c]	c.<c>.platform.status	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	initialized | uninitialized	G--U	Pan tilt head operation status
Camera Information [c]	c.<c>.platform.error	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0 | 1	G--U	Pan tilt head deviation information 0: No error 1: Error
Camera Information [c]	c.<c>.name.utf8	-	<*unicode*>	G--U	Camera name (UTF-8)
Light Amount Correction Information [c]	c.<c>.shooting	-	Selected from c.<c>.shooting.list	GC-U	Shooting mode

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.shooting.list	CR-N700 CR-N500 XF605	fullauto, manual	G--U	Shooting mode list
		CR-N300 CR-N100 CR-X300	fullauto, manual, scene		
		C500mk2 C400 C300mk3 C70	manual		
Light Amount Correction Information [c]	c.<c>.scene	CR-N300 CR-N100 CR-X300	Selected from c.<c>.scene.list	GC-U	Scene mode
Light Amount Correction Information [c]	c.<c>.scene.list	CR-N300 CR-N100 CR-X300	portrait, sports, lowlight, spotlight	G--U	Scene mode list
Light Amount Correction Information [c]	c.<c>.exp	-	Selected from c.<c>.exp.list	GC-U	Exposure mode list * When c.<c>.shooting is "manual" and c.<c>.exp is "auto," the camera's behavior is P (program AE)
Light Amount Correction Information [c]	c.<c>.exp.list	CR-N700 CR-N500 XF605	auto, manual	G--U	Exposure mode list
		CR-N300 CR-N100 CR-X300	auto, av, tv, manual		
		C500mk2 C400 C300mk3 C70	manual		
Light Amount Correction Information [c]	c.<c>.ae.brightness	-	c.<c>.ae.brightness.min… c.<c>.ae.brightness.max	GC-U	Exposure compensation value * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.ae.brightness.min	-	-8	G--U	Minimum configurable exposure compensation value (dark) * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.ae.brightness.max	-	8	G--U	Maximum configurable exposure compensation value (bright) * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.ae.brightness.list	-	-8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8	G--U	Exposure compensation list * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.me.brightness	-	c.<c>.me.brightness.min… c.<c>.me.brightness.max	GC-U	Exposure compensation value * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.me.brightness.min	-	-8	G--U	Minimum configurable exposure compensation value (dark) * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.me.brightness.max	-	8	G--U	Maximum configurable exposure compensation value (bright) * EV value multiplied by 4
Light Amount Correction Information [c]	c.<c>.ae.photometry	-	Selected from c.<c>.ae.photometry.list	GC-U	Metering mode
Light Amount Correction Information [c]	c.<c>.ae.photometry.list	-	center, spotlight, backlight	G--U	Metering mode list center: Center-weighted average metering backlight: Metering mainly on low exposure part spotlight: Metering mainly on low exposure part
Light Amount Correction Information [c]	c.<c>.me.photometry	-	Selected from c.<c>.me.photometry.list	GC-U	Metering mode
Light Amount Correction Information [c]	c.<c>.me.photometry.list	-	center, spotlight, backlight	G--U	Metering mode list center: Center-weighted average metering backlight: Metering mainly on low exposure part spotlight: Metering mainly on high exposure part
Light Amount Correction Information [c]	c.<c>.ae.resp	-	c.<c>.ae.resp.min... c.<c>.ae.resp.max	GC-U	AE response * Convergence speed when c.<c>.exp is "auto"
Light Amount Correction Information [c]	c.<c>.ae.resp.min	-	0	G--U	Minimum configurable AE response value

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.ae.resp.max	-	2	G--U	Maximum configurable AE response value
Light Amount Correction Information [c]	c.<c>.me.resp	-	c.<c>.me.resp.min… c.<c>.me.resp.max	GC-U	AE response (convergence speed for manual exposure) * Convergence speed when c.<c>.exp is "manual"
Light Amount Correction Information [c]	c.<c>.me.resp.min	-	0	G--U	Minimum configurable AE response value
Light Amount Correction Information [c]	c.<c>.me.resp.max	-	2	G--U	Maximum configurable AE response value
Light Amount Correction Information [c]	c.<c>.me.diaphragm.mode	-	Selected from c.<c>.me.diaphragm.mode.list	GC-U	Aperture mode (F-number/T-number)
Light Amount Correction Information [c]	c.<c>.me.diaphragm.mode.list	-	auto, manual	G--U	Aperture mode (F-number/T-number) list
Light Amount Correction Information [c]	c.<c>.me.diaphragm.increment	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from diaphragm.increment.list	GC-U	Iris increment
Light Amount Correction Information [c]	c.<c>.me.diaphragm.increment.list	CR-N700 XF605	3, 4	G--U	Iris increment * Inverse of set value
		C500mk2 C400 C300mk3 C70	2, 3		
Light Amount Correction Information [c]	c.<c>.me.diaphragm.fine	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.me.diaphragm.fine.list	GC-U	Iris fine
Light Amount Correction Information [c]	c.<c>.me.diaphragm.fine.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Iris fine list
Light Amount Correction Information [c]	c.<c>.me.diaphragm.ft	C500mk2 C400 C300mk3 C70	Selected from c.<c>.me.diaphragm.ft.list	G--U	Iris indicator (F-number/T-number) * In cameras where this setting value cannot be obtained, it is interpreted as fixed at "f".
Light Amount Correction Information [c]	c.<c>.me.diaphragm.ft.list	C500mk2 C400 C300mk3 C70	f, t	G--U	Iris indicator list
Light Amount Correction Information [c]	c.<c>.ae.diaphragm	CR-N300 CR-N100 CR-X300 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.ae.diaphragm.list	GC-U	Aperture value (F-number)
Light Amount Correction Information [c]	c.<c>.ae.diaphragm.list	CR-N300 CR-N100	e.g. 180...2200 * The list changes depending on the value of c.<c>.nd.mode	G--U	Aperture value (F-number) list * F-number multiplied by 100 65535: Close * Includes the amount of compensation by an ND filter if the ND filter is dynamically inserted or removed during iris adjustment
		CR-X300	e.g. 180...65535 * The list changes depending on the value of c.<c>.nd.mode and c.<c>.ae.diaphragm.restrict		
		C500mk2 C400 C300mk3 C70 XF605	e.g. 100...9100, 65535 * The list changes depending on the value of c.<c>.me.diaphragm.increment		
Light Amount Correction Information [c]	c.<c>.me.diaphragm	-	Selected from c.<c>.me.diaphragm.list	GC-U	Aperture value (F-number)

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.me.diaphragm.list	CR-N500	280...1100	G--U	Aperture value (F-number) list * F-number multiplied by 100 65535: Close * Includes the amount of compensation by an ND filter if the ND filter is dynamically inserted or removed during iris adjustment
		CR-N300 CR-N100	e.g. 180...2200 * List changes depending on the value of c.<c>.nd.mode		
		CR-X300	e.g. 180...2200, 65535 * List changes depending on the value of c.<c>.nd.mode and c.<c>.ae.diaphragm.restrict		
		CR-N700 C500mk2 C400 C300mk3 C70 XF605	e.g. 100...9100, 65535 * List changes depending on the value of c.<c>.me.diaphragm.increment		
Light Amount Correction Information [c]	c.<c>.me.diaphragm.shift	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.me.diaphragm.shift.min … c.<c>.me.diaphragm.shift.max	-C--	Relative control of iris (F-number) * Specifies the amount of shift to the valid value using the current value as a reference * The unit is not F * 1… : F value increases (bright) * …-1 < 0 : F value decreases (dark)
Light Amount Correction Information [c]	c.<c>.me.diaphragm.shift.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-100	G--U	Limit of the amount of shift on the minus side of the iris relative control
Light Amount Correction Information [c]	c.<c>.me.diaphragm.shift.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	100	G--U	Limit of the amount of shift on the plus side of the iris relative control
Light Amount Correction Information [c]	c.<c>.me.diaphragm.t	C500mk2 C400 C300mk3 C70	Selected from c.<c>.me.diaphragm.t.list	GC-U	Iris (T-number) * T-number multiplied by 100
Light Amount Correction Information [c]	c.<c>.me.diaphragm.t.list	C500mk2 C400 C300mk3 C70	e.g. 100…9100, 65535 List changes depending on the value of c.<c>.me.diaphragm.increment	G--U	Iris (T-number) list * T-number multiplied by 100
Light Amount Correction Information [c]	c.<c>.me.diaphragm.t.shift	C500mk2 C400 C300mk3 C70	c.<c>.me.diaphragm.t.shift.min… c.<c>.me.diaphragm.t.shift.max	-C--	Relative control of iris (T-number) * Specifies the amount of shift to the valid value using the current value as a reference * The unit is not T * 1… : T value increases (bright) * …-1 : T value decreases (dark)
Light Amount Correction Information [c]	c.<c>.me.diaphragm.t.shift.min	C500mk2 C400 C300mk3 C70	-100	G--U	Limit of the amount of shift on the minus side of the iris (T-number) relative control.
Light Amount Correction Information [c]	c.<c>.me.diaphragm.t.shift.max	C500mk2 C400 C300mk3 C70	100	G--U	Limit of the amount of shift on the plus side of the iris (T-number) relative control.
Light Amount Correction Information [c]	c.<c>.ae.iris	CR-N300 CR-N100 CR-X300	c.<c>.ae.iris.min... c.<c>.ae.iris.max	GC-U	Iris (abstract value) * A granularity setting value expressed as an abstract value as it cannot be expressed by F-/T-numbers.
Light Amount Correction Information [c]	c.<c>.ae.iris.min	CR-N300 CR-N100 CR-X300	36	G--U	Minimum value for iris (abstract value) * This is the minimum configurable aperture value, and the F-number/T-number is the maximum.
Light Amount Correction Information [c]	c.<c>.ae.iris.max	CR-N300 CR-N100 CR-X300	296	G--U	Maximum value for Iris (abstract value) * This is the maximum configurable aperture value, and the F-number/T-number is the minimum

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.me.iris	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.me.iris.min… c.<c>.me.iris.max * The value may be rounded up or rounded down when used in camera control. e.g. 112 ⇒ 108 e.g. 113 ⇒ 117	GC-U	Iris (abstract value) * A granularity setting value expressed as an abstract value as it cannot be expresed by F-/T-numbers.
Light Amount Correction Information [c]	c.<c>.me.iris.min	CR-N500 CR-N300 CR-N100	108	G--U	Minimum value for iris (abstract value) * Aperture side; F-number is maximum
		CR-X300	36		
		CR-N700	e.g 27 * The list changes depending on the value of c.<c>.me.diaphragm.restrict		
Light Amount Correction Information [c]	c.<c>.me.iris.max	CR-N500 CR-N300 CR-N100	250	G--U	Maximum value for Iris (abstract value) * Open side; F-number is minimum
		CR-X300	296		
		CR-N700	252		
Light Amount Correction Information [c]	c.<c>.ae.fno	CR-N300 CR-N100 CR-X300 C500mk2 C400 C300mk3 C70 XF605	e.g. 180	G--U	Iris (F-number) * Read-only * It does not include the amount of compensation by an ND filter even if the filter is dynamically inserted or removed during iris adjustment.
Light Amount Correction Information [c]	c.<c>.me.fno	-	e.g. 180	G--U	Aperture (F-number) * Read-only * Does not include the amount of compensation by an ND filter even if the ND filter is dynamically inserted or removed during iris adjustment
Light Amount Correction Information [c]	c.<c>.ae.diaphragm.restrict	CR-X300 XF605	Selected from c.<c>.ae.diaphragm.restrict.list	GC-U	Iris limit
Light Amount Correction Information [c]	c.<c>.ae.diaphragm.restrict.list	CR-X300 XF605	off, on	G--U	Iris limit list
Light Amount Correction Information [c]	c.<c>.me.diaphragm.restrict	CR-N700 CR-X300 XF605	Selected from c.<c>.me.diaphragm.restrict.list	GC-U	Ilis limit
Light Amount Correction Information [c]	c.<c>.me.diaphragm.restrict.list	CR-N700 CR-X300 XF605	off, on	G--U	Ilis limit list
Light Amount Correction Information [c]	c.<c>.me.shutter.mode	-	Selected from c.<c>.me.shutter.mode.list	GC-U	Shutter speed mode
Light Amount Correction Information [c]	c.<c>.me.shutter.mode.list	CR-N500	auto, speed, slow, clearscan	G--U	Shutter speed mode list
		CR-N300 CR-N100 CR-X300	When c.<c>.exp = tv: speedslow When other than c.<c>.exp = tv: auto, speed, slow, clearscan		
		C500mk2 C400 C300mk3 C70	speed, slow, clearscan, angle, off		
		CR-N700 XF605	auto, speed, slow, clearscan, angle, off		
Light Amount Correction Information [c]	c.<c>.me.shutter.increment	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.me.shutter.increment.list	GC-U	Shutter increment * Valid only when c.<c>.me.shutter.mode is set "speed"
Light Amount Correction Information [c]	c.<c>.me.shutter.increment.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	3, 4	G--U	Shutter increment list * Inverse of set value

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.ae.shutter	CR-N300 CR-N100 CR-X300 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.ae.shutter.list	GC-U	Shutter speed * Valid when c.<c>.me.shutter.mode is set to a setting other than "clearscan" and "angle"
Light Amount Correction Information [c]	c.<c>.ae.shutter.list	CR-N300 CR-N100 CR-X300	e.g. 2...2000	G--U	Shutter speed list
		C500mk2 C400 C300mk3 C70 XF605	e.g. 12...2000		
Light Amount Correction Information [c]	c.<c>.me.shutter	-	Selected from c.<c>.me.shutter.list	GC-U	Shutter speed * Valid when me.shutter.mode is set to a setting other than "clearscan" and "angle"
Light Amount Correction Information [c]	c.<c>.me.shutter.list	CR-N500	e.g. 60...2000	G--U	Shutter speed list * Changes by the value of c.<c>.me.shutter.mode and the camera frame rate.
		CR-N300 CR-N100 CR-X300	e.g. 2...2000		
		CR-N700 C500mk2 C400 C300mk3 C70 XF605	e.g. 12...2000		
Light Amount Correction Information [c]	c.<c>.me.clearscan	-	c.<c>.me.clearscan.min… c.<c>.me.clearscan.max * The value may be rounded up or rounded down when used in camera control. e.g. 6001 ⇒ 5994 e.g. 6002 ⇒ 6010	GC-U	Shutter speed during clear scan * Value obtained by multiplying 100 to Hz
Light Amount Correction Information [c]	c.<c>.me.clearscan.min	-	e.g. 5994 * Changes depending on camera frame frequency	G--U	Minimum configurable shutter speed value during clear scan * Value obtained by multiplying 100 to Hz
Light Amount Correction Information [c]	c.<c>.me.clearscan.max	-	e.g. 25038 * Changes depending on camera frame frequency	G--U	Maximum configurable shutter speed value during clear scan * Value obtained by multiplying 100 to Hz
Light Amount Correction Information [c]	c.<c>.me.clearscan.shift	-	c.<c>.me.clearscan.shift.min… c.<c>.me.clearscan.shift.max	-C--	Relative control of shutter speed during clear scan * Specifies the amount of shift to the valid value using the current value as a reference * The unit is not Hz * Obtain the clearscan value (Hz) from c.<c>.me.clearscan
Light Amount Correction Information [c]	c.<c>.me.clearscan.shift.min	-	-100	G--U	Limit of the amount of shift on the minus side of the clear scan relative control
Light Amount Correction Information [c]	c.<c>.me.clearscan.shift.max	-	100	G--U	Limit of the amount of shift on the plus side of the clear scan relative control
Light Amount Correction Information [c]	c.<c>.me.angle	-	Selected from c.<c>.me.shutter.angle.list	GC-U	Shutter speed when in "angle" * Value obtained multiplied by 100 to angle * Valid only when the value in c.<c>.me.shutter.mode is "angle"
Light Amount Correction Information [c]	c.<c>.me.angle.list	-	e.g. 36000, 24000, 18000, 12000, 9000、6000, 4500, 3000, 2250, 1500, 1125	G--U	Shutter angle list * Value obtained multiplied by 100 to angle * Valid only when the value in c.<c>.me.shutter.mode is "angle" * Changes depending on the camera system frequency
Light Amount Correction Information [c]	c.<c>.ae.shutter.restrict	CR-N300 CR-N100 CR-X300 XF605	Selected from c.<c>.ae.shutter.restrict.list	GC-U	Auto slow shutter

