

# FP7 Upgrade Tool Operation Manual

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[Applicable models]

|             |             |
|-------------|-------------|
| FP7 CPS41E  | FP7 CPS4RE  |
| FP7 CPS31E  | FP7 CPS3RE  |
| FP7 CPS31   | FP7 CPS3R   |
| FP7 CPS41ES | FP7 CPS4RES |
| FP7 CPS31ES | FP7 CPS3RES |
| FP7 CPS31S  | FP7 CPS3RS  |
| FP7 CPS21   | FP7 CPS2R   |

# Table of contents

|   |                |
|---|----------------|
| <b>1. How to Operate FP7 Upgrade Tool .....</b>     | <b>1-1</b>     |
| 1.1 How to Activate Upgrade Tool .....              | 1-2            |
| 1.2 Advance Preparation for Upgrade Tool.....       | 1-3            |
| 1.3 Communication Settings/Upgrade Mode Select..... | 1-5            |
| 1.4 Upgrade Mode Check.....                         | 1-9            |
| 1.5 Upgrade .....                                   | 1-10           |
| 1.6 Finish.....                                     | 1-12           |
| <br><b>2. List of Error Messages .....</b>          | <br><b>2-1</b> |
| 2.1 Solution for Each Error Message .....           | 2-3            |

# 1

## How to Operate FP7 Upgrade Tool

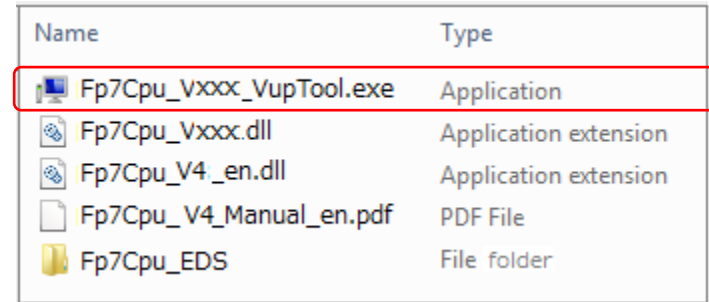
# 1.1 How to Activate Upgrade Tool

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■ How to start

1. Unzip the file (FP7CPU\_Vxxxx\_en.zip) downloaded to a PC into a desired area. The following four files will be decompressed.

| File name               | Content                       |
|-------------------------|-------------------------------|
| Fp7Cpu_Vxxx_VupTool.exe | : Upgrade tool startup module |
| Fp7Cpu_Vxxx_Vup.dll     | : Upgrade tool FP7 DLL file   |
| Fp7Cpu_V4_en.dll        | : Resource DLL file           |
| Fp7Cpu_V4_Manual_en.pdf | : Operation Manual PDF file   |
| Fp7Cpu_EDS              | : FP7 EDS File folder         |



| Name                    | Type                  |
|-------------------------|-----------------------|
| Fp7Cpu_Vxxx_VupTool.exe | Application           |
| Fp7Cpu_Vxxx.dll         | Application extension |
| Fp7Cpu_V4_en.dll        | Application extension |
| Fp7Cpu_V4_Manual_en.pdf | PDF File              |
| Fp7Cpu_EDS              | File folder           |

2. Execute the **upgrade tool startup module** (Fp7Cpu\_Vxxx\_VupTool.exe).

1.2 The [upgrade tool](#) will be activated.

## 1.2 Advance Preparation for Upgrade Tool

### ■ Advance preparation

1. **Confirming applicable models:** Confirm if the FP7 you use is the applicable model for this tool.

- Applicable models: FP7 CPS41E(S)    FP7 CPS4RE(S)  
    FP7 CPS31E(S)    FP7 CPS3RE(S)  
    FP7 CPS31(S)    FP7 CPS3R(S)  
    FP7 CPS21        FP7 CPS2R

2. Please confirm the backup of the project of the FP7 to be upgraded.

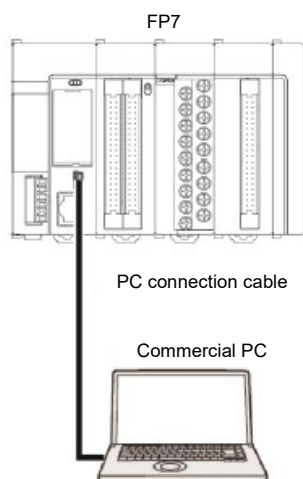
If there is a backup, click the checkbox.(By checking, you can click "next" button)

If you do not have a backup, please back it up with FPWIN GR7 or Pro.

3. Change the switch on the FP7 to **PROG. mode**.



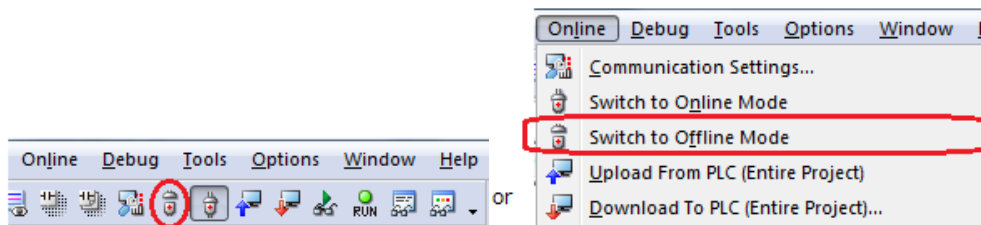
4. Connect the FP7 and PC with the USB cable. \*



\* Do not connect more than one FP7 to one PC.

