easySoft/Galileo Application Note for Communication from easySoft to Galileo

Introduction

easySoft is an intuitive, yet powerful software platform for Nano PLCs. easySoft contains basic visualization features, however for systems that require advanced graphics and visualization, Galileo should also be used in combination with easySoft. The programmer will need to configure easySoft and Galileo to be able to communicate with one another via Modbus TCP. The purpose of this application note provides instructions on how to exchange data between the two software applications.

Configuring easySoft for Modbus TCP Communications

Once you have completed your easySoft program, you will need to ensure that you have set your device up to be a Modbus TCP slave. To do so, go to the Project view, then click on the Modbus tab. You will then need to manually enable the Modbus TCP server, and then select which marker and net words you want to allow to be used in Galileo. If your tags are not in this range, Galileo will not be able to access them. Additionally, if you want to be able to directly read physical I/O and clock data, the box must be manually checked for this too as seen below in Figure 1.
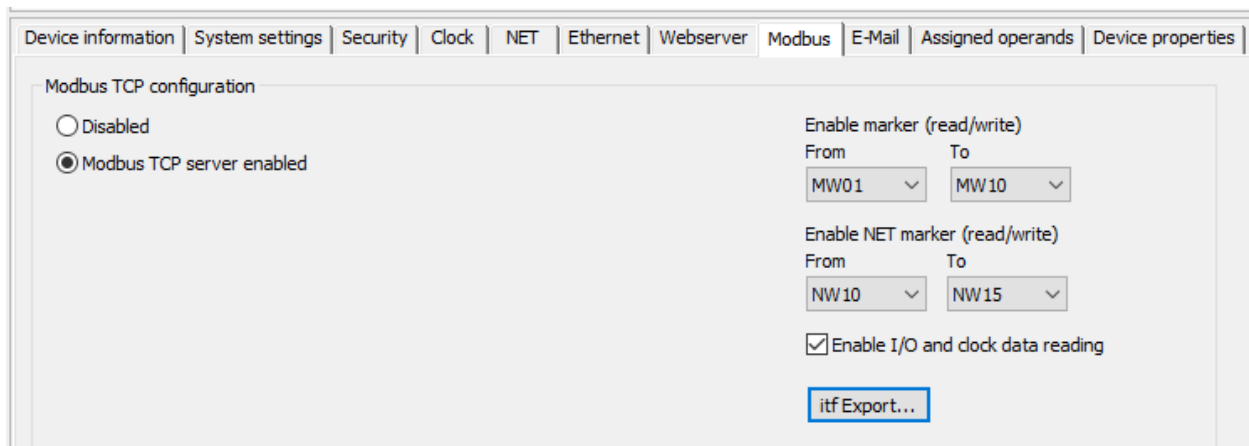

Figure 1

Exporting Tags from easySoft

The next step is to export the program tags from easySoft as an itf file. This file will contain the inputs, outputs, markers, and Real Time Clock data that are used in the project. To create the file, click on the "itfExport…" button seen in Figure 1. It is important to note that the "itfExport…" feature is only available in Version 7.11 and newer of easySoft.

