WEINTEK LABS., INC.

CODESYS SD Card Access

Writing / Reading tag value to / from SD card

Demo Project

Contents

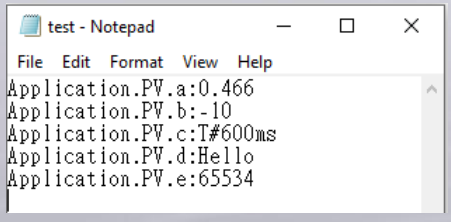
1. Overview

Overview

As the complexity of manufacturing process increases, users search for multipurpose machines or solutions for producing diverse customized products with one machine. Using different features or producing customized products require specific parameters or recipes. This demo project provides a solution for users to save the parameters and recipes into an SD card for use in programs when needed. The SD card not only can store data but also can initialize parameters. For mass productions, users can save the initial values of the parameters into an SD card, and then write them to the program, which makes copying a large amount of data to machines easy. Saving data into an SD card can save memory space for program codes.

This demo project shows how users can copy .txt files from an SD card to CODESYS File System (8MB), or the other way round.

By using function blocks File_Read and File_Write, the tag values in CODESYS can be read from an SD card or written into an SD card. These function blocks can read / write the text format in the file. In this demo project, the format to be read / written in the .txt file is "*full name of the tag:value*", as shown in the following screenshot.



Users can modify function blocks File_Read and File_Write according to the format in their .txt file.

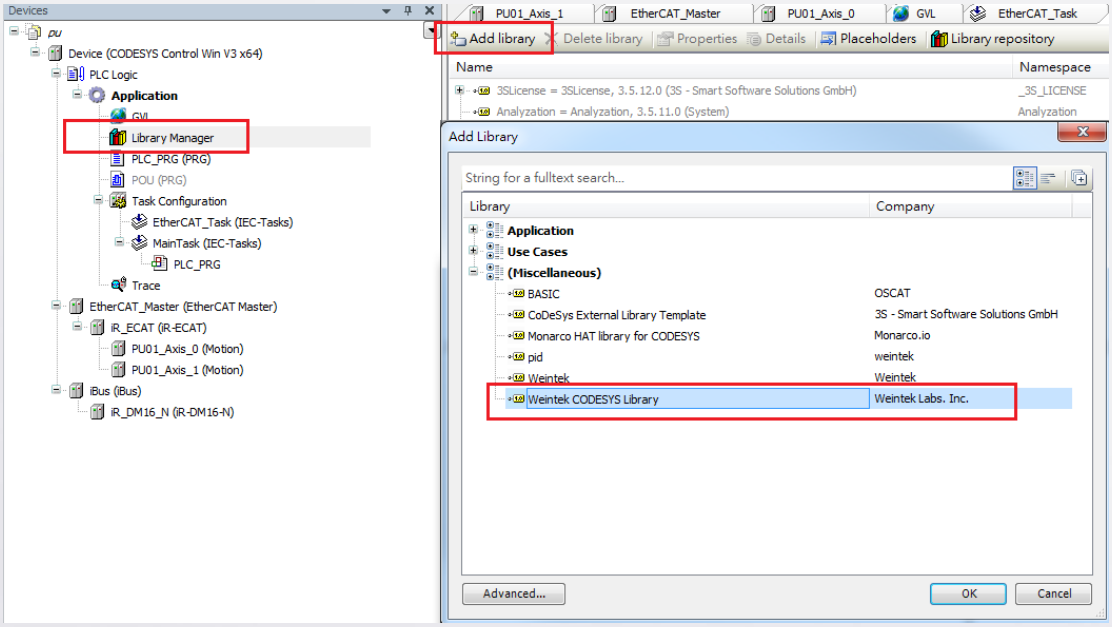
2. Adding Weintek Library

Step 1. Open the download page on Weintek official website and search for [cMT+CODESYS Package] to download and install the package.

https://www.weintek.com/globalw/Download/Download.aspx

(This package contains iR-PU01-P's device description file)

Step 2. Add Weintek CODESYS Library in CODESYS software.



