

OPERATION MANUAL

MV-410HS Live Viewer

Version 2.0 – higher

FOR-A COMPANY LIMITED

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Trademark

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1-1. Overview

MV-410HS Multi viewer is enabled to transmit videos to PC by the connection through a network. Use this MV-410HS Live Viewer to verify the transmitted videos.

1-2. System Requirements

To install MV-410HS Live Viewer, your computer must meet the following requirements.

OS	Windows® XP operating system SP2 or later Professional (32-bit)	Windows® 7 operating system Professional (32/64-bit)		
CPU	Pentium® 4 processor 1.3 GHz or faster	Intel® Core™2 Duo processor 2 GHz or faster		
Memory	512 MB or more 2 GB or more			
Display	Resolution of 1024 x 768pixels or better			
	Must be capable of full color (24-bit) display			
Network port	Ethernet, at least one port			
	100BASE-TX/1000BASE-T			
Network cable	100BASE-TX: Category 5 or better			
	1000BASE-T: Category 6, or enhanced category 5			
Software	Microsoft® .NET Framework 2.0 (Supplied on the CD-ROM)			
	Windows® Installer 3.1 (Supplied on the CD-ROM)			
	Visual C++® 2005 Redistributable (Supplied on the CD-ROM)			

1-3. Installing MV-410HS Live Viewer

(1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file **"setup.exe"** to start the setup wizard.



(2) If [.NET Framework 2.0] is not installed on your PC, the screen shown below is displayed. Click Accept. If [.NET Framework 2.0] is already installed on your PC, this screen is not displayed.

🐞 MV-410HS Live Viewer Setup	×
For the following components:	
.NET Framework 2.0	-
Please read the following license agreement. Press the page down key to see the rest of the agreement.	
MICROSOFT SOFTWARE SUPPLEMENTAL LICENSE TERMS MICROSOFT .NET FRAMEWORK 2.0 MICROSOFT WINDOWS INSTALLER 2.0 MICROSOFT WINDOWS INSTALLER 3.1 Microsoft Corporation (or based on where you live, one of its affiliates) licenses this supplement to you. If you are licensed to use Microsoft Windows operating system software (the "software"), you may use this supplement. You may not use it if you do not have a license for the software. You may use a copy of this supplement with each validly licensed copy of the software. The following license terms describe additional use terms for this	
View EULA for printing	
Do you accept the terms of the pending License Agreement?	
If you choose Don't Accept, install will close. To install you must accept this agreement.	
Accept	

(3) If [Windows Installer 3.1] is not installed on your PC, the screen shown below is displayed. Click Accept. If [Windows Installer 3.1] is already installed on your PC, this screen is not displayed.

🐞 MV-410HS Live Viewer Setup	×
For the following components:	
Windows Installer 3.1	_
Please read the following license agreement. Press the page down key to see the rest of the agreement.	
SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE ("Supplemental EULA") IMPORTANT: READ CAREFULLY - The Microsoft operating system components accompanying this Supplemental EULA, including any "online" or electronic documentation ("OS Components") are subject to the terms and conditions of the agreement under which you have licensed the applicable Microsoft operating system product described below (each an "End User License Agreement" or "EULA") and the terms and conditions of this Supplemental EULA. BY INSTALLING, COPYING, DOWNLOADING, ACCESSING, OR OTHERWISE USING THE OS COMPONENTS, YOU	
View EULA for printing Do you accept the terms of the pending License Agreement?	
If you choose Don't Accept, install will close. To install you must accept this agreement.	
Accept Don't Accept	

(4) The confirmation dialog for installing Visual C++ Runtime Libraries appears. Click Install.

🐞 MV-410HS Live Viewer Setup	X
The following components will be installed on your machine:	
Visual C++ Runtime Libraries (x86)	_
Do you wish to install these components?	
If you choose Cancel, setup will exit.	
Install Cancel	

(5) If [.NET Framework 2.0] is not installed, the installation starts.

🐻 MV-4	110HS Live Viewer Setup	<
6	Installing .NET Framework 2.0	
	<u>C</u> ancel	

(6) When installation of [.NET Framework 2.0] is complete, the screen shown below is displayed requiring a reboot. Click **Yes** to reboot your PC.

🐻 M V-4	10HS Live Viewer Setup		
6	Setup must reboot before proceeding.		
Choose '	Yes' to reboot now or 'No' to manually reboot I	later.	
et	ails >>	Yes	No

(7) After the setup wizard is started, click **Next**.

