TB0444 Renewing CF Card on TwinCAT2 Systems

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Difficulty **Medium**

Duration **30 minute(s)**

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Introduction

Problem

These machines use a CX5020 PC with a 2Gb CF card running TwinCAT2 PLC system. The CF card can fail, which is effectively the windows operating system. The CF card has a very small capacity, so needs to be created from an image. This TB outlines the steps in the process to ensure a successful conclusion.

1.   Create a new CF card at stuga using the beckhoff imaging tool on a CX5020
2.   Boot up with the CX5020
3.   Ensure PLC is set to Enable on start-up (default is config mode)
4.   Rename the PC
5.   Install TeamViewer host v10 or less from a USB stick
6.   If you have a copy of the version of winMulti it was running, copy this in to the c:\ multi folder. If not, a " *new version install*" will be needed so copy in data from the g:\builds\PC Installs\Autoflow\Multi folder
7.   Set up and customer specific network parameters to ensure TeamViewer will work when it is plugged in on site
8.   Send to customer

Once on site, follow procedure A if the winMulti version is preserved, or B if it is a *new version install*

Step 1 - Procedure A- Original Version

1. From Camera PC, use System Manager to activate original configuration
2. From Camera PC, use PLC Editor to login both original projects – PLC_Reset in Port 811, and the other main PLC control project in Port 801.

> ⚠️ DO NOT FORGET TO ACTIVATE BOOT PROJECT

Step 2 - Procedure B- New Version Install

Connect to camera PC

Step 3 - Copy latest tcMulti.pro file

Copy the latest tcMulti.pro file from g:\design\twinCAT to camera PC:\twinCAT\

Step 4 - Copy a similar .tsm file to the machine

Copy a similar .tsm file to the machine from g:\design\twinCAT\TSMs to camera PC:\twinCAT\. This is the system Manager file, and you will need this for the following reasons:
- The latest tcMulti and front end software have a different mapping for the IO
- You can't update an old mapping without loosing all the IO links
- Using a similar file gets to a result quicker

Step 5 - Open System Manager

On Camera PC, open System Manager – this should open the previously used version

Step 6 - Open System Manager again

Open System manager again and load the recently copied TSM

Step 7 - Save

Save as "[BuildNo] tcMulti.TSM"

Step 8 - Update the EtherCAT Device hardware

Update the EtherCAT Device hardware (the TSM will be set up for the MAC address of the machine that this TSM was copied from)

Step 9 - Display side-by-side

Display the two system managers side by side

Step 10 - Check all IO mapping one by one

Using the old TSM as a blueprint, carefully check all IO mapping one by one. Make sure the new TSM matches precisely the old TSM

Step 11 - Activate Configuration

Activate Configuration

Step 12 - Login PLC_Reset

Using PLC Editor, login PLC_Reset in Port 811
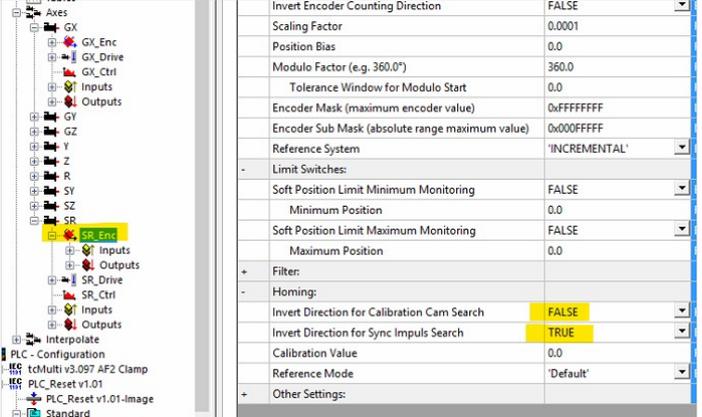
⚠️ **DO NOT FORGET TO ACTIVATE BOOT PROJECT**

Step 13 - Login tcMulti

Using PLC Editor, login latest tcMulti in Port 801

⚠️ **DO NOT FORGET TO ACTIVATE BOOT PROJECT**

Step 14 - Reverse datum direction if required

It is likely that the datum direction on some axes will have reversed. You need to enter setup mode and test each axis homes correctly. If an axis needs to be reversed, invert the two Homing parameters in Encoder Parameters->Homing Tab. Use the download button to save