

**Title:** Updating Controller Firmware with Web Server Classic (v3.0 and earlier)

**Product(s):** MP3□□□iec, MP2□□□iec

**Doc. No.** PN.MCD.08.083

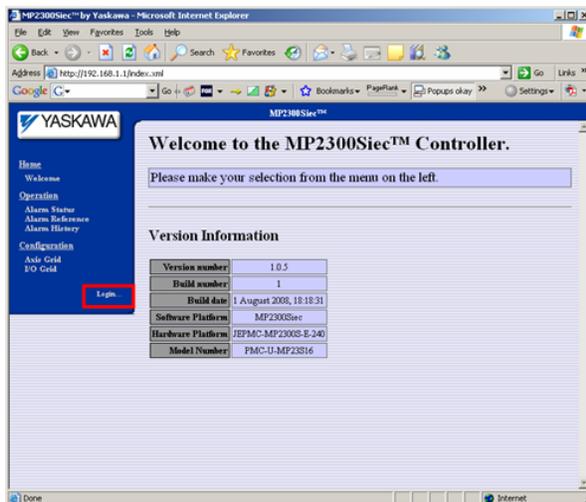
## Product Note Overview

This document describes the method to upgrade the controller firmware on the MP2□□□iec and MP3□□□iec controllers using Web Server Classic. If the firmware currently on the controller is v3.1 or higher, refer to document PN.MPIEC.01 "Updating Controller Firmware using WebUI".

Firmware files can be found at [yaskawa.com/iecfw](http://yaskawa.com/iecfw).

**NOTE: DO NOT EXTRACT THE FILES FROM THE ZIP. THE CONTROLLER WILL EXTRACT THE FILE ITSELF.**

Upgrading from any firmware version prior to 1.1.1 requires first upgrading to version 1.1.1, and then upgrading to a more recent version as a two-step process.



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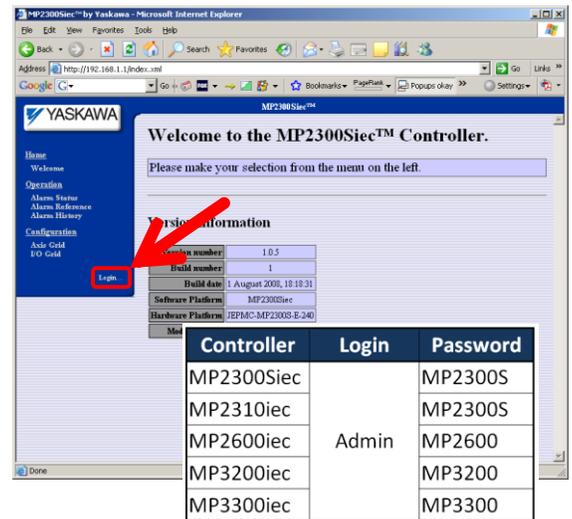
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## Updating Controller Firmware:

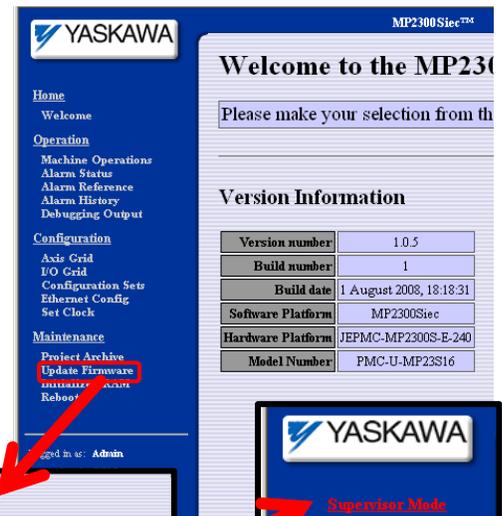
Firmware revisions are available at [www.yaskawa.com/iecfw](http://www.yaskawa.com/iecfw).

Open the web interface in an Internet Explorer window and connect to the controller by entering the controller IP Address in the Address field. IE Version

1. Select Login from the left menu bar.
2. Login using the following login name and password



3. Select Update Firmware from the left menu
4. Put the controller in supervisor mode by one of two methods:
  - a. Click on the 'enabled via software' hyperlink in the text message area and reboot the controller when prompted.
  - b. Flip the controller's SUP or MNT dip switch to the ON position and reboot.



**Firmware Update Prohibited**

Supervisor mode is required to update firmware. To enable supervisor mode, move the SUP switch on the front panel of the controller to the ON position and reboot. Or, if authorized, supervisor mode can be [enabled via software](#).

(After Reboot)



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5. Click the 'Update Firmware' link in the left menu to return to the Update Controller Firmware page.
6. Click 'Browse' and select the firmware.zip file that you wish to upgrade the firmware. **DO NOT** extract the files from the ZIP; The controller will take care of extraction.
7. Click 'Upload' to upload the firmware file to the controller.
8. After the versions have been verified, a message box will inform you what is currently loaded on the controller, and what version you are attempting to upgrade.
9. Click on the 'Update' button to update the controller firmware. **Do not power cycle the controller while the upgrade is taking place!**
10. The web page will refresh to indicate when the firmware update is complete, which will take up to five minutes. You may also check the 'Debugging Output' page for upgrade status.
11. Once the firmware update has successfully completed, make sure the SUP or MNT dip switch is in the OFF position and reboot the controller.
12. After the controller reboots, verify correct version loaded on the controller by clicking 'Welcome' in the left menu bar to refresh the version information.
  - a. If the new firmware is v3.2 or later, Web Server Classic may no longer work. Please connect with the newer WebUI interface using a modern browser such as Chrome, Firefox, or Safari.



