OMRON

Vision Sensor FH-UMAI FH Application Software

Version Update Tool Operating Manual

FH-UMAI FH-5 22/FH-5 22



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Introduction

Thank you for purchasing the FH-UMAI.

This manual contains information that is necessary to use the FH-UMAI.

Please read this manual and make sure you understand the functionality and performance of the FH-UMAI before you attempt to use it in a control system.

Keep this manual in a safe place where it will be available for reference during operation.

Intended Audience

This manual is intended for the following personnel, who must also have knowledge of electrical systems (an electrical engineer or the equivalent).

- Personnel in charge of introducing FA systems.
- · Personnel in charge of designing FA systems.
- Personnel in charge of installing and maintaining FA systems.
- Personnel in charge of managing FA systems and facilities.

Applicable Products

This manual covers the following products.

- FH-UMAI□
- FH-5000
- FH-5000-00

Part of the specifications and restrictions are given in other manuals. Refer to Relevant Manuals on *Relevant Manuals* on page 2 and *Related Manuals* on page 15.

Relevant Manuals

The following table provides the relevant manuals for the upgraded FH sensor controller that uses FH-UMAI.

Read all of the manuals that are relevant to your system configuration and application before you use the FH sensor controller.

			Mar	nual		
	Basic information					
Purpose of use	FH/FHV Series Vision System User's Manual	FH Series Vision System Hardware Setup Manual	FH-UMAI FH Application Software Processing Item Function Reference Manual	FH Series Vision System Macro Customize Functions Programming Manual	FH/FHV Series Vision System User's Manual for Communications Settings	FH/FHV Series Vision System Operation Manual for Sysmac Studio
Overview of FH series	•	•			0,	
Setup and Wiring						
EtherCAT						
EtherNet/IP						
PROFINET		•				
Ethernet						
RS-232C						
Parallel interface						
Setup the communication setting of Sensor Controller						•
EtherCAT						
EtherNet/IP		-				
PROFINET		•			•	
Ethernet						
RS-232C						
Parallel interface						
Setup the Sensor Controller						•
EtherCAT						-
EtherNet/IP						
PROFINET	•					
Ethernet						
RS-232C						
Parallel interface						

infor FH/FHV Series Vision System User's Manual	mation FH Series Vision System Hardware Setup Manual	FH-UMAI FH Application Software Processing Item Function Reference Manual	FH Series Vision System Macro Customize Functions Programming Manual	FH/FHV Series Vision System User's Manual for Communications Settings	FH/FHV Series Vision System Operation Manual for Sysmac Studio
	Series rdware	FH-UMAI FH Application Softwar Processing Item Function Reference Manual	FH Series Vision System Macro Customize Function Programming Manual	FH/FHV Series Vision Sy User's Manual for Comm	FH/FHV Series Vision Operation Manual for
		e	G	/stem าunications Settings	· System · Sysmac Studio
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Manual Structure

Page Structure

The following page structure is used in this manual.



Note This illustration is provided only as a sample. It may not literally appear in this manual.

Special Information

Special information in this manual is classified as follows:



Precautions for Safe Use

Precautions on what to do and what not to do to ensure safe usage of the product.



Precautions for Correct Use

Precautions on what to do and what not to do to ensure proper operation and performance.



Additional Information

Additional information to read as required. This information is provided to increase understanding or make operation easier.

Conventions Used in This Manual

Use of Quotation Marks and Brackets In this manual, menus and other items are indicated as follows.

Bold	Menu	Indicates the menu bar, button, and icon.
Italic	Item name	Indicates the item and area names displayed on the screen.

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Safety Precautions

For details on Safety Precautions, refer to *Safety Precautions* in the *Vision System FH/FHV Series User's Manual (Cat. No. Z365)* and the *FH-UMAI Instruction Sheet (5628265-8)*.

Precautions for Safe Use

For details on Precautions for Safe Use, refer to *Precautions for Safe Use* in the *Vision System FH/FHV Series User's Manual (Cat. No. Z365)* and the *FH-UMAI Instruction Sheet (5628265-8).*

Precautions for Correct Use

For details on Precautions for Correct Use, refer to *Precautions for Correct Use* in the *Vision System FH/FHV Series User's Manual (Cat. No. Z365)* and the *FH-UMAI Instruction Sheet* (5628265-8).

