

HOW TO CREATE A XML FILE WITH DRIVE COMPOSER PRO AND USE IN TWINCAT SYSTEM MANAGER

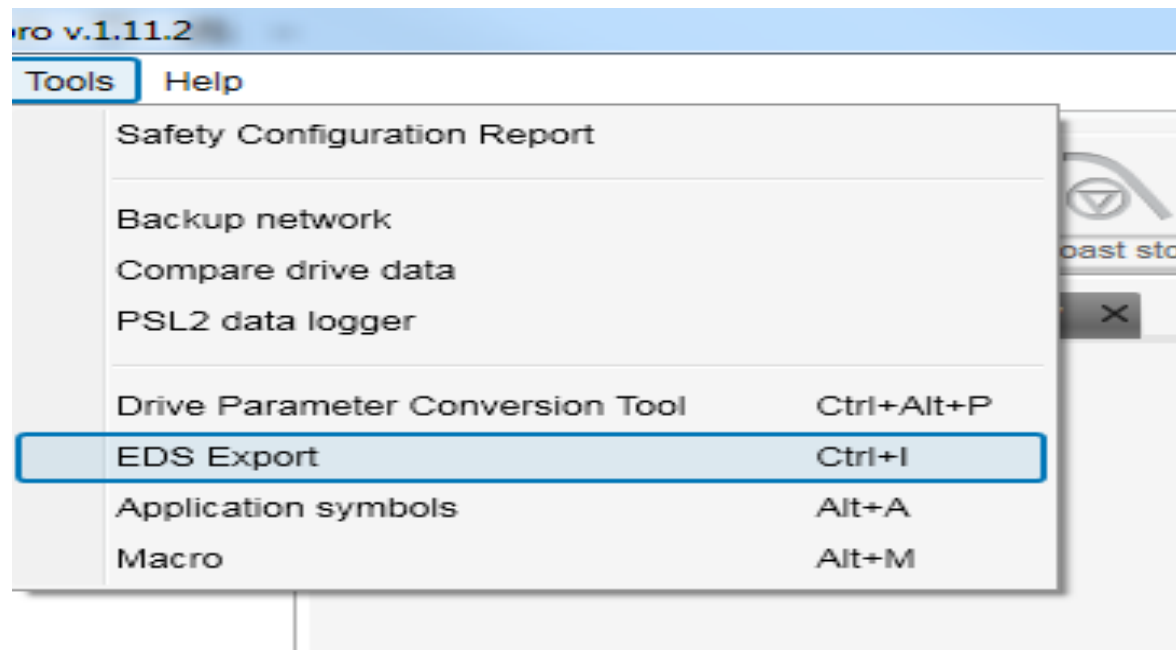
Problem:

A customer had an application that required an encoder module and Ethercat adapter module (FECA-01) to be mounted on an ACS880 control board. When the customer viewed the parameters in the TwinCat System Manager only two of the parameters from parameter Group 92 and 93 were visible. For all of the encoder Group 92 and 93 parameters to be visible, parameter 92.1, Encoder 1 type and/or 93.1, Encoder 2 type must be set to anything other than “None Configured.” As a result, the original XML file loaded into the TwinCat System Manager did not have the remaining Group 92 and 93 parameters.

Solution:

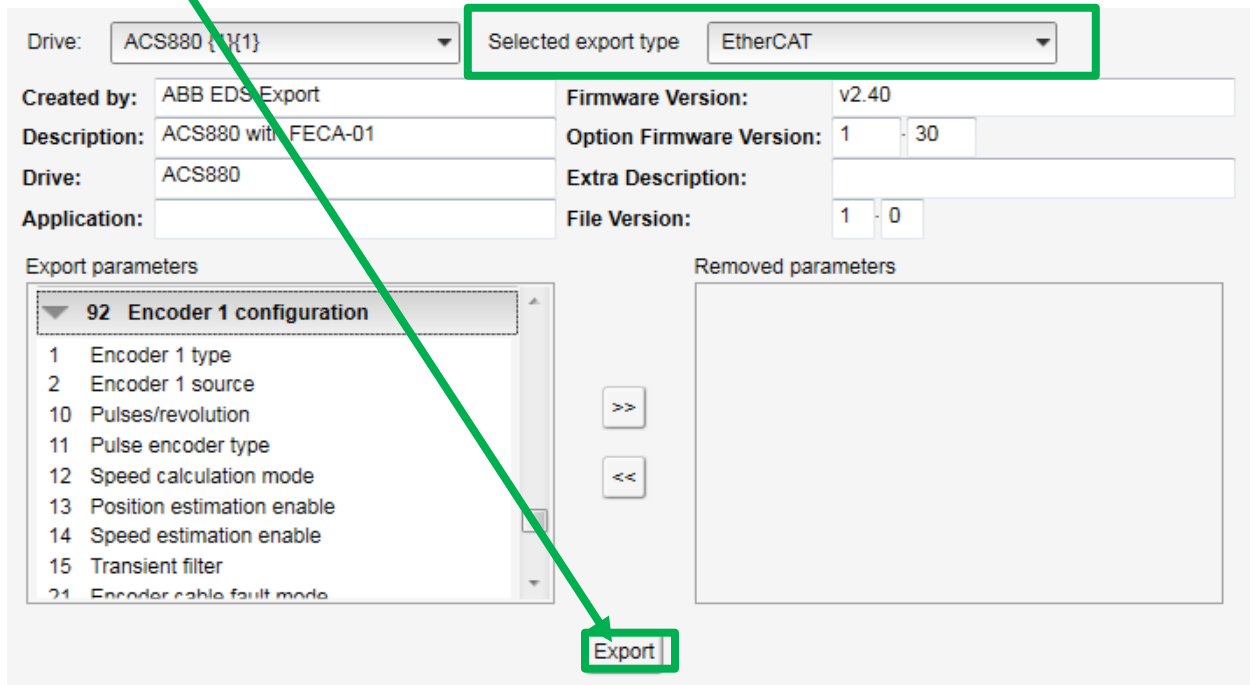
This document will show the process of creating a XML file in Drive Composer Pro, uploading the XML file in the TwinCat System Manager, and viewing the Group 92 and 93 parameters.

Step 1: In Drive Composer Pro, select **Tools**, then **EDS Export**.



Author: Louis Chatfield, Industrial Application Engineering		Date: December 20, 2018
Internal (abbnow) or External	Industry – Industrial	Document #: LVD-EOTN137U-EN
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Product Categories: ACS880, FECA-01, Drive Composer Pro		

Step 2: In the EDS Export Window, choose **Selected Export Type**, then select **Export**.



Drive: ACS880 {1}

Selected export type: EtherCAT

Created by: ABB EDS Export Firmware Version: v2.40

Description: ACS880 with FECA-01 Option Firmware Version: 1 30

Drive: ACS880 Extra Description:

Application: File Version: 1 0

Export parameters

- ▼ 92 Encoder 1 configuration
- 1 Encoder 1 type
- 2 Encoder 1 source
- 10 Pulses/revolution
- 11 Pulse encoder type
- 12 Speed calculation mode
- 13 Position estimation enable
- 14 Speed estimation enable
- 15 Transient filter
- 21 Encoder cable fault mode