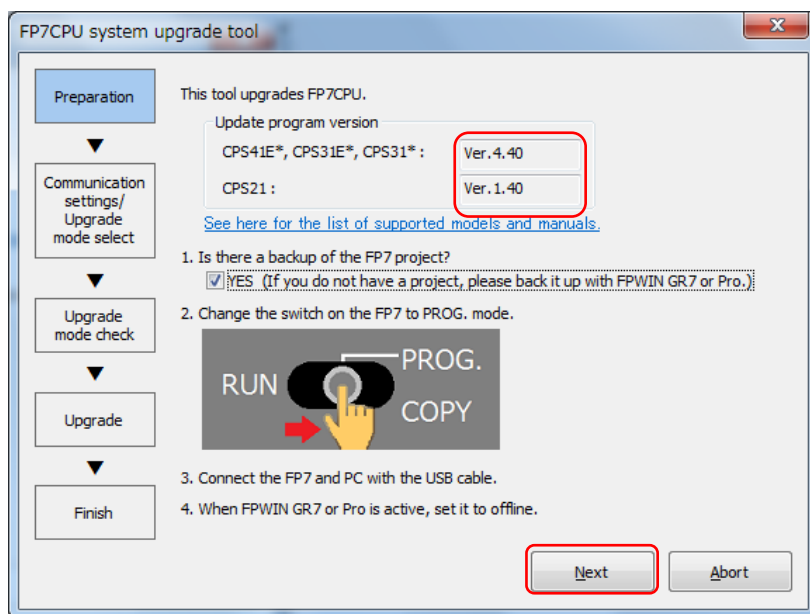
System requirements: OS (Windows8.1, Windows10, Windows11)

5. When FPWIN GR7 is active, set it to **offline**.



### ■ Advance preparation (Continuation of the above section)

After confirming the advance preparation (1 to 4), click the "Next" button.



### Description of functions

Confirm in advance on this screen.

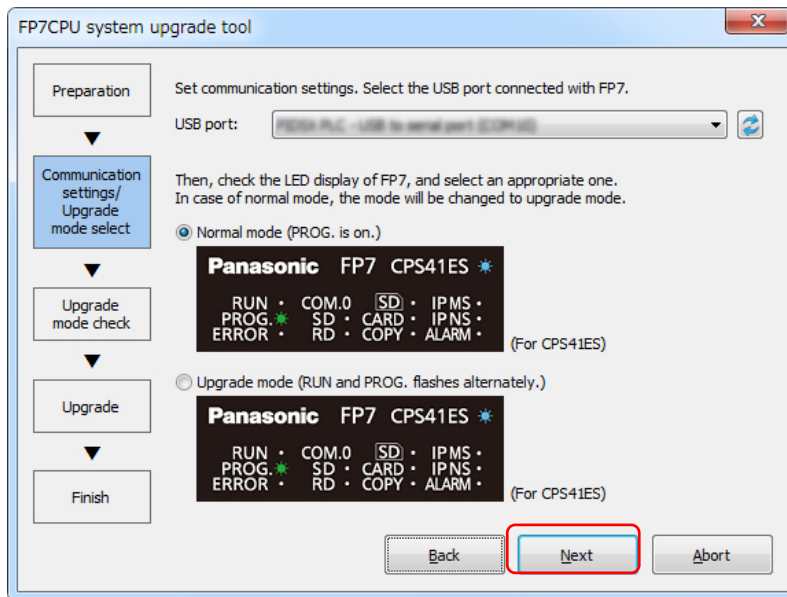
- Update program version: Indicates the update version made with this application.  
The update version varies according to a provided update tool.  
When the version of the FP7 you use is the same, it is not necessary to update it.
- See here for the list of supported models and manuals.: This manual is displayed.
- Backup confirmation checkbox.: After checking the backup of the project, click the checkbox, you can click the "Next" button.

"Abort" button: Aborts and exits this application.

"Next" button: Goes to [1.3 Communication Settings/Upgrade Mode Select](#)

## 1.3 Communication Settings/Upgrade Mode Select

### ■ Communication settings/Upgrade mode select



#### Description of functions

The USB port setting and switching to the upgrade mode is made on this screen.

After selecting a USB port and the mode selection button, click the "Next" button.


#### - Communication settings

Select the USB port connected with the FP7. \*1, 2.

- \*1. When the USB port is automatically selected in the initial display, the USB port is recognized correctly, so the selection is not necessary.

(When more than one FP7 is connected, make only one connection available by turning off the power to the rest of the FP7 units or remove the cables.)

