

Product Note

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Applicable Product: MP2□□□iec



🖉 YASKAWA			
Subject: Product Note	Product: MP2□□□iec	Doc#: PN.MCD.08.083	
Title: Upgrading the MP2□□□iec Controller Firmware			

## **Product Note Overview**

This document describes the two methods to upgrade the controller firmware on the MP2□□□iec controller. NOTE: DO NOT EXTRACT THE FILES FROM THE ZIP. THE CONTROLLER WILL EXTRACT THE FILE ITSELF.

## Important!

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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### Updating the Firmware (By enabling the supervisor mode via web server):

- 1. To locate stored firmware versions on the local computer where MotionWorks IEC v1.0.6 or greater is installed, locate the following path:
  - In this example, we are locating version 1.0.4: MotionWorks IEC InstallPath/MotionWorks IEC Configuration/ConfigTool/ControllerFirmware/MP23iec-v\_1\_0\_4

Firmware revisions are also available on <u>www.yaskawa.com</u>. Search for FAQ <u>MTN-7LPUQC</u>, which will show a table of all firmware releases.

- 2. Open the web interface in a web browser and connect to the controller by entering the controller IP Address in the Address field.
- 3. Select Login from the left menu bar.



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4. Login using the following login name and password:

Controller	Login	Password
MP2600iec	Admin	MP2600
MP2300Siec	Admin	MP2300S
MP2310iec	Admin	MP2300S

Address () http://192.168.1.1,	/index.xml	Go Links
Google G-	💽 Go 🖟 🚿 🚾 👻 🥪 📶 🎒 👻 🏠 Bookmarks 🕶 🎦 PageRank 👻 📮 Popups okay	/ 🎽 🔘 Settings 🗸 👘
VASKAWA	MP2300Siec <sup>#34</sup>	
	Welcome to the MD2200SiseTM Control	- 11
	welcome to the MP2500Slec <sup>14</sup> Contro	oner.
Home Welcome	Please make your selection from the menu on the left	
Oneration	rease make your beccubit it on the mean of the reas	
Alarm Status		
Alarm Reference Alarm History	Manufact Information	
<b>Configuration</b>	version information	
Axis Grid I/O Grid	Version number 1.0.5	
	Build number 1	
Login: Admin	Build date 1 August 2008, 18:18:31	
Password:	Software Platform MP2300Siec	
Log In Log In	Hardware Platform JEPMC-MP2300S-E-240	
	Model Number PMC-U-MP23S16	

Note that the factory default login and passwords may be changed by the user according to the information supplied in product note <u>AN.MCD.09.069</u>.

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5. Select <u>Update Firmware</u> from the left menu:



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6. The firmware update screen will appear:



- 7. Click on the 'enabled via software' hyperlink in the text message area.
- 8. Reboot the controller by clicking on the 'Reboot Controller' button on the update page:



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9. After the controller has finished rebooting, the following page will be displayed:



10. Click the 'Update Firmware' link in the left menu.

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11. Select the firmware.zip file that you wish to upgrade the firmware: **NOTE: DO NOT EXTRACT THE FILES FROM THE ZIP. THE CONTROLLER WILL EXTRACT THE FILE ITSELF.** 

MP23005iec™by Yaskawa	- Microsoft Internet Explorer			IX
Ele Edit View Favorites	Iools Help			1
🌍 Back 🔹 🕥 🗵 봄	💈 🏠 🔎 Search   📩 Favor	ites 🚱 🝰 🍓 🖂 📙 🛍 🦓		
Address 🙋 http://192.168.1.1/	index.xml		💌 🔁 Go 🛛 Link	s »
Google G-	💌 GO 💠 🍏 🏧 👻 🥪 🎑	🛐 👻 🔛 Bookmarks 🕶 PageRank 👻 🖵 Popups	okay 🌺 🔘 Settings 🗸 🍕	ù •
VASKAWA	2	MP2300 Siec <sup>TM</sup>		
				^
	Update Contr	oller Firmware		
Home	Select firmware file:		Browse	
Welcome		Upload		
Operation				
Machine Operations Alarm Status				
Alarm Reference Alarm History				
Debugging Output				
<u>Configuration</u>				
Axis Grid I/O Grid				
Configuration Sets Ethernet Config				
Set Clock				
Maintenance				
Update Firmware				
Initialize SRAM Reboot				
Longed in es: Admin				
Access Level: OEM				
Log Out				
77h -				¥
Done			anternet	

- 12. Click 'Browse' to locate the file.
- 13. Click 'Upload' to upload the firmware file to the controller.
- 14. 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.
- 15. Click on the 'Update' button to update the controller firmware.

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16. Do not power cycle the controller or attempt to click on any of the menu bar links while the upgrade is taking place!





