

Ezi-SERVOII-EC Operation manual for SoftServo 'WMX'

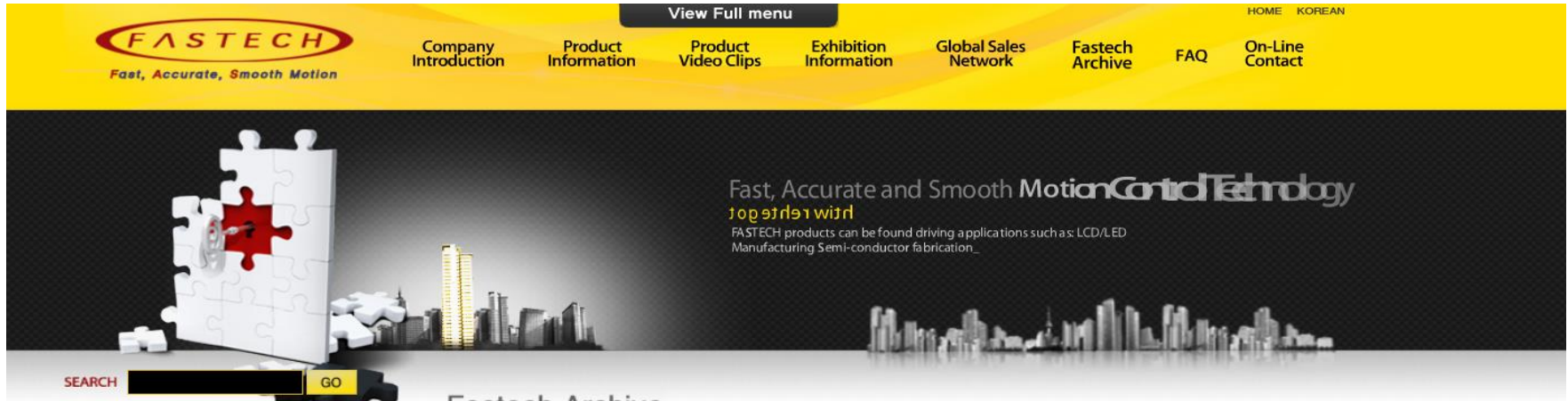


Ezi-SERVOII-EC data Download

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[ESI(XML)]

ESI(XML) : Download from www.fastech.co.kr webpage [FASTECH Archive]



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Fastech Archive

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Date : 15-09-07 15:28

Click

List Write

[Software Program] [Setup] Ezi-SERVO II EtherCAT & S-SERVO ErhetCAT ESI (XML)

Name : 관리자

Hit : 426

FASTECH_Ezi-SERVO2_EtherCAT.XML (176.2K) [33] DATE : 2015-10-12 0

Ezi-SERVO II EtehrCAT Slave Information (XML)
S-SERVO EtehrCAT Slave Information (XML)

EtherCAT Slave information (ESI) is intergrated into the one *.xml file.

Ezi-SERVOII-EC data Download

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[Manual]

Manual : Download from www.fastech.co.kr webpage [Product information]

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FASTECH products can be found driving applications such as: LCD/LED Manufacturing Semi-conductor fabrication, Assembly machines, Packaging machines, Medical diagnostic equipment, Laboratory apparatus, Vision Inspection systems and many other applications that require precise smooth movement. Fastech drives have industry standard NEMA mounting flanges and easily adapt to most linear actuators and precision stages.

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Ezi-Servo II EtherCAT series

풍부한 기술력과 경쟁력을 가진 파스텍(주)을 소개합니다

Ezi-SERVO II EtherCAT series

HOME > Production info >

Product Information

- Fastech Product Specifications
- Ezi-SERVO series
- Ezi-SERVO II EtherCAT series
 - MC4N
- Ezi-STEP series
- Ezi-LinearStep series
- Ezi-Robo series
- S-SERVO series
- Ezi-MOTIONGATE series
- Ezi-Motionlink series
- Motor Selection Tool

Ezi-SERVO II EtherCAT
Closed Loop Stepping System

EtherCAT
Conformance tested



Ezi-SERVO II EtherCAT Series is combination package between Fastech's Closed Loop Stepping Motor Drive/Controller system and Ethernet based Fieldbus EtherCAT. Ezi-SERVO II EtherCAT supports CiA402 Drive Profile.

Click

- CiA 402 Drive Profile Support
- Closed Loop Stepping System
 - No Gain Tuning / No Hunting
- Torque Improvement by Boost Current Control

SPEC PART NUMBERING & DRAWING CATALOGUE **MANUAL**

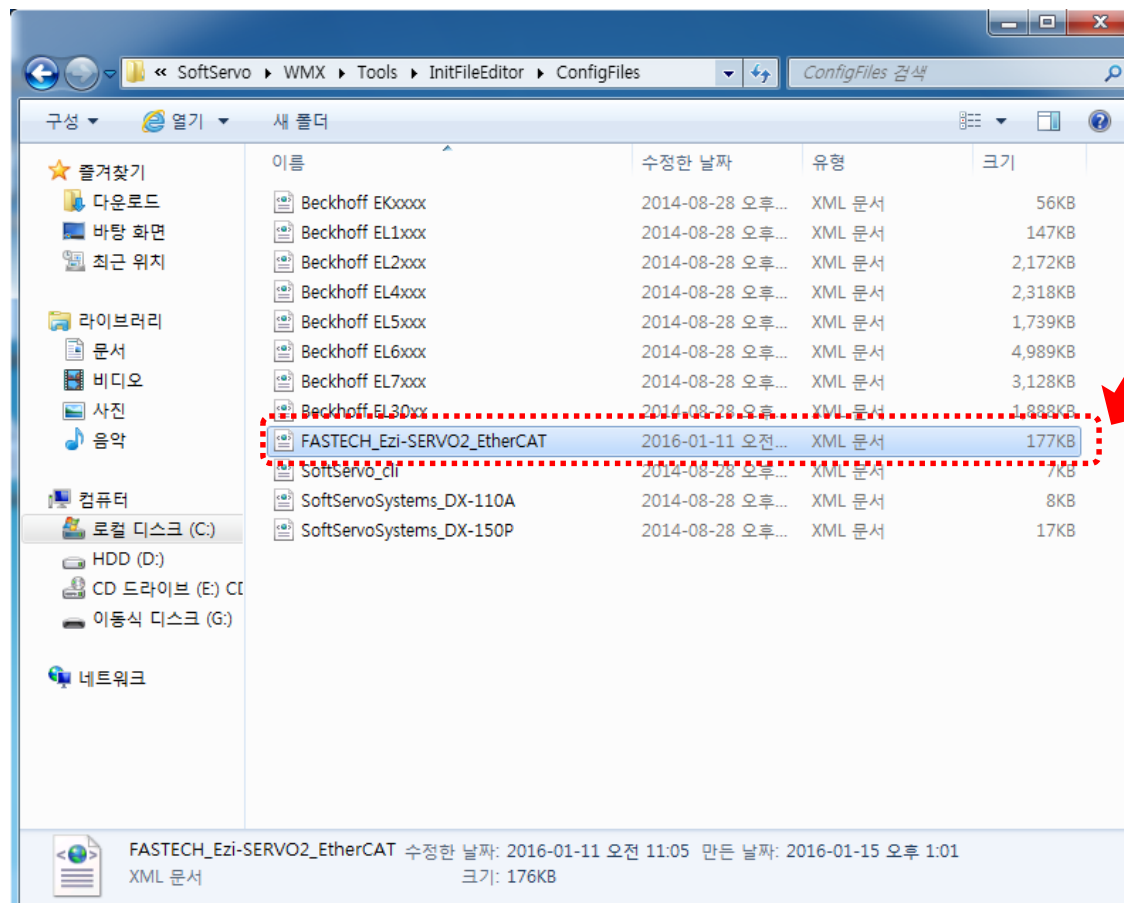
Ezi-SERVO
Closed Loop Stepping System

ESI(XML) file save

Confidential

Make copy of ESI (XML) file from FASTECH website through below path.

