

Applicable Network Cameras for Camera Recorder Module

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■Relevant Models

RD81RC96-CA

Thank you for your continued support of Mitsubishi Electric programmable controllers, MELSEC iQ-R series. This bulletin introduces network cameras applicable to a camera recorder module. For the product availability, please contact the manufacturer.

1 PRECAUTIONS

Specifications of the applicable products are subject to change without notice. Before using the product, please read "SAFETY PRECAUTIONS" of User's Manual. For precautions on wiring of each product, refer to the manual for the product.

1.1 Precautions for Network Cameras

Network cameras manufactured by Axis Communications AB

- The capture mode and power line frequency must be set according to a frame rate to be set for a camera recorder module. (☞ Page 6 Setting an IP address etc.)

For the specifications of the capture mode, refer to the manual for a network camera.

Network cameras manufactured by CANON INC.

- If a resolution to be set for a camera recorder module or GOT does not appear in the communication test screen in the module extended parameter, change the setting of the video size set for a network camera. (☞ Page 9 Setting a video size set)
- If neither PTZ operation nor preset movement is available, release the camera control authority.

For details on the setting method, refer to the manual for a network camera used.

Network cameras manufactured by i-PRO Co., Ltd.

- If a resolution to be set for a camera recorder module or GOT does not appear in the communication test screen in the module extended parameter, change the setting of the image capture mode for a network camera. (☞ Page 11 Setting an image capture mode)

For details on the setting method, refer to the manual for a network camera used.

- When starting the live video display function for a GOT while recording video data, video data delivery from a network camera by using the recording function may temporarily stop. Check the operating status of the target network camera in the "Camera Monitor" screen or in the buffer memory of a camera recorder module.

For details on the "Camera Monitor" screen and buffer memory, refer to the following:

📖MELSEC iQ-R System Recorder User's Manual (Application)

2 NETWORK CAMERA LIST

This chapter shows the list of products that satisfy the interface specifications of modules manufactured by Mitsubishi Electric. When applying the product, make sure to examine the applicability and confirm that it will not cause system operation problems.

In addition, use the product according to the specifications (standards).

2.1 ONVIF Supported Network Cameras

This section shows the list of network cameras that can be used with the ONVIF® (Open Network Video Interface Forum) interface.

Manufacturer	Product	Series	Model name
Axis Communications AB	Fixed box camera	AXIS® M10	M1065-LW (discontinued)
			M1065-L (discontinued)
			M1045-LW (discontinued)
		AXIS Q16	Q1656
			Q1645 (discontinued)
		AXIS P13	P1375-E
			P1377
		AXIS M11	M1135 (discontinued)
			M1135 Mk II
		Fixed dome camera	AXIS P32
	P3245-LVE		
	AXIS Q35		Q3536-LVE
			Q3515-LVE (discontinued)
	Pan/tilt/zoom (PTZ) camera	AXIS M55	M5525-E
		AXIS M50	M5075-G
			M5074
M5065 (discontinued)			
Modular camera	AXIS F	F41 (discontinued)	
		F44 (discontinued)	
	AXIS P12	P1275	
		P1265	
		P1245	
CANON INC.	Compact micro network camera	Compact Full HD	VB-S31D Mk II
			VB-S910F
		Compact HD	VB-S805D Mk II (discontinued)
	Standard network camera	Full HD	VB-H45 (discontinued)
i-PRO Co., Ltd.	PTZ network camera	WV-S6100	WV-S61301-Z2
			WV-S6130 (discontinued)
	Dome network camera	WV-S2500	WV-S2531LN (discontinued)
			WV-S2100
	Box network camera	WV-S1100	WV-S1131 (discontinued)

3 OPERATION CONFIRMED VERSIONS AND SUPPORTED FUNCTIONS

This chapter shows the availability of each function when connecting listed network cameras to a camera recorder module. The operations of the listed ONVIF supported network cameras with the following firmware versions have been confirmed by Mitsubishi Electric.

However, when applying the product, make sure to examine the applicability and confirm that it will not cause system operation problems.

Network cameras manufactured by Axis Communications AB

The following shows the confirmed versions and the availability of each function when connecting each model to a camera recorder module.

○: Available, —: Not available

Model name	Firmware version		Camera adjustment function (PTZ)	Recording function GOT linkage function Camera event function
	Active	LTS		
Q1656	10.9.4	—	—	○
P1375-E	—	9.80.3.8		
P1377		10.12.153		
M1135 Mk II				
P3265-LVE	10.8.1	—		
P3245-LVE	—	9.80.3.8		
Q3536-LVE	10.12.59	—		
M5525-E	—	8.40.4.3	○	
M5075-G	10.12.73	—		
M5074	10.12.65	—		
P1275	—	9.80.3.8	—	
P1265				
P1245				

The following products are discontinued.