3. Function and Function Block

Function：

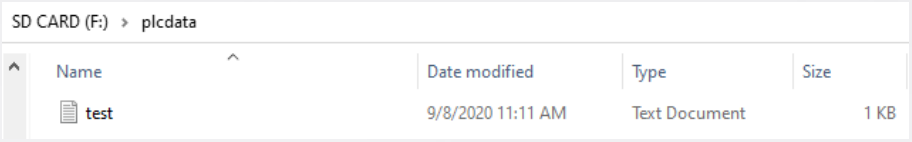
Name	Description
Read_Symbol	Search for the tag same with the string and return the value.
Write_Symbol	Search for the tag same with the string and write the value.

Function Block：

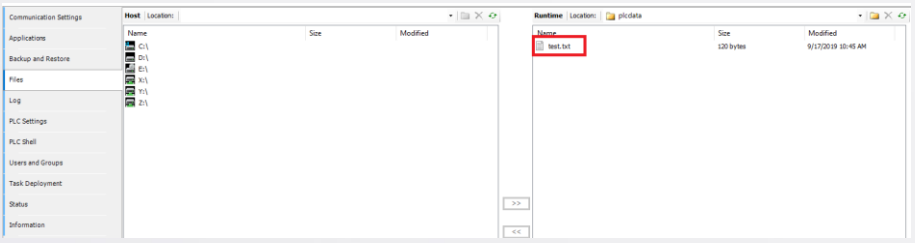
Name	Input/Output		Description
File_Read	Input	Execute	Read tag value in the file.
		FileName	The name of the file to be opened.
		TagName	Read tag name.
	Output	Value	Tag value in the file.
		Done	Reading operation completed.
		Error	The tag with the same TagName is not found.
File_Write	Input	Execute	Write tag value into the file.
		FileName	The name of the file to be opened.
		TagName	Write tag name.
		Value	Write value.
	Output	Done	Writing operation completed.
		Error	The tag with the same TagName is not found.

4. Demonstration

Step 1. Create a folder named plcdata in the SD card, place the .txt file in the plcdata folder, and then insert the SD card into the controller.

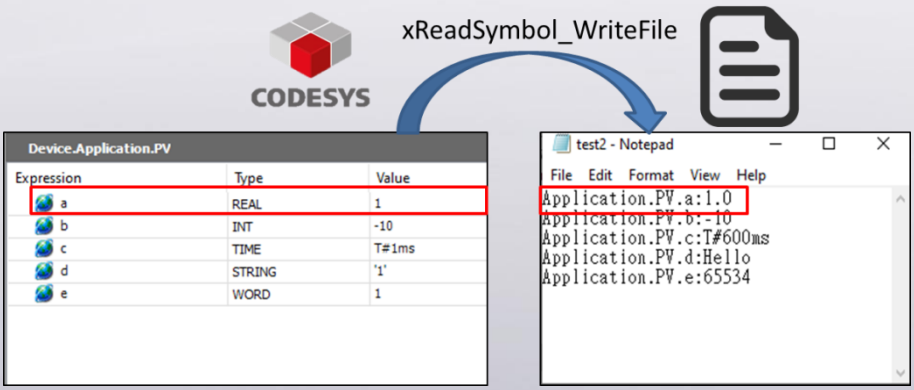


Step 2. Trigger “xFileCopy_From_SD_Trig” to copy the .txt file in the SD card into File System’s plcdata folder.



Step 3. Trigger “Diretory_Set” to set /plcdata/ as the directory for opening the file.

Step 4. Substitute variable sName into string ‘Application.PV.a’ and trigger “xReadSymbol_WriteFile” to write Application.PV.a into the .txt file.



Step 5. Substitute variable sName into string ‘Application.PV.b’ and trigger “xReadFile_WriteSymbol” to write the value in the .txt file into Application.PV.b.