Removed parameters

>>

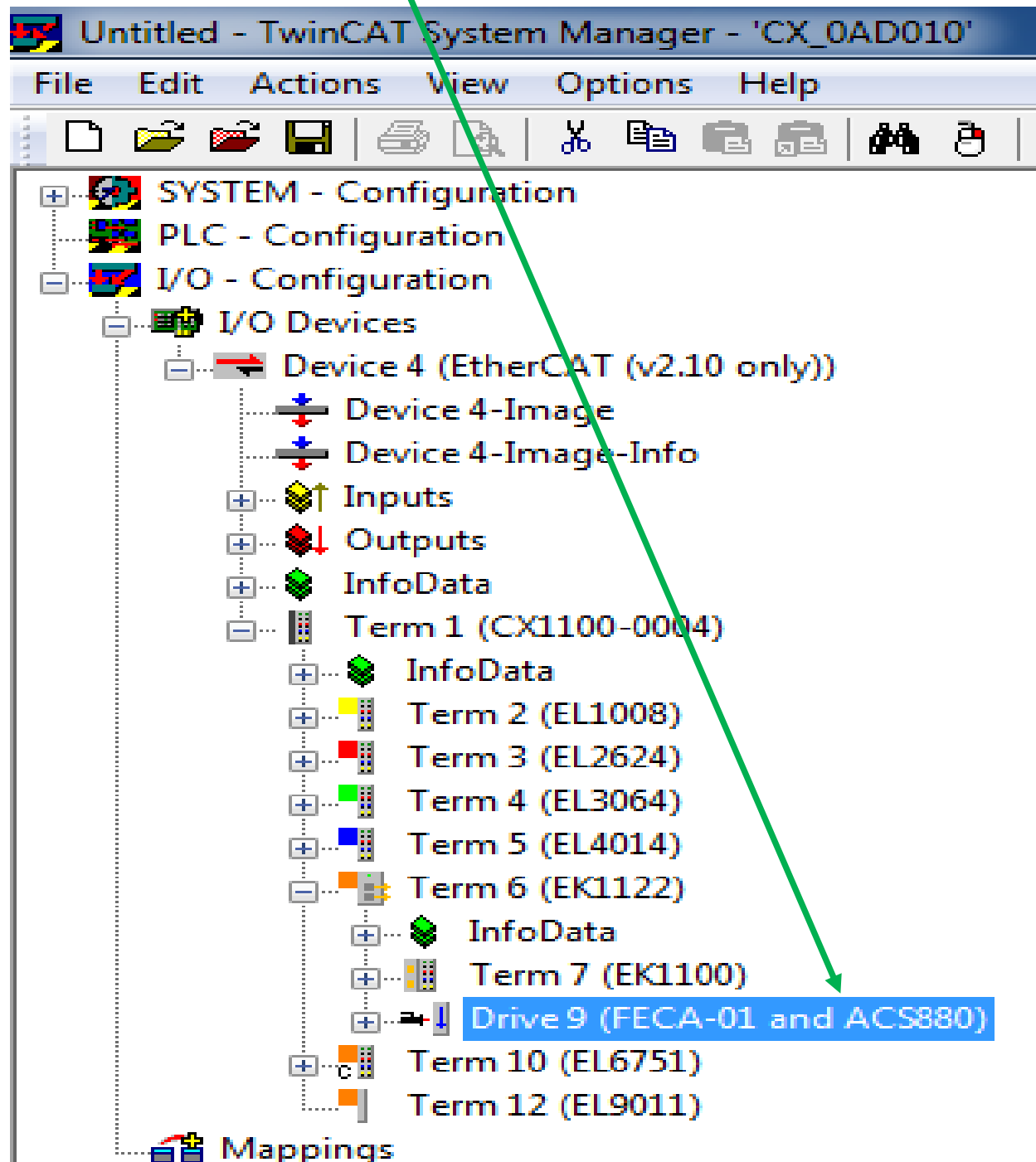
<<

Export

Save the XML under the following directory: **C:\TwinCAT\Io\EtherCAT**.

