

Technical Brief

DuraVision IP Decoding Monitor Troubleshooting Guide

FDF2304W-IP
FDF4627W-IP
FDF2711W-IP
DX0211-IP

Rev. C
(2/16/2022)

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1. Introduction

This document provides information on how to self-solve problems when DuraVision IP decoding monitor or box (hereinafter referred to as "monitor") is unable to display camera images.

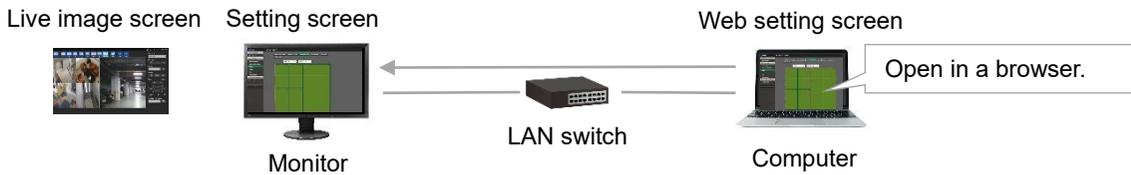
The target monitors are as follows:

- 1st generation platform
 - FDF2304W-IP / FDF4627W-IP
- 2nd generation platform
 - FDF2711W-IP / DX0211-IP

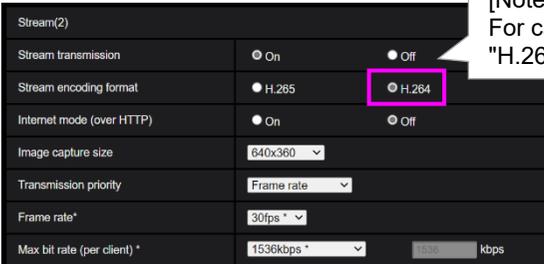
2. Device preparation

Due to the increasing performance and security of cameras, it may be impossible to connect the monitor and camera with the default settings. Please configure each device properly before connecting.

2.1. Monitor preparation

Device	Item	No.	Instructions
FDF2304W-IP FDF4627W-IP FDF2711W-IP DX0211-IP			Open the setting screen on the monitor or enter "http://{IP address of the monitor}/ui/" in your browser to open the web setting screen. <div style="text-align: center; margin-top: 10px;">  </div>
	Software	1	Setting location: "System" - "Maintenance" Make sure the software is the latest version. The latest software can be downloaded from " Software & Drivers " on the EIZO website.
	Initialization	2	Setting location: "System" - "Maintenance" If you are using a monitor that was installed elsewhere, perform initialization to return to the default settings.
	User	3	Setting location: "User" Set the username and password. Default setting is admin/admin.
	Date and Time	4	Setting location: "System" - "Date and Time" Set the current date and time.
	Network	5	Setting location: "System" - "Network" Set an IP address (IPv4 network) that does not overlap with other devices. *Default setting is 192.168.0.150 for IP address and 255.255.255.0 for subnet mask. When installing two or more monitors in the same network, be sure to change the IP address to avoid overlapping.

2.2. Preparing Panasonic i-PRO Camera

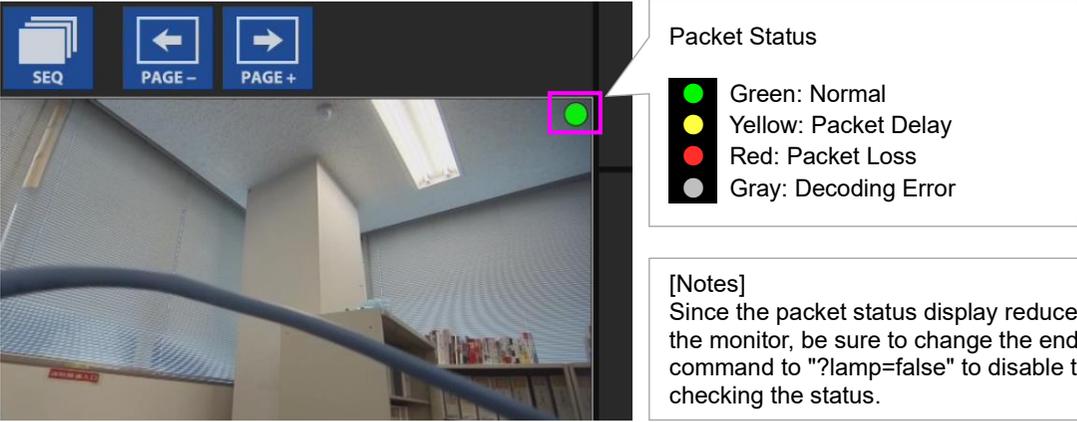
Device	Item	No.	Instructions																										
Panasonic i-PRO camera			Use Panasonic i-PRO "IP Easy Setup Tool" to configure the camera. For details on the settings, refer to the camera's manual. After setting the IP address, enter "http://{IP address of the camera}" in your browser to open the camera's setting screen.																										
	User	1	Set the username and password.																										
	Date and Time	2	Setting location: "Basic" - "Basic" Set the current date and time.																										
	Network	3	Setting location: "Network" - "Network" Select "Static" in the Network Settings of "IPv4 Network" and set an IP address (IPv4) that does not overlap with other devices. *Do not select "Auto(AutoIP)" or "Auto(Advanced)" so that the link local address (169.254.x.x) is not set.																										
	Stream	4	Setting location: "Image/Audio" - "Image" <div style="display: flex; align-items: flex-start; margin-top: 10px;">  <div style="margin-left: 10px;"> <p>[Notes] For cameras that support H.265, the "H.265" is initially selected. Be sure to change it to "H.264" when connecting to FDF2304W-IP / FDF4627W-IP.</p> <p>[Information] When registering a camera to the monitor using the "Panasonic" protocol, the default setting is to connect to stream(2).</p> </div> </div> <p>Set "Stream transmission" of Stream(2) to "On" and set the following values according to the display performance of the monitor.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> For FDF2304W-IP / FDF4627W-IP <ul style="list-style-type: none"> - Compression Format: H.264 - Bit rate: 8192 kbps or less (4096 kbps recommended) - Resolution / Frame rate: Determine the values from the number of cameras displayed simultaneously on the screen. 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2.3. Preparing AXIS camera / ONVIF compliant camera