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.ae.shutter.restrict.list	CR-N300 CR-N100 CR-X300 XF605	off, on	G--U	Auto slow shutter list
Light Amount Correction Information [c]	c.<c>.me.shutter.restrict	CR-N700 CR-N300 CR-N100 CR-X300 XF605	Selected form c.<c>.me.shutter.restrict.list	GC-U	Auto slow shutter
Light Amount Correction Information [c]	c.<c>.me.shutter.restrict.list	CR-N700 CR-N300 CR-N100 CR-X300 XF605	off, on	G--U	Auto slow shutter list
Light Amount Correction Information [c]	c.<c>.ae.flickerreduct	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	Selected from c.<c>.ae.flickerreduct.list	GC-U	Flicker reduction
Light Amount Correction Information [c]	c.<c>.ae.flickerreduct.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	off, auto	G--U	Flicker reduction list
Light Amount Correction Information [c]	c.<c>.me.flickerreduct	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	Selected from c.<c>.me.flickerreduct.list	GC-U	Flicker reduction
Light Amount Correction Information [c]	c.<c>.me.flickerreduct.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	off, auto	G--U	Flicker reduction list
Light Amount Correction Information [c]	c.<c>.me.isogain.mode	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.me.isogain.mode.list	GC-U	ISO/gain mode
Light Amount Correction Information [c]	c.<c>.me.isogain.mode.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	iso, gain	G--U	ISO/gain mode list
Light Amount Correction Information [c]	c.<c>.me.gain.mode	-	Selected from c.<c>.me.gain.mode.list	GC-U	Gain mode
Light Amount Correction Information [c]	c.<c>.me.gain.mode.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C400 C300mk3 C70 XF605	auto, manual	G--U	Gain mode list
		C500mk2	manual		
Light Amount Correction Information [c]	c.<c>.me.gain.extended	C500mk2 C400 C300mk3 C70	Selected from c.<c>.me.gain.extended.list	GC-U	ISO/Gain sensitivity extension * Received when c.<c>.me.isogain.mode is "iso" or "gain"
Light Amount Correction Information [c]	c.<c>.me.gain.extended.list	C500mk2 C400 C300mk3 C70	off, on	G--U	ISO/Gain sensitivity extension list
Light Amount Correction Information [c]	c.<c>.me.gain.increment	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.me.gain.increment.list	GC-U	Gain increment

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.me.gain.increment.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	normal, fine	G--U	Gain increment list
Light Amount Correction Information [c]	c.<c>.me.gain	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.me.gain.min… c.<c>.me.gain.max * Receives in 0.5 dB increments (5 for I/F)	GC-U	Gain * Unit: dB multiplied by 10
		CR-N700 C500mk2 C400 C300mk3 C70 XF605	When c.<c>.me.gain.increment = normal: c.<c>.me.gain.list When c.<c>.me.gain.increment = fine: c.<c>.me.gain.min… c.<c>.me.gain.max		
Light Amount Correction Information [c]	c.<c>.me.gain.min	CR-N700 CR-N500 XF605	-60	G--U	Minimum configurable gain value * Unit: dB multiplied by 10
		CR-N300 CR-N100 CR-X300	0		
		C500mk2 C400 C300mk3 C70	When c.<c>.me.gain.extended = off: -20 When c.<c>.me.gain.extended = on: -60		
Light Amount Correction Information [c]	c.<c>.me.gain.max	CR-N700 CR-N500	330	G--U	Maximum configurable gain value * Unit: dB multiplied by 10
		CR-N300 CR-N100 CR-X300	c.<c>.me.gainlimit.max		
		XF605	When c.<c>.me.gain.boost = off: 210 When c.<c>.me.gain.boost = on: 360		
		C500mk2 C400 C300mk3 C70	When c.<c>.me.gain.extended = off: 420 When c.<c>.me.gain.extended = on: 540		
Light Amount Correction Information [c]	c.<c>.me.gain.list	C500mk2 C400 C300mk3 C70	e.g. -60...540 * Can be referred to only when c.<c>.me.gain.increment is normal	G--U	Gain list * Unit: dB multiplied by 10
		CR-N700 XF605	e.g. -60...210 * Can be referred to only when c.<c>.me.gain.increment is normal		
Light Amount Correction Information [c]	c.<c>.me.gain.boost	CR-N700 XF605	Selected from c.<c>.me.gain.boost.list	GC-U	Gain boost
Light Amount Correction Information [c]	c.<c>.me.gain.boost.list	CR-N700 XF605	off, on	G--U	Gain boost list
Light Amount Correction Information [c]	c.<c>.me.gain.highsensitive	CR-N700 XF605	Selected from c.<c>.me.gain.highsensitive.list	GC-U	High sensitivity mode
Light Amount Correction Information [c]	c.<c>.me.gain.highsensitive.list	CR-N700 XF605	off, on	G--U	High sensitivity mode list
Light Amount Correction Information [c]	c.<c>.me.gain.shockless	CR-N700 XF605	Selected from c.<c>.me.gain.shockless.list	GC-U	Shockless gain
Light Amount Correction Information [c]	c.<c>.me.gain.shockless.list	CR-N700 XF605	off, high, normal, low	G--U	Shockless gain list
Light Amount Correction Information [c]	c.<c>.ae.gainlimit.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.ae.gainlimit.max.min… c.<c>.ae.gainlimit.max.max * Received by increments of 0.5 dB (5 as I/F).	GC-U	Gain limit on the maximum (upper) side * Value obtained by multiplying 10 to dB
		CR-N700 C400 C300mk3 C70 XF605	c.<c>.ae.gainlimit.list * Received by increments of 0.5 dB (5 as I/F).		
Light Amount Correction Information [c]	c.<c>.ae.gainlimit.max.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0	G--U	Minimum configurable gain limit value on maximum (upper) side * Value obtained by multiplying 10 to dB

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.ae.gainlimit.max.max	CR-N700 CR-N500	330	G--U	Maximum configurable gain limit value on maximum (upper) side * Value obtained by multiplying 10 to dB
			300		
		CR-N300 CR-N100 CR-X300	360		
Light Amount Correction Information [c]	c.<c>.ae.gainlimit.max.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	-60...210	G--U	Gain limit list on maximum (upper) side * Value obtained by multiplying 10 to dB
		C300mk3 C70	40...540		
		C400	-20...540		
Light Amount Correction Information [c]	c.<c>.me.gainlimit.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.me.gainlimit.max.min… c.<c>.me.gainlimit.max.max * Received by increments of 0.5 dB (5 as I/F).	GC-U	Gain limit on the maximum (upper) side * Unit: dB multiplied by 10
		C400 C300mk3 C70 XF605	c.<c>.me.gainlimit.max.list		
Light Amount Correction Information [c]	c.<c>.me.gainlimit.max.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	-60	G--U	Minimum configurable gain limit value on maximum (upper) side * Unit: dB multiplied by 10
Light Amount Correction Information [c]	c.<c>.me.gainlimit.max.max	CR-N500	330	G--U	Maximum configurable gain limit value on maximum (upper) side * Unit: dB multiplied by 10
		CR-N300 CR-N100 CR-X300	360		
		CR-N700	210		
Light Amount Correction Information [c]	c.<c>.me.gainlimit.max.list	XF605	-60...210	G--U	Gain limit list on maximum (upper) side * Unit: dB multiplied by 10
		C300mk3 C70	40...540		
		C400	-20...540		
Light Amount Correction Information [c]	c.<c>.me.iso.mode	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from iso.mode.list	GC-U	ISO mode
Light Amount Correction Information [c]	c.<c>.me.iso.mode.list	CR-N700 C400 C300mk3 C70 XF605	auto, manual	G--U	ISO mode list
		C500mk2	manual		
Light Amount Correction Information [c]	c.<c>.me.iso.increment	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.me.iso.increment.list	GC-U	ISO increment
Light Amount Correction Information [c]	c.<c>.me.iso.increment.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	1, 3	G--U	ISO incremement list * Inverse of set value
Light Amount Correction Information [c]	c.<c>.me.iso	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.me.iso.list	GC-U	ISO sensitivity
Light Amount Correction Information [c]	c.<c>.me.iso.list	CR-N700 XF605	e.g. 200…12800 * The list changes depending on the value of c.<c>.me.iso.increment	G--U	ISO sensitivity list
		C500mk2 C400 C300mk3 C70	e.g. 100...102400 * The list changes depending on the value of c.<c>.me.iso.increment		
Light Amount Correction Information [c]	c.<c>.me.isolimit.max	CR-N700 C400 C300mk3 C70 XF605	c.<c>.me.isolimit.max.list	GC-U	ISO sensitivity limit on maximum (upper) side * Unit: ISO

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.me.isolimit.max.list	CR-N700 XF605	200...12800	G--U	Configurable ISO limit list * Unit: ISO
		C300mk3 C70	320...102400		
		C400	160...102400		
Light Amount Correction Information [c]	c.<c>.me.baseiso	C400	Selected from c.<c>.me.baseiso.list		BaseISO
Light Amount Correction Information [c]	c.<c>.me.baseiso.list	C400	auto, iso800_12db, iso3200_12db…		BaseISO list Listing changes that depend on gamma/colorspace and other settings so400_6db, iso1600_6db etc
Light Amount Correction Information [c]	c.<c>.lenscorrect.diffraction	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.lenscorrect.diffraction.list	GC-U	Diffraction correction
Light Amount Correction Information [c]	c.<c>.lenscorrect.diffraction.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Diffraction correction list
Light Amount Correction Information [c]	c.<c>.dn.mode	CR-N700 CR-X300 XF605	Selected from c.<c>.dn.mode.list	GC-U	Infrared shooting control mode
Light Amount Correction Information [c]	c.<c>.dn.mode.list	CR-N700 CR-X300 XF605	manual	G--U	Infrared shooting control mode list
Light Amount Correction Information [c]	c.<c>.dn	CR-N700 CR-X300	Selected from c.<c>.dn.list	GC-U	Infrared shooting * Insertion and extraction of IR cut filter
		XF605	off | on * Read-only	G--U	
Light Amount Correction Information [c]	c.<c>.dn.list	CR-N700 CR-X300 XF605	off, on	G--U	Infrared shooting list off: Infrared off (day; with filter) on: Infrared on (night; without filter)
Light Amount Correction Information [c]	c.<c>.dn.reccolor	CR-N700 XF605	Selected from c.<c>.dn.reccolor.list	GC-U	Infrared shooting color * Color of images when in Infrared (infrared shooting) mode
Light Amount Correction Information [c]	c.<c>.dn.reccolor.list	XF605	white, green, fullcolor * "fullcolor" appears only when the function is available	G--U	Infrared shooting color list
		CR-N700	white, fullcolor * "fullcolor" appears only when the function is available		
Light Amount Correction Information [c]	c.<c>.colorbar	-	Selected from c.<c>.colorbar.list	GC-U	Color bars
Light Amount Correction Information [c]	c.<c>.colorbar.list	-	off, on	G--U	Color bars list
Light Amount Correction Information [c]	c.<c>.nd.mode	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.nd.mode.list	G--U	ND filter mode
		CR-N500 CR-N300 CR-N100 CR-X300		GC-U	
Light Amount Correction Information [c]	c.<c>.nd.mode.list	CR-N700 CR-N500 C500mk2 C400 C300mk3 C70 XF605	manual	G--U	ND filter mode list assist: ND filter changes following iris fixed: ND filter is fixed without following iris manual: Allows changing ND filter setting
		CR-N300 CR-N100 CR-X300	assist, fixed		

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Light Amount Correction Information [c]	c.<c>.nd.filter.extended	C500mk2 C400 C300mk3 C70	Selected from c.<c>.nd.filter.extended.list	GC-U	Extended ND range
Light Amount Correction Information [c]	c.<c>.nd.filter.extended.list	C500mk2 C400 C300mk3 C70	off, on	G--U	Extended ND range list
Light Amount Correction Information [c]	c.<c>.nd.format	C400	Selected from c.<c>.nd.format.list	GC-U	ND display units
Light Amount Correction Information [c]	c.<c>.nd.format.list	C400	stop, transmittance, opticaldensity	G--U	ND display units list
Light Amount Correction Information [c]	c.<c>.nd.filter	CR-N700 CR-N500 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.nd.filter.list	GC-U	ND filter status
		CR-N300 CR-N100 CR-X300	e.g. 400 * Read-only	G--U	
Light Amount Correction Information [c]	c.<c>.nd.filter.list	CR-N700 CR-N500 XF605	0, 400, 1600, 6400	G--U	ND filter list 0: ND filter OFF 400: 1/4 (2 stops) 1600: 1/16 (4 stops) 6400: 1/64 (6 stops) 25600: 1/256 (8 stops) 102400: 1/1024 (10 stop)
		C500mk2 C400 C300mk3 C70	When Extended ND Range is off: 0, 400, 1600, 6400 When Extended ND Range is on: 0, 400, 1600, 6400, 25600, 102400		
Light Amount Correction Information [c]	c.<c>.extnd.mode	CR-X300	Selected from c.<c>.extnd.mode.list	GC-U	Enhanced ND filter mode
Light Amount Correction Information [c]	c.<c>.extnd.mode.list	CR-X300	manual	G--U	Enhanced ND filter mode list
Light Amount Correction Information [c]	c.<c>.extnd.filter	CR-X300	Selected from c.<c>.extnd.filter.list	GC-U	Enhanced ND filter
Light Amount Correction Information [c]	c.<c>.extnd.filter.list	CR-X300	0, 3200	G--U	Enhanced ND filter list
Color Correction Information [c]	c.<c>.wb	-	Selected from c.<c>.wb.list	GC-U	White balance mode
Color Correction Information [c]	c.<c>.wb.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	auto, manual, kelvin, daylight, tungsten, wb_a, wb_b	G--U	White balance mode list
		C500mk2 C400 C300mk3 C70 XF605	auto, kelvin, daylight, tungsten, wb_a, wb_b		
Color Correction Information [c]	c.<c>.wb.action	-	Selected from c.<c>.wb.action.list	-C--	One-shot white balance * Register custom white balance
Color Correction Information [c]	c.<c>.wb.action.list	-	one_shot_a, one_shot_b	G--U	One-shot white balance list
Color Correction Information [c]	c.<c>.wb.value	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	*<R gain value>-<B gain value>* e.g. 256-640	GC-U	R gain, B gain (0...1023) * Valid when c.<c>.wb = manual
Color Correction Information [c]	c.<c>.wb.kelvin.increment	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from wb.kelvin.increment.list	GC-U	Color temperature step * Unit in which the c.<c>.wb.kelvin setting can be changed