Path : C:\Program Files\SoftServo\WMX\Tools\InitFileEditor\ConfigFiles

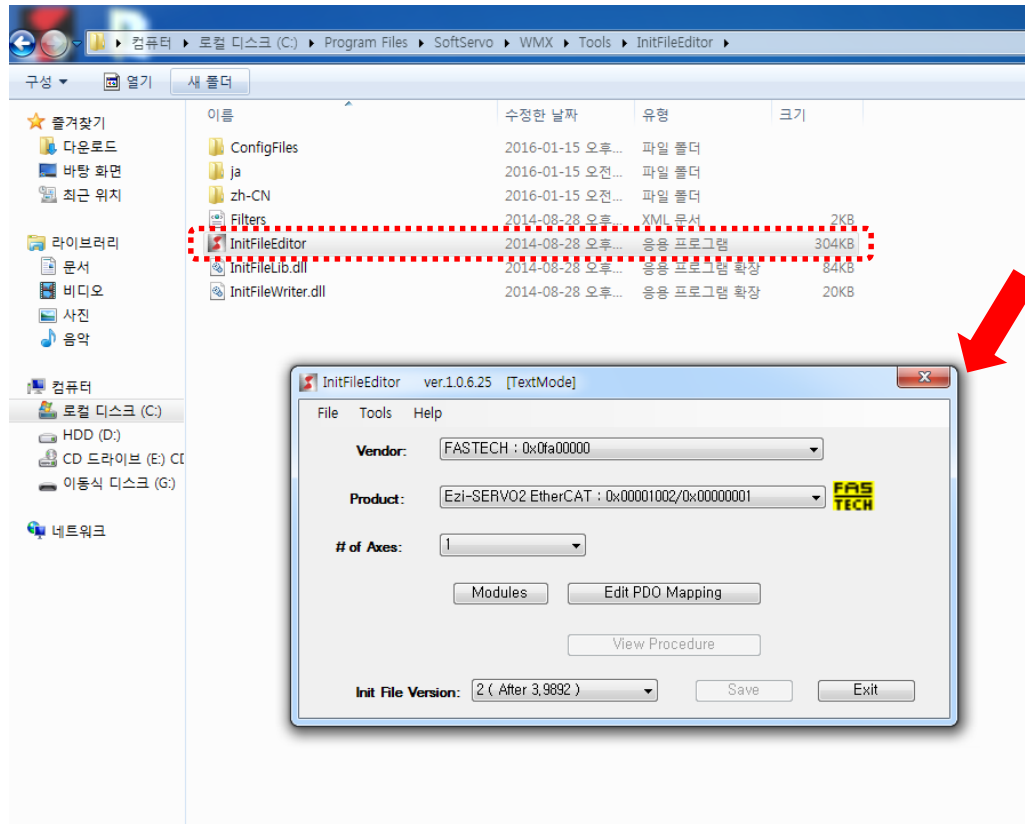


FASTECH
ESI(XML)file

1. InitFileEditor [Init file creation – InitFileEditor execution]

□ Init File creation

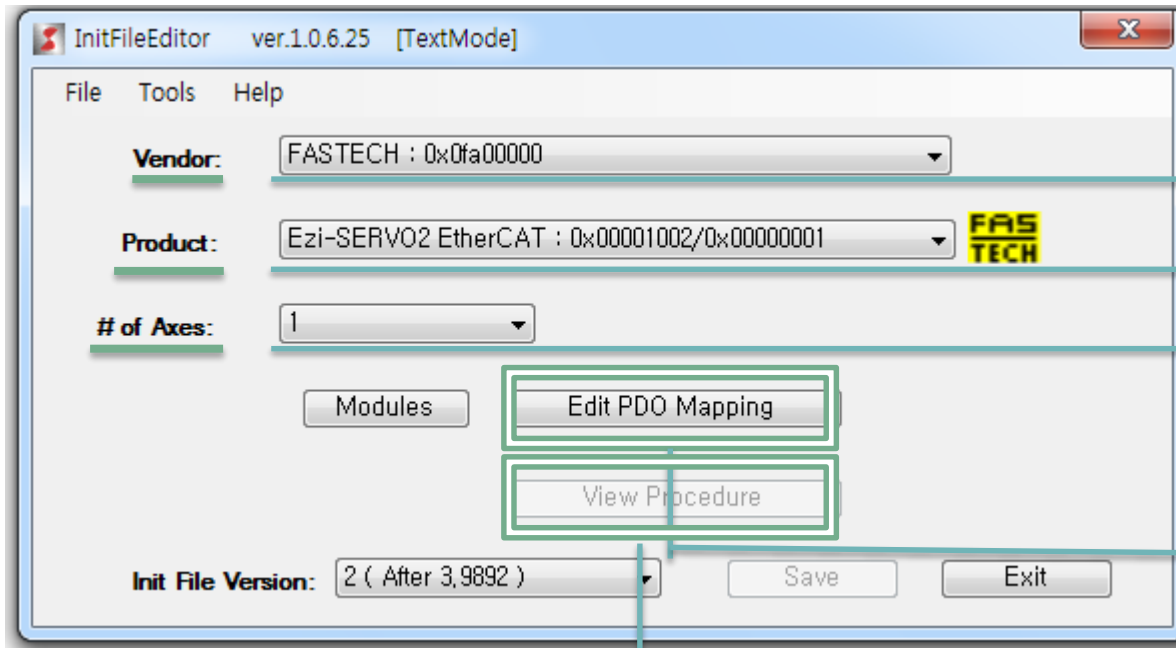
Execution file path : C:\Program Files\SoftServo\WMX\Tools\InitFileEditor



Set to FASTECH product after executing the InitFileEditor

- **InitFileEditor**
 - PDO data setting
 - The tool for data processing between EtherCAT master & slave

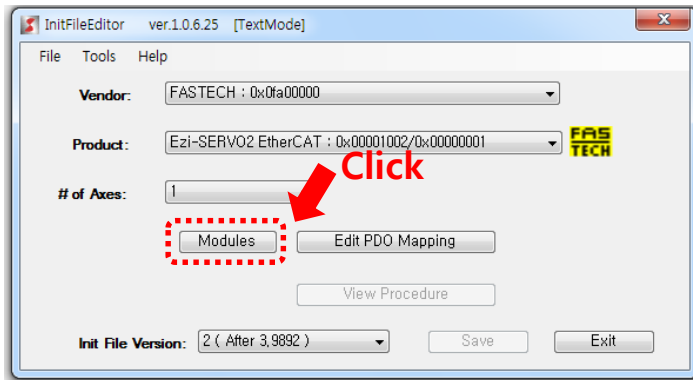
1. InitFileEditor [Init file creation – Product choice]



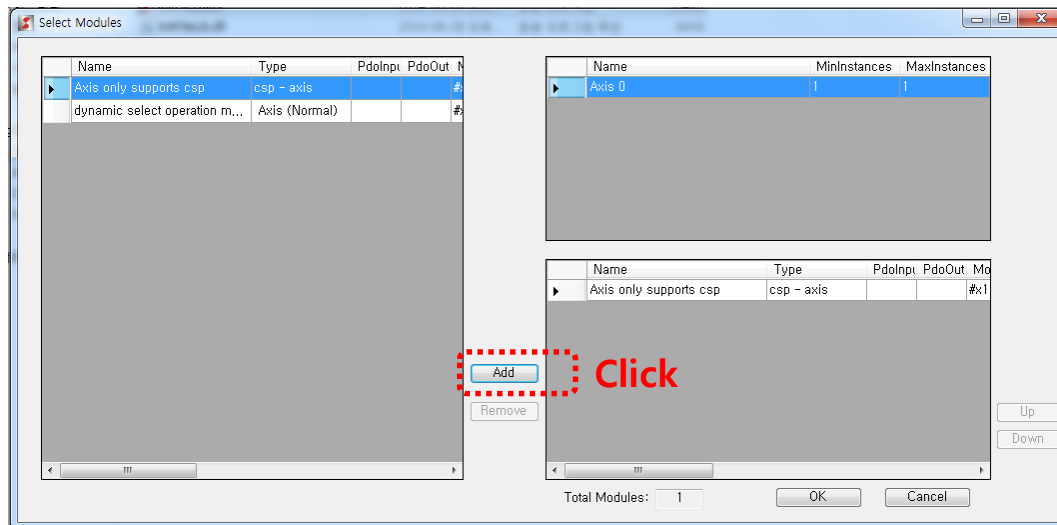
- Vendor Name
- Product Name
- 0 : I/O Module
1 : Servo Drive
- PDO Mapping
- View Procedure

1. InitFileEditor [Init file creation – PDO Mapping]

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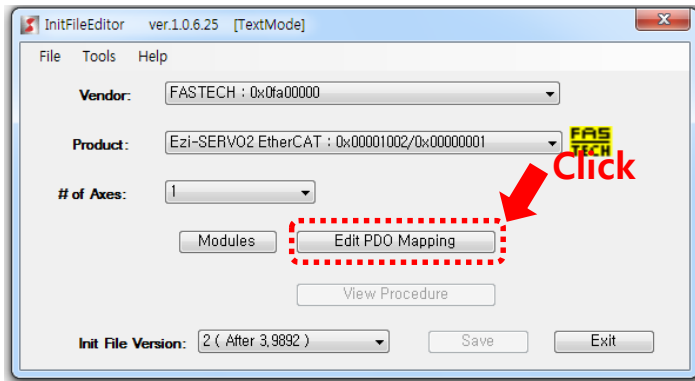
❑ Click **[Modules]** button after set up the Vendor, Product, # of Axes items



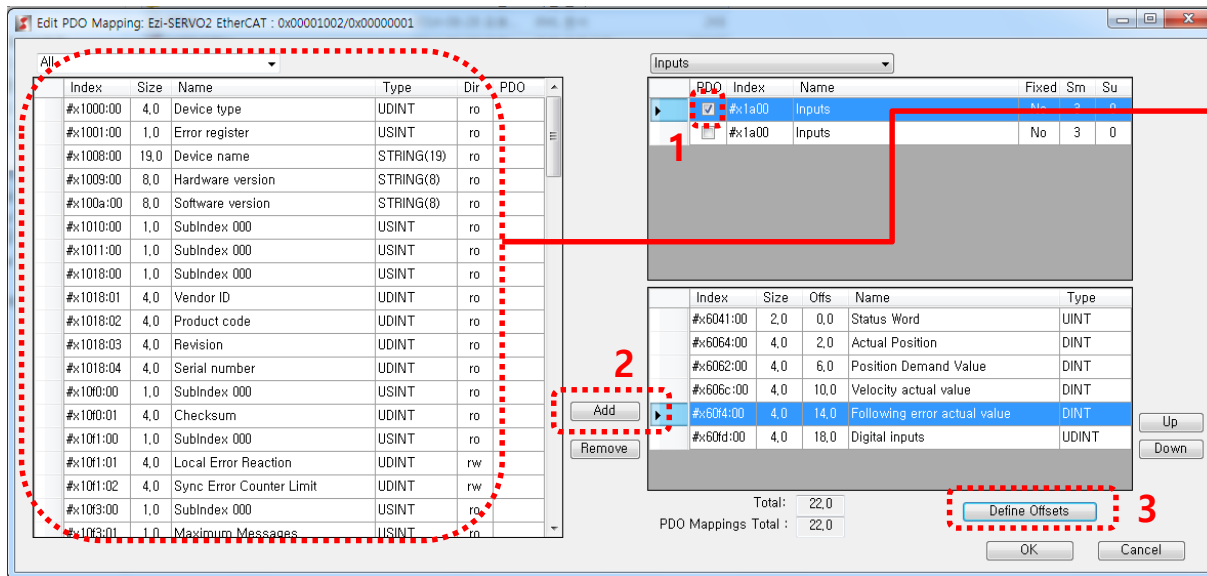
❑ Click **[Add]** button after selecting the type to use