Regulations and Standards

For details on Regulations and Standards, refer to *Regulations and Standards* in the *Vision System FH/FHV Series User's Manual (Cat. No. Z365).*

Related Manuals

Name of Manual	Cat. No	Model	Purpose	Contents
FH-UMAI Instruction Sheet	5628265-8	FH-UMAI	To confirm the safety and usage precau- tions of the FH Appli- cation Software FH- UMAI. When User want to know about the hard- ware specifications or to setup the FH Application Software FH-UMAI	Describes the definitions of basic terms, product specifications, how to use, meaning of signal words, and precautions for correct use of FH series in the manual.
Vision System FH Instruction Sheet	3102269-4	FH-2000 FH-2000-00 FH-5000 FH-5000-00		
Vision System FH/FHV Series User's Manual	Z365	FH-1000 FH-1000-000 FH-2000	When User want to know about the FH/FHV series.	Describes the soft functions, setup, and operations to use FH/FHV ser- ies/
Vision System FH/FHV Series User's manual for Commu- nications Settings	Z342	FH-2000-00 FH-3000-00 FH-3000-00 FH-5000-00 FH-L000 FH-L000-00	When User confirm the setting of com- munication functions.	Describes the functions, settings, and communications methods for communication between FH/FHV series and PLCs. The following communications proto- col are described. Parallel, PLC Link, EtherNet/IP, EtherCAT, and Non-procedure.
FH Application Software FH-UMAI Processing Item Function Reference Manual	Z437	FH-UMAI FH-5000 FH-5000-00	When User confirm the details of each processing items at the create the meas- urement flow or op- erate it.	Describes the software functions, settings, and operations for using FH/FHV series.
Vision System FH series Hardware Setup Manual	Z366	FH-100 FH-100-00 FH-200 FH-200-00 FH-3000 FH-3000-00 FH-3000-00 FH-5000	When User want to know about the Hard-ware specifica- tions or to setup the Sensor Controller of the Vision System FH series.	Describes FH series specifications, dimensions, part names, I/O infor- mation, installation information, and wiring information.
Vision System FH series Macro Customize Func- tions Programming Manual	Z367	FH-5000-00 FH-L000 FH-L000-00	When User operate or programming us- ing Macro Customize functions.	Describes the functions, settings, and operations for using Macro Cus- tomize function of the FH series.
Vision System FH/FHV Series Operation Manual for Sysmac Studio	Z343	FH-100 FH-100-00 FH-2000-00 FH-2000-00 FH-3000-00 FH-3000-00 FH-5000 FH-5000-00	When User connect to NJ/NX series via EtherCAT communi- cation.	Describes the operating procedures for setting up and operating FH/FHV series Vision Sensors from the Sys- mac Studio FH/FHV Tools.

The followings are the manuals related to this manual. Use these manuals for reference.

Revision History

A manual revision code appears as a suffix to the catalog number on the front and back covers of the manual.



Rev. Code	Rev. Date	Revision Contents
01	Jul. 2020	Original production

FH-UMAI Version Update Tool Operating Manual

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1-1 Introduction

This manual describes the procedures for upgrading the software of the FH sensor controller with the FH-UMAI.

Please perform the software version upgrade only after confirming the operating procedures and cautions. After upgrading, if you want to return to the previous version, use the Version upgrade tool (Ver.6.11 or higher) and install the applicable FH sensor controller software.



Precautions for Correct Use

- FH-UMAI can be used for version upgrade of one FH Sensor Controller.
- Keep the FH-UMAI device in a safe place as it will be needed when using again or repairing a controller.
- Do not make any modifications to the files or file structure of the FH-UMAI. It may cause the device to no longer function correctly.

1-2 **Applicable Devices and Device Con**figuration

1-2-1 **Applicable Devices**

The devices for which there is FH-UMAI support are as follows.