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.wb.kelvin.increment.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	kelvin, mired	G--U	Color temperature step list kelvin: In units of 100 kelvins mired: In units of 5 mireds
Color Correction Information [c]	c.<c>.wb.kelvin	-	Selected from c.<c>.wb.kelvin.list	GC-U	Color temperature (K)
Color Correction Information [c]	c.<c>.wb.kelvin.list	-	2000...15000 * Valid only when c.<c>.wb = "kelvin"	G--U	Color temperature list (K)
Color Correction Information [c]	c.<c>.wb.kelvin.cc	-	c.<c>.wb.kelvin.cc.min… c.<c>.wb.kelvin.cc.max	GC-U	White balance color correction value (CC) * c.<c>.wb = Valid only when not "manual"
Color Correction Information [c]	c.<c>.wb.kelvin.cc.min	-	When c.<c>.wb = "daylight", "tungsten": -5 When c.<c>.wb = "auto", "kelvin", "wb_a", "wb_b": -20	G--U	Minimum configurable color correction value (CC) at c.<c>.wb
Color Correction Information [c]	c.<c>.wb.kelvin.cc.max	-	When c.<c>.wb = "daylight", "tungsten": 5 When c.<c>.wb = "auto", "kelvin", "wb_a", "wb_b": 20	G--U	Maximum configurable color correction value (CC) at c.<c>.wb
Color Correction Information [c]	c.<c>.wb.resp	-	c.<c>.wb.resp.min… c.<c>.wb.resp.max	GC-U	AWB response
Color Correction Information [c]	c.<c>.wb.resp.min	-	0	G--U	Minimum configurable value for AWB response
Color Correction Information [c]	c.<c>.wb.resp.max	-	2	G--U	Maximum configurable value for AWB response
Color Correction Information [c]	c.<c>.wb.shockless	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.wb.shockless.list	GC-U	Shockless WB
Color Correction Information [c]	c.<c>.wb.shockless.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Shockless WB list
Color Correction Information [c]	c.<c>.wb.awbhold	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.wb.awbhold.list	GC-U	AWB hold
Color Correction Information [c]	c.<c>.wb.awbhold.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	AWB hold list on: Stops auto white balance off: Executes auto white balance
Custom Picture Information [u]	u	CR-N700 C500mk2 C400 C300mk3 C70 XF605	1…u.count	GC-U	Custom Picture No.
Custom Picture Information [u]	u.count	CR-N700 C500mk2 C400 C300mk3 C70 XF605	20	G--U	Number of Custom Pictures
Custom Picture Information [u]	u.<u>.name	CR-N700 C500mk2 C400 C300mk3 C70 XF605	e.g. BT.709 Normal	G--U	Custom Picture name * Name of the currently selected Custom Picture No. [u]. * 16 alphanumeric characters or symbols
Custom Picture Information [u]	u.<u>.protect	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from u.<u>.protect.list	GC-U	Protect status of Custom Picture * Protect status of the currently selected Custom Picture No. [u]
Custom Picture Information [u]	u.<u>.protect.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Protect status list for custom pictures off: Unprotected state on: Protected state

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.cp	CR-N500	Selected from c.<c>.cp.list	GC-U	Custom picture (Customized image quality mode) * When this item is specified, c.<c>.gamma, c.<c>.colorspace, and c.<c>.colormatrix are changed to predetermined combination for each custom picture.
Color Correction Information [c]	c.<c>.cp.list	CR-N500	normal1_bt709, normal1_bt2020, widedr_bt709, widedr_bt2020, clog3_bt2020, clog3_bt709, off	G--U	Custom picture (custom picture quality mode) list
		CR-N700	normal1_bt709, widedr_bt709, standard_bt709, clog3, pq, hlg, eos_standard, eos_neutral, canon709_bt709, user		Parameter for resetting a custom picture
Color Correction Information [c]	c.<c>.gamma	-	Selected from c.<c>.gamma.list	GC-U	Gamma list * Specifies a combination of gamma and colorspace, depending on the product specification.
Color Correction Information [c]	c.<c>.gamma.list	CR-N500	normal1, normal2, normal3, normal4, widedr, clog3	G--U	Gamma list * Sets a combination of gamma and colorspace, depending on the product specification.
		CR-N300 CR-N100 CR-X300	normal1, normal3		
		CR-N700 XF605	clog3_cgamut, clog3_bt2020, clog3_bt709, pq_bt2020, hlg_bt2020, widedr_bt2020, widedr_bt709, normal_bt2020, normal_bt709, standard_bt709, canon709_bt709		
		C500mk2 C300mk3 C70	clog2_cgamut, clog3_cgamut, clog3_bt2020, clog3_bt709, pq_bt2020, hlg_bt2020, widedr_bt2020, widedr_bt709, normal_bt2020, normal_bt709, standard_bt709, canon709_bt709		
		C400	clog2_cgamut, clog3_cgamut, clog3_bt2020, clog3_bt709, pq_bt2020, hlg_bt2020, widedr_bt709, standard_bt709, canon709_bt709		
Color Correction Information [c]	c.<c>.colorspace	CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.colorspace.list	GC-U	Color space
Color Correction Information [c]	c.<c>.colorspace.list	CR-N500 CR-N300 CR-N100 CR-X300	gamut_bt709, gamut_bt2020	G--U	Color space list
Color Correction Information [c]	c.<c>.colormatrix	-	Selected from c.<c>.colormatrix.list	GC-U	Color Matrix
Color Correction Information [c]	c.<c>.colormatrix.list	CR-N500 CR-N300 CR-N100 CR-X300	video, neutral	G--U	Color Matrix list
		CR-N700 C500mk2 C400 C300mk3 C70 XF605	video, neutral, production_camera		
Color Correction Information [c]	c.<c>.lookfile	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.lookfile.list	GC-U	Applies look file picture quality setting
Color Correction Information [c]	c.<c>.lookfile.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Look file picture quality setting application list
Color Correction Information [c]	c.<c>.lookfile.name	CR-N700 C500mk2 C400 C300mk3 C70 XF605	<string>	G--U	Look file name * Name of the lookfile set for the selected custom picture.
Color Correction Information [c]	c.<c>.lookfile.before.gamma	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.gamma / c.<c>.colorspace	G--U	Gamma/Color Space setting value when registering lookfile

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.lookfile.before.hlgcolor	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.hlgcolor	G--U	HLG Color setting value when registering lookfile
Color Correction Information [c]	c.<c>.lookfile.before.over100	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.over100	G--U	Over 100% setting value when registering lookfile
Color Correction Information [c]	c.<c>.lookfile.before.whitelevel100	C400	c.<c>.knee.whitelevel100	G--U	White level 100% setting value when registering lookfile
Color Correction Information [c]	c.<c>.lookfile.after.gamma	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.gamma / c.<c>.colorspace	G--U	Gamma/Color Space settings after applying lookfile
Color Correction Information [c]	c.<c>.lookfile.after.gamma.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	cp, sdr_bt709, sdr_bt2020, hdr_pq_bt2100, hdr_hlg_bt2100	G--U	Configurable Gamma/Color Space setting value list after lookfile is applied
Color Correction Information [c]	c.<c>.hlgcolor	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.hlgcolor.list	GC-U	HLG Color * Sets the HLG Color tone.
Color Correction Information [c]	c.<c>.hlgcolor.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	vivid, bt2100	G--U	HLG Color list
Color Correction Information [c]	c.<c>.blacklevel	-	c.<c>.blacklevel.min… c.<c>.blacklevel.max	GC-U	Black Level （Black: Master Pedestal）
Color Correction Information [c]	c.<c>.blacklevel.min	C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of Black Level
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	-250		
Color Correction Information [c]	c.<c>.blacklevel.max	C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of Black Level
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	250		
Color Correction Information [c]	c.<c>.blacklevel.red	-	c.<c>.blacklevel.red.min… c.<c>.blacklevel.red.max	GC-U	Black level (RED) (Black: Master Black Red)
Color Correction Information [c]	c.<c>.blacklevel.red.min	C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of black level (RED)
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	-250		
Color Correction Information [c]	c.<c>.blacklevel.red.max	C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of black level (RED)
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	250		

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.blacklevel.green	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.blacklevel.green.min… c.<c>.blacklevel.green.max	GC-U	Black level (GREEN) (Black: Master Black Green)
Color Correction Information [c]	c.<c>.blacklevel.green.min	C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of black level (GREEN)
		CR-N700	-250		
Color Correction Information [c]	c.<c>.blacklevel.green.max	C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of black level (GREEN)
		CR-N700	250		
Color Correction Information [c]	c.<c>.blacklevel.blue	-	c.<c>.blacklevel.blue.min… c.<c>.blacklevel.blue.max	GC-U	Black level (BLUE) (Black: Master Black Blue)
Color Correction Information [c]	c.<c>.blacklevel.blue.min	C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of black level (BLUE)
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	-250		
Color Correction Information [c]	c.<c>.blacklevel.blue.max	C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of black level (BLUE)
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	250		
Color Correction Information [c]	c.<c>.blackgamma	-	c.<c>.blackgamma.min… c.<c>.blackgamma.max	GC-U	Black Gamma: Level
Color Correction Information [c]	c.<c>.blackgamma.min	-	-50	G--U	Minimum configurable value of Black Gamma: Level
Color Correction Information [c]	c.<c>.blackgamma.max	-	50	G--U	Maximum configurable value of Black Gamma: Level
Color Correction Information [c]	c.<c>.blackgamma.range	-	c.<c>.blackgamma.range.min… c.<c>.blackgamma.range.max	GC-U	Black Gamma: Range
Color Correction Information [c]	c.<c>.blackgamma.range.min	-	-20	G--U	Minimum configurable value of Black Gamma: Range
Color Correction Information [c]	c.<c>.blackgamma.range.max	-	50	G--U	Maximum configurable value of Black Gamma: Range
Color Correction Information [c]	c.<c>.blackgamma.point	-	c.<c>.blackgamma.point.min… c.<c>.blackgamma.point.max	GC-U	Black Gamma: Point
Color Correction Information [c]	c.<c>.blackgamma.point.min	-	-20	G--U	Minimum configurable value of Black Gamma: Point
Color Correction Information [c]	c.<c>.blackgamma.point.max	-	50	G--U	Maximum configurable value of Black Gamma: Point
Color Correction Information [c]	c.<c>.lowkeysaturation	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.lowkeysaturation.list	GC-U	Low key Saturation： Activate setting
Color Correction Information [c]	c.<c>.lowkeysaturation.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Low key Saturation: Activate list
Color Correction Information [c]	c.<c>.lowkeysaturation.level	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.lowkeysaturation.level.min… c.<c>.lowkeysaturation.level.max	GC-U	Low key Saturation： Level
Color Correction Information [c]	c.<c>.lowkeysaturation.level.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of Low Key Saturation： Level

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.lowkeysaturation.level.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of Low Key Saturation： Level
Color Correction Information [c]	c.<c>.knee	-	Selected from c.<c>.knee.list	GC-U	Knee: Activate
Color Correction Information [c]	c.<c>.knee.list	-	off, on	G--U	Knee: Activate setting list
Color Correction Information [c]	c.<c>.knee.automatic	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	Selected from c.<c>.knee.automatic.list	GC-U	Knee: Automatic
Color Correction Information [c]	c.<c>.knee.automatic.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	off, on	G--U	Knee: Automatic list
Color Correction Information [c]	c.<c>.knee.whitelevel100	C400	Selected from c.<c>.knee.whitelevel100.list	GC-U	Setting to limit the knee output to 100%
Color Correction Information [c]	c.<c>.knee.whitelevel100.list	C400	off, on	G--U	Setting to limit the knee output to 100% list
Color Correction Information [c]	c.<c>.knee.slope	-	c.<c>.knee.slope.min… c.<c>.knee.slope.max	GC-U	Knee: Slope
Color Correction Information [c]	c.<c>.knee.slope.min	-	-35	G--U	Minimum configurable value of Knee: Slope
Color Correction Information [c]	c.<c>.knee.slope.max	-	50	G--U	Maximum configurable value of Knee: Slope
Color Correction Information [c]	c.<c>.knee.point	-	c.<c>.knee.point.min… c.<c>.knee.point.max	GC-U	Knee: Point
Color Correction Information [c]	c.<c>.knee.point.min	-	50	G--U	Minimum configurable value of Knee: Point
Color Correction Information [c]	c.<c>.knee.point.max	-	109	G--U	Maximum configurable value of knee: point
Color Correction Information [c]	c.<c>.knee.saturation	-	c.<c>.knee.saturation.min… c.<c>.knee.saturation.max	GC-U	Knee: Saturation
Color Correction Information [c]	c.<c>.knee.saturation.min	-	-10	G--U	Minimum configurable value of Knee: Saturation
Color Correction Information [c]	c.<c>.knee.saturation.max	-	10	G--U	Maximum configurable value of Knee: Saturation
IS/NR/Sharpness [c]	c.<c>.nr	CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.nr.min… c.<c>.nr.max	GC-U	Noise Reduction
IS/NR/Sharpness [c]	c.<c>.nr.min	CR-N500 CR-N300 CR-N100 CR-X300	0	G--U	Minimum configurable value of Noise Reduction level
IS/NR/Sharpness [c]	c.<c>.nr.max	CR-N500 CR-N300 CR-N100 CR-X300	12	G--U	Maximum configurable value of Noise Reduction level
IS/NR/Sharpness [c]	c.<c>.nr.mode	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C400 XF605	Selected from nr.mode.list	GC-U	Noise Reduction Mode
IS/NR/Sharpness [c]	c.<c>.nr.mode.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C400 XF605	manual, auto	G--U	Noise Reduction Mode list
IS/NR/Sharpness [c]	c.<c>.nr.spatialfilter	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.nr.spatialfilter.min… c.<c>.nr.spatialfilter.max	GC-U	Noise reduction spatial filter
IS/NR/Sharpness [c]	c.<c>.nr.spatialfilter.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Noise Reduction Spatial Filter 0: Off

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
IS/NR/Sharpness [c]	c.<c>.nr.spatialfilter.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	12	G--U	Maximum configurable value of Noise Reduction Spatial Filter
IS/NR/Sharpness [c]	c.<c>.nr.framecorrelation	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.nr.framecorrelation.min… c.<c>.nr.framecorrelation.max	GC-U	Noise Reduction Frame Correlation
IS/NR/Sharpness [c]	c.<c>.nr.framecorrelation.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Noise Reduction Frame Correlation 0: Off
IS/NR/Sharpness [c]	c.<c>.nr.framecorrelation.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	3	G--U	Maximum configurable value of Noise Reduction Frame Correlation
IS/NR/Sharpness [c]	c.<c>.nr.snpriority	CR-N300 CR-N100 CR-X300	Selected from nc.<c>.nr.snpriority.list	GC-U	S/N priority mode
IS/NR/Sharpness [c]	c.<c>.nr.snpriority.list	CR-N300 CR-N100 CR-X300	off, on	G--U	S/N priority mode list
IS/NR/Sharpness [c]	c.<c>.ac	-	c.<c>.ac.min… c.<c>.ac.max	GC-U	Sharpness: Level
IS/NR/Sharpness [c]	c.<c>.ac.min	-	-10	G--U	Minimum configurable value of Sharpness: Level
IS/NR/Sharpness [c]	c.<c>.ac.max	-	50	G--U	Maximum configurable value of Sharpness: Level
IS/NR/Sharpness [c]	c.<c>.ac.detailfreq	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.ac.detailfreq.min… c.<c>.ac.detailfreq.max	GC-U	Sharpness: Detail Frequency
IS/NR/Sharpness [c]	c.<c>.ac.detailfreq.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-8	G--U	Minimum configurable value of Sharpness: Detail Frequency
IS/NR/Sharpness [c]	c.<c>.ac.detailfreq.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	8	G--U	Maximum configurable value of Sharpness: Detail Frequency
IS/NR/Sharpness [c]	c.<c>.ac.coringlevel	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.ac.coringlevel.min… c.<c>.ac.coringlevel.max	GC-U	Sharpness: Coring Level
IS/NR/Sharpness [c]	c.<c>.ac.coringlevel.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-30	G--U	Minimum configurable value of Sharpness: Coring Level
IS/NR/Sharpness [c]	c.<c>.ac.coringlevel.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of Sharpness: Coring Level
IS/NR/Sharpness [c]	c.<c>.ac.limit	-	c.<c>.ac.limit.min… c.<c>.ac.limit.max	GC-U	Sharpness: Limit
IS/NR/Sharpness [c]	c.<c>.ac.limit.min	-	-50	G--U	Minimum configurable value of Sharpness Limit
IS/NR/Sharpness [c]	c.<c>.ac.limit.max	-	50	G--U	Maximum configurable value of Sharpness Limit