❑ Click **[OK]** button after checking the added item

1. InitFileEditor [Init file creation – PDO Mapping]



❑ Click **[Edit PDO Mapping]** button after set up the Modules



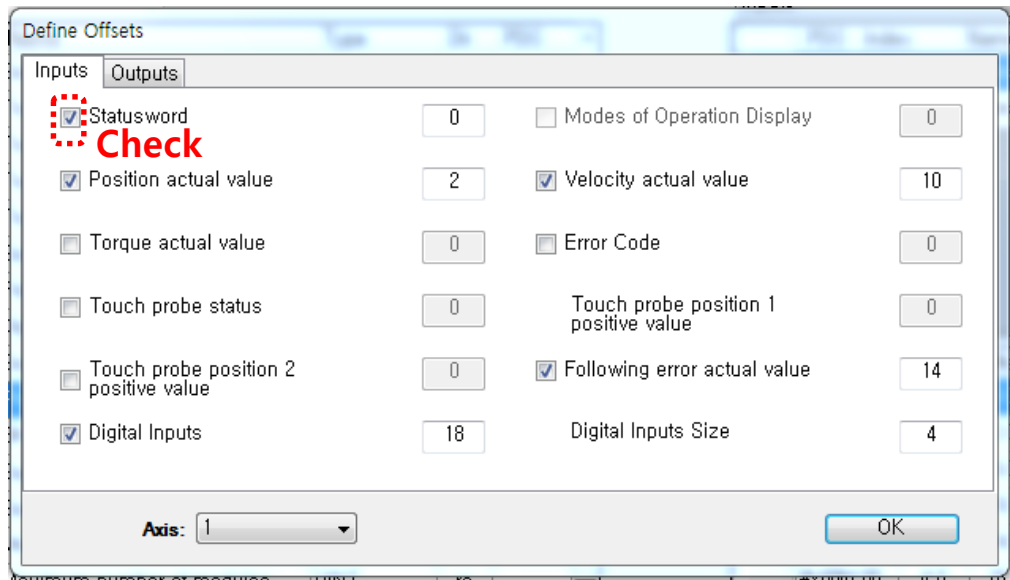
☞ **1** : Click Inputs PDO check box

2 : Click **[ADD]** button after make a selection for **PDO** to Mapping

3 : Click **[Define Offsets]** after making selection

1. InitFileEditor [Init file creation – PDO Mapping]

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- To **Check** selected PDO items previously
- Click **[OK]** button after done **Checking**

- Essential PDO items when using Ezi-SERVOII-EC

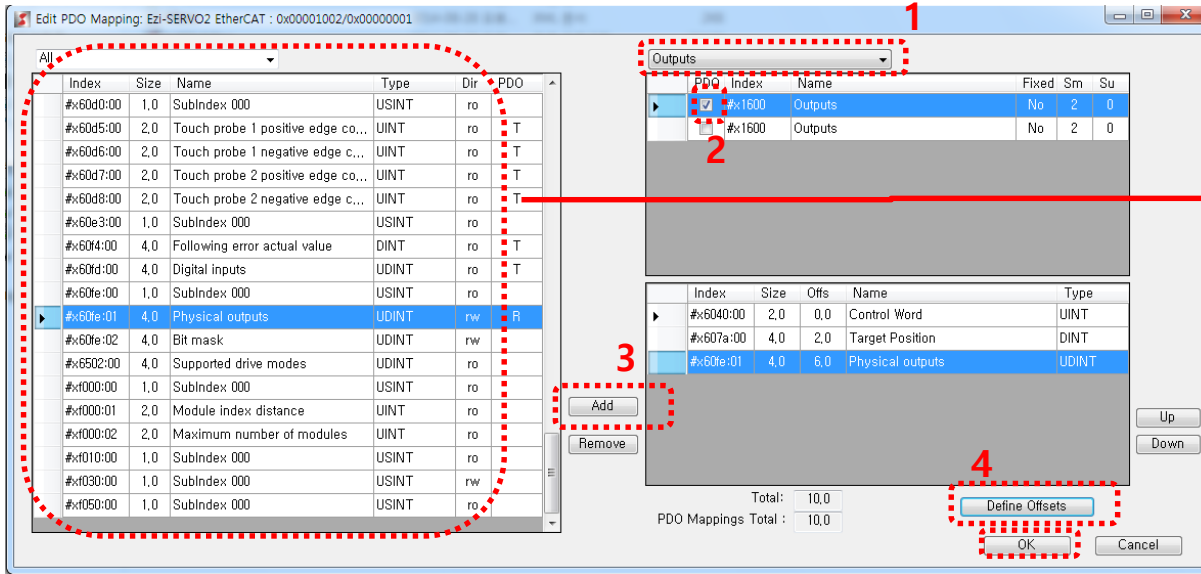
Input : 'Status Word' , 'Position Actual Value'

Output : 'Control Word' , 'Target Position'

👁 Need To add Digital Inputs, Outputs for using of Ezi-SERVOII-EC I/O

1. InitFileEditor [Init file creation – PDO Mapping]

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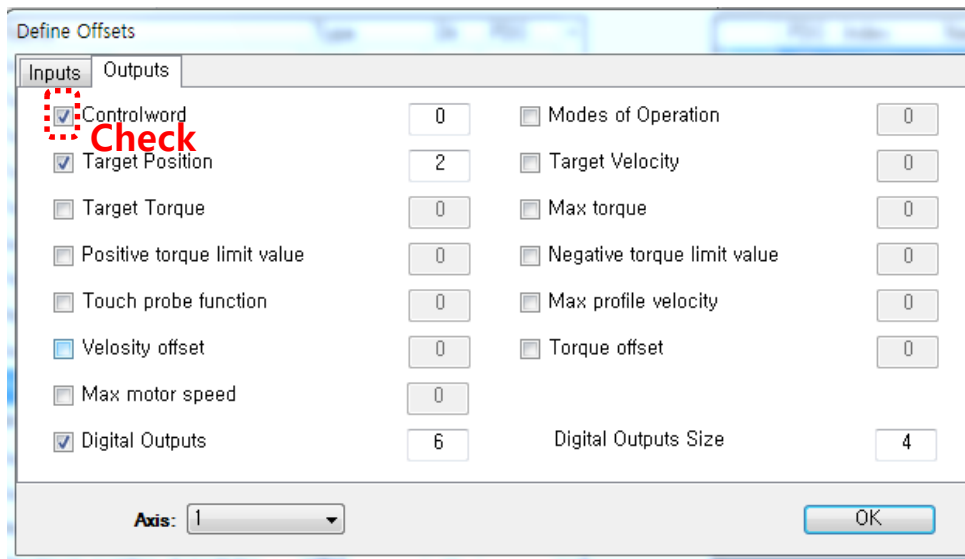
1 : Change into Outputs

2 : Click to Inputs PDO check box

3 : Click [ADD] button after make a selection for PDO to Mapping

4 : Click [Define Offsets] after making selection

5 : Click [OK] button after done all of items set up



To Check previously selected PDO items for using

Click [OK] button after done Checking

1. InitFileEditor [Init file creation – File Save]

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The screenshot shows the InitFileEditor application window with the following configuration:

- Vendor: FASTECH : 0x0fa00000
- Product: Ezi-SERVO2 EtherCAT : 0x00001002/0x00000001
- # of Axes: 1
- Init File Version: 2 (After 3,9892)

The 'Save' button is highlighted with a red dashed box and the word 'Click' next to it.

Below the application window, a file explorer window titled '다른 이름으로 저장' (Save with name) is open, showing the contents of the 'init' folder. The file list is as follows:

이름	수정된 날짜	유형	크기
000000ab_00000380	2014-08-28 오후...	텍스트 문서	3KB
0fa00000_00001002	2016-01-21 오후...	텍스트 문서	2KB
000001b9_00000002	2014-09-02 오전...	텍스트 문서	3KB
00000002_0bfc3052	2014-08-28 오후...	텍스트 문서	2KB
00000002_0c5a3052	2014-08-28 오후...	텍스트 문서	1KB
00000002_0fbf3052	2014-08-28 오후...	텍스트 문서	1KB
00000002_03f03052	2014-08-28 오후...	텍스트 문서	1KB
00000002_03f63052	2014-08-28 오후...	텍스트 문서	1KB
00000002_03fa3052	2014-08-28 오후...	텍스트 문서	1KB
00000002_07d43052	2014-08-28 오후...	텍스트 문서	1KB
00000002_07d83052	2014-08-28 오후...	텍스트 문서	1KB
00000002_044c2c52	2014-08-28 오후...	텍스트 문서	1KB
00000002_04463052	2014-08-28 오후...	텍스트 문서	1KB
00000002_04685432	2014-08-28 오후...	텍스트 문서	1KB

The file explorer window shows the file name '0fa00000_00001002' and the file type 'InitFile (*.txt)' selected.

