

Ezi-SERVOII-EC 기초 사용법

< SoftServo 'WMX'편 >



□ Ezi-SERVOII-EC 관련 자료 Down

Confidential
[ESI(XML)]

□ ESI(XML) : www.fastech.co.kr 홈페이지 [파스텍 자료실]에서 다운로드

The screenshot shows the Fastech website interface. At the top, there is a navigation menu with items like '회사소개', '제품정보', '제품동영상', '전시회안내', '해외판매망', '파스텍 자료실', 'FAQ', and '온라인상담'. The main content area features a large banner with the text 'Fast, Accurate and Smooth Motion Control Technology together with always constant mind'. Below the banner, there is a search bar and a section titled '파스텍 자료실' (Fastech Archive). The archive section displays a list of files, with one file highlighted by a red dashed box and a red arrow pointing to it with the word 'Click' written above it. The highlighted file is 'FASTECH_Ezi-SERVO2_EtherCAT.XML (176.2K) [93]' with a date of '2015-10-12 09:59:27'. The website also includes a 'FASTECH PRODUCTS' section and a footer with the 'Ezi-SERVO' logo and the tagline 'Closed Loop Stepping System'.

■ Ezi-SERVOII-EC 관련 자료 Down [Manual]

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□ Manual : www.fastech.co.kr 홈페이지 [제품정보]에서 다운로드

FASTECH
Fast, Accurate, Smooth Motion

회사소개 제품정보 제품동영상 전시회안내 해외판매망 파스텍 자료실 FAQ 온라인상담

Fast, Accurate and Smooth Motion Control Technology
together with always constant mind

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.

SEARCH 검색

Ezi-Servo series
풍부한 기술력과 경쟁력을 가진 파스텍(주)을 소개합니다

HOME > 제품정보 > Ezi-Servo series

제품정보
Product Information

- ① 파스텍 제품특성
- ② Ezi-SERVO series
- ③ Ezi-STEP series
- ④ Ezi-LinearStep series
- ⑤ Ezi-Robo series
- ⑥ S-SERVO series
- ⑦ Ezi-MotionNetwork series
- ⑧ Ezi-Motionlink series

Ezi-SERVO II EtherCAT
Closed Loop Stepping System

EtherCAT CE
Conformance tested

Ezi-SERVO II EtherCAT은 FASTECH의 페루프 스텝 모터제어 시스템과 Ethernet 기반의 Fieldbus인 EtherCAT을 결합한 시스템입니다. Ezi-SERVO II EtherCAT은 CiA402 Drive Profile을 지원합니다.