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.skindetail.level	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.skindetail.level.min… c.<c>.skindetail.level.max	GC-U	Skin Detail: Effect Level
Color Correction Information [c]	c.<c>.skindetail.level.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Skin Detail: Effect Level
Color Correction Information [c]	c.<c>.skindetail.level.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	3	G--U	Maximum configurable value of Skin Detail: Effect Level
Color Correction Information [c]	c.<c>.skindetail.hue	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.skindetail.hue.min… c.<c>.skindetail.hue.max	GC-U	Skin Detail:Hue
Color Correction Information [c]	c.<c>.skindetail.hue.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-16	G--U	Minimum configurable value of Skin Detail: Hue
Color Correction Information [c]	c.<c>.skindetail.hue.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	16	G--U	Maximum configurable value of Skin Detail: Hue
Color Correction Information [c]	c.<c>.skindetail.chroma	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.skindetail.chroma.min… c.<c>.skindetail.chroma.max	GC-U	Skin Detail: Chroma
Color Correction Information [c]	c.<c>.skindetail.chroma.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Skin Detail: Chroma
Color Correction Information [c]	c.<c>.skindetail.chroma.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Skin Detail: Chroma
Color Correction Information [c]	c.<c>.skindetail.area	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.skindetail.area.min… c.<c>.skindetail.area.max	GC-U	Skin Detail: Area
Color Correction Information [c]	c.<c>.skindetail.area.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Skin Detail: Area
Color Correction Information [c]	c.<c>.skindetail.area.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Skin Detail: Area
Color Correction Information [c]	c.<c>.skindetail.ylevel	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.skindetail.ylevel.min… c.<c>.skindetail.ylevel.max	GC-U	Skin Detail: Y Level
Color Correction Information [c]	c.<c>.skindetail.ylevel.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Skin Detail: Y Level

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.skindetail.ylevel.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Skin Detail: Y Level
Color Correction Information [c]	c.<c>.colormatrix.gain	-	c.<c>.colormatrix.gain.min… c.<c>.colormatrix.gain.max	GC-U	Color Matrix Tuning: Gain
Color Correction Information [c]	c.<c>.colormatrix.gain.min	-	-50	G--U	Minimum configurable value of Color Matrix Tuning: Gain
Color Correction Information [c]	c.<c>.colormatrix.gain.max	-	50	G--U	Maximum configurable value of Color Matrix Tuning: Gain
Color Correction Information [c]	c.<c>.colormatrix.phase	-	c.<c>.colormatrix.phase.min… c.<c>.colormatrix.phase.max	GC-U	Color Color Matrix Tuning: phase
Color Correction Information [c]	c.<c>.colormatrix.phase.min	-	-18	G--U	Minimum configurable value of Color Matrix Tuning: phase
Color Correction Information [c]	c.<c>.colormatrix.phase.max	-	18	G--U	Maximum configurable value of Color Matrix Tuning: phase
Color Correction Information [c]	c.<c>.colormatrix.rg	-	c.<c>.colormatrix.rg.min… c.<c>.colormatrix.rg.max	GC-U	Color Matrix Tuning R-G
Color Correction Information [c]	c.<c>.colormatrix.rg.min	-	-50	G--U	Minimum configurable R-G value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.rg.max	-	50	G--U	Maximum configurable R-G value of color matrix
Color Correction Information [c]	c.<c>.colormatrix.rb	-	c.<c>.colormatrix.rb.min… c.<c>.colormatrix.rb.max	GC-U	Color Matrix Tuning R-B
Color Correction Information [c]	c.<c>.colormatrix.rb.min	-	-50	G--U	Minimum configurable R-B value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.rb.max	-	50	G--U	Maximum configurable R-B value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.gr	-	c.<c>.colormatrix.gr.min… c.<c>.colormatrix.gr.max	GC-U	Color Matrix Tuning G-R
Color Correction Information [c]	c.<c>.colormatrix.gr.min	-	-50	G--U	Minimum configurable G-R value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.gr.max	-	50	G--U	Maximum configurable G-R value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.gb	-	c.<c>.colormatrix.gb.min… c.<c>.colormatrix.gb.max	GC-U	Color Matrix Tuning G-B
Color Correction Information [c]	c.<c>.colormatrix.gb.min	-	-50	G--U	Minimum configurable G-B value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.gb.max	-	50	G--U	Maximum configurable G-B value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.br	-	c.<c>.colormatrix.br.min… c.<c>.colormatrix.br.max	GC-U	Color Matrix Tuning B-R
Color Correction Information [c]	c.<c>.colormatrix.br.min	-	-50	G--U	Minimum configurable B-R value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.br.max	-	50	G--U	Maximum configurable B-R value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.bg	-	c.<c>.colormatrix.bg.min… c.<c>.colormatrix.bg.max	GC-U	Color Matrix Tuning B-G
Color Correction Information [c]	c.<c>.colormatrix.bg.min	-	-50	G--U	Minimum configurable B-G value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.colormatrix.bg.max	-	50	G--U	Maximum configurable B-G value of Color Matrix Tuning
Color Correction Information [c]	c.<c>.wb.shift.rgain	-	c.<c>.wb.shift.rgain.min… c.<c>.wb.shift.rgain.max	GC-U	White Balance: R Gain
Color Correction Information [c]	c.<c>.wb.shift.rgain.min	-	-50	G--U	Minimum configurable value of White Balance: R Gain
Color Correction Information [c]	c.<c>.wb.shift.rgain.max	-	50	G--U	Maximum configurable value of White Balance: R Gain
Color Correction Information [c]	c.<c>.wb.shift.ggain	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.wb.shift.ggain.min… c.<c>.wb.shift.ggain.max	GC-U	White Balance: G Gain
Color Correction Information [c]	c.<c>.wb.shift.ggain.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of White Balance: G Gain
Color Correction Information [c]	c.<c>.wb.shift.ggain.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of White Balance: G Gain

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.wb.shift.bgain	-	c.<c>.wb.shift.bgain.min… c.<c>.wb.shift.bgain.max	GC-U	White Balance: B Gain
Color Correction Information [c]	c.<c>.wb.shift.bgain.min	-	-50	G--U	Minimum configurable value of White Balance: B Gain
Color Correction Information [c]	c.<c>.wb.shift.bgain.max	-	50	G--U	Maximum configurable value of White Balance: B Gain
Color Correction Information [c]	c.<c>.colorcorrection.area	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.colorcorrection.area.list	GC-U	Color Correction: Select Area
Color Correction Information [c]	c.<c>.colorcorrection.area.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, area_a, area_b, area_ab	G--U	Color Correction: Select Area list
Color Correction Information [c]	c.<c>.colorcorrection.a.phase	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.a.phase.min… c.<c>.colorcorrection.a.phase.max	GC-U	Color Correction: Area A Setting Phase
Color Correction Information [c]	c.<c>.colorcorrection.a.phase.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area A Setting Phase
Color Correction Information [c]	c.<c>.colorcorrection.a.phase.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area A Setting Phase
Color Correction Information [c]	c.<c>.colorcorrection.a.chroma	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.a.chroma.min… c.<c>.colorcorrection.a.chroma.max	GC-U	Color Correction: Area A Setting Chroma
Color Correction Information [c]	c.<c>.colorcorrection.a.chroma.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area A Setting Chroma
Color Correction Information [c]	c.<c>.colorcorrection.a.chroma.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area A Setting Chroma
Color Correction Information [c]	c.<c>.colorcorrection.a.area	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.a.area.min… c.<c>.colorcorrection.a.area.max	GC-U	Color Correction: Area A Setting Area
Color Correction Information [c]	c.<c>.colorcorrection.a.area.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area A Setting Area
Color Correction Information [c]	c.<c>.colorcorrection.a.area.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area A Setting Area
Color Correction Information [c]	c.<c>.colorcorrection.a.ylevel	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.a.ylevel.min… c.<c>.colorcorrection.a.ylevel.max	GC-U	Color Correction: Area A Setting Y Level
Color Correction Information [c]	c.<c>.colorcorrection.a.ylevel.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area A Setting Y Level

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.colorcorrection.a.ylevel.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area A Setting Y Level
Color Correction Information [c]	c.<c>.colorcorrection.a.revision.level	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.a.revision.level.min… c.<c>.colorcorrection.a.revision.level.max	GC-U	Color Correction: Area A Revision Level
Color Correction Information [c]	c.<c>.colorcorrection.a.revision.level.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of Color Correction: Area A Revision Level
Color Correction Information [c]	c.<c>.colorcorrection.a.revision.level.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of Color Correction: Area A Revision Level
Color Correction Information [c]	c.<c>.colorcorrection.a.revision.phase	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.a.revision.phase.min… c.<c>.colorcorrection.a.revision.phase.max	GC-U	Color Correction: Area A Revison Phase
Color Correction Information [c]	c.<c>.colorcorrection.a.revision.phase.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-18	G--U	Minimum configurable value of Color Correction: Area A Revison Phase
Color Correction Information [c]	c.<c>.colorcorrection.a.revision.phase.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	18	G--U	Maximum configurable value of Color Correction: Area A Revison Phase
Color Correction Information [c]	c.<c>.colorcorrection.b.phase	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.b.phase.min… c.<c>.colorcorrection.b.phase.max	GC-U	Color Correction: Area B Setting Phase
Color Correction Information [c]	c.<c>.colorcorrection.b.phase.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area B Setting Phase
Color Correction Information [c]	c.<c>.colorcorrection.b.phase.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area B Setting Phase
Color Correction Information [c]	c.<c>.colorcorrection.b.chroma	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.b.chroma.min… c.<c>.colorcorrection.b.chroma.max	GC-U	Color Correction: Area B Setting Chroma
Color Correction Information [c]	c.<c>.colorcorrection.b.chroma.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area B Setting Chroma
Color Correction Information [c]	c.<c>.colorcorrection.b.chroma.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction area-B chroma
Color Correction Information [c]	c.<c>.colorcorrection.b.area	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.b.area.min… c.<c>.colorcorrection.b.area.max	GC-U	Color Correction: Area B Setting Area

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Color Correction Information [c]	c.<c>.colorcorrection.b.area.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area B Setting Area
Color Correction Information [c]	c.<c>.colorcorrection.b.area.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area B Setting Area
Color Correction Information [c]	c.<c>.colorcorrection.b.ylevel	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.b.ylevel.min… c.<c>.colorcorrection.b.ylevel.max	GC-U	Color Correction: Area B Setting Y Level
Color Correction Information [c]	c.<c>.colorcorrection.b.ylevel.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Minimum configurable value of Color Correction: Area B Setting Y Level
Color Correction Information [c]	c.<c>.colorcorrection.b.ylevel.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	31	G--U	Maximum configurable value of Color Correction: Area B Setting Y Level
Color Correction Information [c]	c.<c>.colorcorrection.b.revision.level	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.b.revision.level.min… c.<c>.colorcorrection.b.revision.level.max	GC-U	Color Correction: Area B Revision Level
Color Correction Information [c]	c.<c>.colorcorrection.b.revision.level.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-50	G--U	Minimum configurable value of Color Correction: Area B Revision Level
Color Correction Information [c]	c.<c>.colorcorrection.b.revision.level.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	50	G--U	Maximum configurable value of Color Correction: Area B Revision Level
Color Correction Information [c]	c.<c>.colorcorrection.b.revision.phase	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.colorcorrection.b.revision.phase.min… c.<c>.colorcorrection.b.revision.phase.max	GC-U	Color Correction: Area B Revision Phase
Color Correction Information [c]	c.<c>.colorcorrection.b.revision.phase.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-18	G--U	Minimum configurable value of Color Correction: Area B Revision Phase
Color Correction Information [c]	c.<c>.colorcorrection.b.revision.phase.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	18	G--U	Maximum configurable value of Color Correction: Area B Revision Phase
Color Correction Information [c]	c.<c>.over100	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.over100.list	GC-U	Over 100%
Color Correction Information [c]	c.<c>.over100.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	through, clip, press	G--U	Over 100% list Through: Leave the signal unchanged Clip: Clip the signal at 100% Press: Compresses a signal of up to 108% down to 100% levels

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
IS/NR/Sharpness [c]	c.<c>.is	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	Selected from c.<c>.is.list	GC-U	Image stabilizer
IS/NR/Sharpness [c]	c.<c>.is.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	off, on1, on2	G--U	Image stabilizer list off: Not used on1: For small amplitude on2: For large amplitude
		XF605	off, on1, on2, on3, on4		off: Not used (Image stabilizer is off and IS mode is set to Standard) on1: Standard on2: Standard + Powered on3: Dynamic on4: Dynamic + Powered
IS/NR/Sharpness [c]	c.<c>.eis	C500mk2 C400 C300mk3 C70	Selected from c.<c>.eis.list	GC-U	Electronic image stabilizer (Digital IS)
IS/NR/Sharpness [c]	c.<c>.eis.list	C500mk2 C300mk3	off, on1	G--U	Electronic image stabilizer list off: Not in use (Digital IS OFF) on1: Electronic image stabilizer ON (Digital IS ON)
		C400 C70	off, on1, on2		Electronic image stabilizer list C70 off: Not in use (Digital IS OFF) on1: Digital IS ON, Super16 Digital IS OFF on2: Digital IS ON, Super16 Digital IS ON C400 off: Not in use (Digital IS OFF) on1: Digital IS ON, Digital IS Mode: Standard on2: Digital IS ON, Digital IS Mode: High
Focus Information [c]	c.<c>.focus	-	Selected from c.<c>.focus.list	GC-U	Focus mode
Focus Information [c]	c.<c>.focus.list	-	auto, manual	G--U	Focus mode list
Focus Information [c]	c.<c>.focus.action	-	Selected from c.<c>.focus.action.list	-C--	Focus action
Focus Information [c]	c.<c>.focus.action.list	CR-N500 CR-N300 CR-N100 CR-X300 C500mk2 C400 C300mk3 C70	stop, one_shot, near, far	G--U	Focus action list one_shot: One-shot AF near: Focus movement to short distance side far: Focus movement to long distance side stop: Focus operation stop
		CR-N700 XF605	stop, near, far		
Focus Information [c]	c.<c>.focus.target.action	CR-N700 C500mk2 C400 C300mk3 C70 XF605	c.<c>.focus.target.action.listより選択	-C--	Action for focused targets
Focus Information [c]	c.<c>.focus.target.action.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	prev, next	G--U	Focused target action list prev: Moves focus back to the previous subject next: Moves focus to the next subject
Focus Information [c]	c.<c>.focus.value	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	c.<c>.focus.value.min... c.<c>.focus.value.max	GC-U	Focus value
Focus Information [c]	c.<c>.focus.value.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	0	G--U	Minimum configurable focus value

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Focus Information [c]	c.<c>.focus.value.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	2048	G--U	Maximum configurable focus value
Focus Information [c]	c.<c>.focus.restrict	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	Selected from c.<c>.focus.restrict.list	GC-U	Focus limit
Focus Information [c]	c.<c>.focus.restrict.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	off, on	G--U	Focus limit list
Focus Information [c]	c.<c>.focus.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.focus.speed.min… c.<c>.focus.speed.max	GC-U	MF speed
		C500mk2 C400 C300mk3 C70 XF605		-C--	
Focus Information [c]	c.<c>.focus.speed.min	-	0	G--U	Minimum configurable MF speed value
Focus Information [c]	c.<c>.focus.speed.max	C500mk2 C400 C300mk3 C70	7	G--U	Maximum configurable MF speed value
		XF605	63		
		CR-N500 CR-N300 CR-N100 CR-X300	63 | 2		
		CR-N700	63 | 7		
Focus Information [c]	c.<c>.focus.auto	CR-N700 CR-N500 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.focus.auto.list	GC-U	AF mode
Focus Information [c]	c.<c>.focus.auto.list	-	continuous, afboosted	G--U	AF mode list continuous: Always in AF mode afboosted: Adjust the focus automatically when closing in on the focus position
Focus Information [c]	c.<c>.focus.auto.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	c.<c>.focus.auto.speed.min… c.<c>.focus.auto.speed.max	GC-U	AF speed
Focus Information [c]	c.<c>.focus.auto.speed.min	C500mk2 C300mk3 C70	0	G--U	Minimum configurable AF speed value
		C400	-7		
Focus Information [c]	c.<c>.focus.auto.speed.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C500mk2 C300mk3 C70 XF605	2	G--U	Maximum configurable AF speed value
		C400	10		
Focus Information [c]	c.<c>.focus.auto.lock	C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.focus.auto.lock.list	GC-U	AF lock
Focus Information [c]	c.<c>.focus.auto.lock.list	C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	AF lock list