Model name	Firmware version		Camera adjustment function (PTZ)	Recording function GOT linkage function Camera event function
	Active	LTS		
M1065-LW	—	9.80.3.8	—	○
M1065-L				
M1045-LW				
Q1645				
M1135				
Q3515-LVE				
M5065	6.53.5.5	—	○	
M5054				
F41	6.50.5.5	—	—	
F44*1				

*1 A camera recorder module does not support the quad view stream (quad stream).

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Network cameras manufactured by CANON INC.

The following shows the confirmed version and the availability of each function when connecting each model to a camera recorder module.



Each function can be used only when selecting the simple setting mode for a camera recorder module.

○: Available, —: Not available

Model name	Firmware version	Camera adjustment function (PTZ)	Recording function GOT linkage function Camera event function
VB-S31D Mk II	1.1.5	○	○
VB-S910F			

The following products are discontinued.

Model name	Firmware version	Camera adjustment function (PTZ)	Recording function GOT linkage function Camera event function
VB-S805D Mk II	1.1.5	—	○
VB-H45		○	

Network cameras manufactured by i-PRO Co., Ltd.

The following shows the confirmed versions and the availability of each function when connecting each model to a camera recorder module.



Each function can be used only when selecting the simple setting mode for a camera recorder module.

○: Available, —: Not available

Model name	Firmware version	Camera adjustment function (PTZ)	Recording function GOT linkage function Camera event function
WV-S61301-Z2	2.36	○	○

The following products are discontinued.

Model name	Firmware version	Camera adjustment function (PTZ)	Recording function GOT linkage function Camera event function
WV-S6130	4.91	○	○
WV-S2531LN		—	
WV-S2111L			
WV-S1131			

4 SETTING PROCEDURES


Network settings such as an IP address are required when starting a network camera for the first time.

This chapter shows the outline of an initial setting procedure for a network camera as a reference.

For details on the procedure, refer to the manual for each product.

Outline of settings

The following shows the procedure outline for setting a network camera.

- 1.** Design a network configuration of a system, and determine the IP address for each device.
Set all IP addresses for a CPU module in a programmable controller system, network camera, and each network storage device to be in the same segment.
- 2.** Set the IP addresses etc. by using the network connection setting function of a personal computer and network camera.
 Page 5 Outline of network connection settings
- 3.** Install the network camera.
- 4.** Access the network camera from the personal computer, and configure other settings as necessary.

Type	Reference	Required/optional
Network camera manufactured by Axis Communications AB	Page 7 Setting the live view window	Required
	Page 7 Setting an ONVIF user	Required
	Page 7 Configuring the setting for using the camera event function	Optional
	Page 8 Configuring the setting for changing a video rotation angle on a network camera	Optional
Network camera manufactured by CANON INC.	Page 9 Setting a video size set	Optional
	Page 9 Configuring the setting for using the camera event function	Optional
Network camera manufactured by i-PRO Co., Ltd.	Page 10 Setting a stream encoding format	Required
	Page 11 Setting an image capture mode	Optional
	Page 11 Configuring the setting for using the camera event function	Optional

Outline of network connection settings

The following shows the procedure outline for setting an IP address etc.

- 1.** Connect a network camera and personal computer to a network.
- 2.** Check the IP address (initial value) of the network camera.
- 3.** Set the IP address for the personal computer to be in the same segment as the IP address of the network camera.
- 4.** Access the network camera from the personal computer and set the IP address etc. for the network camera.

Type	Reference
Network camera manufactured by Axis Communications AB	Page 6 Setting an IP address etc.
Network camera manufactured by CANON INC.	Page 8 Setting an IP address etc.
Network camera manufactured by i-PRO Co., Ltd.	Page 10 Setting an IP address etc.

- 5.** Set the IP address for the personal computer again to be in the same segment as the IP address of the network camera.



Set all IP addresses for a CPU module in a programmable controller system, network camera, and each network storage device to be in the same segment.

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4.1 Initial Settings for an ONVIF Supported Network Camera

Network camera manufactured by Axis Communications AB

Use a web browser to set a network camera.



Available browsers differ depending on the firmware version of a camera to be used. For available browsers, refer to the manual for each network camera or the website of Axis Communications AB(www.axis.com).

Setting an IP address etc.

The following shows the procedure for setting an IP address etc. by connecting to a network camera from a web browser.