Manufacturer	Name	Model	Version
OMRON	FH sensor controller	FH-5000, FH-50000	Ver. 6.11 or higher

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1-2-2 **Device Configuration**

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USB Mouse

LCD Monitor

Power Supply

FH-UMAI FH Application Software Version Update Tool Operating Manual (Z438-E1)

Version

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1-3 Operating procedure

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Precautions for Correct Use

Do not remove the FH-UMAI from the FH sensor controller during the version upgrade. It may cause the version upgrade to fail.

Do not turn off the power to the FH Sensor Controller during the version upgrade. It may cause the version upgrade to fail.

1 Make sure the FH-UMAI is inserted in the FH Sensor Controller when it is started up. The Language Setting dialog will be displayed the first time the FH-UMAI is used. In the Language Setting dialog, select the language and click OK.

Language Setting	
Select language of the system.	
Language : English	_
	ОК

- 2 The following dialogs will be displayed. Click **OK**.
 - If the license file has already been generated:

FH-UMAI Firmware upgrade tool Ver.1.00					
The license is validated.					
Press "OK" button to start installation.					
	ОК				

• If the license file has not already been generated:

FH-UMAI Firmware upgrade tool Ver.1.00					
The license file will be created.					
Once the license has been created,					
the license cannot be made on other sensor controller.					
OK?					
*Do not disconnect FH-UMAI.					
OK Cancel					

If you click **OK**, the dialog will not be displayed again. The following dialogs will be displayed. Click **OK**.

FH-UMAI Firmware upgrade tool Ver.1.00	
The production of license is accomplished.	
Press "OK" button to start installation.	
ОК	

If you click **Cancel**, the license file creation will be canceled and the FH Sensor Controller will be restarted.

FH-UMAI Firmware upgrade tool Ver.1.00
The production of license is canceled.
Press "OK" button to restart.
ОК

3 The following dialog will be displayed. Click **Execute**.

FH-UMAI Firmware upgrade tool Ver.1.00	
This will upgrade sensor controller firmware.	
Make sure firmware version are correct, then start upgrade.	
Version	
Firmware version in the sensor controller :	
FZ/FH/FJ-XXX Ver.6.40	
2020/06/05	
Firmware version after upgrade :	
FH-XXX-UMAI001 Ver.6.40	
2020/06/05	
Language Setting Execute Cancel	

- Clicking **Execute** starts the Version upgrade.
- If you click Cancel, the Version upgrade is cancelled and the FH Sensor Controller will be restarted.
- If you click Language Setting, the Language Setting dialog will open. Select your desired language and click OK. The dialog will change to the selected language. If you click Cancel it will revert to the previous language.

1

Select language of the system.	
ок	Cancel

4 When upgrading, the FH sensor controller may restart more than once.

Precautions for Correct Use

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Do not remove the FH-UMAI until the version upgrade is completely finished.

5 If the following dialog appears, select **Install this driver software anyway**. If the dialog below does not appear, proceed to the next step.

😵 Win	ndows Security	1
\bigotimes	Windows can't verify the publisher of this driver software	
	 Don't install this driver software You should check your manufacturer's website for updated driver software for your device. 	
	Install this driver software anyway Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.	
•	See details	

Precautions for Correct Use

If you select **Don't install this driver software**, the process will proceed without updating the driver. If you mistakenly select this, the following dialog will appear. Click **OK** to display the same dialog screen will appear again during the process. In which case select **Install this driver software anyway**.



6 Depending on the configuration of the FH sensor controller, Touch panel drivers may also be installed. If the following dialog appears, select **Install**. If the dialog below does not appear, proceed to the next step.





Precautions for Correct Use

If you select **Don't install**, the process will proceed without updating the driver. If you mistakenly select this, the following dialog will appear several times. Click **OK**. After that, please proceed to step 9 and execute the version upgrade procedure again.



7 When upgrading, the FH sensor controller may restart more than once.

Precautions for Correct Use

Do not remove the FH-UMAI until the version upgrade is completely finished.