Click

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

제품사양 제품형명 및 도면 카탈로그 메뉴얼

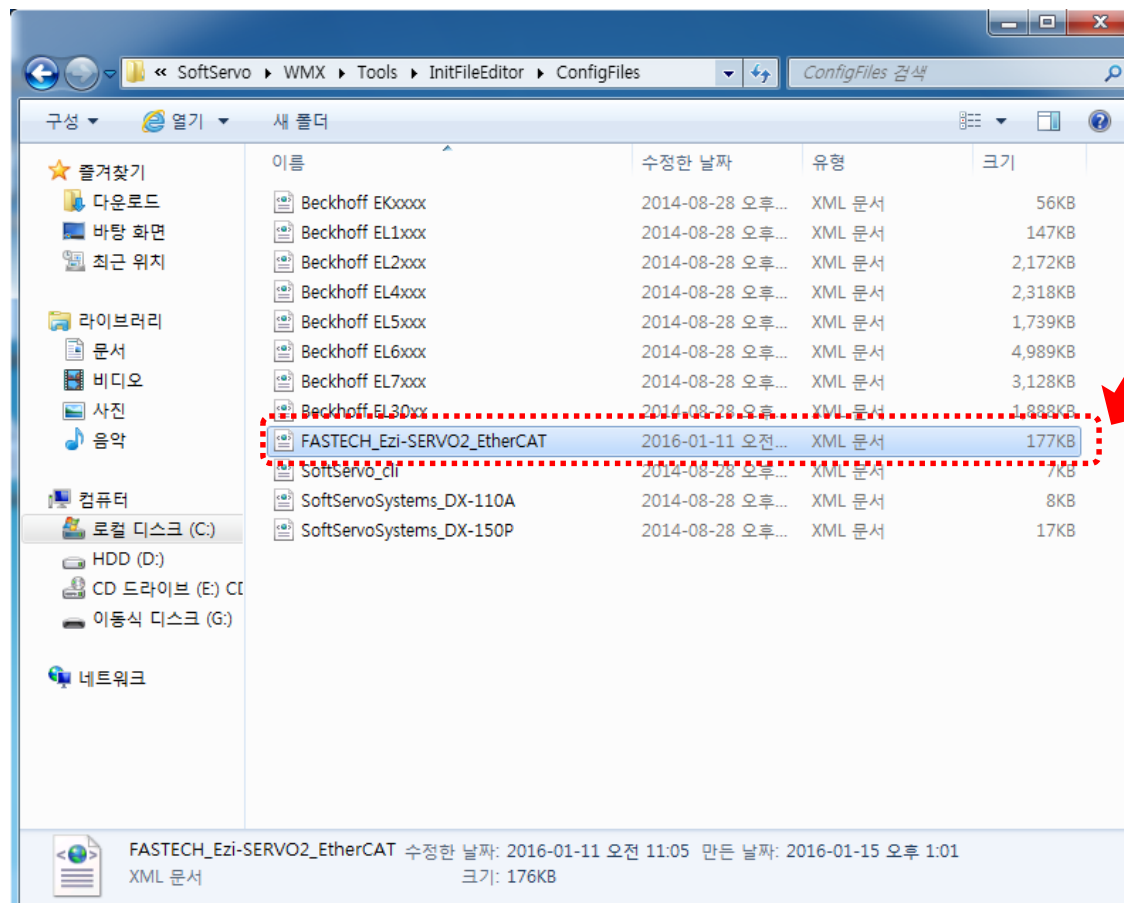
Closed Loop Stepping System

ESI(XML) 저장

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다운받은 ESI(XML)파일을 아래의 경로에 복사

저장 경로 : C:\Program Files\SoftServo\WMX\Tools\InitFileEditor\ConfigFiles

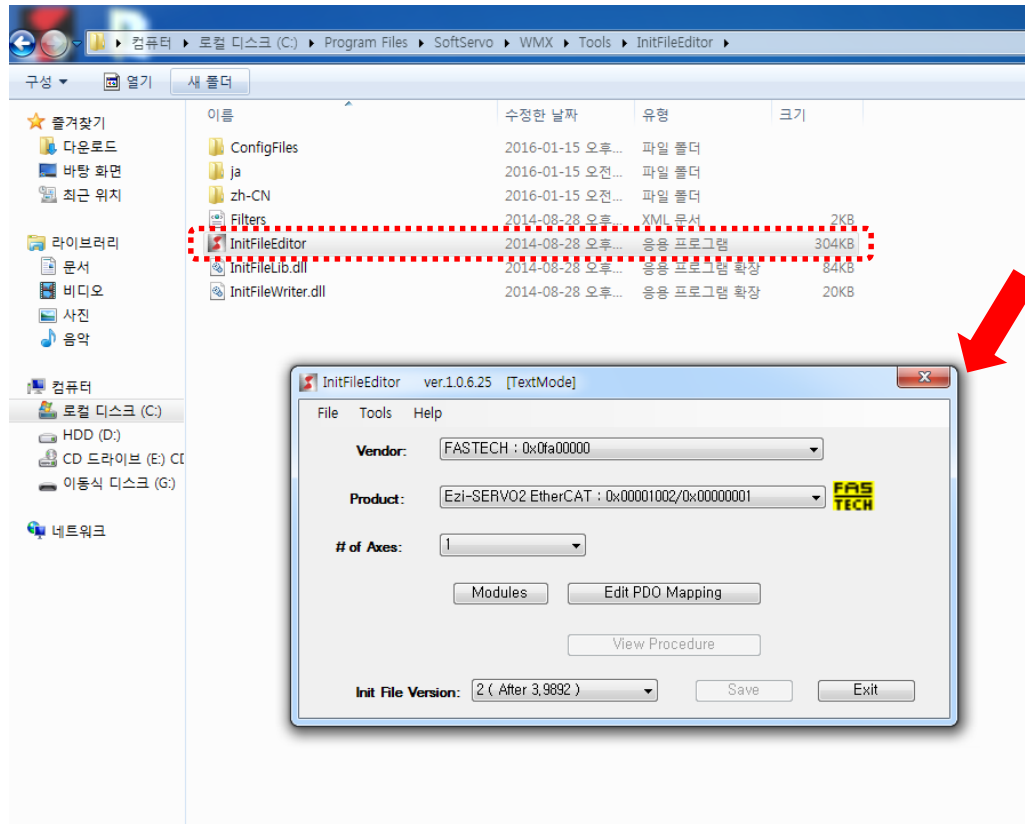