😼 MV-410HS Live Viewer
Welcome to the MV-410HS Live Viewer Setup Wizard
The installer will guide you through the steps required to install MV-410HS Live Viewer on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel < <u>B</u> ack

(8) Select the installation directory. It is not necessary to change the folder. Select whether to install MV-410HS Layout Editor for current user only or for all users. When the settings are completed, click **NEXT>**.

🛃 MV-410HS Live Viewer	
Select Installation Folder	
The installer will install MV-410HS Live Viewer to the following folder.	
To install in this folder, click "Next". To install to a different folder, enter it be	low or click "Browse".
Eolder: C:¥Program Files¥FOR.A¥MV-410HS Live Viewer¥	Browse
	<u>D</u> isk Cost
Install MV-410HS Live Viewer for yourself, or for anyone who uses	this computer:
⊂ Just <u>m</u> e	
Cancel < <u>B</u> ack	Next >

(9) Click **NEXT>** to start the installation.

🛃 MV-410HS Live Viewer		
Confirm Installation		
The installer is ready to install MV-410HS Click "Next" to start the installation.	S Live Viewer on your compute	Я.
	Cancel <	Back

(10) When installation is completed normally, the screen shown below is displayed. Click **Close** to quit the setup wizard.

😸 MV-410HS Live Viewer			
Installation Incomplete			
The installer was interrupted before MV-4 the installer to try again.	410HS Live Viewer could	d be installed. You nee	ed to restart
Click "Close" to exit.			
	Cancel	< <u>B</u> ack	<u>C</u> lose

1-4. Removing MV-410HS Live Viewer

To remove MV-410HS Live Viewer, follow the procedure below.

1) Go to Start > Control Panel. In the Add or Remove Programs window, select "MV-410HS Live Viewer", and click Remove.

🐻 Add or Re	move Programs			
5	Currently installed programs:	Show up <u>d</u> ates	Sort by: Name	*
C <u>h</u> ange or Remove	🔂 MV-410HS Live Viewer		Size	2.00MB
Programs	Click here for support information.		Used	<u>rarely</u>
2	To change this program or remove it from you	r computer, click Change or Remove.	Change	Remove

2) The confirmation dialog shown below is displayed. Click **Yes** to start the uninstallation.

Add or I	Remove Programs	
?	Are you sure you want to remove MV-410HS Live Viewer from your	computer?

The "Windows Installer 3.1", "Microsoft .NET Framework 2.0", and "Microsoft Visual C++2005 Redistributable" do not need to be removed.

1-5. Connections

To control MV-410HS over a LAN interface, be aware that the cables and equipment used vary depending on the connection method. Use a crossover LAN cable to connect the computer directly to the MV-410HS. Use a straight through LAN cable for the connection using a router or a hub.

IMPORTANT	
In UNICAST mode, the connection with one PC is available for one MV-410HS.	_

1-6. Communication Standard

The communication standards for serial control over a LAN interface is as follows.

Protocol	TCP/IP Protocol					
	Setting range: 0.0.0.0 ~255.255.255.255					
	However, there also are limitations on IP addresses set by the PC as shown below. Set the IP address in this range.					
IP address	$192 \cdot 168 \cdot 0 \cdot 1$ $1^{\text{st}} \text{ octet} \qquad 2^{\text{nd}} \text{ octet} \qquad 3^{\text{rd}} \text{ octet} \qquad 4^{\text{th}} \text{ octet}$					
	1 st octet: 1 to 223 (except 127) 2 nd octet: 0 to 255 3 rd octet: 0 to 255 4 th octet: 1 to 254					
	* This is set in the menu screen on the main unit.					
	* The default setting is 192.168.0.1.					
Subset	Setting range: 0 to 31					
length	* This is set in the menu screen on the main unit.					
lengu	* The default setting is 24.					
	Setting range: 0.0.0.0 to 255.255.255.255					
Cotowov	* This is set in the menu screen on the main unit.					
Galeway	* The value 0.0.0.0 signifies that the gateway has not been set.					
	* The default setting is 0.0.0.0.					
	This is already set at factory shipping (cannot be changed).					
IVIAC address	* The setting can be confirmed in the menu screen on the main unit.					

IMPORTANT

You cannot change the LAN communication standard settings for MV-410HS main unit from PC. The changes can be made on MV-410HS main unit. See MV-410HS Operation Manual, section 7-3. "LAN" for details.