❑ Basic path to save the Init file first time is c:\Winit folder

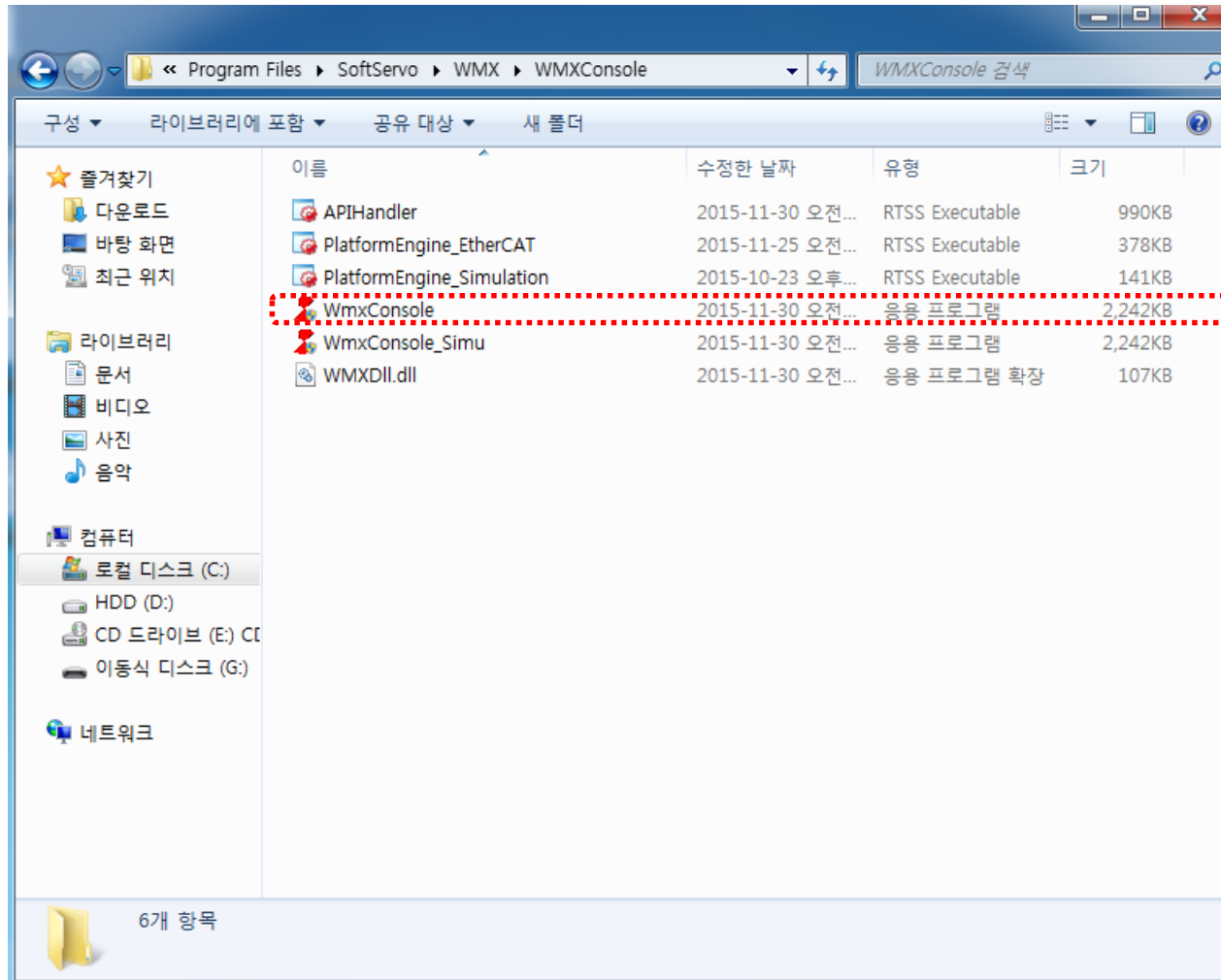
- [Vendor ID]_[Product Code].txt structure
- Need to use same name when modifying or recreation for Init file

2. WMX Console [GUI program execution]

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WMX Console

Path of EXE file : C:\Program Files\SoftServo\WMX\WMXConsole



2. WMX Console [GUI program execution]

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❑ WMX Console

Start-up screen after execution

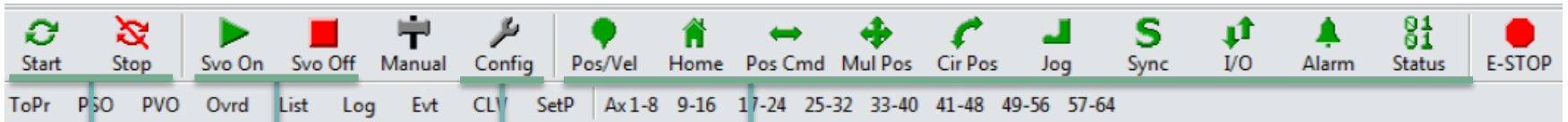
The screenshot displays the WMX Console software interface. The main window is titled "Soft Servo Systems, Inc. - WMX Console - Servo On". The menu bar includes File, Engine, Control, Configure, View, and Help. The toolbar contains various control buttons: Start, Stop, Svo On, Svo Off, Manual, Config, Pos/Vel, Home, Pos Cmd, Mul Pos, Cir Pos, Jog, Sync, I/O, Alarm, Status, and E-STOP. Below the toolbar, there are tabs for ToPr, PSO, PVO, OvrD, List, Log, Evt, CLV, SetP, Trq, Aux, and a list of axes (Ax 1-8, 9-16, 17-24, 25-32, 33-40, 41-48, 49-56, 57-64). The main display area is split into two panes. The left pane, titled "Position/Velocity", shows a table of servo data for 32 axes. The right pane, titled "Servo On", shows the communication state for 64 servos, with a status indicator set to "Off".

Axis	Cmd Pos	Fb Pos	Op	Axis	Cmd Pos	Fb Pos	Op
1	0	0	OFF	33	0	0	OFF
2	0	0	OFF	34	0	0	OFF
3	0	0	OFF	35	0	0	OFF
4	0	0	OFF	36	0	0	OFF
5	0	0	OFF	37	0	0	OFF
6	0	0	OFF	38	0	0	OFF
7	0	0	OFF	39	0	0	OFF
8	0	0	OFF	40	0	0	OFF
9	0	0	OFF	41	0	0	OFF
10	0	0	OFF	42	0	0	OFF
11	0	0	OFF	43	0	0	OFF
12	0	0	OFF	44	0	0	OFF
13	0	0	OFF	45	0	0	OFF
14	0	0	OFF	46	0	0	OFF
15	0	0	OFF	47	0	0	OFF
16	0	0	OFF	48	0	0	OFF
17	0	0	OFF	49	0	0	OFF
18	0	0	OFF	50	0	0	OFF
19	0	0	OFF	51	0	0	OFF
20	0	0	OFF	52	0	0	OFF
21	0	0	OFF	53	0	0	OFF
22	0	0	OFF	54	0	0	OFF
23	0	0	OFF	55	0	0	OFF
24	0	0	OFF	56	0	0	OFF
25	0	0	OFF	57	0	0	OFF
26	0	0	OFF	58	0	0	OFF
27	0	0	OFF	59	0	0	OFF
28	0	0	OFF	60	0	0	OFF
29	0	0	OFF	61	0	0	OFF
30	0	0	OFF	62	0	0	OFF
31	0	0	OFF	63	0	0	OFF
32	0	0	OFF	64	0	0	OFF

On	Off	1	On	Off	17	On	Off	33	On	Off	49
On	Off	2	On	Off	18	On	Off	34	On	Off	50
On	Off	3	On	Off	19	On	Off	35	On	Off	51
On	Off	4	On	Off	20	On	Off	36	On	Off	52
On	Off	5	On	Off	21	On	Off	37	On	Off	53
On	Off	6	On	Off	22	On	Off	38	On	Off	54
On	Off	7	On	Off	23	On	Off	39	On	Off	55
On	Off	8	On	Off	24	On	Off	40	On	Off	56
On	Off	9	On	Off	25	On	Off	41	On	Off	57
On	Off	10	On	Off	26	On	Off	42	On	Off	58
On	Off	11	On	Off	27	On	Off	43	On	Off	59
On	Off	12	On	Off	28	On	Off	44	On	Off	60
On	Off	13	On	Off	29	On	Off	45	On	Off	61
On	Off	14	On	Off	30	On	Off	46	On	Off	62
On	Off	15	On	Off	31	On	Off	47	On	Off	63
On	Off	16	On	Off	32	On	Off	48	On	Off	64