- \*2. When the USB is not selected in the initial display;

As the FP7 is not recognized, reinsert the USB cable after turning on the power, and press the  "Update" button. (The USB port will be redisplayed.)

#### - Upgrade mode select

Compare the LED display on the FP7 to the screen, and select the operation mode.

Normal mode: PROG. is on. → To Upgrade mode select \*3

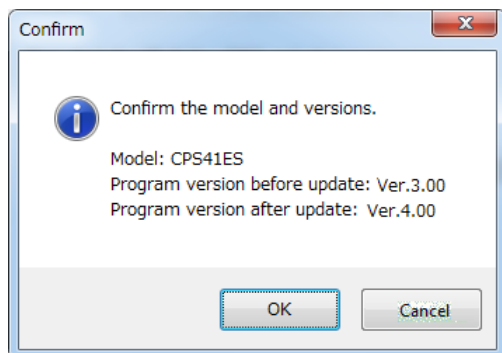
Upgrade mode: RUN and PROG. flashes alternately. → Upgrade

- \*3. Note: The FP7 may be locked if "Normal mode" is selected in the upgrade mode. (In this case, the FP7 must be rebooted.)

### ■ Communication settings/Upgrade mode select (Continuation of the above section)

#### 1). For the unit for which V4 upgrade is supported

By clicking "Next" when "Normal mode" is selected, the connected PLC model and the version of the update program will be displayed.



When clicking "Cancel";

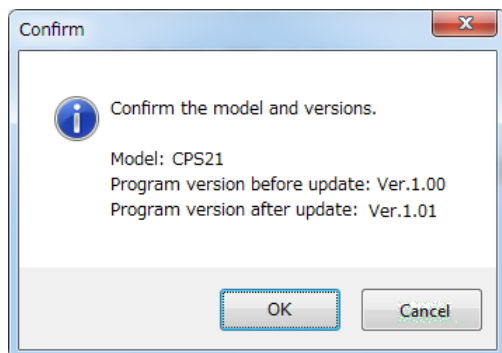
Returns to [1.3 Communication Settings/Upgrade Mode Select](#).

When clicking "OK";

Starts switching to the upgrade mode.

#### 2). For the unit for which CPS21 upgrade is supported

By clicking "Next" when "Normal mode" is selected, the connected PLC model and the version of the update program will be displayed.



When clicking "Cancel";

Returns to [1.3 Communication Settings/Upgrade Mode Select](#).

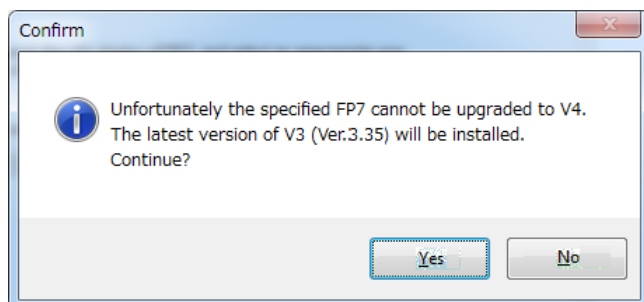
When clicking "OK";

Starts switching to the upgrade mode.



3). For the unit for which V4 upgrade is not supported

By clicking "Next" when "Normal mode" is selected, a message saying that the unit is excluded from the target of the upgrade will be displayed, and the installation of the V3 latest version will start.

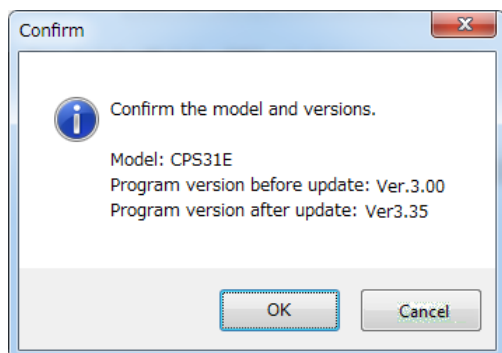


When clicking "No (N)";

Returns to [1.3 Communication Settings/Upgrade Mode Select](#).

When clicking "Yes (Y)";

Displays the model of the connected PLC and the version of the update program.



When clicking "Cancel";

Returns to [1.3 Communication Settings/Upgrade Mode Select](#).