1-7. PC Network Settings

The PC network settings need to match that of the MV-410HS. The procedure for making the network settings at the PC vary depending on the OS, so refer to the OS manual for details. This setting example shows the case when connecting to the MV-410HS with the default settings. The MV-410HS default settings are shown below.

IP address	192. 168. 0.1		
Subnet mask length	24		
Gateway	0.0.0.0		

1) Setting in Windows XP with the default Start menu setting

Click Start on the taskbar, open [Control Panel], and double-click "Network Connections". Right-click "Local Area Connection" icon to open [Properties] window. Double-clicking "Internet Protocol (TCP/IP)" under the [General] tab opens the [Internet Protocol (TCP/IP) Properties] window. Make the settings as shown in the example below. Make a note of the settings before changing them in case you need to return the IP address to its original settings later.

eneral	
You can get IP settings assigned this capability. Otherwise, you ne the appropriate IP settings.	ł automatically if your network supports jed to ask your network administrator for
O Obtain an IP address auton	natically
Use the following IP addres	s:
IP address:	192 . 168 . 000 . 200
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
Default gateway:	
O <u>D</u> tain DNS server address	automatically
OSE THE FOLLOWING DNS SETV SETVENTION OF SETVENTION OF SET	ver addresses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	
	Advanced.

IP address for PC	192.168.0.yyy (yyy is any number from 2 to 254 except for the number set for the MV-410HS unit and the gateway number. In this example, the setting is yyy=200.)
Subnet mask	Set to 255.255.255.0.

2) Setting in Windows XP with the Start menu setting changed to Classic Click Start on the taskbar, select "Settings" → "Network Connections" and then right-click the "Local Area Connection" icon to open [Properties] window. Double-clicking "Internet Protocol (TCP/IP)" under the [General] tab opens the [Internet Protocol (TCP/IP) Properties] window. The settings are then made in the same way as 1) above.

When the settings are completed, click **OK**, and then close all setting windows.

2. Video Transmission using Live Viewer

2-1. Starting and Exiting MV-410HS Live Viewer

To start MV-410HS Live Viewer, go to **Start > Programs > FOR.A** and select "Live Viewer". The Controller dialog shown below is displayed.

MV-410HS Live	Viewer Ver.1.0.1	- Controller					
IP Address		FrameRate	0.00	Jpe	gFileSize	0	
MulticastAddress	239.255.0.0	-Quality					
MulticastPort	2100	01	02	03	○ 4		
🔄 Multicast		FrameRate					
	Connect	0 60	0 30	0 15	O 10	05	01

1) To connect in Unicast Mode

Enter the IP address of the MV-410HS to be connected in the IP address box, and then click **CONNECT**.

MV-410HS Live	Viewer Ver.1.0.1	- Controlle	r				
IP Address	192.168.0.1	FrameRate	0.00	Jpe	egFileSize	0	
MulticastAddress	239.255.0.0	Quality					
MulticastPort	2100	01	02	03	04		
Multicast		FrameRate	,				
	Connect	0 60) 30	() 15	0 10	05	01

If ID is set, the authentication window shown below is displayed.

* If ID is not set, the Viewer screen opens.

MV-410HS	LiveViewer 💶 🗖 🔀
ID	
Password	
	ОК

Enter ID and password and click OK. When the entered ID and password match the stored data, the Viewer screen opens.

	×
ID ROOT	
Password *****	
ОК	

The default settings on MV-410HS are as follows.

ID: ROOT Password: 00000

2) To connect in Multicast Mode

Put a check in the Multicast check box, and enter the Multicast address and Multicast port of the MV-410HS to be connected.

Click **CONNECT**. When the connection is established, the Viewer screen is displayed.

MV-410HS Live	Viewer Ver.1.0.1	- Controlle	r				
IP Address	192.168.0.1	FrameRate	0.00	Jpe	egFileSize	0	
MulticastAddress	239.255.0.0	Quality					
MulticastPort	2100	01	02	03	• 4		
🔽 (Multicast)		FrameRate					
	Connect	. 60) 30	0 15	0 10	05	01
			TANT				

Due to the UDP protocol used in MULTICAST mode, the video output may not be updated at the packet loss which occurs under the unstable network condition.

2-2. Closing Connection and MV-410HS Live Viewer

To close the communication with the MV-410HS, click \times at the top-right corner of the Viewer screen. To exit the MV410HS Live Viewer, click \times at the top-right corner of the control window.