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Focus Information [c]	c.<c>.focus.frame.pos	C500mk2 C300mk3 C70 XF605	Selected from c.<c>.focus.frame.pos.list	GC-U	AF frame position
Focus Information [c]	c.<c>.focus.frame.pos.list	C500mk2 C300mk3 C70 XF605	movable, fixed	G--U	AF frame position list movable: In operation fixed: Fixed at the center
Focus Information [c]	c.<c>.focus.frame.<f>	CR-N700 CR-N500 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.focus.frame.<f>.list	GC-U	AF frame size
Focus Information [c]	c.<c>.focus.frame.<f>.list	CR-N700 CR-N500 C70 XF605	auto, large, small	G--U	AF frame size list
		C500mk2 C300mk3	large, small		
		C400	auto, spot, zone, large_zone_vertical, large_zone_horizontal		
Focus Information [c]	c.<c>.focus.frame.<f>.x	-	c.<c>.focus.frame.<f>.x.min… c.<c>.focus.frame.<f>.x.max	GC-U	X-coordinate of the center coordinates of the AF frame * Indicates the center coordinate of the AF frame, focus guide, and one-shot AF
Focus Information [c]	c.<c>.focus.frame.<f>.x.min	-	0	G--U	Minimum configurable x-coordinate for the center coordinates of the AF frame
Focus Information [c]	c.<c>.focus.frame.<f>.x.max	-	9999	G--U	Maximum configurable x-coordinate for the center coordinates of the AF frame
Focus Information [c]	c.<c>.focus.frame.<f>.y	-	c.<c>.focus.frame.<f>.y.min… c.<c>.focus.frame.<f>.y.max	GC-U	Y-coordinate of the center coordinates of the AF frame * Indicates the center coordinate of the AF frame, focus guide, and one-shot AF
Focus Information [c]	c.<c>.focus.frame.<f>.y.min	-	0	G--U	Minimum configurable y-coordinate for the center coordinates of the AF frame
Focus Information [c]	c.<c>.focus.frame.<f>.y.max	-	9999	G--U	Maximum configurable y-coordinate for the center coordinates of the AF frame
Focus Information [c]	c.<c>.focus.frame.<f>.width	-	e.g. 2344	G--U	AF frame width
Focus Information [c]	c.<c>.focus.frame.<f>.height	-	e.g. 2666	G--U	AF frame height
Focus Information [c]	c.<c>.focus.detect	-	Selected from c.<c>.focus.detect.list	GC-U	Face detection AF
Focus Information [c]	c.<c>.focus.detect.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C500mk2 C300mk3 C70 XF605	off, faceonly, facecatch	G--U	Face detection AF list
		C400	off, ppl_only, ppl_catch, anml_only, anml_catch		
Focus Information [c]	c.<c>.focus.detect.eye	CR-N700 C400 C70 XF605	Selected from c.<c>.focus.detect.eye.list	GC-U	Eye detection
Focus Information [c]	c.<c>.focus.detect.eye.list	CR-N700 C400 C70 XF605	off, on	G--U	Eye detection list
Focus Information [c]	c.<c>.focus.detect.faceae	CR-N700 C400 XF605	Selected from c.<c>.focus.detect.faceae.list	GC-U	Face detection AE
Focus Information [c]	c.<c>.focus.detect.faceae.list	CR-N700 C400 XF605	off, on	G--U	Face detection AE list
Focus Information [c]	c.<c>.focus.auto.track	-	Selected from c.<c>.focus.auto.track.list	GC-U	Tracking start and stop

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Focus Information [c]	c.<c>.focus.auto.track.list	-	off, on	G--U	Tracking start/stop list off: Stop on: Start, tracking in progress
Focus Information [c]	c.<c>.focus.auto.track.mode	CR-N700 CR-N500 C500mk2 C400 C300mk3 C70 XF605	Selected from c.<c>.focus.auto.track.mode.list	GC-U	Tracking mode
Focus Information [c]	c.<c>.focus.auto.track.mode.list	CR-N700 CR-N500 C500mk2 C300mk3 C70 XF605	mode1, mode2	G--U	Tracking mode list mode1: Displays AF frame at the specified coordinates mode2: Tracks the subject at the specified coordinates
		C400	mode2		
Focus Information [c]	c.<c>.focus.auto.track.frame.x	-	c.<c>.focus.auto.track.frame.x.min… c.<c>.focus.auto.track.frame.x.max	-C--	X-coordinate of tracking start point (x-coordinate of the center of the tracking frame)
Focus Information [c]	c.<c>.focus.auto.track.frame.x.min	-	e.g. 0	G--U	Minimum configurable tracking start x-coordinate (center)
Focus Information [c]	c.<c>.focus.auto.track.frame.x.max	-	e.g. 9999	G--U	Maximum configurable tracking start x-coordinate (center)
Focus Information [c]	c.<c>.focus.auto.track.frame.y	-	c.<c>.focus.auto.track.frame.y.min… c.<c>.focus.auto.track.frame.y.max	-C--	Y-coordinate of tracking start point (y-coordinate of the center of the tracking frame)
Focus Information [c]	c.<c>.focus.auto.track.frame.y.min	-	e.g. 0	G--U	Minimum configurable tracking start y-coordinate (center)
Focus Information [c]	c.<c>.focus.auto.track.frame.y.max	-	e.g. 9999	G--U	Maximum configurable tracking start y-coordinate (center)
Focus Information [c]	c.<c>.focus.auto.resp	-	c.<c>.focus.auto.resp.min… c.<c>.focus.auto.resp.max	GC-U	AF response
Focus Information [c]	c.<c>.focus.auto.resp.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	0	G--U	Minimum configurable AF response value
		C500mk2 C400 C300mk3 C70	-3		
Focus Information [c]	c.<c>.focus.auto.resp.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	2	G--U	Maximum configurable AF response value
		C500mk2 C400 C300mk3 C70	3		
Zoom Information [c]	c.<c>.zoom	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	* Specifies absolute position c.<c>.zoom.min… c.<c>.zoom.max * Specifies relative position d[±]<difference>, e.g. d50 v[+]<difference>, e.g. v50 * Specifies direction tele, wide, stop	GC-U	* Absolute position specification Zoom value (optical zoom ratio, digital zoom ratio, angle of view including teleconverter ratio) * Relative position specification Specify a relative position from the current zoom position. d: Specify by zoom position v: Specify by standard ratio (100 = current ratio) v200 is 2 times zoom v50 is 0.5 times zoom * Direction specification tele: move to telephoto side wide: move to wide-angle side
		C500mk2 C400 C300mk3 C70	* Specifies direction tele, wide, stop		
Zoom Information [c]	c.<c>.zoom.status	CR-N700 CR-N500 CR-N300 CR-N100 XF605	0, 1	G--U	Zoom operation status 0: During stop 1: During movement

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Zoom Information [c]	c.<c>.zoom.d	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	e.g. 570	G--U	Zoom value (absolute position) indicating the boundary between optical zoom and digital zoom (optical telephoto end)
Zoom Information [c]	c.<c>.zoom.mode	-	Selected from c.<c>.zoom.mode.list	GC-U	Digital zoom mode
Zoom Information [c]	c.<c>.zoom.mode.list	CR-N500 CR-N300 CR-N100 CR-X300	off, dzoom, mag	G--U	Digital zoom mode list dzoom: Digital zoom mag: Digital teleconverter advanced: Advanced zoom
		CR-N700 XF605	off, dzoom, mag, advanced		
		C500mk2 C400 C300mk3 C70	off, mag		
Zoom Information [c]	c.<c>.zoom.dzoom	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	e.g. 150	G--U	Digital zoom magnification * Unit: % * Valid when c.<c>.zoom.mode is "dzoom"
Zoom Information [c]	c.<c>.zoom.mag	-	Selected from c.<c>.zoom.mag.list	GC-U	Digital zoom magnification (digital teleconverter) * Unit: % * Valid when c.<c>.zoom.mode is "mag"
Zoom Information [c]	c.<c>.zoom.mag.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	100, 150, 300, 600	G--U	Digital zoom magnification list
		C500mk2 C400 C300mk3 C70	100, 150, 200, 250, 300		
Zoom Information [c]	c.<c>.zoom.diameter	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	e.g. 350	G--U	Zoom magnification * Unit: % * Valid regardless of c.<c>.zoom.mode
Zoom Information [c]	c.<c>.zoom.min	CR-N700 CR-N500 XF605	e.g. 570 * Value changes depending on the value of c.<c>.zoom.mag and c.<c>.zoom.mode	G--U	Minimum configurable value of zoom telephoto side control limit (variable) * Angle of view (1=0.01 degree)
		CR-N300 CR-N100 CR-X300	When 2K: e.g. 340 When 4K: e.g. 360 * Value changes depending on the value of c.<c>.zoom.mag and c.<c>.zoom.mode		
		C500mk2 C400 C300mk3 C70	0		
Zoom Information [c]	c.<c>.zoom.max	CR-N700 CR-N500 XF605	e.g. 7300 * Value changes depending on the value of c.<c>.zoom.mag and c.<c>.zoom.mode	G--U	Maximum configurable value of zoom telephoto side control limit (variable) * Angle of view (1=0.01 degree)
		CR-N300 CR-N100 CR-X300	When 2K: e.g. 6340 When 4K: e.g. 6560 * Value changes depending on the value of c.<c>.zoom.mag and c.<c>.zoom.mode		
		C500mk2 C400 C300mk3 C70	0		
Zoom Information [c]	c.<c>.zoom.limit.min	CR-N700 CR-N500	570	G--U	Minimum configurable value of zoom telephoto end * Angle of view (1=0.01 degree)
		CR-N300 CR-N100 CR-X300	When 2K: 340 When 4K: 360		
Zoom Information [c]	c.<c>.zoom.limit.max	CR-N700 CR-N500	7300	G--U	Maximum configurable value of zoom telephoto end * Angle of view (1=0.01 degree)
		CR-N300 CR-N100 CR-X300	When 2K: 6340 When 4K: 6560		

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Zoom Information [c]	c.<c>.zoom.speed	-	c.<c>.zoom.speed.min… c.<c>.zoom.speed.max	-CP-	Direction specification/position specification zoom speed
Zoom Information [c]	c.<c>.zoom.speed.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	c.<c>.zoom.speed.min… c.<c>.zoom.speed.max	GCPU	Position specification zoom speed
Zoom Information [c]	c.<c>.zoom.speed.dir	-	c.<c>.zoom.speed.min… c.<c>.zoom.speed.max	GCPU	Direction specification zoom speed
Zoom Information [c]	c.<c>.zoom.speed.min	-	0	G--U	Minimum configurable value of zoom speed
Zoom Information [c]	c.<c>.zoom.speed.max	C500mk2 C400 C300mk3 C70	15	G--U	Maximum configurable value of zoom speed
		XF605	23		
		CR-N500 CR-N300 CR-N100 CR-X300	127 | 15		
		CR-N700	127 | 23		
Zoom Information [c]	c.<c>.zoom.accel	CR-N300 CR-N100 CR-X300	Selected from c.<c>.zoom.accel.list	GC-U	Soft zoom control
Zoom Information [c]	c.<c>.zoom.accel.list	CR-N300 CR-N100 CR-X300	off, start, stop, both	G--U	Soft zoom control list
Pan/Tilt Information [c]	c.<c>.pan	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	* Specifies absolute position c.<c>.pan.min… c.<c>.pan.max, * Specifies relative position d[±]<difference>, v[±]<difference>, * Specifies direction right, left, stop	GC-U	* Absolute position specification Specify absolute position for pan Expressed by the angle of view (1 = 0.01 degrees), the actual front is specified as 0 and the right is specified as positive. * Relative position specification Specify the relative position from the current camera orientation. d: Specify by angle of view (1 = 0.01 degrees) v: Specify by standard screen (100 = half screen equivalent) v100: Moves regarding the right edge of the screen as the center. v-100: Moves regarding the left edge of the screen as the center. * Direction specification right: move to the right
Pan/Tilt Information [c]	c.<c>.pan.status	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0, 1	G--U	Pan operation status 0: During stop 1: During movement
Pan/Tilt Information [c]	c.<c>.pan.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.limit.min… c.<c>.pan.limit.max	G--U	Left side control limit of pan operation (variable) * Angle of view (1=0.01 degree)
Pan/Tilt Information [c]	c.<c>.pan.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.limit.min… c.<c>.pan.limit.max	G--U	Right side control limit of pan operation (variable) * Angle of view (1=0.01 degree)
Pan/Tilt Information [c]	c.<c>.pan.limit.min	CR-N700 CR-N500 CR-N300 CR-N100	-17000	G--U	Left side movable limit of pan operation * Angle of view (1=0.01 degree)
		CR-X300	-18000		
Pan/Tilt Information [c]	c.<c>.pan.limit.max	CR-N700 CR-N500 CR-N300 CR-N100	17000	G--U	Right side movable limit of pan operation * Angle of view (1=0.01 degree)
		CR-X300	18000		
Pan/Tilt Information [c]	c.<c>.pan.speed.mode	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.pan.speed.mode.list	-CP-	Pan operating speed mode
Pan/Tilt Information [c]	c.<c>.pan.speed.mode.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.pan.speed.mode.list	GCPU	Position specification pan operating speed mode

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Pan/Tilt Information [c]	c.<c>.pan.speed.mode.dir	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.pan.speed.mode.list	GCPU	Direction specification pan operating speed mode
Pan/Tilt Information [c]	c.<c>.pan.speed.mode.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	manual, auto1, auto2	G--U	Pan operating speed mode list manual: Controlled at a constant speed. auto1: Speed control in accordance with the ratio to the horizontal angle of view. c.<c>.pan.speed.ratio is used. auto2: Speed control in accordance with the ratio to the horizontal angle of view. c.<c>.pan.speed is regarded as the speed at the wide angle end, and operation is performed at a speed corresponding to the angle of view.
Pan/Tilt Information [c]	c.<c>.pan.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.min… c.<c>.pan.speed.max	-CP-	Pan speed during "manual" or "auto2" 100 sets the speed of movement to 1 degree per second
Pan/Tilt Information [c]	c.<c>.pan.speed.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.min… c.<c>.pan.speed.max	GCPU	Position specification pan speed during "manual" or "auto2"
Pan/Tilt Information [c]	c.<c>.pan.speed.dir	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.min… c.<c>.pan.speed.max	GCPU	Direction specification pan speed during "manual" or "auto2"
Pan/Tilt Information [c]	c.<c>.pan.speed.min	CR-N700 CR-N500	10	G--U	Minimum configurable pan speed value during "manual" or "auto2"
		CR-N300 CR-N100	20		
		CR-X300	4		
Pan/Tilt Information [c]	c.<c>.pan.speed.max	CR-N700 CR-N500 CR-N300 CR-N100	10000	G--U	Maximum configurable pan speed value during "manual" or "auto2"
		CR-X300	6000		
Pan/Tilt Information [c]	c.<c>.pan.speed.ratio	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.ratio.min… c.<c>.pan.speed.ratio.max	-CP-	Pan speed during "auto1" * The operation speed is specified by the ratio to the horizontal angle of view. * The speed at which one screen moves per second is set to 100.
Pan/Tilt Information [c]	c.<c>.pan.speed.ratio.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.ratio.min… c.<c>.pan.speed.ratio.max	GCPU	Position specification pan speed during "auto1"
Pan/Tilt Information [c]	c.<c>.pan.speed.ratio.dir	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.ratio.min… c.<c>.pan.speed.ratio.max	GCPU	Direction specification pan speed during "auto1"
Pan/Tilt Information [c]	c.<c>.pan.speed.ratio.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1	G--U	Minimum configurable pan speed value during "auto1"
Pan/Tilt Information [c]	c.<c>.pan.speed.ratio.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1000	G--U	Maximum configurable pan speed value during "auto1"
Pan/Tilt Information [c]	c.<c>.pan.ramp	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.ramp.min… c.<c>.pan.ramp.max	GC-U	Pan acceleration
Pan/Tilt Information [c]	c.<c>.pan.ramp.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0	G--U	Minimum configurable pan acceleration value
Pan/Tilt Information [c]	c.<c>.pan.ramp.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	2	G--U	Maximum configurable pan acceleration value