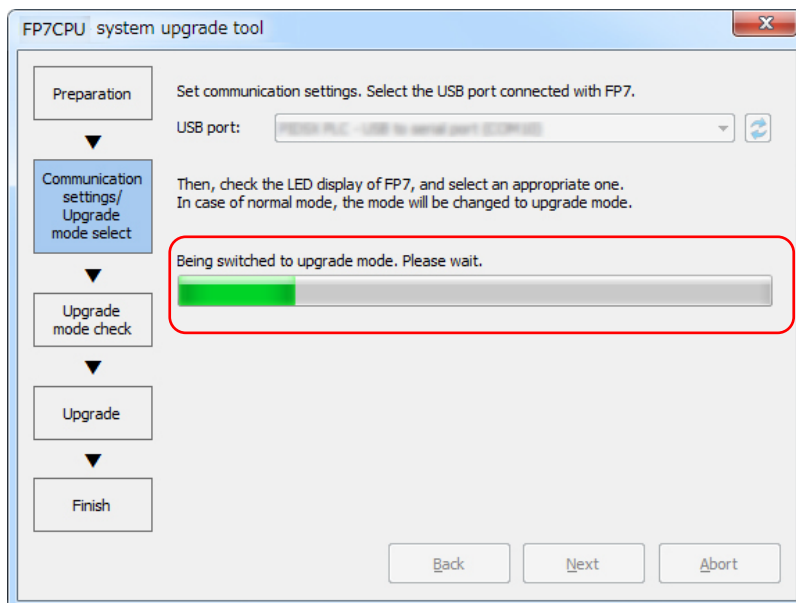
When clicking "OK";

Starts switching to the upgrade mode.

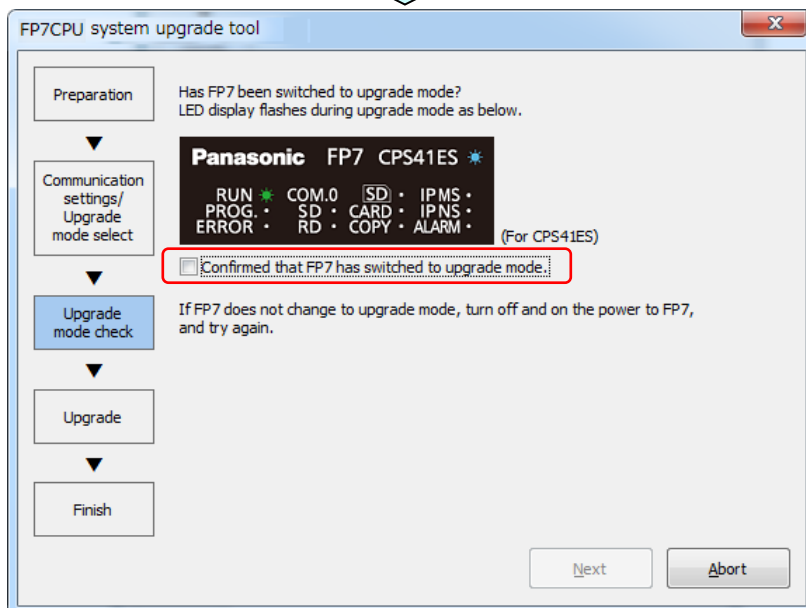
### ■ Communication settings/Upgrade mode select (Continuation of the above section)

By clicking "Next" when "Normal mode" is selected, changing the mode to the upgrade mode will start.

(After a short time, the screen will change to "Upgrade mode confirmation screen".)



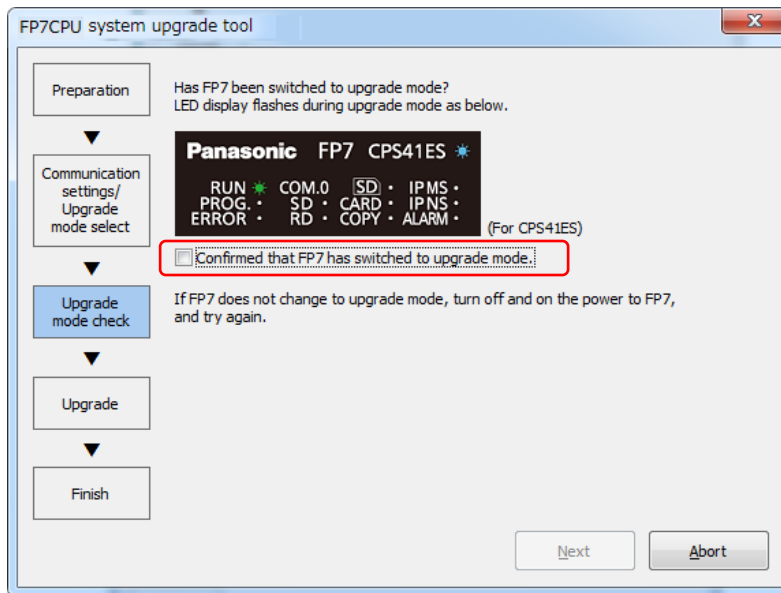
↓ (The screen will change after a short time.)



Goes to [1.4 Upgrade Mode Check](#).

