

Title: Storing MotionWorks IEC Source Code onto a MP2600iec

Product(s): MP2600iec, Sigma-5, Sigma-7 Series

Doc. No. MTN-9GHUF5

Application Overview

This application note instructs the user how to store the MotionWorks IEC 3 project source file onto the MP2600iec controller.

Products Used

Component	Product and Model Number
Servopack	Sigma-5 and Sigma-7 Series
Motor	Sigma-5 and Sigma-7 Series
Software	MotionWorks IEC 3

Application Highlights

During the download process, selecting the checkbox to include the source code zips the current project files and downloads them to the controller together with the compiled code. The zipped source can be used as a backup of the current project in case future modifications are necessary. It can be uploaded into the software development environment at a later time for editing and also provides another way to store the program in case of any data loss from third party servers or computers.

Note

While the controller does have 3.5MB of flash available, only 1.4MB of that is allocated to MotionWorks IEC project storage. This is because there are scenarios where two copies are stored on the controller (totaling 2.8MB, leaving 0.7MB free for other user files such as Config, Cam/Data files, etc. which are not included as part of the "user project". A Controller Memory Chart follows at the bottom of this FAQ.

Steps

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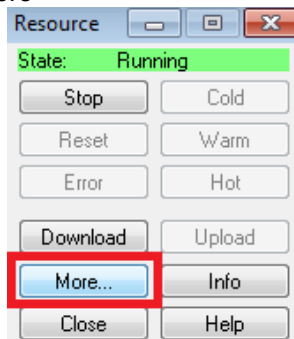
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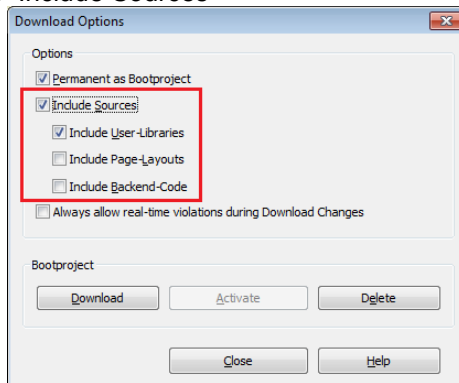
- Click on the Project Control Dialog



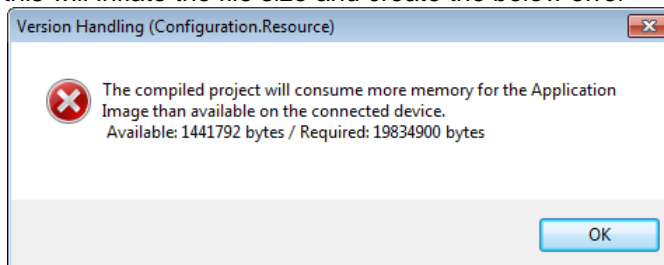
- Click More



- Click on "Include Sources"



- **Note:** BE SURE to uncheck "Include Page-Layouts" and "Include Backend-Code" as this will inflate the file size and create the below error

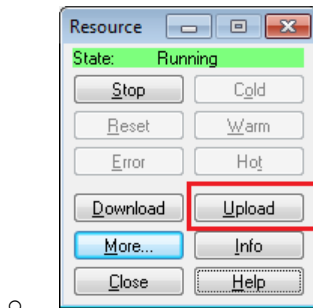


- A successful download of the Source Code will display the "Upload" as below:

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Controller Memory

Physical Memory	MP2600iec	MP2300Siec	MP2310iec	MP3200iec	Note
Size of FLASH	8 MB	8 MB	8 MB	40 MB	
Size of SRAM (Battery backed memory)	0.5 MB	0.5 MB	2 MB	8 MB	
Size of SDRAM	32 MB	32 MB	32 MB	128 MB	
FLASH Allocation:					
Firmware	4 MB	4 MB	4 MB	8 MB *	* Separate flash device from user flash
System Files	0.5 MB	0.5 MB	0.5 MB	None *	* Stored w/ firmware image
DOS compatible flash file system to store user data files, compiled IEC application, and IEC application source code (if desired)	3.5 MB	3.5 MB	3.5 MB	32 MB	
SRAM Allocation: (Battery backed memory)					
System	34 KB	34 KB	34 KB	34 KB	
Modbus	34 KB	34 KB	34 KB	34 KB	
Axis Data	56 KB	60 KB	60 KB	60 KB	
Alarm History	32 KB	32 KB	32 KB	256 KB	
User Retained Data (Global Variables)	352 KB	352 KB	951 KB	6 MB	
NOTE: Divide User Retained Data by 2 to allow 2 copies at run time to support the 'Download Changes' feature.					
SDRAM Allocation:					
Firmware - system memory - cam tables - other data	13 MB	13 MB	13 MB	32 MB	
Running cam tables (CamTableDs)	7.5 MB	7.5 MB	7.5 MB	20 MB	
Memory available to the IEC application during run (code & data)	3.5 MB	3.5 MB	3.5 MB	52 MB	
RamDisk for system use	4 MB	4 MB	4 MB	24 MB	
Note: The can select between two memory allocations to favor the 'Running Cam Tables' or the 'Memory available to the IEC application' via a toolbar button on the Configuration toolbar. The 'Memory available to the IEC application' can be increased to 6.5MB, which reduces the 'Memory available for Running cam tables' to 4.5 MB					

FIGURE 1 CONTROLLER MEMORY FROM THE MOTIONWORKS IEC HARDWARE CONFIGURATION MANUAL, SECTION 4

For more information on Controller Memory, please see document MTN-9GZ6HP:

https://www.yaskawa.com/about-us/contact-us?_yascontactus_WAR_yascontactusportlet_selectedDocumentId=MTN-9GZ6HP&_yascontactus_WAR_yascontactusportlet_safetyText=true