2. WMX Console [Icon information]

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Communication
On, Off

Servo On, Off

Parameter
setting

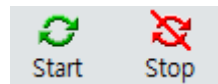
Other functions

2. WMX Console [Ezi-SERVO II-EC communication link]

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❑ WMX Console

Communication link / release by click to **[Start]** , **[Stop]** icons



Non-Communication link status

Axis	Position	Velocity	Op	Axis	Position	Velocity	Op
1	0	0	OFF	33	0	0	OFF
2	0	0	OFF	34	0	0	OFF
3	0	0	OFF	35	0	0	OFF
4	0	0	OFF	36	0	0	OFF
5	0	0	OFF	37	0	0	OFF
6	0	0	OFF	38	0	0	OFF
7	0	0	OFF	39	0	0	OFF
8	0	0	OFF	40	0	0	OFF
9	0	0	OFF	41	0	0	OFF
10	0	0	OFF	42	0	0	OFF
11	0	0	OFF	43	0	0	OFF
12	0	0	OFF	44	0	0	OFF
13	0	0	OFF	45	0	0	OFF
14	0	0	OFF	46	0	0	OFF
15	0	0	OFF	47	0	0	OFF
16	0	0	OFF	48	0	0	OFF
17	0	0	OFF	49	0	0	OFF
18	0	0	OFF	50	0	0	OFF
19	0	0	OFF	51	0	0	OFF
20	0	0	OFF	52	0	0	OFF
21	0	0	OFF	53	0	0	OFF
22	0	0	OFF	54	0	0	OFF
23	0	0	OFF	55	0	0	OFF
24	0	0	OFF	56	0	0	OFF
25	0	0	OFF	57	0	0	OFF
26	0	0	OFF	58	0	0	OFF
27	0	0	OFF	59	0	0	OFF
28	0	0	OFF	60	0	0	OFF
29	0	0	OFF	61	0	0	OFF
30	0	0	OFF	62	0	0	OFF
31	0	0	OFF	63	0	0	OFF
32	0	0	OFF	64	0	0	OFF

Communication link status

Axis	Position	Velocity	Op	Axis	Position	Velocity	Op
1	0	0	OFF	33	0	0	OFF
2	0	0	OFF	34	0	0	OFF
3	0	0	OFF	35	0	0	OFF
4	0	0	OFF	36	0	0	OFF
5	0	0	OFF	37	0	0	OFF
6	0	0	OFF	38	0	0	OFF
7	0	0	OFF	39	0	0	OFF
8	0	0	OFF	40	0	0	OFF
9	0	0	OFF	41	0	0	OFF
10	0	0	OFF	42	0	0	OFF
11	0	0	OFF	43	0	0	OFF
12	0	0	OFF	44	0	0	OFF
13	0	0	OFF	45	0	0	OFF
14	0	0	OFF	46	0	0	OFF
15	0	0	OFF	47	0	0	OFF
16	0	0	OFF	48	0	0	OFF
17	0	0	OFF	49	0	0	OFF
18	0	0	OFF	50	0	0	OFF
19	0	0	OFF	51	0	0	OFF
20	0	0	OFF	52	0	0	OFF
21	0	0	OFF	53	0	0	OFF
22	0	0	OFF	54	0	0	OFF
23	0	0	OFF	55	0	0	OFF
24	0	0	OFF	56	0	0	OFF
25	0	0	OFF	57	0	0	OFF
26	0	0	OFF	58	0	0	OFF
27	0	0	OFF	59	0	0	OFF
28	0	0	OFF	60	0	0	OFF
29	0	0	OFF	61	0	0	OFF
30	0	0	OFF	62	0	0	OFF
31	0	0	OFF	63	0	0	OFF
32	0	0	OFF	64	0	0	OFF

2. WMX Console [Ezi-SERVO II-EC SERVO ON/OFF]

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❑ SERVO State

Communication status : On
1,2,3,4 Servo axes status : On

The screenshot shows the 'Servo On' window with the 'Communication State' set to 'On'. The servo axes are arranged in a 4x4 grid. The first four columns (axes 1-4) show 'On' status for all 16 axes, while the remaining 12 axes (5-16) show 'Off' status. The 'All On' button is highlighted.

1 On	1 Off	On	17 On	17 Off	Off	33 On	33 Off	Off	49 On	49 Off	Off
2 On	2 Off	On	18 On	18 Off	Off	34 On	34 Off	Off	50 On	50 Off	Off
3 On	3 Off	On	19 On	19 Off	Off	35 On	35 Off	Off	51 On	51 Off	Off
4 On	4 Off	On	20 On	20 Off	Off	36 On	36 Off	Off	52 On	52 Off	Off
5 On	5 Off	Off	21 On	21 Off	Off	37 On	37 Off	Off	53 On	53 Off	Off
6 On	6 Off	Off	22 On	22 Off	Off	38 On	38 Off	Off	54 On	54 Off	Off
7 On	7 Off	Off	23 On	23 Off	Off	39 On	39 Off	Off	55 On	55 Off	Off
8 On	8 Off	Off	24 On	24 Off	Off	40 On	40 Off	Off	56 On	56 Off	Off
9 On	9 Off	Off	25 On	25 Off	Off	41 On	41 Off	Off	57 On	57 Off	Off
10 On	10 Off	Off	26 On	26 Off	Off	42 On	42 Off	Off	58 On	58 Off	Off
11 On	11 Off	Off	27 On	27 Off	Off	43 On	43 Off	Off	59 On	59 Off	Off
12 On	12 Off	Off	28 On	28 Off	Off	44 On	44 Off	Off	60 On	60 Off	Off
13 On	13 Off	Off	29 On	29 Off	Off	45 On	45 Off	Off	61 On	61 Off	Off
14 On	14 Off	Off	30 On	30 Off	Off	46 On	46 Off	Off	62 On	62 Off	Off
15 On	15 Off	Off	31 On	31 Off	Off	47 On	47 Off	Off	63 On	63 Off	Off
16 On	16 Off	Off	32 On	32 Off	Off	48 On	48 Off	Off	64 On	64 Off	Off

Communication status : Off
All of servo axes status : Off

The screenshot shows the 'Servo On' window with the 'Communication State' set to 'Off'. All servo axes (1-64) show 'Off' status. The 'All Off' button is highlighted.

1 On	1 Off	Off	17 On	17 Off	Off	33 On	33 Off	Off	49 On	49 Off	Off
2 On	2 Off	Off	18 On	18 Off	Off	34 On	34 Off	Off	50 On	50 Off	Off
3 On	3 Off	Off	19 On	19 Off	Off	35 On	35 Off	Off	51 On	51 Off	Off
4 On	4 Off	Off	20 On	20 Off	Off	36 On	36 Off	Off	52 On	52 Off	Off
5 On	5 Off	Off	21 On	21 Off	Off	37 On	37 Off	Off	53 On	53 Off	Off
6 On	6 Off	Off	22 On	22 Off	Off	38 On	38 Off	Off	54 On	54 Off	Off
7 On	7 Off	Off	23 On	23 Off	Off	39 On	39 Off	Off	55 On	55 Off	Off
8 On	8 Off	Off	24 On	24 Off	Off	40 On	40 Off	Off	56 On	56 Off	Off
9 On	9 Off	Off	25 On	25 Off	Off	41 On	41 Off	Off	57 On	57 Off	Off
10 On	10 Off	Off	26 On	26 Off	Off	42 On	42 Off	Off	58 On	58 Off	Off
11 On	11 Off	Off	27 On	27 Off	Off	43 On	43 Off	Off	59 On	59 Off	Off
12 On	12 Off	Off	28 On	28 Off	Off	44 On	44 Off	Off	60 On	60 Off	Off
13 On	13 Off	Off	29 On	29 Off	Off	45 On	45 Off	Off	61 On	61 Off	Off
14 On	14 Off	Off	30 On	30 Off	Off	46 On	46 Off	Off	62 On	62 Off	Off
15 On	15 Off	Off	31 On	31 Off	Off	47 On	47 Off	Off	63 On	63 Off	Off
16 On	16 Off	Off	32 On	32 Off	Off	48 On	48 Off	Off	64 On	64 Off	Off

2. WMX Console [Jog operation]

Confidential

[Jog] motion operating

☐ Start -> SERVO ON -> Jog operating

The screenshot shows the WMX Console software interface. The main window is titled "Soft Servo Systems, Inc. - WMX Console - Servo On". The menu bar includes File, Engine, Control, Configure, View, and Help. The toolbar contains various icons for Start, Stop, Svo On, Svo Off, Manual, Config, Pos/Vel, Home, Pos Cmd, Mul Pos, Cir Pos, Jog, Sync, I/O, Alarm, Status, and E-STOP. The Start, Svo On, and Jog buttons are highlighted with red circles and numbered 1, 2, and 3 respectively. Below the toolbar, there are several panels: "Position/Velocity" showing a table of axis data, "Servo On" showing a grid of servo status indicators, and "Communication State" showing "On".