## 1.4 Upgrade Mode Check

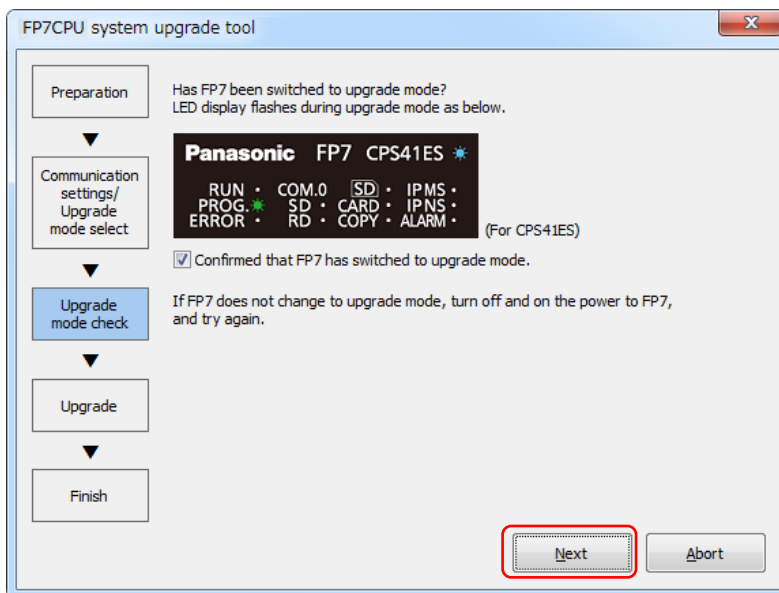
### ■ Upgrade mode check



### Description of functions

Check if the mode has been changed from normal mode to upgrade mode on this screen. After checking that the LED display on the FP7 flashes just like the animation on the screen, check the checkbox and click the "Next" button.

### - Upgrade mode select confirmation (After check)

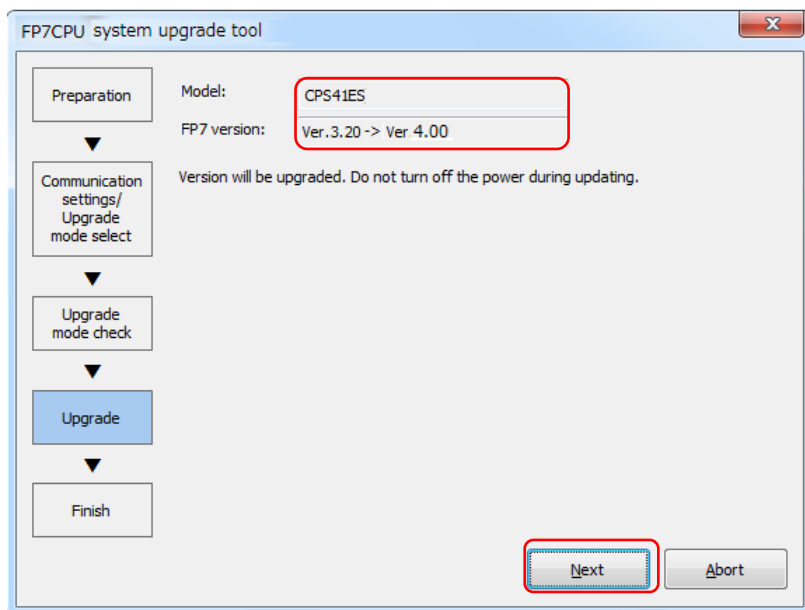


Goes to [1.5 Upgrade](#).

## 1.5 Upgrade

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### ■ Upgrade



#### Description of functions

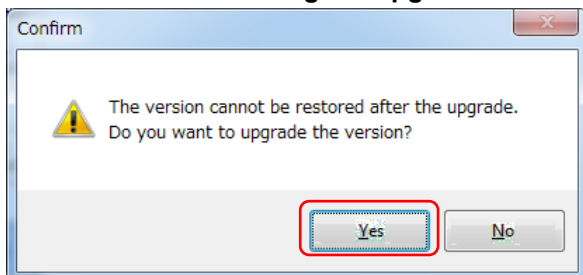
Confirm the current program version and execute the upgrade on this screen.

When selecting the upgrade mode in Communication settings/Upgrade mode select, the current model and program version is not displayed.

(Display example: \*\*\*\* Ver.\*\*.\* → Ver.4.00)

After the confirmation, click the "Next" button.

### ■ Confirmation of starting the upgrade.

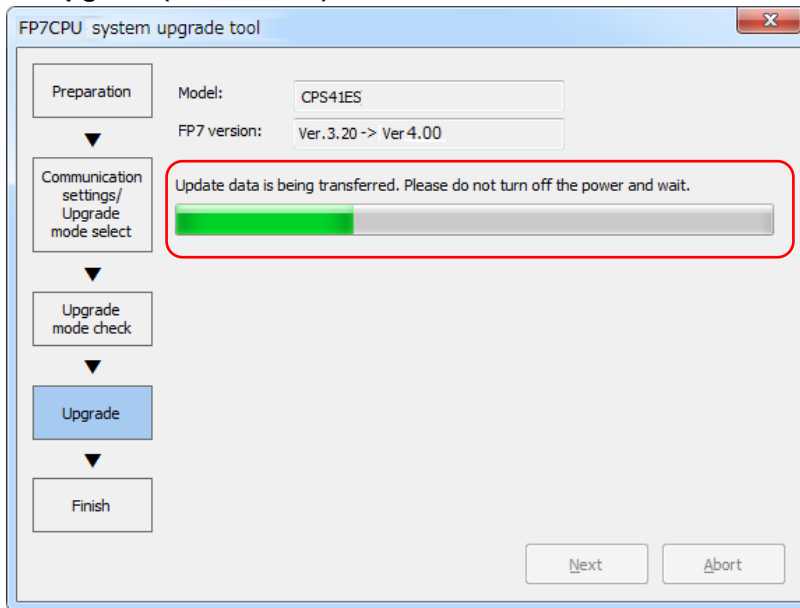


Confirm the message and click the "Yes" button. \*

\* The subsequent operation cannot be aborted. (Proceed with the operation carefully.)