Operating procedure

- 1.** Enter the IP address of a network camera on a web browser.
If the IP address of the network camera is unknown, it can be checked on a network by using AXIS IP Utility or AXIS Device Manager.
AXIS IP Utility and AXIS Device Manager can be downloaded from the website of Axis Communications AB(www.axis.com). The screen for setting an administrator password (root password) appears when accessing the web server.
- 2.** Set a password and language to use, and click the [Create login] button.
The password must be 32 characters or less in length to access the network camera from a camera recorder module.
- 3.** Enter the set user name and password to log in to the network camera.
- 4.** Follow the on-screen instructions to set the necessary information.
The maximum frame rate of a network camera varies depending on the power line frequency and capture mode. Set the power line frequency and capture mode according to a frame rate to be set for the camera recorder module.
—: Cannot be set

Network camera setting			Camera recorder module setting
Capture mode example	Power line frequency	Frame rate	Frame rate
720p @ 180 fps (no WDR)	50/60 Hz	180 fps	180 fps
1080p (16:9) @ 100/120 fps	50 Hz	100 fps	—
	60 Hz	120 fps	120 fps
1080p (16:9) Forensic WDR @ 25/30 fps	50 Hz	25 fps	—
	60 Hz	30 fps	30 fps

For 1080p (16:9) @ 100/120 fps in the above capture mode example, the power line frequency must be set to 60 Hz to set the frame rate to 120 fps for a camera recorder module.

For the specifications of the capture mode, refer to the manual for a network camera.

- 5.** Set "IPv4" to "Manual IP and manual DNS," and set desired network parameters.
Once the IP address is changed, the connection is disconnected. Close the web browser.

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Setting the live view window

The following shows the procedure for setting the live view window. Set it with a personal computer and network camera connected after setting an IP address.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
The live view window appears.
3. Adjust the installation position of the network camera while checking the video.

Setting an ONVIF user

The following shows the procedure for setting an ONVIF user. Set it with a personal computer and network camera connected after setting an IP address.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
3. Select [Settings] ⇒ [System] ⇒ [ONVIF].
4. Click "+" below "ONVIF users," and add an ONVIF user.

Set a user name and password.

Select "Administrator" for the user group.

Point

The user name and password set for "ONVIF users" are used for "Camera Individual Settings" in the module extended parameter of a camera recorder module.

Configuring the setting for using the camera event function

To use the camera event function, the motion detection setting must be configured on the network camera side.

The following shows the procedure for configuring the setting. Configure it with a personal computer and network camera connected after setting an IP address.

A camera recorder module acquires the event detection time from a network camera in seconds.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
3. Select [Settings] ⇒ [Apps] ⇒ [AXIS Video Motion Detection].
4. Click "Start."
The status changes to "Running."
5. Click the [Open] button to select a detection range on the video.

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Configuring the setting for changing a video rotation angle on a network camera

This setting is not required for models other than those listed below, because a video rotation angle set in the module extended parameter of a camera recorder module is applied to a network camera.

For the following models, a video rotation angle can be set on the network camera side.

Models:

Q1656, P1375-E, P1377, M1135, Q3536-LVE, P3245-LVE, P3265-LVE, M5074, M5075-G, M1135 Mk II

The following shows the procedure for configuring the setting. Configure it with a personal computer and network camera connected after setting an IP address.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
3. Select [Settings] ⇒ [Image] ⇒ [Rotate] to set an angle.

Network camera manufactured by CANON INC.

Use a web browser to set a network camera.

Setting an IP address etc.

The following shows the procedure for setting an IP address etc. by connecting to a network camera from a web browser.

Operating procedure

1. Enter the IP address of a network camera on a web browser.

If the IP address of the network camera is unknown, it can be checked on a network by using Camera Management Tool.

Camera Management Tool can be downloaded from the website of Canon U.S.A., Inc.

www.usa.canon.com/internet/portal/us/home/support

The initial setting screen for an administrator account appears when accessing the web server.

2. Set an administrator name and password, and click the [Apply and reboot] button.

The administrator name set in this step is used as the user name to log in to the network camera.

3. Enter the set user name and password to log in to the network camera.

The settings menu appears.

4. Select [Basic] ⇒ [Network], and set "IPv4 Address Settings Method" to "Manual" under "IPv4."

5. Set an IP address, and click the [Apply and reboot] button.

Once the IP address is changed, the connection is disconnected. Close the web browser.

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Setting a video size set

The following shows the procedure for setting a video size set. Set it with a personal computer and network camera connected after setting an IP address.

A resolution that can be set for a camera recorder module or GOT is determined according to the setting of "Video Size Set." If a resolution to be set does not appear in the communication test screen of a camera recorder module, change this setting.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.

The settings menu appears.