Axis	Cmd Pos	Fb Pos	Op	Axis	Cmd Pos	Fb Pos	Op
1	-80	-80	IDLE	33	0	0	OFF
2	-101	-101	IDLE	34	0	0	OFF
3	0	0	OFFLN	35	0	0	OFF
4	0	0	OFFLN	36	0	0	OFF
5	0	0	OFFLN	37	0	0	OFF
6	0	0	OFFLN	38	0	0	OFF
7	0	0	OFFLN	39	0	0	OFF
8	0	0	OFFLN	40	0	0	OFF
9	0	0	OFFLN	41	0	0	OFF
10	0	0	OFFLN	42	0	0	OFF
11	0	0	OFFLN	43	0	0	OFF
12	0	0	OFFLN	44	0	0	OFF
13	0	0	OFFLN	45	0	0	OFF
14	0	0	OFFLN	46	0	0	OFF
15	0	0	OFFLN	47	0	0	OFF
16	0	0	OFFLN	48	0	0	OFF
17	0	0	OFFLN	49	0	0	OFF
18	0	0	OFFLN	50	0	0	OFF
19	0	0	OFFLN	51	0	0	OFF
20	0	0	OFFLN	52	0	0	OFF
21	0	0	OFFLN	53	0	0	OFF
22	0	0	OFFLN	54	0	0	OFF
23	0	0	OFFLN	55	0	0	OFF
24	0	0	OFFLN	56	0	0	OFF
25	0	0	OFFLN	57	0	0	OFF
26	0	0	OFFLN	58	0	0	OFF
27	0	0	OFFLN	59	0	0	OFF
28	0	0	OFFLN	60	0	0	OFF
29	0	0	OFFLN	61	0	0	OFF
30	0	0	OFFLN	62	0	0	OFF
31	0	0	OFFLN	63	0	0	OFF
32	0	0	OFFLN	64	0	0	OFF

1 : Click to [Start] after program start

2 : Click to [Svo On]

3 : Click to [Jog]

2. WMX Console [Jog set up & operation]

Confidential

[Jog] 구동 해보기(BasicMotion)

- Click to Start after set up [Velocity] → ACC → Direction

Axis	1 Velocity [p/s]	2 Acc [p/s^2]	Dec Time [s]	Run Time [s]	Jerk Acc [p/s^3]	Jerk Ratio [0-1]	Direction 3	Command Mode 4	Start	Stop	QStop
<input type="checkbox"/>	100000	1000000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	100000	1000000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	10000	10000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	10000	10000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	10000	10000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	10000	10000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	10000	10000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop
<input type="checkbox"/>	10000	10000	1	1	10000	0.5	<input checked="" type="radio"/> Fwd <input type="radio"/> Bwd	Position	Start	Stop	QStop

- 1 : Velocity(operation speed) [p/s]
- 2 : ACC(acceleration / deceleration) [p/s^2]
- 3 : Direction(operation direction)
- 4 : Execution order (Start, Stop, QStop)

2. WMX Console [Pos Cmd execution]

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[Pos Cmd] operation

☐ Start -> SERVO ON -> Pos Cmd(Position move)

The screenshot shows the WMX Console software interface. The main window is titled "Soft Servo Systems, Inc. - WMX Console - Servo On". The menu bar includes File, Engine, Control, Configure, View, and Help. The toolbar contains various icons for Start, Stop, Svo On, Svo Off, Manual, Config, Pos/Vel, Home, Pos Cmd, Mul Pos, Cir Pos, Jog, Sync, I/O, Alarm, Status, and E-STOP. The Start button is circled in red and labeled with a red '1'. The Svo On button is circled in red and labeled with a red '2'. The Pos Cmd button is circled in red and labeled with a red '3'. Below the toolbar, there are several panels. The "Position/Velocity" panel shows a table of servo data. The "Servo On" panel shows a grid of servo status indicators.

Axis	Cmd Pos	Fb Pos	Op	Axis	Cmd Pos	Fb Pos	Op
1	-80	-80	IDLE	33	0	0	OFF
2	-101	-101	IDLE	34	0	0	OFF
3	0	0	OFFLN	35	0	0	OFF
4	0	0	OFFLN	36	0	0	OFF
5	0	0	OFFLN	37	0	0	OFF
6	0	0	OFFLN	38	0	0	OFF
7	0	0	OFFLN	39	0	0	OFF
8	0	0	OFFLN	40	0	0	OFF
9	0	0	OFFLN	41	0	0	OFF
10	0	0	OFFLN	42	0	0	OFF
11	0	0	OFFLN	43	0	0	OFF
12	0	0	OFFLN	44	0	0	OFF
13	0	0	OFFLN	45	0	0	OFF
14	0	0	OFFLN	46	0	0	OFF
15	0	0	OFFLN	47	0	0	OFF
16	0	0	OFFLN	48	0	0	OFF
17	0	0	OFFLN	49	0	0	OFF
18	0	0	OFFLN	50	0	0	OFF
19	0	0	OFFLN	51	0	0	OFF
20	0	0	OFFLN	52	0	0	OFF
21	0	0	OFFLN	53	0	0	OFF
22	0	0	OFFLN	54	0	0	OFF
23	0	0	OFFLN	55	0	0	OFF
24	0	0	OFFLN	56	0	0	OFF
25	0	0	OFFLN	57	0	0	OFF
26	0	0	OFFLN	58	0	0	OFF
27	0	0	OFFLN	59	0	0	OFF
28	0	0	OFFLN	60	0	0	OFF
29	0	0	OFFLN	61	0	0	OFF
30	0	0	OFFLN	62	0	0	OFF
31	0	0	OFFLN	63	0	0	OFF
32	0	0	OFFLN	64	0	0	OFF

The "Servo On" panel shows a grid of servo status indicators. The Communication State is "On". The grid contains 64 columns, each with "On" and "Off" buttons. The "On" buttons are highlighted in red and numbered 1 through 64. The "Off" buttons are highlighted in green. Below the grid are "All On" and "All Off" buttons.

☞ 1 : Click to [Start] after program start

2 : Click to [Svo On]

3 : Click to [Pos Cmd]

2. WMX Console [Pos Cmd set up & operation]

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[Pos Cmd] operation (BasicMotion)

❑ Click to Start after set up [Target],[Velocity] → [ACC],[Dec] → Repeat Mode(repeat operation)

Single Position Operation

Library: BasicMotion Profile: Trapezoidal Target: Absolute Function: Pos

Axis	Target [pulse]	Velocity [p/s]	Second Vel [p/s]	Start Vel [p/s]	End Vel [p/s]	Acc [p/s ²]	Dec [p/s ²]	Jerk Acc [p/s ³]	Jerk Dec [p/s ³]	Jerk Acc Ratio [0-1]	Jerk Dec Ratio [0-1]
1	10000	100000	10000	10000	0	1000000	1000000	10000	10000	0.5	0.5
2	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5
3	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5
4	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5
5	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5
6	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5
7	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5
8	10000	10000	10000	0	0	10000	10000	10000	10000	0.5	0.5

Repeat Mode

Enable Rpt. Cnt. Current Count

Axis	Trigger Type	Trigger Axis [1-64]	Trigger Value	Enable Repeat	Repeat Delay [ms]	Repeat Count	Current Count
1	Rem. Tir	1	1000	<input checked="" type="checkbox"/>	500	10	0
2	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0
3	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0
4	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0
5	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0
6	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0
7	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0
8	Rem. Tir	1	1000	<input type="checkbox"/>	1000	10	0

Start Axis 1 Stop Axis 1 QStop Axis 1

Start Axis 2 Stop Axis 2 QStop Axis 2

Start Axis 3 Stop Axis 3 QStop Axis 3

Start Axis 4 Stop Axis 4 QStop Axis 4

Start Axis 5 Stop Axis 5 QStop Axis 5

Start Axis 6 Stop Axis 6 QStop Axis 6

Start Axis 7 Stop Axis 7 QStop Axis 7

Start Axis 8 Stop Axis 8 QStop Axis 8

Stop All QStop All

1 : Absolute, Relative : operation mode selection

2 : Target, Velocity set up

3 : Acc, Dec set up

4 : Set up for repeat mode

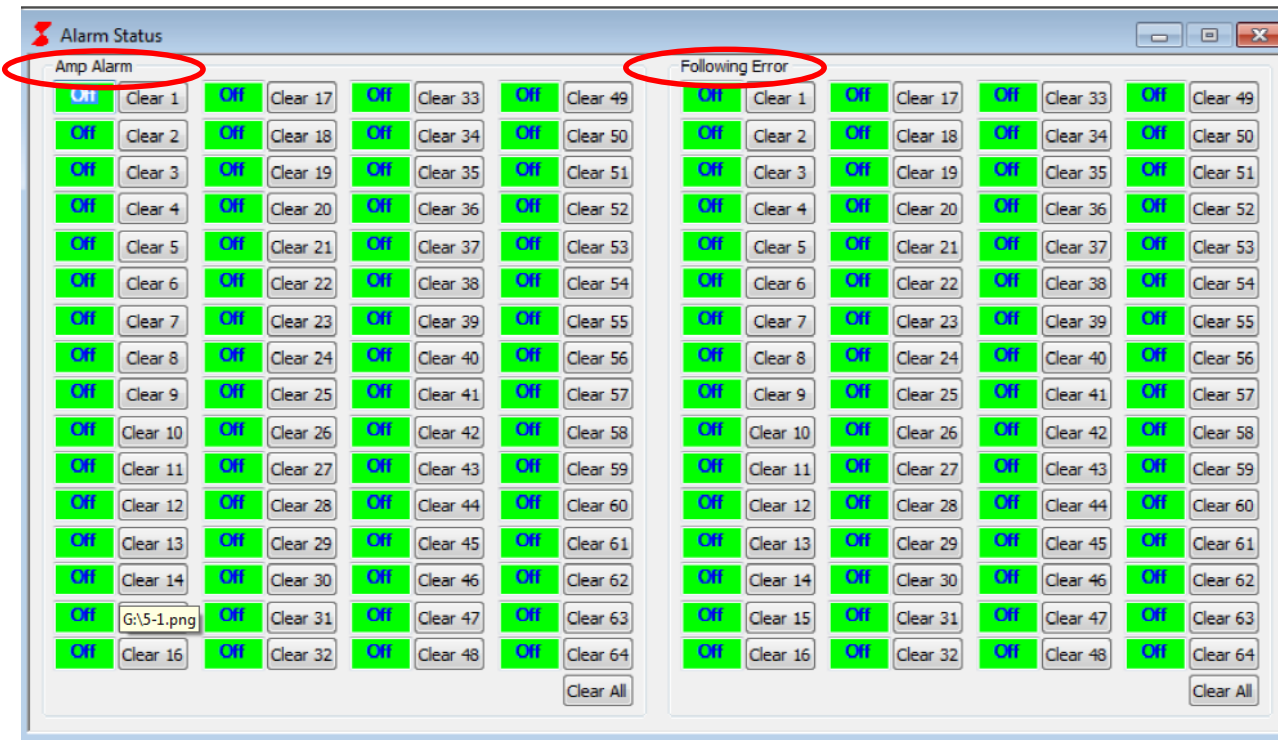
5 : Execution order (Start, Stop, QStop)