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Pan/Tilt Information [c]	c.<c>.tilt	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	* Specifies absolute position c.<c>.tilt.min… c.<c>.tilt.max, * Specifies relative position d[±]<difference>, v[±]<difference>, * Specifies direction up, down, stop	GC-U	* Absolute position specification Specify absolute position for tilt Expressed by the angle of view (1 = 0.01 degrees), the actual front is specified as 0 and up is specified as positive. * Relative position specification Specify the relative position from the current camera orientation. d: Specify by angle of view (1 = 0.01 degrees) v: Specify by standard screen (100 = half screen equivalent) v100: Moves regarding the upper edge of the screen as the center. v-100: Moves regarding the bottom edge of the screen as the center. * Direction specification up: move up down: move down
Pan/Tilt Information [c]	c.<c>.tilt.status	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0, 1	G--U	Tilt operation status 0: During stop 1: During movement
Pan/Tilt Information [c]	c.<c>.tilt.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.limit.min… c.<c>.tilt.limit.max	G--U	Downward control limit of tilt operation (variable) * Angle of view (1=0.01 degree)
Pan/Tilt Information [c]	c.<c>.tilt.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.limit.min… c.<c>.tilt.limit.max	G--U	Upward control limit of tilt operation (variable) * Angle of view (1=0.01 degree)
Pan/Tilt Information [c]	c.<c>.tilt.limit.min	CR-N700 CR-N500 CR-N300 CR-N100	-3000	G--U	Downward movable limit of tilt operation * Angle of view (1=0.01 degree)
		CR-X300	-4000		
Pan/Tilt Information [c]	c.<c>.tilt.limit.max	CR-N700 CR-N500	9000	G--U	Upward movable limit of tilt operation * Angle of view (1=0.01 degree)
		CR-N300 CR-N100	10000		
		CR-X300	21500		
Pan/Tilt Information [c]	c.<c>.tilt.speed.mode	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.tilt.speed.mode.list	-CP-	Tilt operating speed mode
Pan/Tilt Information [c]	c.<c>.tilt.speed.mode.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.tilt.speed.mode.list	GCPU	Tilt operating speed mode of position specification
Pan/Tilt Information [c]	c.<c>.tilt.speed.mode.dir	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.tilt.speed.mode.list	GCPU	Tilt operating speed mode of direction specification
Pan/Tilt Information [c]	c.<c>.tilt.speed.mode.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	manual, auto1, auto2	G--U	Tilt operating speed mode list manual: Controlled at a constant speed. auto1: Speed control in accordance with the ratio to the vertical angle of view. c.<c>.tilt.speed.ratio is used. auto2: Speed control in accordance with the ratio to the vertical angle of view. c.<c>.tilt.speed is regarded as the speed at the wide angle end, and operation is performed at a speed corresponding to the angle of view.
Pan/Tilt Information [c]	c.<c>.tilt.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.min… c.<c>.tilt.speed.max	-CP-	Tilt speed during "manual" or "auto2" * 100 sets the speed of movement to 1 degree per second
Pan/Tilt Information [c]	c.<c>.tilt.speed.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.min… c.<c>.tilt.speed.max	GCPU	Position specification tilt speed during "manual" or "auto2"

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Pan/Tilt Information [c]	c.<c>.tilt.speed.dir	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.min… c.<c>.tilt.speed.max	GCPU	Direction specification tilt speed during "manual" or "auto2"
Pan/Tilt Information [c]	c.<c>.tilt.speed.min	CR-N700 CR-N500	10	G--U	Minimum configurable tilt speed value during "manual" or "auto2"
		CR-N300 CR-N100	20		
		CR-X300	4		
Pan/Tilt Information [c]	c.<c>.tilt.speed.max	CR-N700 CR-N500 CR-N300 CR-N100	10000	G--U	Maximum configurable tilt speed value during "manual" or "auto2"
		CR-X300	6000		
Pan/Tilt Information [c]	c.<c>.tilt.speed.ratio	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.ratio.min… c.<c>.tilt.speed.ratio.max	-CP-	Tilt speed during "auto1" * The operation speed is specified by the ratio to the vertical angle of view. The speed at which one screen moves per second is set to 100.
Pan/Tilt Information [c]	c.<c>.tilt.speed.ratio.pos	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.ratio.min… c.<c>.tilt.speed.ratio.max	GC-U	Position specification tilt speed during "auto1"
Pan/Tilt Information [c]	c.<c>.tilt.speed.ratio.dir	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.ratio.min… c.<c>.tilt.speed.ratio.max	GC-U	Direction specification tilt speed during "auto1"
Pan/Tilt Information [c]	c.<c>.tilt.speed.ratio.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1	G--U	Minimum configurable tilt speed value during "auto1"
Pan/Tilt Information [c]	c.<c>.tilt.speed.ratio.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1000	G--U	Maximum configurable tilt speed value during "auto1"
Pan/Tilt Information [c]	c.<c>.tilt.ramp	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.ramp.min… c.<c>.tilt.ramp.max	GC-U	Tilt acceleration
Pan/Tilt Information [c]	c.<c>.tilt.ramp.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0	G--U	Minimum configurable tilt acceleration value
Pan/Tilt Information [c]	c.<c>.tilt.ramp.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	2	G--U	Maximum configurable tilt acceleration value
Pan/Tilt Information [c]	c.<c>.erotate	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from c.<c>.erotate.list	GC-U	Video inversion
Pan/Tilt Information [c]	c.<c>.erotate.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0, 18000	G--U	Video inversion list * Angle multiplied by 100 0: Standard 18000: Flip up/down
Pan/Tilt Information [c]	c.<c>.eflip	CR-X300	off, on	G--U	Flip status off: Not flipped on: During flipped
Preset Information [p]	p	-	1…p.count	GC-U	Preset number controlled last time *0 is returned until the first preset execution after start.
Preset Information [p]	p.count	-	100	G---	Number of preset information settings * Valid setting number is returned.

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Preset Information [p]	p.status	-	0, 1	G--U	Preset operation status 0: During stop 1: During movement
Preset Information [p]	p.<p>.name.utf8	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	<*unicode*>	G--U	Preset name (UTF-8) * Visible only when the preset name is set.
Preset Information [p]	p.<p>.thumbnail.id	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	e.g. p.3.thumbnail.id=d41d8cd98f00b204e9800998ecf8427e p.3.thumbnail.id=	G--U	Preset thumbnail ID * Null value if no thumbnail image is registered.
Preset Information [p]	p.<p>.content	-	enabled | disabled	G--U	Preset parameter saving flag * Any parameter that is registered to preset is "enabled".
Preset Information [p]	p.<p>.content.ptz	-	enabled | disabled	G--U	Preset PTZ flag
Preset Information [p]	p.<p>.content.focus	-	enabled | disabled	G--U	Preset focus flag
Preset Information [p]	p.<p>.content.exp	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C400	enabled | disabled	G--U	Preset exp flag
		C500mk2 C300mk3 C70 XF605	disabled		
Preset Information [p]	p.<p>.content.wb	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 C400	enabled | disabled	G--U	Preset wb flag
		C500mk2 C300mk3 C70 XF605	disabled		
Preset Information [p]	p.<p>.content.is	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	enabled | disabled	G--U	Preset is flag
		C500mk2 C400 C300mk3 C70 XF605	disabled		
Preset Information [p]	p.<p>.content.cp	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	enabled | disabled	G--U	Preset cp flag
		C500mk2 C400 C300mk3 C70 XF605	disabled		
プリセット情報[p]	p.<p>.content.lenscorrect	CR-N700	enabled / disabled	G--U	Preset lenscorrect flag
Preset Information [p]	p.<p>.zoom.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.zoom.speed.min… c.<c>.zoom.speed.max	G--U	Preset zoom speed * Not return when p.<p>.content.ptz=disabled
Preset Information [p]	p.<p>.pan.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.pan.speed.min… c.<c>.pan.speed.max	G--U	Preset pan speed * Not return when p.<p>.content.ptz=disabled
Preset Information [p]	p.<p>.tilt.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	c.<c>.tilt.speed.min… c.<c>.tilt.speed.max	G--U	Preset zoom speed * Not return when p.<p>.content.ptz=disabled

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Preset Information [p]	p.<p>.ptz.speed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	p.ptzspeed.min… p.ptzspeed.max	G--U	Preset synchronized PTZ speed * Not return when p.<p>.content.ptz = "disabled"
Preset Information [p]	p.action	-	Selected from p.action.list	-C--	Preset action
Preset Information [p]	p.action.list	-	stop	G--U	Preset action list stop: stops the preset operation if any preset is running
Preset Information [p]	p.ptztime	-	p.ptztime.min… p.ptztime.max	-C--	PTZ movement time to the preset position * Unit: millisecond * p.<p>.pan.speed, p.<p>.tilt.speed, p.<p>.zoom.speed are ignored when p.ptztime is specified. * In the case of p.ptztime and p.ptzspeed, the former is preferred.
Preset Information [p]	p.ptztime.min	-	2000	G--U	Minimum configurable value of PTZ movement time to the preset position * Unit: millisecond
Preset Information [p]	p.ptztime.max	-	99000	G--U	Maximum configurable value of PTZ movement time to the preset position * Unit: millisecond
Preset Information [p]	p.ptzspeed	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	p.ptzspeed.min… p.ptzspeed.max	-C--	PTZ movement speed to the preset position (abstract value) * p.<p>.pan.speed, p.<p>.tilt.speed, p.<p>.zoom.speed are ignored when p.ptzspeed is specified. * In the case of p.ptztime and p.ptzspeed, the former is preferred.
Preset Information [p]	p.ptzspeed.min	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	1	G--U	Minimum configurable value of PTZ movement speed to the preset position
Preset Information [p]	p.ptzspeed.max	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300 XF605	100	G--U	Maximum configurable value of PTZ movement speed to the preset position
Preset Information [p]	p.ptzspeed.saved	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from p.ptzspeed.saved.list	-C--	Preset synchronized PTZ speed control
Preset Information [p]	p.ptzspeed.saved.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	on	G--U	Preset synchronized PTZ speed control list on: Move at p.<p>.ptzspeed speed
Preset Information [p]	p.freeze	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Selected from p.freeze.list	-C--	Still image output during preset playback * If not specified, the value of p.freeze.default is used.
Preset Information [p]	p.freeze.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	off, on	G--U	Still image output during preset playback list off: No still image output on: Still image output
Preset Information [p]	p.freeze.default	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	Setting value from p.freeze.list	G--U	Default value of still image output during preset playback
Trace Information [t]	t	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	1…t.count	G--U	Trace number controlled last time * 0 is returned until the first trace execution after start.
Trace Information [t]	t.count	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	10	G---	Number of trace information settings * Valid setting number is returned.

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Trace Information [t]	t.status	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	idle, recording, preparing, prepared, playing	G--U	Trace status idle: Not in race status recording: Recording trace preparing: Preparing trace prepared: Trace preparation complete playing: Trace is playing
Trace Information [t]	t.<t>.name.utf8	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	<*unicode*>	G--U	Trace name (UTF-8) * Visible only when the trace name is set.
Trace Information [t]	t.<t>.thumbnail.id	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	e.g. t.3.thumbnail.id=d41d8cd98f00b204e9800998ecf8427e t.3.thumbnail.id=	G--U	Trace thumbnail ID * Null value if no thumbnail image is registered.
Trace Information [t]	t.<t>.recorded	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	off, on	G--U	Trace recording status
Trace Information [t]	t.<t>.time	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0...300	G--U	Trace time * Unit: Second
Audio Device Information [a]	a.count	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	0	G---	Number of audio devices
Audio Device Information [a]	a.level.info	C500mk2 C400 C300mk3 C70 XF605	Selected from a.level.info.list	GCPU	Audio level notification * Specifies whether audio level is included as an information acquisition source in info.cgi.
Audio Device Information [a]	a.level.info.list	C500mk2 C400 C300mk3 C70 XF605	off, on	G-PU	Audio level notification list off: No notification on: Notification
Audio Device Information [a]	a.level.ch1	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level of CH1 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch2	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level of CH2 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch3	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level of CH3 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch4	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level of CH4 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch1.peak	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level peak value of CH1 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch2.peak	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level peak value of CH2 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch3.peak	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level peak value of CH3 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.
Audio Device Information [a]	a.level.ch4.peak	C500mk2 C400 C300mk3 C70 XF605	0…99	G-PU	Audio level peak value of CH4 0: Minimum value 99: Maximum value If a.level.info is set to "on", acquisition is enabled in info.cgi.

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Contact Input/Output Information [i/o]	i.count	CR-N700 CR-N500 CR-N300 CR-N100	0	G---	Number of external device input terminal
		CR-X300	1		
Contact Input/Output Information [i/o]	i.<i>	CR-X300	0 | 1	G--U	Status of external device input terminal, AUX<i> * <i> indicates the number of any external device input terminal from 1 to i.count 0: off 1: on
Contact Input/Output Information [i/o]	o.count	CR-N700 CR-N500 CR-N300 CR-N100	0	G---	Number of external device output terminals
		CR-X300	1		
Contact Input/Output Information [i/o]	o.<o>	CR-X300	Selected from o.<o>.list	GC-U	Status of external device output terminal AUX<o> * <o> indicates the number of any external device output terminal from 1 to o.count
Contact Input/Output Information [i/o]	o.<o>.list	CR-X300	0, 1	G--U	Status list of external device output terminal AUX<o> 0: off 1: on
Tally Lamp Information [f]	f.tally	-	Selected from f.tally.list	GC-U	Tally lamp use
Tally Lamp Information [f]	f.tally.list	-	off, on	G--U	Tally lamp use list
Tally Lamp Information [f]	f.tally.mode	-	Selected from f.tally.mode.list	GC-U	Tally lamp mode
Tally Lamp Information [f]	f.tally.mode.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	preview, program	G--U	Tally lamp mode list
		C500mk2 C400 C300mk3 C70 XF605	preview, program, preview_program		
Standby Information [f]	f.standby	-	One of the setting values of f.standby.list	G--U	Standby
Standby Information [f]	f.standby.list	CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	idle, standby	G--U	Standby list
		C500mk2 C400 C300mk3 C70 XF605	idle		
Mode Information [f]	f.mode	C500mk2 C400 C300mk3 C70 XF605	camera, recreview	G--U	Camera mode
Video Recording Information [f]	f.rec	C500mk2 C400 C300mk3 C70 XF605	Selected from f.rec.list	GC-U	Record/Stop movie
Video Recording Information [f]	f.rec.list	C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Record/Stop movie list on: Record off: Stop
Video Recording Information [f]	f.rec.status	C500mk2 C400 C300mk3 C70 XF605	idle, rec	G--U	Video recording status idle: Recording stopped rec: Recording in progress
Video Recording Information [f]	f.rec.continuous.status	C400 C70 XF605	idle, rec	G--U	Continuous video recording status idle: Recording stopped rec: Recording in progress