17. Verify correct version loaded on the controller by clicking 'Welcome' to refresh in the left menu bar.

## Updating Firmware (By using the SUP DIP Switch):

- 1. Flip on the SUP switch on the MP2300Siec controller.
- 2. Reboot the controller. Controller will boot up in supervisor mode.
- 3. Login to the controller.
- 4. Point web browser at the controller. Go to the firmware update page.
- 5. Select the appropriate firmware.zip file. The file checksums will be automatically verified.
- 6. Click on the "Update" button to confirm update. Wait until firmware update finishes.
- 7. Flip off the SUP switch.
- 8. Reboot the controller. Wait until controller restarts.
- 9. Verify correct version loaded on the controller by clicking 'Welcome' in the left menu bar.

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## **Firmware Library Version Checking**

There are two components to the firmware. One component resides on the controller hardware (the "Firmware",) and the other is referenced by the application project on your computer (the "Firmware Library".) 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:



 [EQUAL] Firmware Library v.xx in Project Matches Controller Library v.xx. (Shown in the "Infos" message window)

3			
) (1%)			
📝 🕑 Firmware Library v2.1 in Project Matches Controller Library v2.1			
1:27:55 PM			
Build \ Errors \ Warnings \ Infos \ PLC Errors \ Print /			
1 1 1 8			

2) [NOT EQUAL] Firmware Library v.xx in project NOT match Controller Library v.xx. This will appear as

#### a message box.



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#### If the controller has a higher revision than the application's firmware library:

#### Yaskawa's Recommendation:

Obtain the recommended firmware library that matches the controller firmware version. Firmware libraries are available on <u>www.yaskawa.com</u>. Search for FAQ <u>MTN-7LPUQC</u>, which will show a table of all firmware libraries.

- Delete the PLCopenPlus firmware library from the project, and re-select a Firmware library from the following folder: "C:\Program Files\Yaskawa\MotionWorks IEC Configuration\MW IDE\MotionWorks IEC\PLC\FW\_LIB" for prior PLCopenPlus firmware libraries. This will in effect "downgrade" the application to match the function block capabilities on the hardware.
- 2. Locate the folder that has the same firmware library version as the one listed on the hardware.
- 3. See page 14 for more instructions on changing the firmware library.

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#### 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 recommendations:

- 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. There is no need to upgrade the hardware if it has been working satisfactorily in the field.
- Delete the PLCopenPlus firmware library from the project, and re-select a Firmware library from the following folder: "C:\Program Files\Yaskawa\MotionWorks IEC Configuration\MW IDE\MotionWorks IEC\PLC\FW\_LIB" for prior PLCopenPlus firmware libraries. This will in effect "downgrade" the application to match the function block library on the hardware.
- 3. Locate the folder that has the same firmware library version as the one listed for the hardware.
- 4. See page 14 for more instructions on changing the firmware library.

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## Upgrading A Firmware Library

- 1. Download an appropriate firmware library zip file from <u>http://www.yaskawa.com/</u>.
- 2. Extract the ZIP to the following location:

C:\Program Files\Yaskawa\MotionWorks IEC Configuration\MW IDE\MotionWorks IEC\PLC\FW\_LIB

🖃 🛅 Yaskawa				
C BootP				
🛅 Drive Wizard				
표 🚞 IndexWorks				
🖃 🚞 MotionWorks IEC Configuration				
표 🚞 ConfigTool				
🖃 🚞 MW IDE				
🖃 🚞 MotionWorks IEC				
Config				
🚞 Help				
🛅 HelpExpress				
🖃 🚞 PLC	T			
🖃 🧰 FW_LIB	Name 🔺	Size	Туре	Date Modified
BIT_UTIL	PLCopenPlus.xml	1 KB	XML Document	10/7/2008 5:22 PM
CopenPlus	PLCopenPlus_Fbfun001.chm	1,561 KB	Compiled HTML Help file	12/4/2008 4:29 PM
🚞 PLCopenPlus-v_2_1 🌙	DLCopenPlus-v_2_1.FWL	0 KB	FWL File	9/4/2008 3:42 PM
PLCopenPlus-v_2_2	DLCopenPlus-v_2_1.POU	2 KB	POU File	9/4/2008 3:42 PM
PROCONOS	PLCopenPlus-v_2_1.prj	1 KB	YASKAWA Ladder Works File	9/4/2008 3:42 PM
C YLogging	🖬 tmp.sto	76 KB	STO File	9/5/2008 11:56 AM
-				

Any directory location will work, but this is the location where firmware libraries are located during the installation process.

- 3. Open MotionWorks IEC
- 4. Open a project.
- 5. Go to the Project Tab of the Project Tree Window
- 6. Open The Libraries Folder
- 7. Right click on the firmware library to delete, and delete it
- 8. Right click on the heading "Libraries" and <Insert> firmware library. Search the paths mentioned in step 2 above and select the appropriate FWL file.