2. WMX Console [Alarm check / Release]

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[Alarm] check / Release

- Click to [Alarm]  button for alarm check / release



Alarm Status

1. Amp Alarm : Out put alarm from Ezi-SERVO II – EC drive
2. Following Error : Alarm from WMX Software

☞ Alarm can be released by click to Clear button when alarm generating

2. WMX Console [I/O Check]

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[I/O] Control

- Input check & out put by click to  [I/O] button



The screenshot shows the 'I/O Control' window with two main sections: 'Output' and 'Input'. Both sections have an 'Address' field set to '0' and a 'Set' button. The 'Output' section contains a grid of 28 cells (addresses 0.0 to 3.7), each with 'On' and 'Off' buttons. The 'Input' section contains a grid of 28 cells (addresses 0.0 to 7.7) represented as red blocks. Red boxes highlight the 'Set' buttons in both sections and the 'On' button for address 0.0 in the Output section.

Move to set up address

Green : Enable
Red : Disable

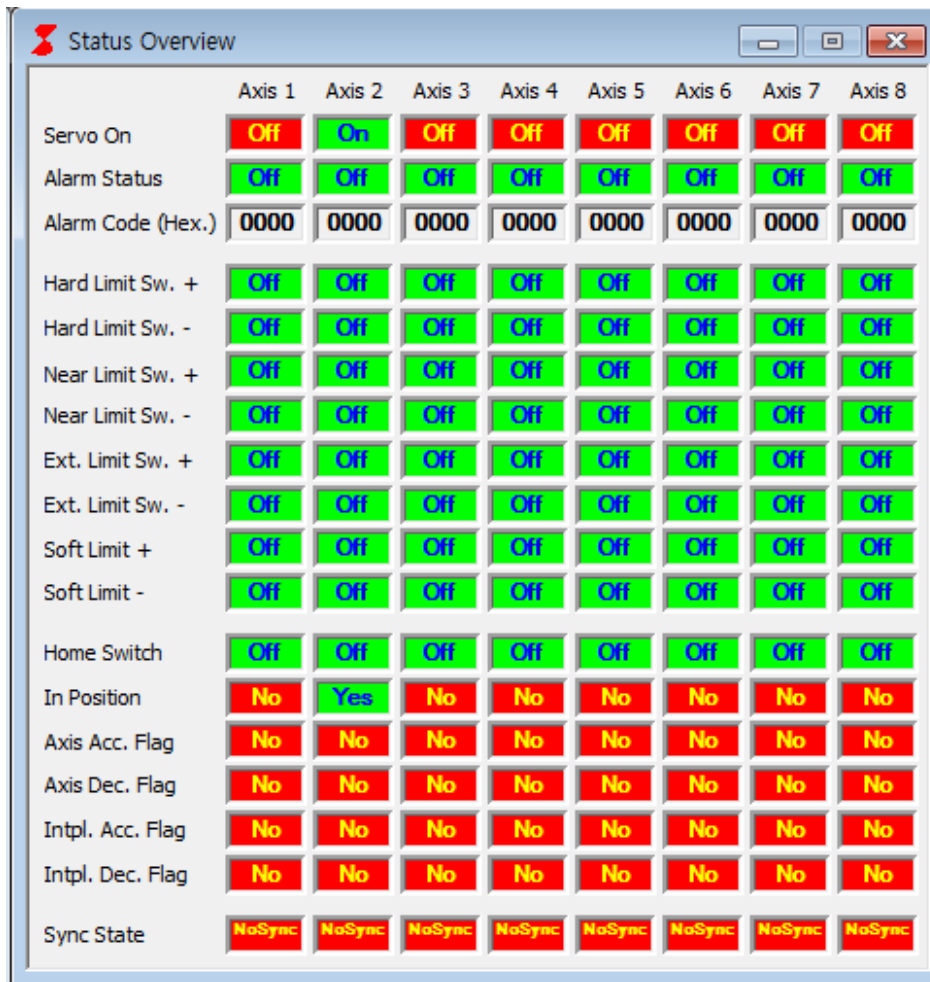
Input signal check

2. WMX Console [Status check]

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[Status] Overview

☐ Status of each axis check by click to  [Status] button



	Axis 1	Axis 2	Axis 3	Axis 4	Axis 5	Axis 6	Axis 7	Axis 8
Servo On	Off	On	Off	Off	Off	Off	Off	Off
Alarm Status	Off	Off	Off	Off	Off	Off	Off	Off
Alarm Code (Hex.)	0000	0000	0000	0000	0000	0000	0000	0000
Hard Limit Sw. +	Off	Off	Off	Off	Off	Off	Off	Off
Hard Limit Sw. -	Off	Off	Off	Off	Off	Off	Off	Off
Near Limit Sw. +	Off	Off	Off	Off	Off	Off	Off	Off
Near Limit Sw. -	Off	Off	Off	Off	Off	Off	Off	Off
Ext. Limit Sw. +	Off	Off	Off	Off	Off	Off	Off	Off
Ext. Limit Sw. -	Off	Off	Off	Off	Off	Off	Off	Off
Soft Limit +	Off	Off	Off	Off	Off	Off	Off	Off
Soft Limit -	Off	Off	Off	Off	Off	Off	Off	Off
Home Switch	Off	Off	Off	Off	Off	Off	Off	Off
In Position	No	Yes	No	No	No	No	No	No
Axis Acc. Flag	No	No	No	No	No	No	No	No
Axis Dec. Flag	No	No	No	No	No	No	No	No
Intpl. Acc. Flag	No	No	No	No	No	No	No	No
Intpl. Dec. Flag	No	No	No	No	No	No	No	No
Sync State	NoSync	NoSync	NoSync	NoSync	NoSync	NoSync	NoSync	NoSync

☐ Possible to detail set up (Sensor Logic) from Config window.

☞ set up by click to  Config button

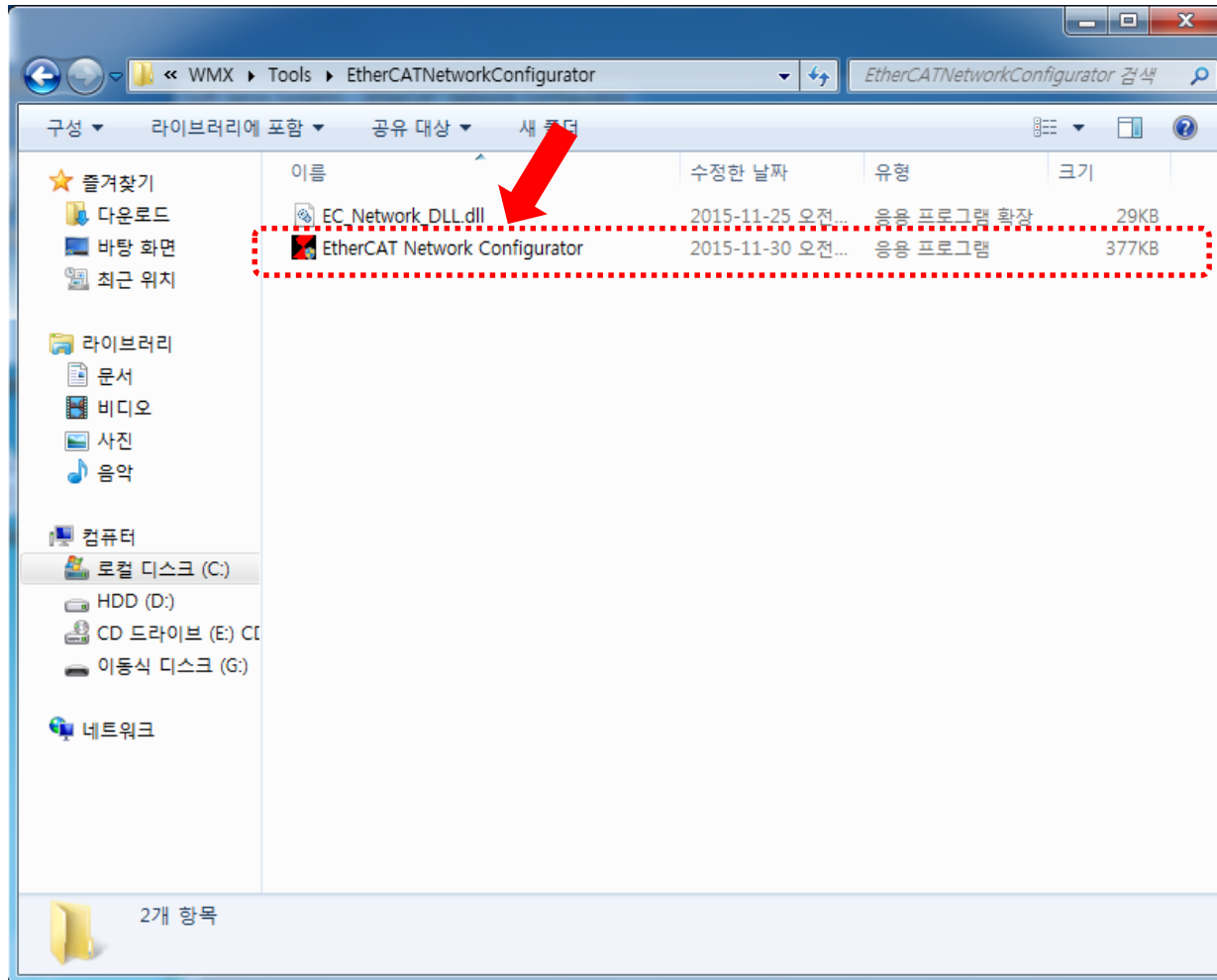
3. EtherCAT Network Configurator

[Tool execution]