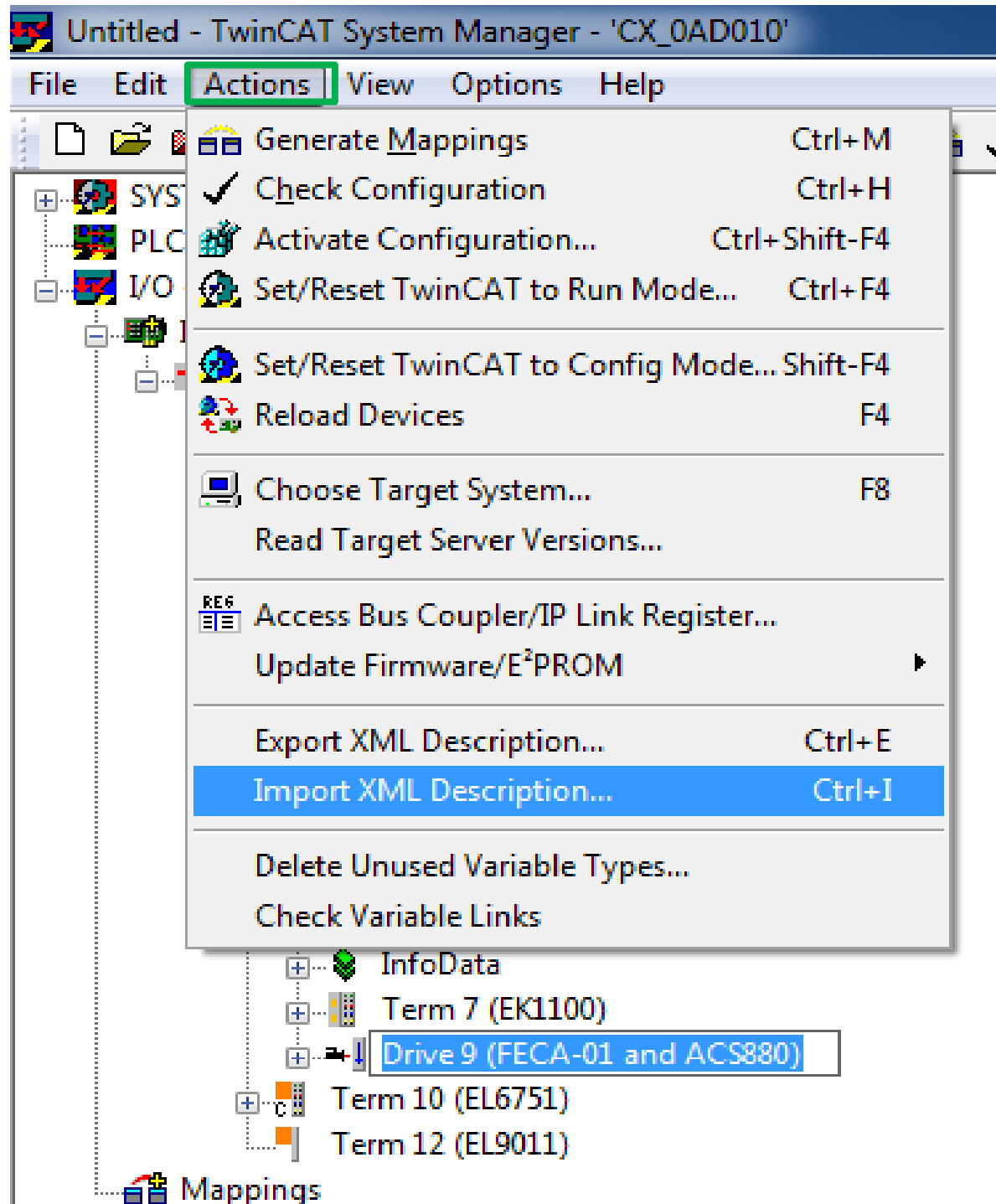
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Step 3: Select the desired **drive** on the Ethercat network within TwinCat System Manager