Goes to Upgrade (Start to End)

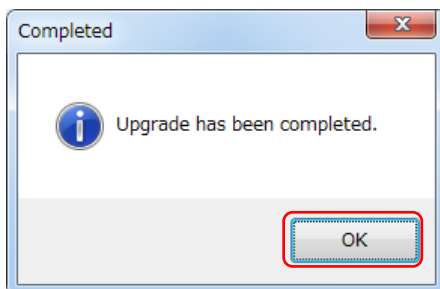
## ■ Upgrade (Start to End)



The screen message changes as follows according to the progress.

- (1) "Version will be upgraded. Do not turn off the power during updating."  
↓ (Waiting for starting the upgrade)
- (2) "Update data is being transferred. Please do not turn off the power and wait."  
↓ (FP7 is transferring data.)
- (3) "Firmware is being rewritten. Please do not turn off the power and wait."  
↓ (FP7 is rewriting the firmware.)
- (4) "Web contents are being transferred. Please do not turn off the power and wait."  
↓ (FP7 is rewriting web contents.)
- (5) "Upgrade verification in progress"  
↓ (FP7 is waiting for reboot and confirming the version.)

Completed.

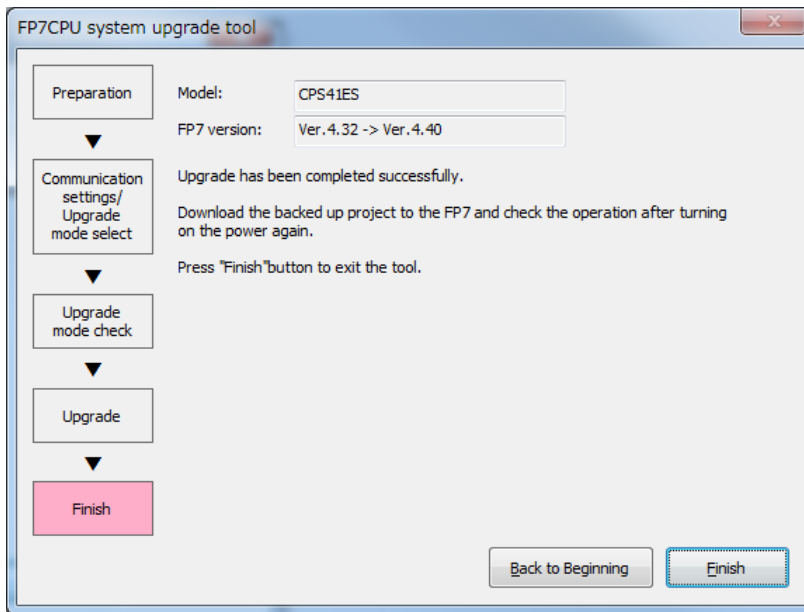


Click the "OK" button to go to [1.6 Finish](#).

# 1.6 Finish

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### ■ Finish



### Description of functions

The upgrade operation has been completed. Click the "Finish" button to finish the operation.

For upgrade another FP7, click the "Back to Beginning" button.

Goes to [1.2 Advance Preparation](#).

# 2

## List of Error Messages

### List of error and warning messages

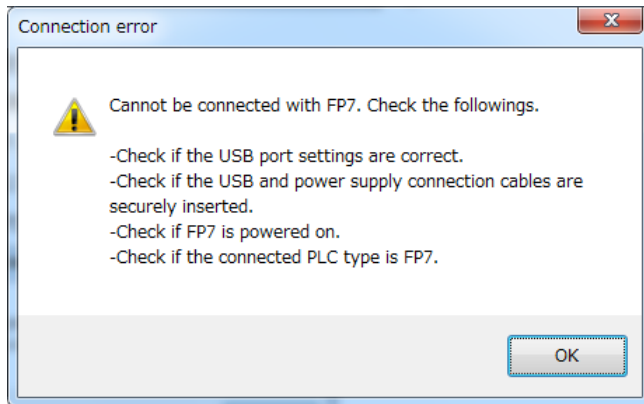
| Error title name   | Screen                                     | Cause                                 |
|--|--|---------------------------------------|
| 1) <a href="#">Connection error</a>                              | Communication settings/Upgrade mode select | USB connection error                  |
| 2) <a href="#">Connection error</a>                              | Communication settings/Upgrade mode select | USB is being used.                    |
| 3) <a href="#">Version upgrade not supported</a>                 | Communication settings/Upgrade mode select | Unsupported model                     |
| 4) <a href="#">Latest version</a>                                | Communication settings/Upgrade mode select | The latest version already installed. |
| 5) <a href="#">Failed in changing the upgrade mode</a>           | Communication settings/Upgrade mode select | Communication failure                 |
| 6) <a href="#">Operation mode is incorrect</a>                   | Communication settings/Upgrade mode select | RUN mode                              |
| 7) <a href="#">Upgrade failed</a>                                | Upgrade                                    | Writing error                         |
| 8) <a href="#">FP7 cannot be detected</a>                        | Upgrade                                    | USB reconnection error                |
| 9) <a href="#">FP7 multiple units connection error</a>           | Communication settings/Upgrade mode select | Multiple FP7 connections              |
| 10) <a href="#">RUN mode select confirmation</a>                 | Communication settings/Upgrade mode select | RUN mode                              |
| 11) <a href="#">Upgrade data error</a>                           | None (At the initial startup)              | Data error                            |
| 12) <a href="#">Version upgrade not supported (Confirmation)</a> | Communication settings/Upgrade mode select | V4 unsupported models                 |
| 13) <a href="#">Upgrade confirmed</a>                            | Communication settings/Upgrade mode select | Confirmation of update target         |