파스텍 ESI(XML)파일

1. InitFileEditor [Init 파일 만들기 - InitFileEditor 실행]

□ Init File 생성

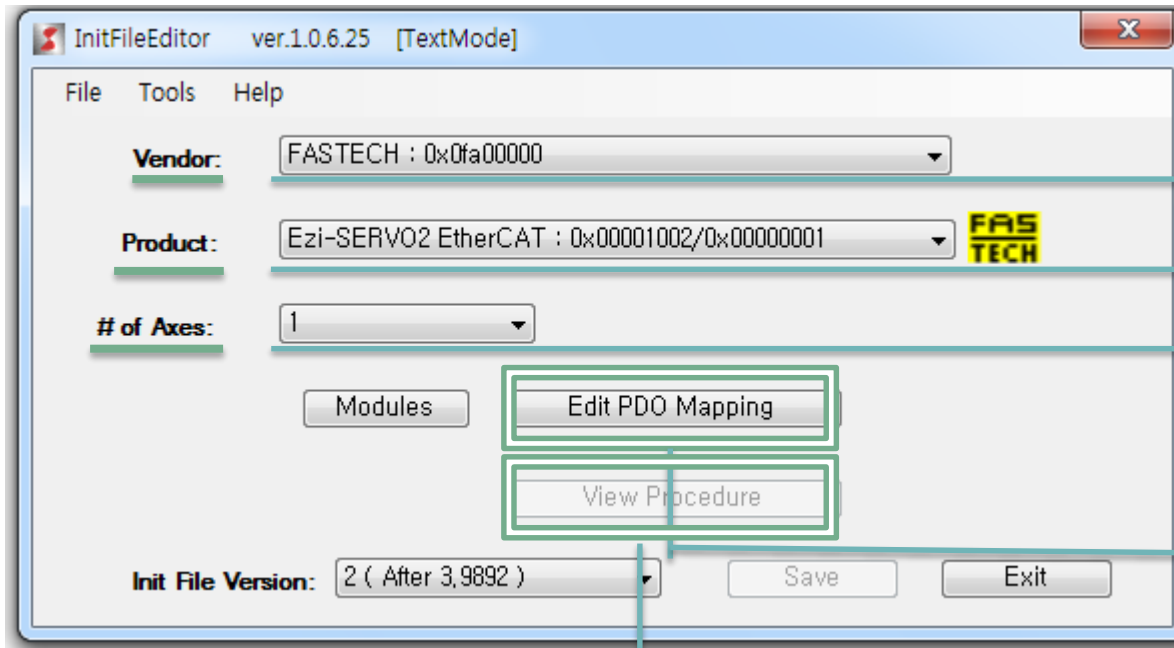
실행 파일 경로 : C:\Program Files\SoftServo\WMX\Tools\InitFileEditor



InitFileEditor를 실행하고 FASTECH 제품으로 설정

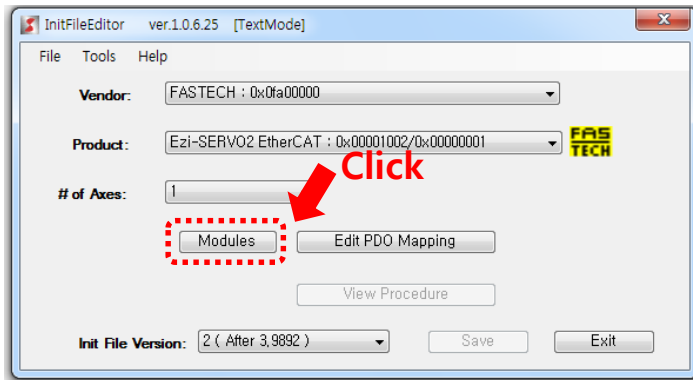
- **InitFileEditor**
 - PDO데이터 설정
 - EtherCAT 마스터와 슬레이브간 데이터 처리를 설정해 주는 Tool