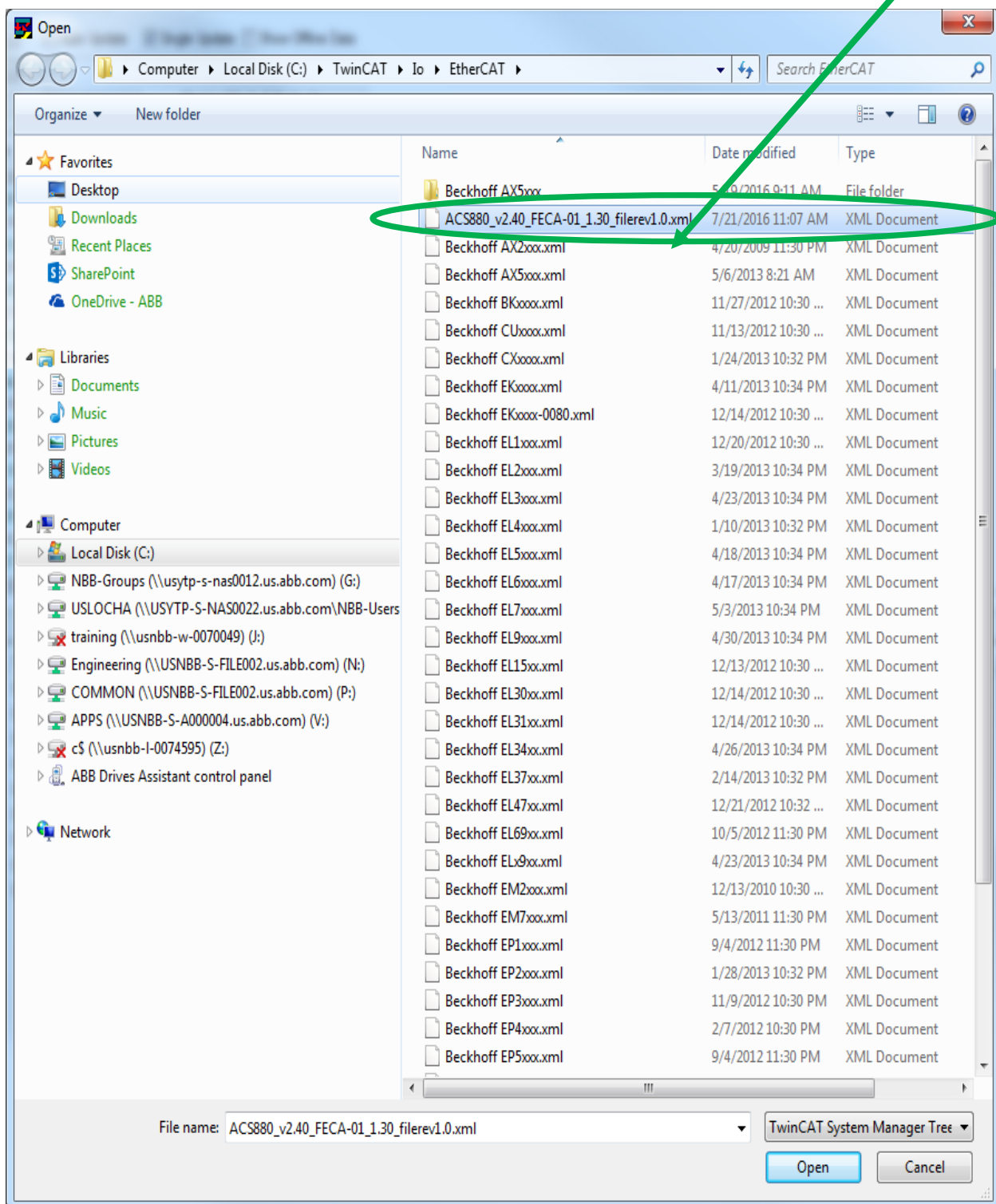
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Step 4: Select **Actions**, then **Import XML Description**.



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Step 5: Go to the **C:\TwinCAT\Io\EtherCAT** directory and select the desired XML file.



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Step 6: Go to the **CoE Online Tab** and the Group 92 and 93 parameters will be visible.

The screenshot shows the TwinCAT System Manager interface. On the left, a tree view shows the configuration hierarchy: SYSTEM - Configuration, PLC - Configuration, I/O - Configuration, I/O Devices, Device 4 (EtherCAT (v2.10 only)), Device 4-Image, Device 4-Image-Info, Inputs, Outputs, InfoData, Term 1 (CX1100-0004), InfoData, Term 2 (EL1008), Term 3 (EL2624), Term 4 (EL3064), Term 5 (EL4014), Term 6 (EK1122), InfoData, Term 7 (EK1100), Drive 9 (FECA-01 and ACS880), Term 10 (EL6751), Term 12 (EL9011), and Mappings.