Create Modbus TCP Communication in Galileo

You will need to add a Modbus TCP communication connection in Galileo. This can be done right away when creating a project by adding a Modbus TCP communication, otherwise the connection can be added after the project is created. To add communications after creating a project, go to the Device tab in Galileo and then click on PLC Communication. You then must select Modbus TCP and be sure to select the correct port on the interface column.
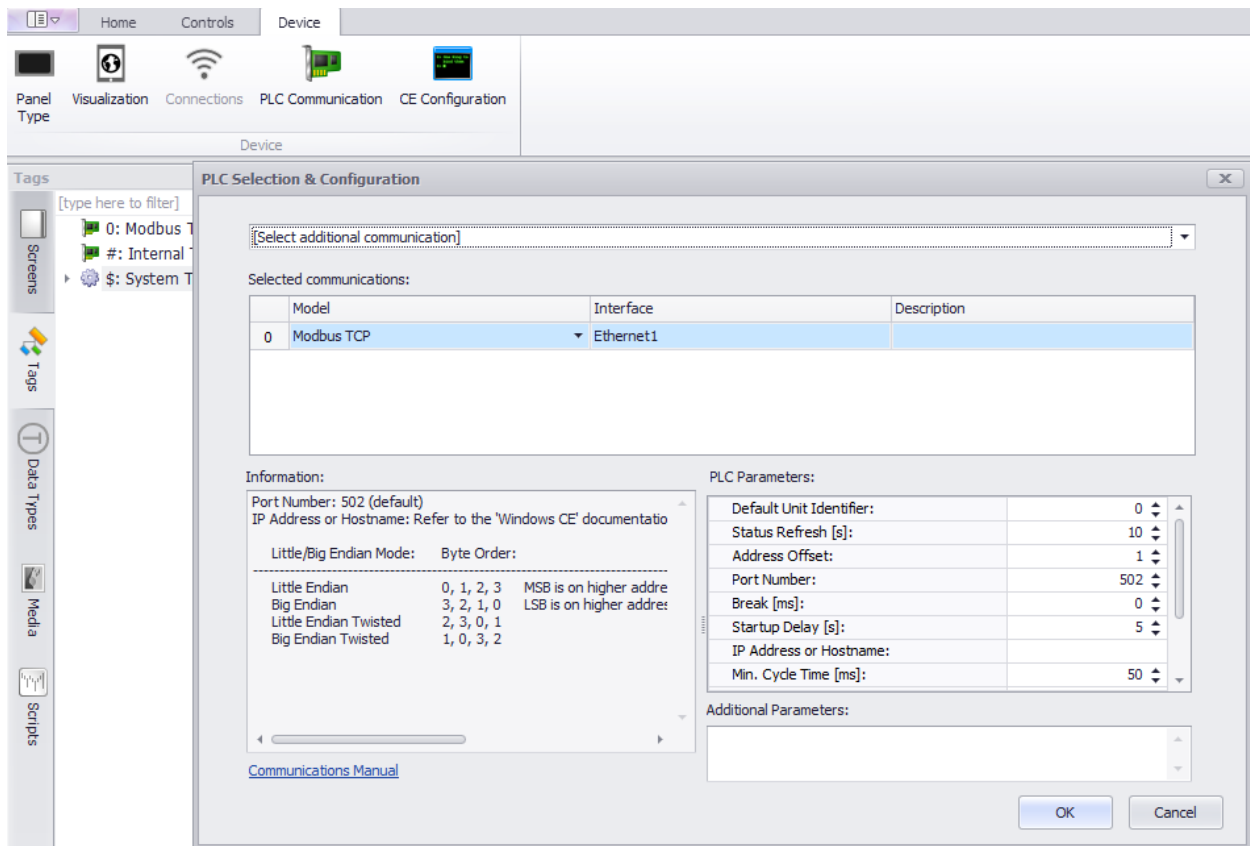

Figure 2

Additionally, you will need to configure the PLC parameters. Set the Unit Identifier to 1, enter the IP address of the easyE4 into the designated spot, set Memory Alignment to 2 Bytes (Word), and lastly set the Endian Mode to "Little endian twisted" as seen below in Figure 3.

Default Unit Identifier:	1
Status Refresh [s]:	10
Address Offset:	0
Port Number:	502
Break [ms]:	0
Startup Delay [s]:	5
IP Address or Hostname:	192.168.1.1
Min. Cycle Time [ms]:	50
Endian Mode:	Little endian twisted
Memory alignment inside structures:	2 Byte (Word)

Figure 3

Once complete, the Modbus TCP connection you created will be added to the Tags tab of the project organization part of the application.
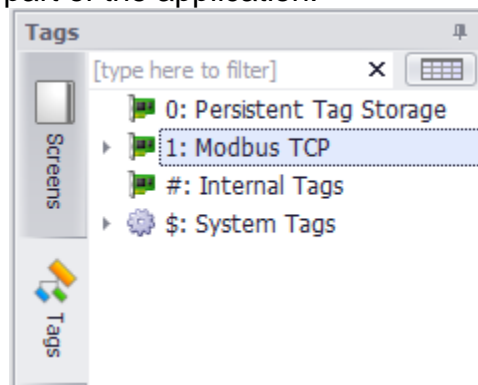
Figure 4

Import Tags into Galileo

Once the Modbus TCP connection is added and can be found in the Tags tab, you can right click on it to import the itf you previously created.
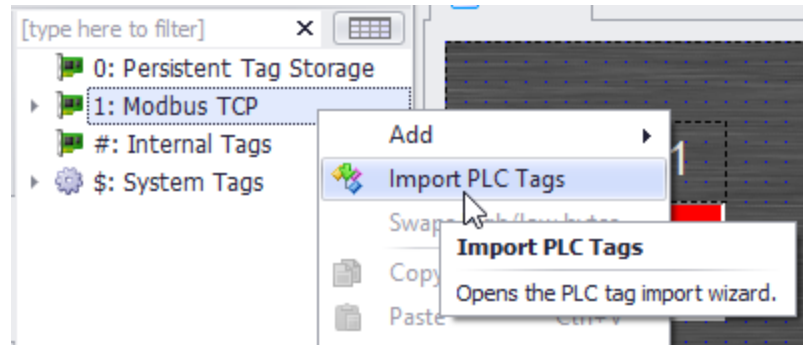
Figure 5

Select the Communication connection you want the tags to import into, and then browse for the file and click next.