1. InitFileEditor [Init 파일 만들기 - 제품 선택]

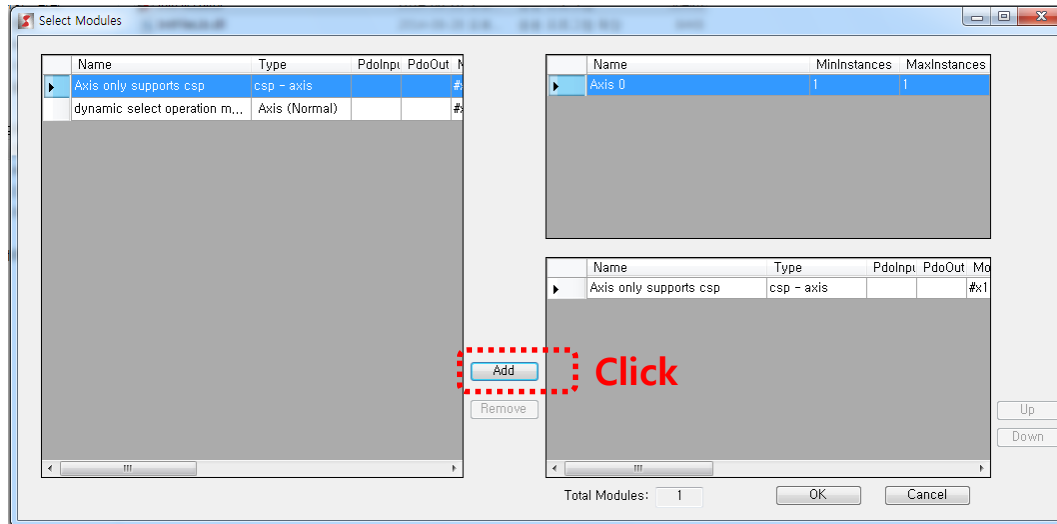


- Vendor Name
- Product Name
- 0 : I/O Module
1 : Servo Drive
- PDO Mapping
- View Procedure