Device	Item	No.	Instructions	
AXIS camera / ONVIF compliant camera			Use the camera maker's tools to configure the camera. For details on the settings, refer to the camera's manual. Example. "AXIS IP Utility" by AXIS, "Configuration Manager" by Bosch After setting the IP address, enter "http://{IP address of the camera}" in your browser to open the camera's setting screen.	
	User	1	Set the username and password.	
	Date and Time	2	Set the current date and time.	
	Network	3	Set an IP address (IPv4 network) that does not overlap with other devices. *Do not select the auto-configuration option for the IP address so that the link local address (169.254.x.x) is not set.	
	Stream	4	<p>Set the following values according to the display performance of the monitor.</p> <table border="0"> <tr> <td style="vertical-align: top;"> For FDF2304W-IP / FDF4627W-IP - Compression Format: H.264 - Bit rate: 8192 kbps or less (4096 kbps recommended) - Resolution / Frame rate: Determine the values from the number of cameras displayed simultaneously on the screen. (When the bit rate is 4096 kbps) 1 unit 1920 x 1080 / 30 fps 3 units 640 x 1024 / 30 fps 4 units 1920 x 1080 / 20 fps 8 units 1280 x 720 / 20 fps 9 units 1280 x 720 / 20 fps 16 units 640 x 480 / 30 fps </td> <td style="vertical-align: top;"> For FDF2711W-IP / DX0211-IP - Compression Format: H.265 / H.264 - Bit rate: 8192 kbps or less (4096 kbps recommended) - Resolution / Frame rate: Determine the values from the number of cameras displayed simultaneously on the screen. (When the bit rate is 4096 kbps) 1 unit 3840 x 2160 / 30 fps, 1920 x 1080 / 60 fps, 1280 x 720 / 60 fps 4 units 3840 x 2160 / 20 fps, 1920 x 1080 / 60 fps, 1280 x 720 / 60 fps 9 units 1920 x 1080 / 30 fps, 1280 x 720 / 50 fps, 640 x 480 / 60 fps 12 units 1920 x 1080 / 20 fps, 1280 x 720 / 40 fps, 640 x 480 / 60 fps 16 units 1920 x 1080 / 20 fps, 1280 x 720 / 30 fps, 640 x 480 / 50 fps 32 units 1280 x 720 / 15 fps, 640 x 480 / 30 fps *The reference values of the DX0211-IP differ depending on the resolution of the external monitor to which it is connected. The above values are for reference when connecting to a Full HD monitor; when connecting to a 4K monitor, check the DX0211-IP setup manual for reference values. </td> </tr> </table>	For FDF2304W-IP / FDF4627W-IP - Compression Format: H.264 - Bit rate: 8192 kbps or less (4096 kbps recommended) - Resolution / Frame rate: Determine the values from the number of cameras displayed simultaneously on the screen. (When the bit rate is 4096 kbps) 1 unit 1920 x 1080 / 30 fps 3 units 640 x 1024 / 30 fps 4 units 1920 x 1080 / 20 fps 8 units 1280 x 720 / 20 fps 9 units 1280 x 720 / 20 fps 16 units 640 x 480 / 30 fps
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	5	Disable B-frame if the camera supports B-frame. *The monitor does not support B-frames. If B-frames are included in the stream, an image that looks like an object being rewound will be displayed. Version 5.5000 or later of the FDF2711W-IP / DX0211-IP supports B-frame. Set "B Frame Decode Buffer" to "On" in "Live Image Screen" - "Other".		