## 2.1 Solution for Each Error Message

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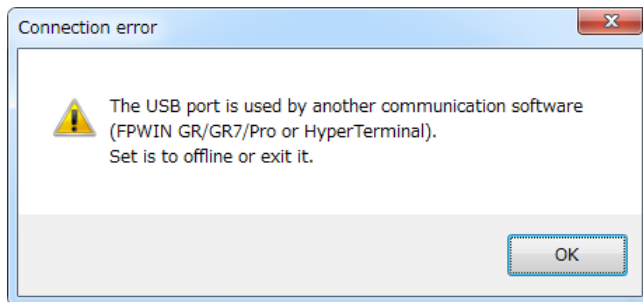
### 1) Error message (Connection error)



#### **Solution**

- Check if the USB port settings are correct. (Select the correct USB port.)
- Check if the USB and power supply connection cables are securely inserted.
- Check if the FP7 is powered on.
- Check if the connected PLC type is FP7.

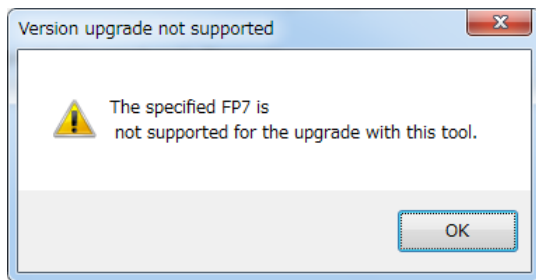
### 2) Error message (Connection error)



#### **Solution**

- The USB port is used by another communication software (FPWIN GR/GR7/Pro or HyperTerminal).
- Set it to offline or exit it.

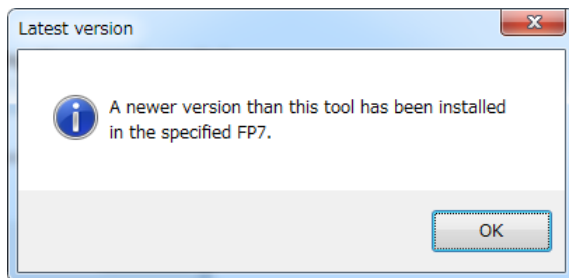
### 3) Error message (Version upgrade not supported)



#### Solution

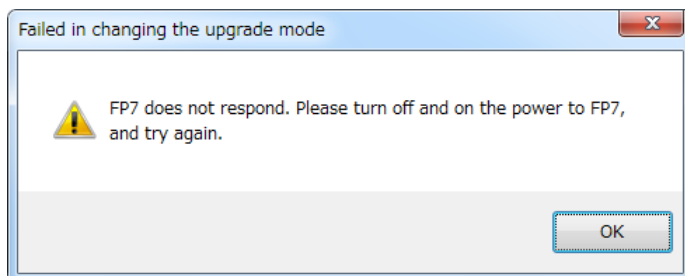
- The model used is not applicable for this tool. Use a supported model.

### 4) Warning message (Latest version)



Solution: None (The latest version has been already installed.)

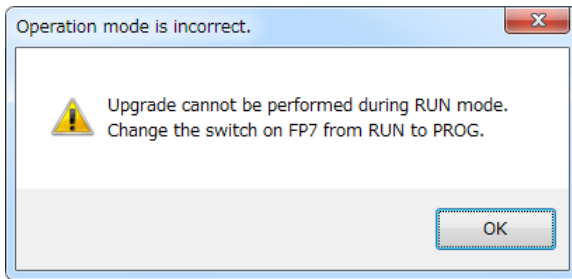
### 5) Error message (Failed in changing the upgrade mode.)



#### Solution

- Turn off the power to the FP7 and retry the upgrade from the beginning.