3. Select [Basic] ⇒ [Video], and select an item including a resolution to be set for a camera recorder module for [Video Size Set] under [All Videos].
4. Click the [Apply and reboot] button.

The change is applied and the camera restarts.

Configuring the setting for using the camera event function

To use the camera event function, the motion detection setting must be configured on the network camera side.

The following shows the procedure for configuring the setting. Configure it with a personal computer and network camera connected after setting an IP address.

A camera recorder module acquires the event detection time from a network camera in milliseconds.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
The settings menu appears.
3. Select [Event] ⇒ [Intelligent Function] to open the screen for setting motion detection.
4. Click the [Add] button.
5. In the "New Detection Settings" screen, set a number for "Detection Settings Number" and select "Moving Object Detection" for "Detection Type."
6. Select a detection range on the video, and click the [Apply] button.

Point

While the intelligent function is restarting, detection is not performed.

If operating a camera (PTZ movement) while the intelligent function is being set or running, the function restarts.

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Network camera manufactured by i-PRO Co., Ltd.

Use a web browser to set a network camera.

Setting an IP address etc.

The following shows the procedure for setting an IP address etc. by connecting to a network camera from a web browser.

Operating procedure

1. Enter the IP address of a network camera on a web browser.

If the IP address of the network camera is unknown, it can be checked on a network by using i-PRO Configuration Tool.

i-PRO Configuration Tool can be downloaded from the website of i-PRO Co., Ltd.

i-pro.com/global/en/surveillance

The screen for registering an administrator appears when accessing the web server.

2. Set a user name and password, and click the [Set] button.
3. Enter the set user name and password to log in to the network camera.

The live page appears.

4. Click the [Setup] button.
5. Set "Network Settings" to "Static" under "IPv4 network" in [Network].
6. Set an IP address, and click the [Set] button.

Once the IP address is changed, the connection is disconnected. Close the web browser.

Setting a stream encoding format

The following shows the procedure for setting a stream encoding format. Set it with a personal computer and network camera connected after setting an IP address.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
 2. Enter the set user name and password to log in to the network camera.
- The live page appears.
3. Click the [Setup] button.
 4. Select [Image/Audio] ⇒ [Image], and select "H.264" for [Stream encoding format].
 5. Click the [Set] button.

The change is applied.

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Setting an image capture mode

The following shows the procedure for setting an image capture mode. Set it with a personal computer and network camera connected after setting an IP address.

A resolution that can be set for a camera recorder module or GOT is determined according to the setting of "Image capture mode."

If a resolution to be set does not appear in the communication test screen of a camera recorder module, change this setting.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
The live page appears.
3. Click the [Setup] button.
4. Select [Image/Audio] ⇒ [Image], and select a mode including a resolution to be set for a camera recorder module for [Image capture mode].
5. Click the [Set] button.
The change is applied.

Configuring the setting for using the camera event function

To use the camera event function, the motion detection setting must be configured on the network camera side.

The following shows the procedure for configuring the setting. Configure it with a personal computer and network camera connected after setting an IP address.

A camera recorder module acquires the event detection time from a network camera in seconds.

Operating procedure

1. Enter the IP address of a network camera on a web browser.
2. Enter the set user name and password to log in to the network camera.
The live page appears.
3. Click the [Setup] button.
4. Select [Alarm] ⇒ [VMD area].
The screen for setting an area to detect object motion appears.

Point

For PTZ cameras, when clicking the [Start] button for "Select a preset position," the screen for setting an area appears.

By selecting "except the preset positions" for "Select a preset position," a camera event is reported even after PTZ movement.

5. Specify an area on the screen.
6. Click the [Set] button.
The setting is applied.
7. Close the screen.

Point

While the setting screen is open, motion detection alarms may not be detected and interlink operations cannot be performed. Close the screen after completing the setting.

REVISIONS

Version	Date of issue	Revision
A	February 2021	First edition
B	April 2021	Models of ONVIF supported network cameras have been added.
C	July 2021	The title has been changed. The overall configuration has been reviewed with this change. Models of ONVIF supported network cameras manufactured by CANON INC. and Panasonic i-PRO Sensing Solutions Co., Ltd. have been added.
D	September 2021	A precaution for network cameras has been added.
E	April 2022	The supported firmware versions have been updated. The camera event function has been supported. The company name has been changed from Panasonic i-PRO Sensing Solutions Co., Ltd. to i-PRO Co., Ltd.
F	October 2022	Models of ONVIF supported network cameras have been added.
G	April 2023	A model of ONVIF supported network cameras has been added.
H	January 2024	A model of ONVIF supported network cameras has been added.

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