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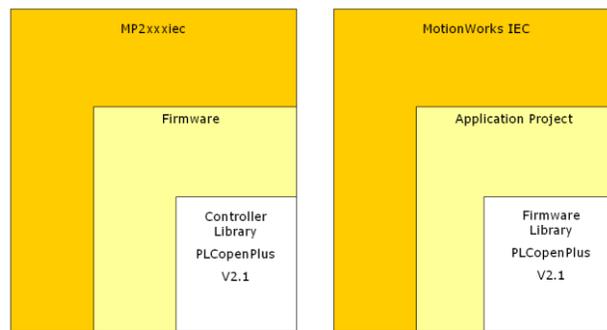
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## Firmware Library Version Checking with MotionWorks IEC 2.x and earlier

There are two components to the firmware:

- One firmware that resides on the controller hardware.
- Firmware library referenced by the application project on your computer.



A check is performed to verify that the function block list, and I/O interface of the supported functions are compatible.

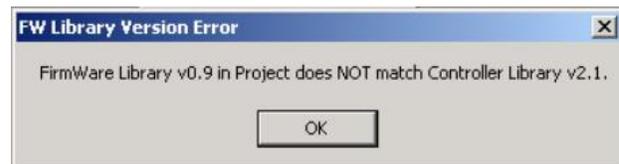
A message that may appear when downloading refers to the interface version check that was performed. Two possible results are shown below:

- Matching libraries: Firmware Library v.xx in Project Matches Controller Library v.xx. (Shown in the "Infos" message window)

```

POU: R_TRIG           , non retain data: 4, retain data: 0, temp data: 12, instance #: 51
POU: Reverse_MC_Direction , non retain data: 112, retain data: 0, temp data: 13, instance #: 3
POU: Status           , non retain data: 148, retain data: 0, temp data: 12, instance #: 1
POU: Init             , non retain data: 104, retain data: 0, temp data: 12, instance #: 1
Total:
POU size: 892 (14)
Firmware Library v2.1 in Project Matches Controller Library v2.1
Firmware Library v2.1 in Project Matches Controller Library v2.1
Process for Download IEC Project and Download Bootproject ended for resource 'Configuration.Resource' at 12/12/2008 1:27:55 PM
  
```

- Mismatching Libraries: Firmware Library v.xx in project NOT match Controller Library v.xx. This will appear as a message box.



### Yaskawa's Recommendation:

Obtain the recommended firmware library that matches the controller firmware version. Firmware libraries are available on [www.yaskawa.com](http://www.yaskawa.com). Search for FAQ [MTN-7LPUQC](#), which will show a table of all firmware libraries.

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Delete the PLCopenPlus firmware library from the project, and re-select a Firmware library from the following folder:

- **Windows XP:** C:\Program Files\Yaskawa\MotionWorks IEC Configuration\MW IDE\MotionWorks IEC\PLC\FW\_LIB
- **Windows 7, Windows 8, Windows 10:** C:\ProgramData\Yaskawa\MotionWorks IEC 3 Pro\[current version]\plc\FW\_LIB

This will in effect “downgrade” the application to match the function block capabilities on the hardware.

### **If the controller has a lower revision than the application’s firmware library:**

For example, if a function block in the firmware library received an upgrade that changed the number of input or outputs, a download error will result because the I/O linking to the function blocks will fail. Also, there may be new function blocks in the library, that if added to the application program, the hardware will not know of, and cause an error.

### Yaskawa’s recommendation:

If a machine has been in production for a long time, and minimal maintenance work is required in the program, Yaskawa recommends downgrading the firmware library in the MotionWorks IEC software to match the hardware. The method for this is outlined above. There is no need to upgrade the hardware if it has been working satisfactorily in the field.

### **Upgrading a Firmware Library**

All versions of MotionWorks IEC include all previous versions of firmware libraries. Alternately, download an appropriate firmware library zip file from [www.yaskawa.com/iecfw](http://www.yaskawa.com/iecfw).

Extract the ZIP to the following location:

- **Windows XP:** C:\Program Files\Yaskawa\MotionWorks IEC Configuration\MW IDE\MotionWorks IEC\PLC\FW\_LIB
- **Windows 7, Windows 8, Windows 10:** C:\ProgramData\Yaskawa\MotionWorks IEC 3 Pro\[current version]\plc\FW\_LIB

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Then:

- Open MotionWorks IEC.
- Open a project.
- Right click on the old PLCPlus firmware library and delete it.
- Right click on the heading "Libraries" and Insert a firmware library. Search the paths mentioned above and select the appropriate FWL file.