Automation Interface for USS

Auto Generate Ethernet IP network from EtherCAT network

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How to Guide for setting up the program to load a new project into the converter and get the results you want. The guide will focus on capabilities and all the settings available.

1. Create a TwinCAT project which has an EtherCAT network created. This network should be the final EtherCAT network you want. Scanning or manually creating it is fine.
2. Edit the settings.txt file. Graphical user interface, text, application

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   1. List of Commands
      1. TwinCATProjectPath,C:\USS\TwinCAT Project1\TwinCAT Project1.sln
         1. The destination of the project to be edited
      2. ImportPou,UseLocalPath,Exports\GVL\_AutoGenerated.xml
         1. POU to be imported. You can export any POU you wish. Simply export a POU from a project and add this settings.
         2. Optional: EthernetIPTemplate,C:\EtherNet\_IP Adapter (EL6652-0010).xti
      3. EIPTagAddOutput,{Name;EtherCATStatus},{Type;UINT},{LinkToPlc;GVL\_AutoGenerated.EtherCATStatus}
         1. Adds a tag to the EIP output. Also links it to another tag.
      4. EIPTagAddInput,{Name;EtherCATStatus},{Type;UINT},{LinkToPlc;GVL\_AutoGenerated.EtherCATStatus}
         1. Adds a tag to the EIP Input. Also links it to another tag of your chossing.
      5. AddLink,{PlcLinkInput;GVL\_AutoGenerated.EtherCAT\_NetId},{EtherCATLink;InfoData^AmsNetId}
         1. Links a tag to another tag. Useful for linking tags from POU’s that are imported. Otherwise, you’d probably be using
      6. SettingsFile,EtherCAT\_StartupList.txt
         1. Expands the settings file. We could pile all the settings into the same file but this allows for some organization like a subroutine.
      7. EthernetIPTemplate,UseLocalPath,Exports\EtherNet\_IP Adapter (EL6652-0010).xti
         1. This settings is required to start the generation of the EtherNET IP network. It’s possible to point this to different files with IP addresses already setup.
      8. CharReplaceInEtherCAT,Channel,Chl
         1. Works the same as a Find and replace all inside the EtherCAT network. Very useful for shortening names or giving a variable a better name.
      9. CharReplaceInEIP,(,
         1. Works as a fine and replace all inside the EIP network.
         2. Is a must because some char rockwell doesn’t like.
         3. Can be used also to automatically adjust tags in the EIP network.
3. Run “ScriptingTestContainer.exe”
4. Select a TwinCAT project which you want to generate the Ethernet IP network for.
   1. Option A: Pick an already opened TwinCAT project. Graphical user interface, application

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   2. Option B: Use the file path from the setting.txt file. Graphical user interface, application

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5. Select your Script. Most likely you’ll use the top one. Graphical user interface, text

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