Figure 6

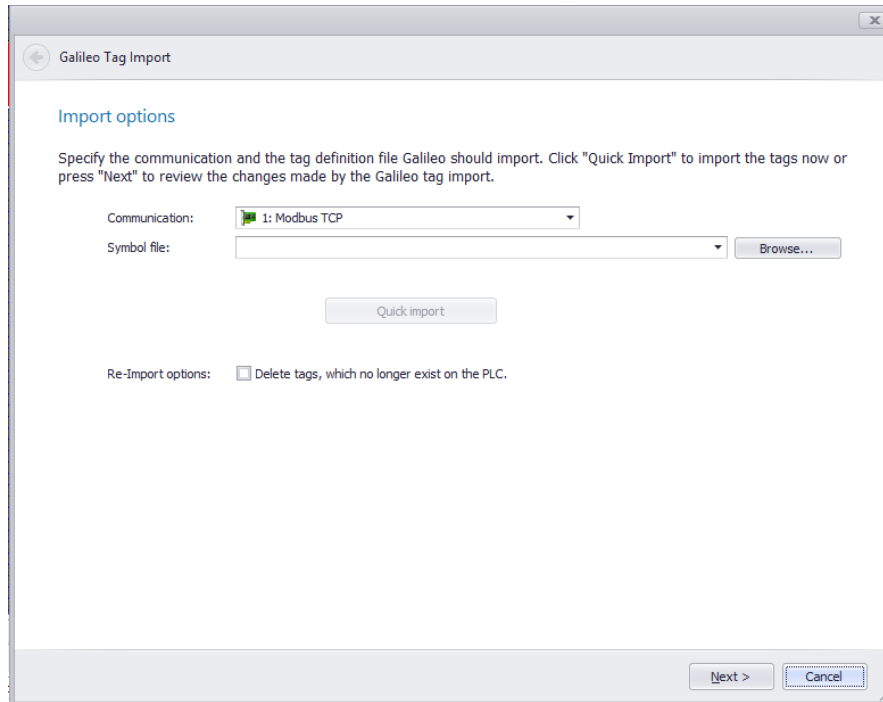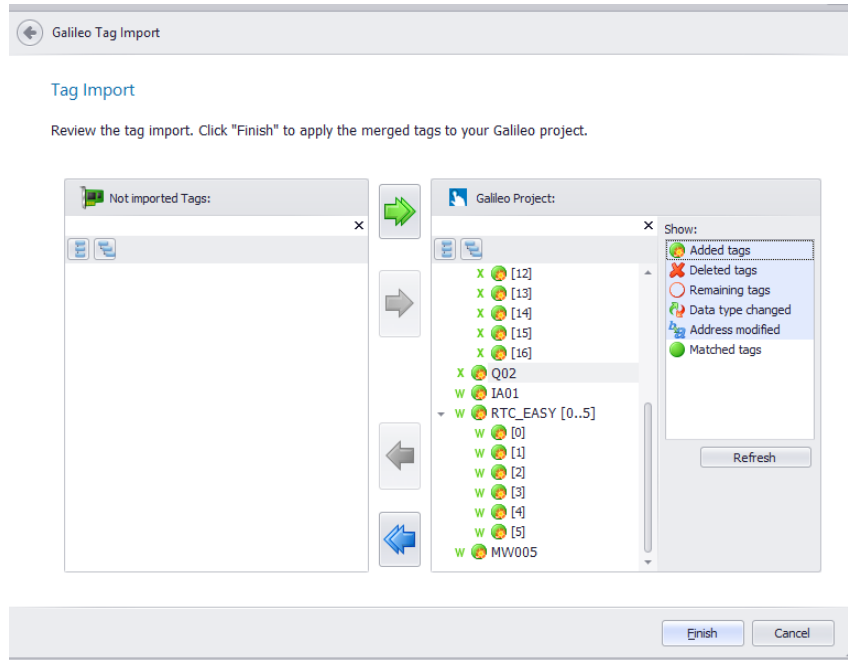Lastly review the list of tags and click "Finish" to import all the tags in the file.
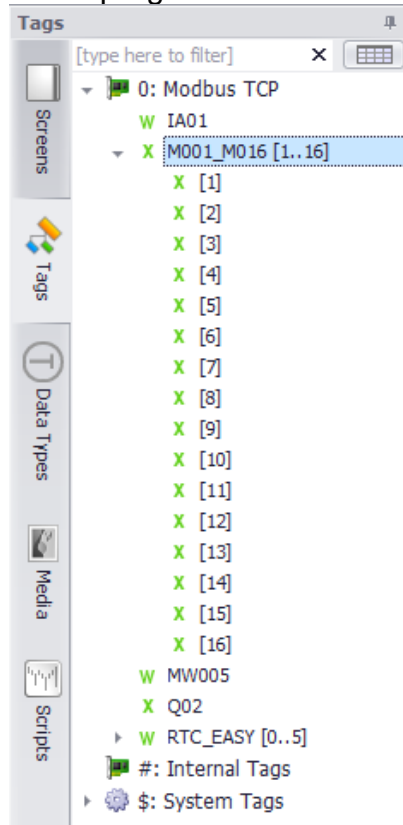
Figure 7

The tags will now be in your Galileo program .

Figure 8

Additional Help

In the US or Canada: please contact the Technical Resource Center at 1-877-ETN-CARE or 1-877-326-2273 option 2, option 5.

All other supporting documentation is located on the Eaton web site at www.eaton.com/easy

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