The main window displays the 'CoE - Online' tab. It includes controls for 'Update List', 'Auto Update' (checked), 'Single Update', and 'Show Offline Data'. Below these are 'Advanced...' and 'Add to Startup...' buttons. A 'Module OD (AoE Port)' dropdown is set to '0'. The main area contains a table of parameters:

Index	Name	Flags	Value
405C:02	92.02 Encoder 1 source	RW P	0x0000 (0)
405C:0A	92.10 Pulses/revolution	RW P	0x0800 (2048)
405C:0B	92.11 Pulse encoder type	RW P	0x0000 (0)
405C:0C	92.12 Speed calculation mode	RW P	0x0004 (4)
405C:0D	92.13 Position estimation enable	RW P	0x0001 (1)
405C:0E	92.14 Speed estimation enable	RW P	0x0000 (0)
405C:0F	92.15 Transient filter	RW P	0x0000 (0)
405C:15	92.21 Encoder cable fault mode	RW P	0x0000 (0)
405C:17	92.23 Maximum pulse waiting time	RW P	4
405D:0	93 Encoder 2 configuration	RO	> 25 <
405D:01	93.01 Encoder 2 type	RW P	0x0001 (1)
405D:02	93.02 Encoder 2 source	RW P	0x0001 (1)
405D:0A	93.10 Pulses/revolution	RW P	0x0800 (2048)
405D:0B	93.11 Pulse encoder type	RW P	0x0000 (0)
405D:0C	93.12 Speed calculation mode	RW P	0x0004 (4)
405D:0D	93.13 Position estimation enable	RW P	0x0001 (1)
405D:0E	93.14 Speed estimation enable	RW P	0x0000 (0)
405D:0F	93.15 Transient filter	RW P	0x0000 (0)
405D:15	93.21 Encoder cable fault mode	RW P	0x0000 (0)

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General | EtherCAT | Process Data | Startup | **CoE - Online** | Online

Update List Auto Update Single Update Show Offline Data

Advanced... _____

Add to Startup... Online Data Module OD (AoE Port): 0

Index	Name	Flags	Value
405C:02	92.02 Encoder 1 source	RW P	0x0000 (0)
405C:0A	92.10 Pulses/revolution	RW P	0x0800 (2048)
405C:0B	92.11 Pulse encoder type	RW P	0x0000 (0)
405C:0C	92.12 Speed calculation mode	RW P	0x0004 (4)
405C:0D	92.13 Position estimation enable	RW P	0x0001 (1)
405C:0E	92.14 Speed estimation enable	RW P	0x0000 (0)
405C:0F	92.15 Transient filter	RW P	0x0000 (0)
405C:15	92.21 Encoder cable fault mode	RW P	0x0000 (0)
405C:17	92.23 Maximum pulse waiting time	RW P	4
405D:0	93 Encoder 2 configuration	RO	> 25 <
405D:01	93.01 Encoder 2 type	RW P	0x0001 (1)
405D:02	93.02 Encoder 2 source	RW P	0x0001 (1)
405D:0A	93.10 Pulses/revolution	RW P	0x0800 (2048)
405D:0B	93.11 Pulse encoder type	RW P	0x0000 (0)
405D:0C	93.12 Speed calculation mode	RW P	0x0004 (4)
405D:0D	93.13 Position estimation enable	RW P	0x0001 (1)
405D:0E	93.14 Speed estimation enable	RW P	0x0000 (0)
405D:0F	93.15 Transient filter	RW P	0x0000 (0)
405D:15	93.21 Encoder cable fault mode	RW P	0x0000 (0)

Figure 1: View of the Group 92 and 93 Parameters

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Documents or other reference material:

ACS880 Primary Control Program, Document Number 3AUA0000085967

Drive Composer User Manual, Document Number 3AUA0000094606

FECA-01 Ethercat Adapter User Manual, Document Number 3AUA0000068940

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