2-3. MV-410HS Live Viewer - Controller

		6)			7)	
_							
MV-410HS Live	Viewer Ver.1.0.1	- Controlle	r				
IP Address	192.168.0.1	FrameRate	15.03	Jp	egFileSize	45997	
MulticastAddress	239.255.0.0	Quality 0 1	02	03	⊙ 4		+
Multicast		FrameRate	,				
	Connect	0 60	◯ 30	15	0 10	05	01

1) IP Addres

Displays the IP address of the connected MV-410HS. To change the connection with MV-410HS, close the Viewer screen, enter the IP address, and then click **Connect** again.

2) Multicast Address

Displays the Multicast address of the connected MV-410HS. To change the Multicast address to connect to, close the Viewer screen, enter the Multicast address and then click **Connect** again.

3) Multicast Port

Displays the Multicast port of the connected MV-410HS. To change the Multicast port to connect to, close the Viewer screen, enter the Multicast port and then click **Connect** again.

4) Multicast

Selects whether to connect in Unicast mode or Multicast mode. Unchecked: Connects in Unicast mode. Checked: Connects in Multicast mode.

5) Connect

Establishes the connection with the MV-410HS specified by the IP Address and opens the Viewer screen.

- 6) Frame Rate Measures and displays the actual frame rate.
- Jpeg File Size Displays the file size of the transmitted video image in Bytes.
- 8) Quality

Selects the compression rate for the JPEG image to transmit from 1 to 4. The larger number provides higher resolution.

9) Frame Rate

Selects the frame rate for the video image transmission. When the output frequency of MV-410HS is set to 60Hz or 59.94Hz, frame rate of 1FPS, 5FPS, 10FPS, 15FPS, 30FPS, and 60FPS are available. When the output frequency of MV-410HS is set to 50Hz, frame rate of 1FPS, 4FPS, 8FPS, 12FPS, 25FPS, and 50FPS are available.

IMPORTANT

The sufficient frame rate may not be obtained due to the transmitted video images, JPEG compression ratio, specifications of the connected PC, network environment, and other factors. If It occurs, change the JPEG compression ratio to reduce the data volume being transmitted

If the MV-410HS is connected in Multicast mode, settings of QUALITY and FRAME RATE cannot be changed. To change the settings, change the connection to Unicast mode.

Although settings for any of the followings are changed using Layout Editor, RS-232C/422/485/LAN command, or Web Browser while displaying MV-410HS Live Viewer screen, the parameter display on the Live Viewer - Controller dialog will not be updated.

- Output frequency
- JPEG compression ratio
- Frame rate



2-4. MV-410HS Live Viewer - Viewer Screen

1) Image Display Area

Displays the image transmitted from MV-410HS. The MV-410HS compresses the image data output from DVI OUT connector into both horizontally and vertically half size JPEG format and transmit the data.

- Output Screen Displays the output screen type selected on MV-410HS.
- Resolution Displays the resolution of the image transmitted from MV-410HS.

3. Troubleshooting

If any of the following problems occur during operation of your MV-410HS Live Viewer, proceed as indicated below to see if the problem can be corrected before assuming unit malfunction has occurred.

IMPORTANT

If the problem is not corrected by processing the actions below, power off the unit and power on again. If it does not correct the problem either, contact your dealer.

Problem	Check	Action
MV-410HS Live Viewer does not start.	Does the PC meet the operating environment conditions?	Start with a PC that meets the operating environment conditions.
	Is other software currently running?	There may be a conflict with another software program. Close all other programs, and then start the MV-410HS Live Viewer again.
The connection with MV-410HS cannot be established.	Is the MV-410HS turned on?	Check the MV-410HS is turned on.
	Is the network connected correctly?	Check that the network wires and cables are connected properly.
		Check that the cable type is correct.
	Are the LAN adapter and other hardware operating properly?	Use the device manager or diagnostic program to check if the hardware is operating properly.
		Check that the drivers are installed correctly.
	Were the PC network settings made correctly?	Check that the TCP/IP protocol is installed and that the IP address and other settings are correct.
	Were the MV-410HS network setting made correctly?	From the MV-410HS menu, check that the IP address and other settings are correct.
	Is the same IP address being used?	Check that no IP addresses are duplicated among all PCs and MV-410HS units in the network.
	Is the network mode set correctly?	Check that the MV-410HS network mode matches to that of the MV-410HS Live Viewer.