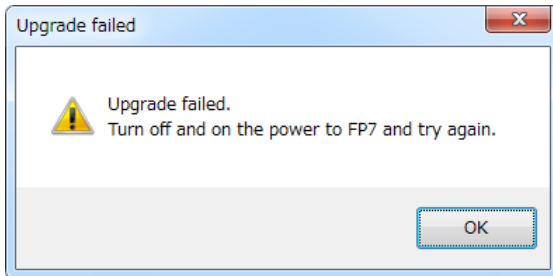
**6) Error message (Operation mode is incorrect.)**



**Solution**

- Change the switch on the FP7 to PROG.

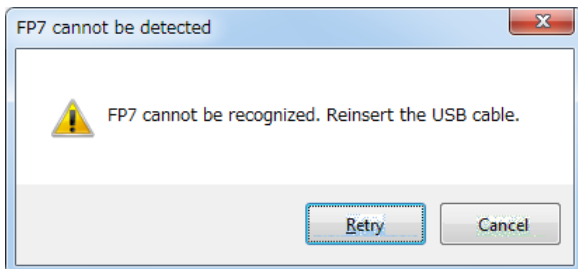
**7) Error message (Upgrade failed)**



**Solution**

Turn off the power to the FP7 and retry the upgrade from the beginning.

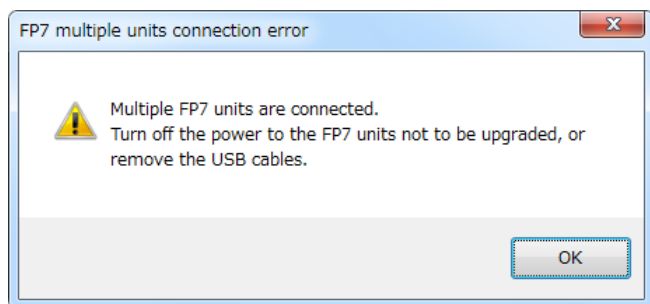
**8) FP7 cannot be detected.**



**Solution**

- Reinsert the USB cable and click the "Retry" button.

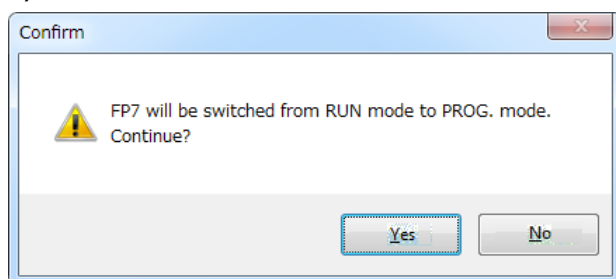
### 9) FP7 multiple units connection error



#### Solution

- Turn off the power to the FP7 units not to be upgraded, or remove the USB cables.

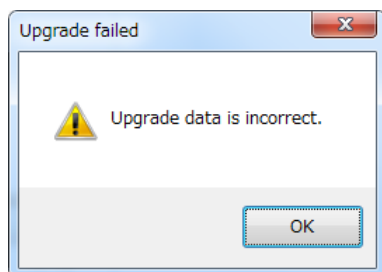
### 10) RUN mode select confirmation



#### Solution

- Click the "Yes" button. (The mode will be automatically changed to the PROG. mode in the software.)
- When the switch is changed manually, click the "No" button to proceed.

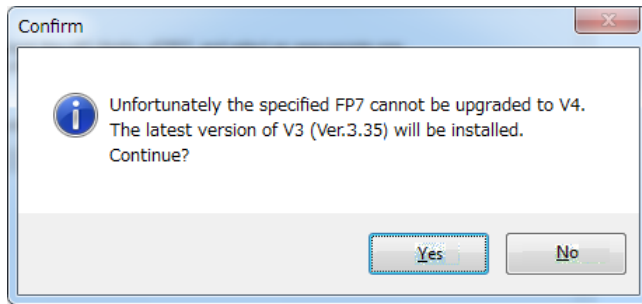
### 11) Upgrade data error



#### Solution

Please contact your dealer regarding upgrade data errors.

### 12) Version upgrade not supported (Confirmation)



#### Solution)

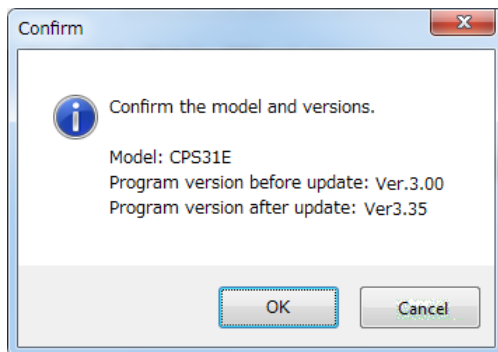
- The model does not correspond to the V4 firmware.

The latest V3 firmware can be installed.

To start the installation, click "Yes (Y)".

To cancel the installation, click "No (N)".

### 13) Upgrade confirmed



#### Solution)

- Confirm the version of the update program of FP7.

To start the update, click the "OK" button.

To cancel the update, click the "Cancel" button.

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