3. Troubleshooting

Symptom	No.	Instructions
Unable to detect the camera automatically.	1	<ul style="list-style-type: none"> Select the protocol that suits your camera. <ul style="list-style-type: none"> "Panasonic": Panasonic i-PRO camera "AXIS": AXIS camera "ONVIF": ONVIF compliant camera Make sure the username and password are correct. <p>Whether a camera can be detected automatically depends on the camera and the network environment. Some cameras have a setting to accept auto-detection only for a certain period of time after they are turned on. If the camera cannot be detected automatically, use manual registration to register it.</p>
Unable to register the camera manually.	2	Make sure the IP addresses of the devices (monitor, camera, PC, or recorder) connected to the network are not duplicated.
	3	Make sure the IP address, HTTP port (typically 80), username and password of the camera entered in the manual registration screen are correct.
	4	Check if you can connect to the camera with the Ping command. If the monitor is FDF2711W-IP / DX0211-IP, enter the IP address of the camera in the manual registration screen and press the "Ping" button. If the monitor is FDF2304W-IP / FDF4627-IP, open the command prompt on your PC and type "ping {IP address}" to connect to the camera and monitor. <u>When there is no response to the ping command</u> <ul style="list-style-type: none"> Connect the network cable to another LAN port on the LAN switch. Replace the network cable with a different cable. If the camera is connected to a different subnet, connect the camera to the same subnet as the monitor. If manual registration succeeds, make sure that TCP and UDP ports are allowed on the router connecting the subnets.
The camera has been registered, but the image is not displayed on the live image screen. <ul style="list-style-type: none"> The image is completely black. Error "E**-**" is displayed. Image is disturbed. 	5	If the above methods do not solve the problem and the camera is not listed in the compatibility information (1st generation / 2nd generation) on the EIZO website, the monitor and camera may be incompatible. <ul style="list-style-type: none"> If you are using FDF2304W-IP / FDF4627W-IP, please consider FDF2711W-IP / DX0211-IP. These use different libraries, which may improve the symptom. Please consider connecting with the "DirectUri" protocol. To find the RTSP URL starting with "rtsp://" to be entered in the manual registration screen, refer to the camera's manual or contact the camera manufacturer. When connecting using the "DirectUri" protocol, the camera image can be displayed, but camera operations such as pan, tilt, and zoom cannot be performed.
	6	Make sure the camera's stream settings are set correctly. (See 2.2 / 2.3) *There are many reports of errors when trying to display H.265 streams on FDF2304W-IP / FDF4627W-IP.
	7	Make sure that the camera user you entered when registering the camera has administrator rights.
	8	If the camera is connected to a different subnet, connect the camera to the same subnet as the monitor. <u>When the image is displayed</u> <ul style="list-style-type: none"> Make sure that TCP and UDP ports are allowed on the router connecting the subnets. Select "ONVIF" for the protocol and "RTP over RTSP" for the communication method on the manual registration screen. The "RTP over RTSP" does not use UDP port, so you can display images even if the UDP port is blocked on the router. If the monitor is FDF2711W-IP/DX0211-IP, the "RTP over RTSP" is also available in AXIS protocol.

	9	<p>Enter the Web API command "http://{IP address of the monitor}/api/v1/debug/traffic-condition-lamp?lamp=true" in your browser and display the packet status in the camera image on the live image screen. If the version of FDF2711W-IP / DX0211-IP is 5.5000 or later, set "Communication Status Display" to "On" in "Live Image Screen" - "Other". Packet status display is available in version 4.3200 and later.</p> <div data-bbox="674 293 1751 715" style="border: 1px solid black; padding: 5px;">  </div> <p><u>When the packet state is not normal</u> The correct packet has not reached the monitor due to a camera or network issue.</p> <ul style="list-style-type: none"> •Connect the network cable to another LAN port on the LAN switch. •Replace the network cable with another cable. •Reduce the camera load by lowering the bit rate in the camera stream settings. •Connect only the camera and monitor to the LAN switch. If you can display the image correctly, make sure that the LAN switch or router settings in the communication path are correct.
	10	<p>If you have multiple devices connected to the camera, leave the monitor and remove the other devices.</p> <p><u>When the image is displayed</u> The camera may be under load and may not send correct packets. Consider using multicast instead of unicast.</p>
	11	<p>If the above methods do not solve the problem and the camera is not listed in the compatibility information (1st generation / 2nd generation) on the EIZO website, the monitor and camera may be incompatible.</p> <ul style="list-style-type: none"> •If you are using FDF2304W-IP/FDF4627W-IP, consider FDF2711W-IP/DX0211-IP. These use different libraries, which may improve the symptom. • Consider connecting with the DirectUri protocol. To find the RTSP URL starting with "rtsp:///" to be entered in the manual registration screen, refer to the camera's manual or contact the camera manufacturer. When connecting using the "DirectUri" protocol, the camera image can be displayed, but camera operations such as pan, tilt, and zoom cannot be performed.
<p>The image was displayed on the monitor, but adding a camera makes the image unstable.</p> <ul style="list-style-type: none"> •Image position changes. •Image is disturbed. 	12	<p>Make sure the IP address of the added camera does not overlap with the IP address of the existing devices.</p> <p>Make sure the stream settings of the camera you added are set correctly. (See 2.2 / 2.3)</p> <p>The increase in cameras may be overloading the monitor. Make sure that the resolution and frame rate are set according to the number of cameras displayed simultaneously on one screen. (See 2.2 / 2.3)</p>