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Video Recording Information [f]	f.rec.mode	C400 C70 XF605	normal | interval | slowfastmotion | pre | slowfastmotion_audio | frame | continuous	G--U	Special recording mode normal: Normal recording interval: Interval recording slowfastmotion: Slow & fast motion recording pre: Pre-recording
		C500mk2 C300mk3	normal | slowfastmotion | pre		
Video Recording Information [f]	f.rec.format.media1	C500mk2 C300mk3	raw | xfavc	G--U	Recording format of card A
		XF605	xfavc | h264mp4 | h265mp4 | wav		
		C70	raw | xfavc | h264mp4 | h265mp4 | wav		
		C400	raw | xfavc | xfavc_s | xfhevc_s | wav		
Video Recording Information [f]	f.rec.format.media2	C500mk2 C300mk3	raw | xfavc	G--U	Recording format of card B
		XF605	xfavc | h264mp4 | h265mp4 | wav		
		C70	raw | xfavc | h264mp4 | h265mp4 | wav		
		C400	raw | xfavc | xfavc_s | xfhevc_s | wav		
Video Recording Information [f]	f.rec.command	C500mk2 C400 C300mk3 C70 XF605	Selected from f.rec.command.list	GC-U	Rec command
Video Recording Information [f]	f.rec.command.list	C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Rec command list off: Rec command Off on: Rec command On
Video Recording Information [f]	f.rec.review	C500mk2 C400 C300mk3 C70 XF605	Selected from f.rec.review.list	GC-U	Rec review
Video Recording Information [f]	f.rec.review.list	C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Rec review list off : During stop on : During play
Video Recording Information [f]	f.rec.media.main	C500mk2 C400 C300mk3 C70 XF605	Selected from f.rec.media.main.list	GC-U	Main recording card
Video Recording Information [f]	f.rec.media.main.list	C500mk2 C400 C300mk3 C70 XF605	1, 2	G--U	Main recording card 1: Card A 2 : Card B
Video Recording Information [f]	f.rec.function.double	C500mk2 C400 C300mk3 C70 XF605	off | on	G--U	Double slot recording
Video Recording Information [f]	f.rec.function.relay	C500mk2 C400 C300mk3 C70 XF605	off | on	G--U	Relay recording
Video Recording Information [f]	f.rec.function.proxy	C400 C70 XF605	off | on	G--U	Proxy recording
Video Recording Information [f]	f.rec.function.sub	C500mk2 C400 C300mk3 C70 XF605	off | on	G--U	Sub recording
Video Recording Information [f]	f.rec.function.audio	C400 XF605	off | on	G--U	Audio recording
Video Recording Information [f]	f.rec.function.chunk	XF605	off | on	G--U	Chunk recording
Video Recording Information [f]	f.rec.media1.status	C500mk2 C400 C300mk3 C70 XF605	recordable | unrecordable	G--U	Status of card A recordable: Can be recorded unrecordable: Cannot be recorded
Video Recording Information [f]	f.rec.media2.status	C500mk2 C400 C300mk3 C70 XF605	recordable | unrecordable	G--U	Status of card B recordable: Can be recorded unrecordable: Cannot be recorded

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Video Recording Information [f]	f.rec.media1.remainingtime	C500mk2 C400 C300mk3 C70 XF605	0...9999	G--U	Recordable Time on card A * Unit: Minutes * Valid only when f.rec.media1.status is set "recordable"
Video Recording Information [f]	f.rec.media2.remainingtime	C500mk2 C400 C300mk3 C70 XF605	0...9999	G--U	Recordable time on card B * Unit: Minutes * Valid only when f.rec.media2.status is set "recordable"
Video Recording Information [f]	f.rec.media1.videoinfo	C500mk2 C400 C300mk3 C70 XF605	*<width of image>*x*<height of image>*:*<frame rate>*:*<scan method>* e.g. 3840x2160:59980:P	G--U	Resolution and frame rate of video recorded to card A
Video Recording Information [f]	f.rec.media2.videoinfo	C500mk2 C400 C300mk3 C70 XF605	*<width of image>*x*<height of image>*:*<frame rate>*:*<scan method>* e.g. 3840x2160:59980:P	G--U	Resolution and frame rate of video recorded to card B
Timecode Information[f]	f.timecode.info	C500mk2 C400 C300mk3 C70 XF605	f.timecode.info.listより選択	GCPU	Timecode notification
Timecode Information[f]	f.timecode.info.list	C500mk2 C400 C300mk3 C70 XF605	off, on	G-PU	Timecode notification list
Timecode Information[f]	f.timecode	C500mk2 C400 C300mk3 C70 XF605	*<hour>:<minute>:<second>:<frame>* e.g. 01:23:45：00	G-PU	Timecode If f.timecode.info is set to "on", acquisition is enabled in info.cgi.
Timecode Information[f]	f.timecode.mode	C500mk2 C400 C300mk3 C70 XF605	f.timecode.mode.listより取得	GC-U	Timecode mode
Timecode Information[f]	f.timecode.mode.list	C500mk2 C400 C300mk3 C70 XF605	preset, regen	G—U	Timecode mode list
Timecode Information[f]	f.timecode.run	C500mk2 C400 C300mk3 C70 XF605	f.timecode.run.listより取得	GC-U	Timecode stepping mode
Timecode Information[f]	f.timecode.run.list	C500mk2 C400 C300mk3 C70 XF605	recrun, freerun	G—U	Timecode stepping mode list
Timecode Information[f]	f.timecode.frame	C500mk2 C400 C300mk3 C70 XF605	f.timecode.frame.listより取得	GC-U	DF/NDF
Timecode Information[f]	f.timecode.frame.list	C500mk2 C400 C300mk3 C70 XF605	df, ndf	G—U	DF/NDF list
Timecode Information[f]	f.timecode.set	C500mk2 C400 C300mk3 C70 XF605	00:00:00:00～23:59:59:29	GC-U	Timecode initial value
Timecode Information[f]	f.timecode.term	C500mk2 C400 C300mk3 C70 XF605	in | out	G—U	Timecode term
Assign Button Information [f]	f.assign	C500mk2 C400 C300mk3 C70 XF605	f.assign.min… f.assign.max	-C--	Assign button control

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Assign Button Information [f]	f.assign.min	C500mk2 C400 C300mk3 C70 XF605	1	G--U	Minimum value of available assign buttons
Assign Button Information [f]	f.assign.max	C500mk2 C400 C300mk3 C70 XF605	4	G--U	Maximum value of available assign buttons
Assign Button Information [f]	f.assign.name<N>	C500mk2 C400 C300mk3 C70 XF605	<*string*>	G--U	Nth assign button name
Wiper Information [f]	f.wiper	CR-X300	Selected from f.wipe.list	GC-U	Wiper operation status off: Stop on: During operation
Wiper Information [f]	f.wiper.list	CR-X300	off, on	G--U	Wiper operation status list
Wiper Information [f]	f.washer	CR-X300	Selected from f.washer.list	GC-U	Washer operation status * Combined operation of wiper and washer off: Stop on: During operation
Wiper Information [f]	f.washer.list	CR-X300	off, on	G--U	Washer operating status list
Wiper Information [f]	f.washer.drain	CR-X300	Selected from f.washer.drain.list	GC-U	Washer operating status * Single washer operation (drain only) off: Stopped on: In operation
Wiper Information [f]	f.washer.drain.list	CR-X300	off, on	G--U	Washer operating status list
Output Video Information [f]	f.output.list	CR-N700	output1:12g-sdi, output2:hdmi_3g-sdi	G--U	Camera output terminal information list
		C500mk2 C400 C300mk3	output1:12g-sdi, output2:3g-sdi, output3:hdmi		
		XF605	output1:12g-sdi, output2:hdmi		
		CR-N100 C70	output1:hdmi		
		CR-N500 CR-N300	output1:hdmi_3g-sdi		
		CR-X300	output1:hdmi_6g-sdi		
Output Video Information [f]	f.{output}.videoinfo	C500mk2 C400 C300mk3 C70 XF605	<*width of image*>x<*height of image*>:<*frame rate*>:<*scan method*> e.g. 3840x2160:59940:P * The value is null when outputting to HDMI or not outputting any images	G--U	Resolution and frame rate information for each output terminal
		CR-N700 CR-N500 CR-N300 CR-N100 CR-X300	<*width of image*> x<*height of image*>:<*frame rate*>:<*scan method*> e.g. 3840x2160:59940:P * The value cannot be null		
Menu Information [m]	m.menu.list	C500mk2 C400 C300mk3 C70 XF605	up, down, left, right, enter, cancel	G--U	Menu operation list * See menu.cgi for control menu.cgi?cmd=<*Value*>
Menu Information [m]	m.menu.type	CR-N700 C500mk2 C400 C300mk3 C70 XF605	One of the setting values of m.menu.type.list * Read-only	G--U	Menu and other setting screens
Menu Information [m]	m.menu.type.list	C500mk2 C400 C300mk3 C70 XF605	0, 1, 2, 3	G--U	Menu and other setting screens list 0: None 1: MENU screen 2: Custom Picture screen 3: FUNC screen
		CR-N700	0		

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Menu Information [m]	m.onscreen	CR-N700 C500mk2 C400 C300mk3 C70 XF605	One of the setting values of m.onscreen.list * Read-only	G--U	On-screen superimposed output * See menu.cgi for control. menu.cgi?onscreen=<*Value*> * When equipped with multiple output terminals, all terminals are subject to control * Notifies "on" when any of the output terminals are turned on
Menu Information [m]	m.onscreen.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Onscreen superimposed output list
Menu Information [m]	m.{output}.onscreen	CR-N700 C500mk2 C400 C300mk3 C70 XF605	One of the setting values of m.{output}.onscreen.list * Read-only	G--U	On-screen superimposed output video output from each {output} terminal * See menu.cgi for control menu.cgi?onscreen=<*Value*>&output=<*Value*>
Menu Information [m]	m.{output}.onscreen.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	List of on-screen superimposed video outputs for each {output} terminal
Crop Information [k]	k.count	CR-N700	2	G---	Number of crop areas
Crop Information [k]	k.{output}.crop	CR-N700	Selected from k.{output}.crop.list	GC-U	Image area to be output to each {output} terminal
Crop Information [k]	k.{output}.crop.list	CR-N700	overview, crop1, crop2	G--U	List of image areas to be output to each {output} terminal overview: Video area before CROP crop1: CROP video area 1 crop2: CROP video area 2
Crop Information [k]	k.<k>.crop.size	CR-N700	1920x1080 / 1280x720	G--U	Crop resolution
Crop Information [k]	k.<k>.crop.frame.x	CR-N700	k.<k>.crop.frame.x.min... k.<k>.crop.frame.x.max	GC-U	X-coordinate of the center point of the crop area (abstract value)
Crop Information [k]	k.<k>.crop.frame.x.min	CR-N700	0	G--U	Minimum x-coordinate of the crop area center point (abstract value)
Crop Information [k]	k.<k>.crop.frame.x.max	CR-N700	9999	G--U	Maximum x-coordinate of the crop area center point (abstract value)
Crop Information [k]	k.<k>.crop.frame.y	CR-N700	k.<k>.crop.frame.y.min... k.<k>.crop.frame.y.max	GC-U	Y-coordinate of the crop area center point (abstract value)
Crop Information [k]	k.<k>.crop.frame.y.min	CR-N700	0	G--U	Minimum y-coordinate of the crop area center point (abstract value)
Crop Information [k]	k.<k>.crop.frame.y.max	CR-N700	9999	G--U	Maximum y-coordinate of the crop area center point (abstract value)
Crop Information [k]	k.<k>.crop.frame.width	CR-N700	k.<k>.crop.frame.width.min... k.<k>.crop.frame.width.max	GC-U	Width of the crop area (abstract value)
Crop Information [k]	k.<k>.crop.frame.width.min	CR-N700	When <k>=1: 1333 When <k>=2: Same value as k.<k>.crop.frame.width.max, either 5000 or 3333 depending on k.<k>.crop.size	G--U	Minimum width of the crop area (abstract value)
Crop Information [k]	k.<k>.crop.frame.width.max	CR-N700	When <k>=1: 9999 When <k>=2: Same value as k.<k>.crop.frame.width.min, with 5000 or 3333 depending on k.<k>.crop.size	G--U	Maximum width of the crop area (abstract value)
Crop Information [k]	k.<k>.crop.frame.height	CR-N700	e.g. 5000 * Read-only	G--U	Height of the crop area (abstract value)

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Lens Information [c]	c.<c>.lens	C500mk2 C400 C300mk3 C70	off | on	G--U	Lens connection status off: No connection or lens not detected on: Connected * The following information cannot be referred to if the setting value of c.<c>.lens cannot be obtained. c.<c>.lens.name c.<c>.lens.focus c.<c>.lens.iris c.<c>.lens.zoom
Lens Information [c]	c.<c>.lens.name	C500mk2 C400 C300mk3 C70	<*unicode*>	G--U	Lens name * When c.<c>.lens=:off, the response value is null.
Lens Information [c]	c.<c>.lens.focus	C500mk2 C400 C300mk3 C70	af | mf	G--U	Lens focus switch status af: Focus control enabled mf: focus control disabled * When c.<c>.lens=:off, the response value is null * If the lens does not have a switch, it returns a setting value according to the availability of lens control
Lens Information [c]	c.<c>.lens.iris	C500mk2 C400 C300mk3 C70	auto | manual	G--U	Lens iris switch status auto: iris control enabled manual: iris control disabled * When c.<c>.lens=:off, the response value is null * If the lens does not have a switch, it returns a setting value according to the availability of lens control
Lens Information [c]	c.<c>.lens.zoom	C500mk2 C400 C300mk3 C70	servo | manual	G--U	Lens zoom switch status servo: Zoom enabled manual: Zoom control disabled * When c.<c>.lens=:off, the response value is null * If the lens does not have a switch, it returns a setting value according to the availability of lens control
Warning Information[b]	b.power	C500mk2 C400 C300mk3 C70 XF605	0...4	G--U	Status of power supply 0: Operating normally. 1: State different from normal detected. 2: Abnormal state detected (no limitation on operation). 3: Abnormal state detected (limitation on operation). 4: Abnormal state detected (operation
Warning Information[b]	b.fan	C500mk2 C400 C300mk3 C70 XF605	0...4	G--U	Status of fun 0: Operating normally. 1: State different from normal detected. 2: Abnormal state detected (no limitation on operation). 3: Abnormal state detected (limitation on operation). 4: Abnormal state detected (operation
Warning Information[b]	b.temperature	C500mk2 C400 C300mk3 C70 XF605	0...4	G--U	Status of internal temperature 0: Operating normally. 1: State different from normal detected. 2: Abnormal state detected (no limitation on operation). 3: Abnormal state detected (limitation on operation). 4: Abnormal state detected (operation
Warning Information[b]	b.lens	C500mk2 C400 C300mk3 C70	0...4	G--U	Status of lens 0: Operating normally. 1: State different from normal detected. 2: Abnormal state detected (no limitation on operation). 3: Abnormal state detected (limitation on operation). 4: Abnormal state detected (operation