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❑ EtherCAT Network Configurator execution

Path of EXE file : C:\Program Files\SoftServo\WMX\Tools\EtherCATNetworkConfigurator



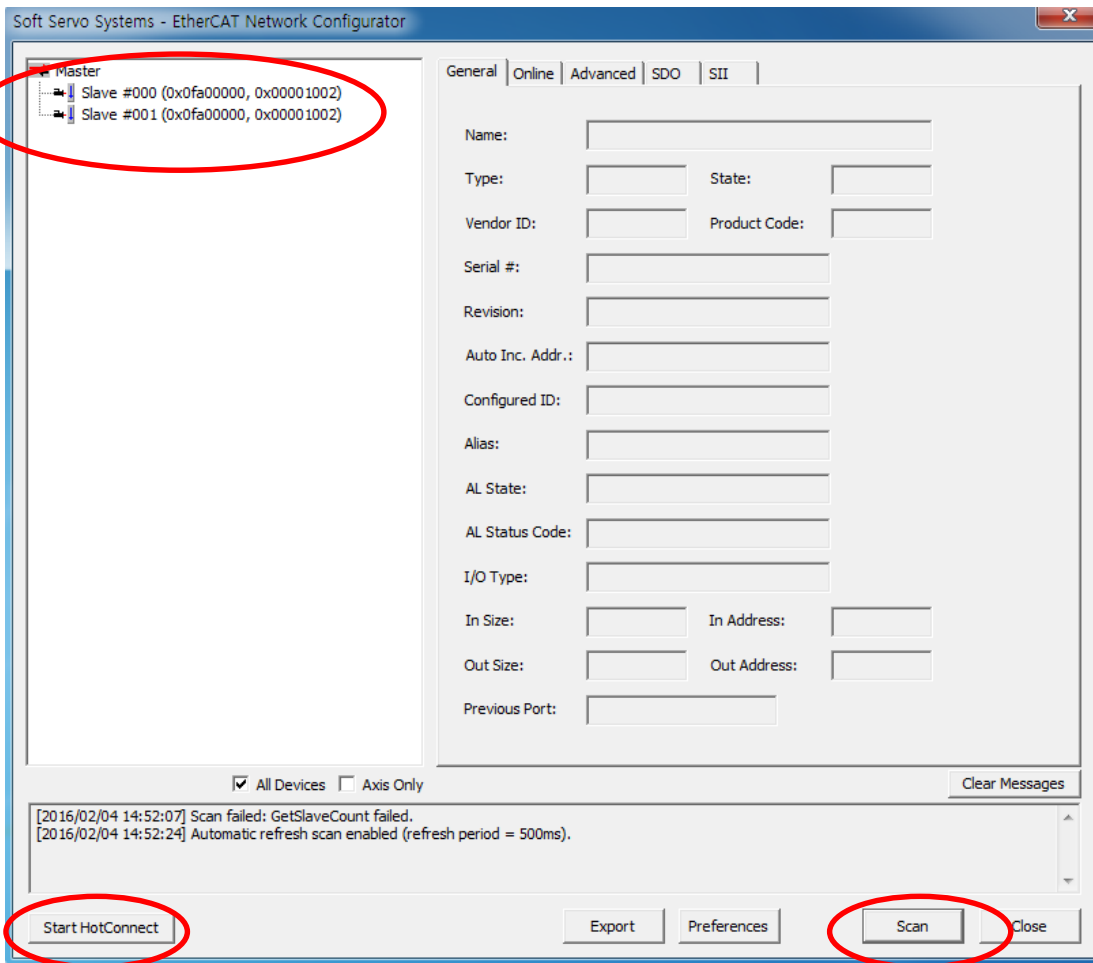
3. EtherCAT Network Configurator

[EtherCAT access]

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❑ Ezi-SERVOII-EC link

1. WMX Console execution → 2. EtherCAT Network Configurator execution
- 3. click to [Start HotConnect] → 4. click to Scan → display current linked Slave information



- **Monitoring EtherCAT Master status**
- **Monitoring EtherCAT Slave status & setting**
- **Support for SOD function for each Device**
- **Slave set up or F/W renewal by using of SDO function & FoE**
- **Network definition creating & modifying**

3. EtherCAT Network Configurator

[Product information check]

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General Information

- **Vendor ID** : FASTECH Vendor ID
- **Product Code** : FASTECH Ezi-SERVO II-EC product Code
- **AL State** : Alarm status
- **AL Status Code** : Alarm status / 0000 is meaning normal status
- **In Size** : Size of input data
- **In Address** : Size of output data
- **Out Address** : Start address for output data

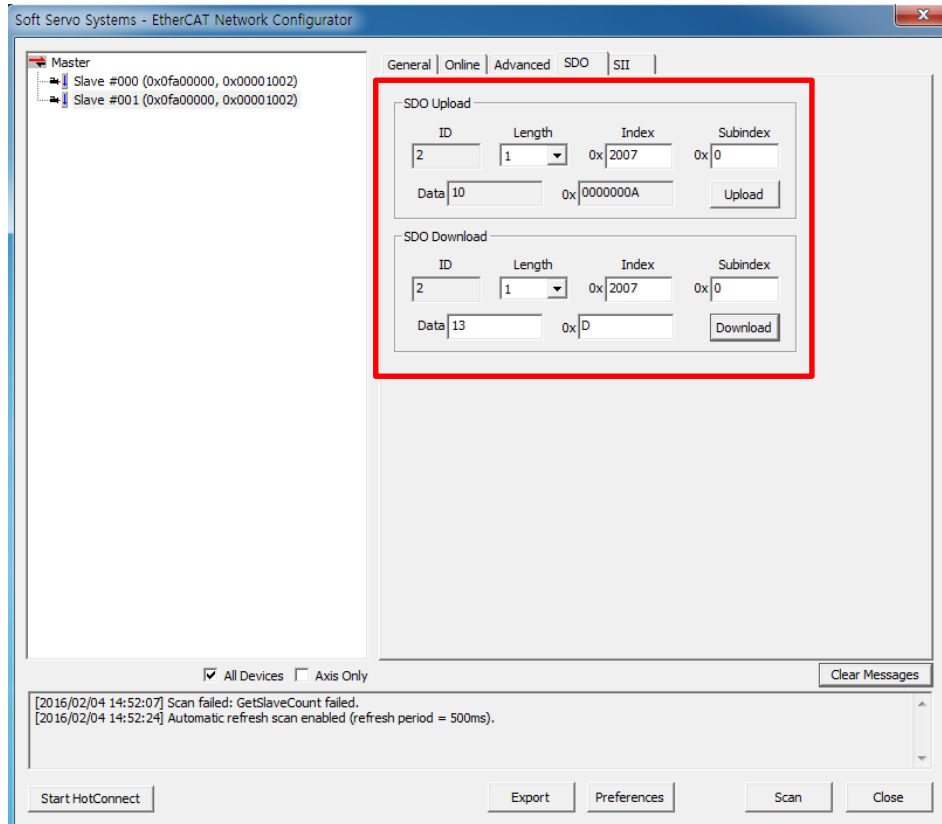
3. EtherCAT Network Configurator

[SDO check/ modify]

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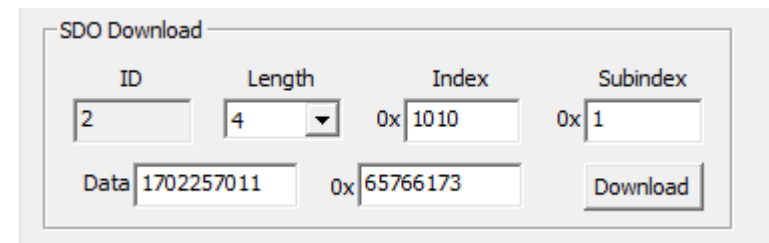
❑ SDO data check / Insert / Save

- Refer to 'Ezi-SERVOII_EtherCAT Manual' for Index, Data information



- **SDO Upload :**
 - Check current Object value
 - Left Object is 'Run Current'
- **SDO Download :**
 - Object value change to '13'(130%)

👉 To save the modifying Object to EEPROM, Store Parameters(1010h) process needed (Refer to below pic.)



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the history of step motor !!**



Ezi-SERVO[®]
Closed Loop Stepping System