8 The following dialog will appear. Remove the FH-UMAI from the FH sensor controller and click OK.



9 The FH controller will restart. This will complete the Version upgrade.

1-4 Troubleshooting

When this occurs	Possible cause	Corrective action
The Version upgrade tool does not start.	 The files in the FH-UMAI may be corrupted. At startup, there may be a delay in recognizing FH-UMAI, and the Version upgrade tool may have failed to load. 	Perform the Version upgrade pro- cedure again. If it does not start after the above actions, please contact us.
The FH controller does not restart.	 A power failure may have occur- red during installation, and the hardware of the FH Sensor Con- troller may be damaged. 	Turn off the power of the FH sensor controller and restart it. If the above does not work, the file or hardware may be damaged. Please contact Omron.
	 The files in the FH Sensor Controller may be corrupted. The version upgrade may have failed due to the insertion / extraction of FH-UMAI. 	Perform the Version upgrade pro- cedure again. If the above does not work, the file or hardware may be damaged. Please contact Omron.
The camera or I/O do not work properly after the version upgrade.	 Some files may not have been updated due to FH-UMAI inser- tion / removal while the FH sen- sor controller was restarting. 	Perform the Version upgrade pro- cedure again. If the above does not work, the file or hardware may be damaged. Please contact Omron.
After version upgrade, the FH sen- sor controller does not start normal- ly.	 You may have selected "Do not install" in the driver installation confirmation dialog during the version upgrade. Some files may not have gotten updated. It is possible that the power was turned off without pressing the OK button when the version upgrade complete message was displayed. Some files may not have gotten updated. There was a delay in recognizing the FH-UMAI while restarting the FH sensor controller, and some files may not have gotten updated. 	Perform the Version upgrade pro- cedure again. If the above does not work, the file or hardware may be damaged. Please contact Omron.

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• If an FH-UMAI of the same format was previously used for the same FH sensor controller in the past, the following dialog is displayed.



To execute, click OK.

To cancel, click **Cancel**. If you click **Cancel**, the following dialog is displayed. Remove the FH-UMAI and then click **OK**. The FH controller will restart.

	×
Remove FH-UMAI. Press "OK" button to restart.	
ОК	

 If the FH-UMAI is executed on a non-supported FH sensor controller model, the following dialog will be displayed.

Check that the device is a supported model and perform the version upgrade procedure again. Refer to *1-2-1 Applicable Devices* on page 1-3.

Епог	×
This sensor controller cannot be upgraded with this firmware. FH-UMAI compatible sensor controller can be checked in the manual Z438 Press "OK" button to restart.	1
ОК	

• If the file structure of FH-UMAI is changed, the following dialog may be displayed. If the following dialog appears, please contact Omron.



FH-UMAI Firmware upgrade tool Ver.1.00	
License file creation failed.	
Data in FH-UMAI has changed from the factory de	fault.
Please contact our company.	
Press "OK" button to restart.	
ОК	

• If an error occurs in the controller, the following dialog will be displayed. If the following dialog appears, please contact Omron.

FH-UMAI Firmware upgrade tool Ver.1.00
Failed to read sensor controller information.
Possible hardware failure.
Please contact our company.
Press "OK" button to restart.
ОК
Error
Failed to read sensor controller information. Possible hardware failure. Please contact our company. Press "OK" button to restart.
ОК

• If an error occurs in FH-UMAI, the following dialog will be displayed. If the following dialog appears, please contact Omron.

FH-UMAI Firmware upgrade tool Ver.1.00
License file creation failed.
Possible hardware failure.
Please contact our company.
Press "OK" button to restart.
ОК

 If you use a licensed FH-UMAI with an FH sensor controller that is different from the one used when the license was created, the following dialog will be displayed.
 Use FH-UMAI with the correct license file. 1

FH-UMAI Firmware upgrade tool Ver.1.00
The license validation failed.
The license file is for a different sensor controller.
Please insert FH-UMAI with correct license.
Press "OK" button to restart.
ОК

• If the version upgrade fails, the following dialog will be displayed. Perform the Version upgrade procedure again.

Ептог		×
Â	Failed to upgrade firmware. Remove FH-UMAI, and press "OK" button. The system will reboot with the current firmware.	
	ОК	

• If you remove the FH-UMAI while updating the driver, the following dialog will be displayed. Connect FH-UMAI again and press the **OK** button. The Version upgrade will continue.

Ептог		X
<u> </u>	Please do not remove FH-UMAI until complete.	
	ОК	

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