Table 20 Parameters of info.cgi/configuration

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
System Information [s]	s	-	<*int*>	--P-	Session ID
System Information [s]	s.priority	-	0...50	GCPU	Session priority 0: General session 1...4: Reserved (*) 5...50: Privileged session (*) If specified, it is treated as "5"
Monitoring Setting [monitoring]	monitoring.{output}.lut	CR-N700 C500mk2 C400 C300mk3 XF605	Selected from monitoring.{output}.lut.list	GC-U	Monitoring LUT setting for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.lut.list	CR-N700 C500mk2 C400 C300mk3 XF605	off, on	G--U	List of monitoring LUT settings for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.lut.type	CR-N700 C500mk2 C400 C300mk3 XF605	Selected from monitoring.{output}.lut.type.list	GC-U	Monitoring LUT type setting for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.lut.type.list	CR-N700 XF605	bt709, bt2020, dci, pq, hlg, cmt709, userlut1, userlut2, userlut3, userlut4	G--U	Monitoring LUT type setting list for {output} terminal
		C500mk2 C300mk3	bt709, bt2020, dci, pq, hlg, acesproxy, cmt709, userlut1, userlut2, userlut3, userlut4		
		C400	acesproxy, cmt709,canon709,cmtdci,cmtpq,cmthlg, userlut1,userlut2,userlut3,userlut4		
			dci, pq, hlg, cmt709, canon709, cmtdci, cmtpq, cmthlg, userlut1, userlut2, userlut3, userlut4		
Monitoring Setting [monitoring]	monitoring.{output}.userlut{N}.name	CR-N700	<*string*> * Alphanumeric characters and symbols up to 8 characters	GC-U	userlut name of {output} terminal * {N} is a number from 1 to 4 * Valid if monitoring.{output}.lut.type has userlut{N}
		C500mk2 C400 C300mk3 XF605		G--U	
Monitoring Setting [monitoring]	monitoring.{output}.userlut{N}.colorspace	CR-N700 C500mk2 C400 C300mk3 XF605	Selected from monitoring.{output}.userlut{N}.colorspace.list	GC-U	User LUT color space setting for {output} terminal * {N} is a number from 1 to 4 * Valid when monitoring.{output}.lut.type has userlut{N}
Monitoring Setting [monitoring]	monitoring.{output}.userlut{N}.colorspace.list	CR-N700 C500mk2 C400 C300mk3 XF605	gamut_bt709, gamut_bt2020, none	G--U	List of User LUT color space settings for {output} terminal * {N} is a number from 1 to 4 * Valid if monitoring.{output}.lut.type has userlut{N}
Monitoring Setting [monitoring]	monitoring.{output}.userlut{N}.range	CR-N700 C500mk2 C400 C300mk3 XF605	Selected from monitoring.{output}.userlut{N}.range.list	GC-U	User LUT range setting for {output} terminal * {N} is a number from 1 to 4 * Valid if monitoring.{output}.lut.type has userlut{N}
Monitoring Setting [monitoring]	monitoring.{output}.userlut{N}.range.list	CR-N700 C500mk2 C400 C300mk3 XF605	full, narrow	G--U	List of User LUT range settings for {output} terminal * {N} is a number from 1 to 4 * Valid if monitoring.{output}.lut.type has userlut{N}
Monitoring Setting [monitoring]	monitoring.{output}.userlut{N}.lut.name	CR-N700 C500mk2 C400 C300mk3 XF605	<*string*> * Read-only	G--U	Name of lookfile in lut setting * {N} is a number from 1 to 4 * Valid if monitoring.{output}.lut.type has userlut{N}
Monitoring Setting [monitoring]	monitoring.{output}.viewassist	CR-N700 C70 XF605	Selected from monitoring.{output}.viewassist.list	GC-U	View assist output for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.viewassist.list	CR-N700 C70 XF605	off, on	G--U	View assist output list for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.viewassist.type	CR-N700 C70 XF605	Selected from monitoring.{output}.viewassist.type.list	GC-U	View assist type for {output} terminal

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Monitoring Setting [monitoring]	monitoring.{output}.viewassist.type.list	CR-N700 C70 XF605	bt709, cmt709	G--U	List of view assist types for {output} terminal
			cmt709, canon709		
Monitoring Setting [monitoring]	monitoring.{output}.clog.range	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.{output}.clog.range.list	GC-U	Range of Canon Log output for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.clog.range.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	full, narrow	G--U	List of Canon Log output ranges for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.hdr.range	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.{output}.hdr.range.list	GC-U	Range of HDR output for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.hdr.range.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	full, narrow	G--U	Range list for HDR output to {output} terminal
Monitoring Setting [monitoring]	monitoring.hlgcolor	CR-N700 C500mk2 C300mk3 XF605	Selected from monitoring.hlgcolor.list	GC-U	Color setting for HLG
Monitoring Setting [monitoring]	monitoring.hlgcolor.list	CR-N700 C500mk2 C300mk3 XF605	bt2100, vivid	G--U	List of color settings for HLG
Monitoring Setting [monitoring]	monitoring.hdrtosdrgain	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected frome monitoring.hdrtohdrgain.list	GC-U	Adjusting the Gain Differnece between HDR and SDR (Gain for HDR-to-SDR Conv.) * Unit: dB multiplied by 10
Monitoring Setting [monitoring]	monitoring.hdrtosdrgain.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	-75, -70, -65…70, 75	G--U	HDR→SDR gain list * Unit: dB multiplied by 10
Monitoring Setting [monitoring]	monitoring.osd.framedisplay	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.framedisplay.list	GC-U	DISP level for frame display
Monitoring Setting [monitoring]	monitoring.osd.framedisplay.list	CR-N700	displevel1_2, displevel1, displevel2, off	G--U	List of DISP levels for frame display
		C500mk2 C400 C300mk3 C70 XF605	displevel1_2_3, displaevel1_2, displevel1, displevel2, displevel3, off		
Monitoring Setting [monitoring]	monitoring.osd.displevel	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.displevel.list	GC-U	Screen display level
Monitoring Setting [monitoring]	monitoring.osd.displevel.list	CR-N700	displevel1, displevel2	G--U	List of screen display levels
		C500mk2 C400 C300mk3 C70 XF605	displevel1, displevel2, displevel3		
Monitoring Setting [monitoring]	monitoring.osd.displevel1	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.displevel1.list	GC-U	Display contents of DISP level 1

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Monitoring Setting [monitoring]	monitoring.osd.displevel1.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	all, all_frame	G--U	List of DISP level 1 display contents
Monitoring Setting [monitoring]	monitoring.osd.displevel2	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.displevel2.list	GC-U	Display contents of DISP level 2
Monitoring Setting [monitoring]	monitoring.osd.displevel2.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	recinfo, funcmenu	G--U	List of DISP level 2 display contents
Monitoring Setting [monitoring]	monitoring.osd.displevel3	C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.displevel3.list	GC-U	Display contents of DISP level 3
Monitoring Setting [monitoring]	monitoring.osd.displevel3.list	C500mk2 C400 C300mk3 C70 XF605	rec, off	G--U	List of DISP level 3 display contents
Monitoring Setting [monitoring]	monitoring.{output}.osd.opacity	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.{output}.osd.opacity.list	GC-U	OSD transparency for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.osd.opacity.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	OSD transparency list for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.osd.opacity.level	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.{output}.osd.opacity.level.list * Valid when monitoring.{output}.osd.opacity=on	GC-U	OSD opacity for {output} terminal
Monitoring Setting [monitoring]	monitoring.{output}.osd.opacity.level.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	250, 375, 500, 625, 750	G--U	OSD opacity list for {output} terminal
Monitoring Setting [monitoring]	monitoring.osd.opacity.screen	C500mk2 C400 C300mk3 C70 XF605	Selected from monitoring.osd.opacity.screen.list	GC-U	OSD transparency-applied screen
Monitoring Setting [monitoring]	monitoring.osd.opacity.screen.list	C500mk2 C400 C300mk3 C70 XF605	all, shoot	G--U	List of OSD transparency-applied screens
Assist Setting [assist]	assist.{output}.focusguide	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.{output}.focusguide.list	GC-U	Focus guide display for {output} terminal
Assist Setting [assist]	assist.{output}.focusguide.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Focus guide display list for {output} terminal
Assist Setting [assist]	assist.{output}.skindetail	CR-N700	Selected from assist.{output}.skindetail.list	GC-U	Skin detail for {output} terminal
Assist Setting [assist]	assist.{output}.skindetail.list	CR-N700	off, on	G--U	Skin detail list for {output} terminal
Assist Setting [assist]	assist.{output}.colorcorrection	CR-N700	Selected from assist.peaking.peaking1.color.list	GC-U	Color correction for {output} terminal

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Assist Setting [assist]	assist.{output}.colorcorrection.list	CR-N700	off, area_a, area_b	G--U	Color correction list for {output} terminal
Assist Setting [assist]	assist.{output}.peaking	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.{output}.peaking.list	GC-U	Peaking for {output} terminal
Assist Setting [assist]	assist.{output}.peaking.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Peaking list for {output} terminal
Assist Setting [assist]	assist.peaking.type	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.peaking.type.list	GC-U	Peaking type
Assist Setting [assist]	assist.peaking.type.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	peaking1, peaking2	G--U	Peaking types list
Assist Setting [assist]	assist.peaking.peaking1.color	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.peaking.peaking1.color.list	GC-U	Peaking 1 : Color
Assist Setting [assist]	assist.peaking.peaking1.color.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	white, red, yellow, blue	G--U	Peaking 1 : Color list
Assist Setting [assist]	assist.peaking.peaking1.gain	CR-N700 C500mk2 C400 C300mk3 C70 XF605	assist.peaking.peaking1.gain.min… assist.peaking.peaking1.gain.max	GC-U	Peaking 1 : Gain
Assist Setting [assist]	assist.peaking.peaking1.gain.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Confirmation required for 0 (means off)	G--U	Peaking 1 : Minimum configurable gain
Assist Setting [assist]	assist.peaking.peaking1.gain.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	15	G--U	Peaking 1 : Maximum configurable gain
Assist Setting [assist]	assist.peaking.peaking1.freq	CR-N700 C500mk2 C400 C300mk3 C70 XF605	assist.peaking.peaking1.freq.min… assist.peaking.peaking1.freq.max	GC-U	Peaking 1 : Frequency
Assist Setting [assist]	assist.peaking.peaking1.freq.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	1	G--U	Peaking 1 : Minimum configurable frequency
Assist Setting [assist]	assist.peaking.peaking1.freq.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	4	G--U	Peaking 1 : Maximum configurable frequency
Assist Setting [assist]	assist.peaking.peaking2.color	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.peaking.peaking2.color.list	GC-U	Peaking 2 : Color

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Assist Setting [assist]	assist.peaking.peaking2.color.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	white, red, yellow, blue	G--U	Peaking 2 : Color list
Assist Setting [assist]	assist.peaking.peaking2.gain	CR-N700 C500mk2 C400 C300mk3 C70 XF605	assist.peaking.peaking2.gain.min… assist.peaking.peaking2.gain.max	GC-U	Peaking 2 : Gain
Assist Setting [assist]	assist.peaking.peaking2.gain.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	0	G--U	Peaking 2 : Minimum configurable gain * 0: Off
Assist Setting [assist]	assist.peaking.peaking2.gain.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	15	G--U	Peaking 2 : Maximum configurable frequency
Assist Setting [assist]	assist.peaking.peaking2.freq	CR-N700 C500mk2 C400 C300mk3 C70 XF605	assist.peaking.peaking2.freq.min… assist.peaking.peaking2.freq.max	GC-U	Peaking 2 : Frequency
Assist Setting [assist]	assist.peaking.peaking2.freq.min	CR-N700 C500mk2 C400 C300mk3 C70 XF605	1	G--U	Peaking 2 : Minimum configurable frequency
Assist Setting [assist]	assist.peaking.peaking2.freq.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	4	G--U	Peaking 2 : Maximum configurable frequency
Assist Setting [assist]	assist.{output}.marker	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.{output}.marker.list	GC-U	Marker for {output} terminal
Assist Setting [assist]	assist.{output}.marker.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	off, on	G--U	Marker list for {output} terminal
Assist Setting [assist]	assist.marker.center	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.center.list	GC-U	Center marker color
Assist Setting [assist]	assist.marker.center.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	yellow, blue, green, red, black, gray, white, off	G--U	Center marker color list
Assist Setting [assist]	assist.marker.center.type	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.center.type.list	GC-U	Center marker type
Assist Setting [assist]	assist.marker.center.type.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	cross1, cross2, dot1, dot2	G--U	Center marker type list
Assist Setting [assist]	assist.marker.horizontal	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.horizontal.list	GC-U	Horizontal marker color

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Assist Setting [assist]	assist.marker.horizontal.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	yellow, blue, green, red, black, gray, white, off	G--U	Horizontal marker color list
Assist Setting [assist]	assist.marker.vertical	CR-N700 C400 C70 XF605	Selected from assist.marker.vertical.list	GC-U	Vertical marker color
Assist Setting [assist]	assist.marker.vertical.list	CR-N700 C400 C70 XF605	yellow, blue, green, red, black, gray, white, off	G--U	Vertical marker color list
Assist Setting [assist]	assist.marker.grid	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.grid.list	GC-U	Grid marker color
Assist Setting [assist]	assist.marker.grid.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	yellow, blue, green, red, black, gray, white, off	G--U	Grid marker color list
Assist Setting [assist]	assist.marker.aspect	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.aspect.list	GC-U	Aspect marker color
Assist Setting [assist]	assist.marker.aspect.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	yellow, blue, green, red, black, gray, white, mask100, mask75, mask50, mask25, off	G--U	Aspect marker color list
Assist Setting [assist]	assist.marker.aspect.ratio	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.aspect.ratio.list	GC-U	Marker aspect ratio
Assist Setting [assist]	assist.marker.aspect.ratio.list	CR-N700 C500mk2 C300mk3 C70 XF605	4:3, 13:9, 14:9, 16:9, 1.375:1, 1.66:1, 1.75:1, 1.85:1, 1.90:1, 2.35:1, 2.39:1, 9:16, custom	G--U	Marker aspect ratio list
		C400	4:3, 13:9, 14:9, 16:9, 1.375:1, 1.66:1, 1.75:1, 1.85:1, 1.90:1, 2.35:1, 2.39:1, 9:16, 4:5, 2:1, 1:1, custom		
Assist Setting [assist]	assist.marker.aspect.custom	CR-N700 C500mk2 C300mk3 C70 XF605	assist.marker.aspect.custom.min… assist.marker.aspect.custom.max	GC-U	Marker custom aspect ratio * In aspect ratio (width:height), the value of width when the height is 100
		C400			Marker custom aspect ratio * In aspect ratio (width:height), the value of
Assist Setting [assist]	assist.marker.aspect.custom.min	CR-N700 C500mk2 C300mk3 C70 XF605	100	G--U	Marker custom aspect ratio: Minimum configurable width
		C400	1		
Assist Setting [assist]	assist.marker.aspect.custom.max	CR-N700 C500mk2 C400 C300mk3 C70 XF605	999	G--U	Marker custom aspect ratio: Maximum configurable width
Assist Setting [assist]	assist.marker.aspect.custom.vertical	C400	assist.marker.aspect.custom.vertical.min… assist.marker.aspect.custom.vertical.max	GC-U	Marker custom aspect ratio: height value * In aspect ratio (width:height), the value of
Assist Setting [assist]	assist.marker.aspect.custom.vertical.min	C400	1	G---	Marker custom aspect ratio Minimum configurable width
Assist Setting [assist]	assist.marker.aspect.custom.vertical.max	C400	999	G---	Marker custom aspect ratio height value: Maximum configurable height

Parameter Type	Item Name	Model Specific Information ("-" for common spec.)	Value Type/Range	Attribute	Description
Assist Setting [assist]	assist.marker.safearea	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.safearea.list	GC-U	Safety zone marker color
Assist Setting [assist]	assist.marker.safearea.list	CR-N700 C400 C70 XF605	yellow, blue, green, red, black, gray, white, mask100, mask75, mask50, mask25, off	G--U	Safety zone marker color list
		C500mk2 C300mk3	yellow,blue,green,red,black,gray,white,off		
Assist Setting [assist]	assist.marker.safearea.basis	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.safearea.basis.list	GC-U	Marker safety zone reference
Assist Setting [assist]	assist.marker.safearea.basis.list	CR-N700 C500mk2 C400 C300mk3 C70 XF605	whole_picture, aspect_marker	G--U	Marker safety zone reference list
Assist Setting [assist]	assist.marker.safearea.type	CR-N700 C500mk2 C400 C300mk3 C70 XF605	Selected from assist.marker.safearea.type.list	GC-U	safety zone area
Assist Setting [assist]	assist.marker.safearea.type.list	CR-N700 C500mk2 C300mk3 C70 XF605	side_length_8000, side_length_8800, side_length_9000, side_length_9300, side_length_9500, area_8000, area_9000, area_9250, area_9500	G--U	Safety zone area list
		C400	side_length_8000,side_length_8800,side_length_9000, side_length_9300,side_length_9500		

(End)