1. InitFileEditor [Init 파일 만들기 – PDO Mapping]

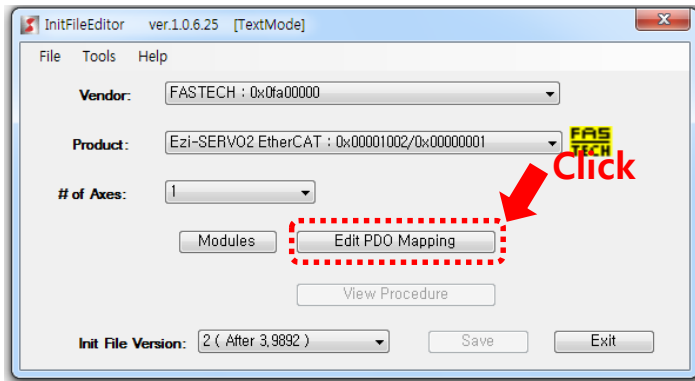


- Vendor, Product, # of Axes 설정 후 [Modules] 버튼을 클릭

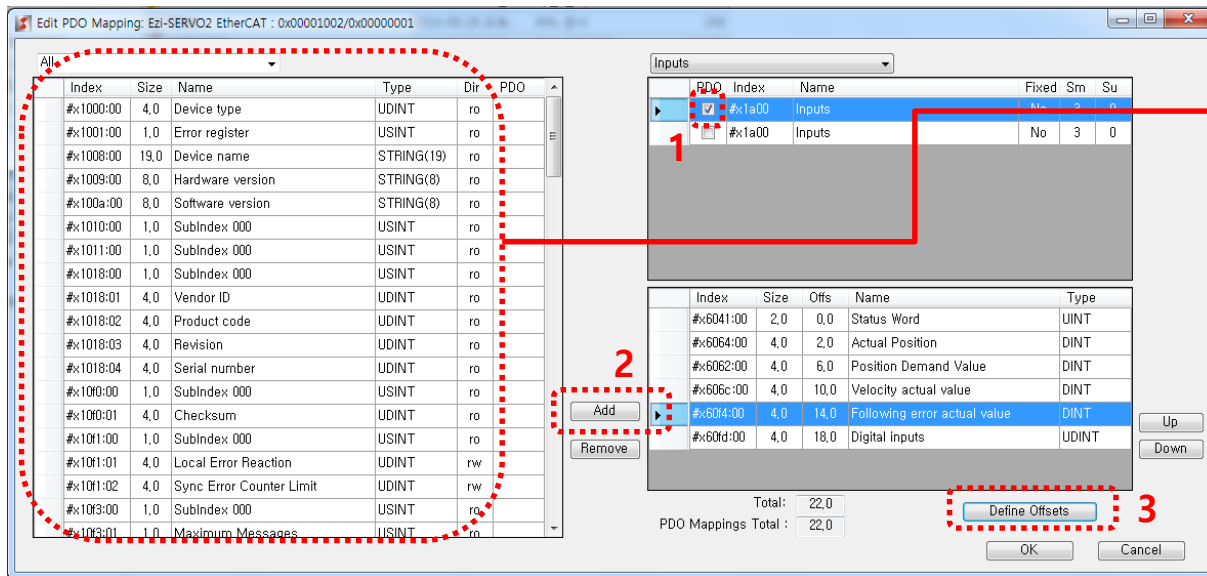


- 사용하고자 하는 Type 선택 후 [Add] 버튼을 클릭
- 추가된 것을 확인하고 [OK]클릭

1. InitFileEditor [Init 파일 만들기 - PDO Mapping]



□ Modules 설정 후 [Edit PDO Mapping] 클릭



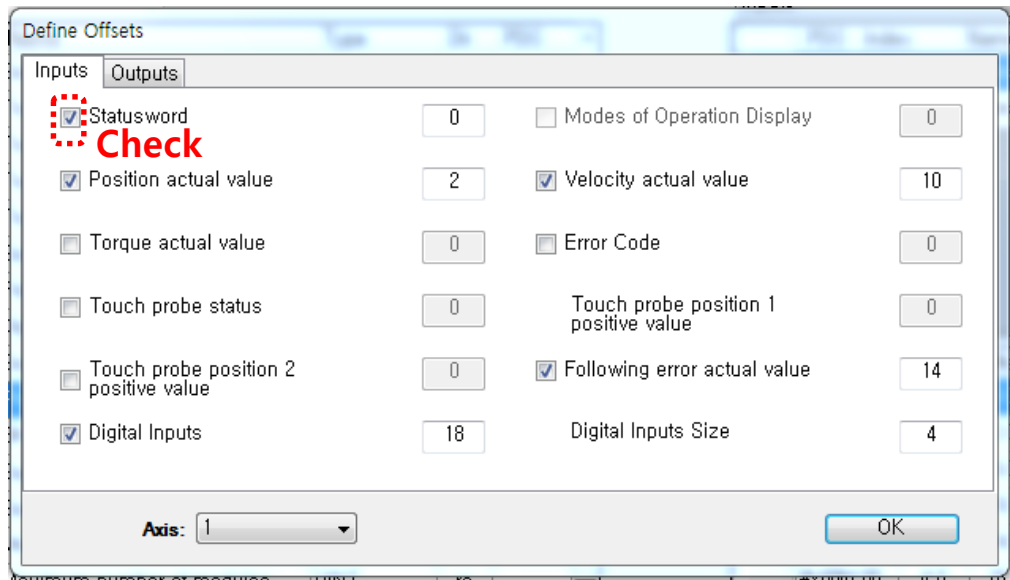
☞ 1 : Inputs PDO 체크박스 클릭

2 : Mapping하고자 하는 PDO 선택 후 [ADD]버튼 클릭

3 : 선택 완료 후 [Define Offsets] 클릭

1. InitFileEditor [Init 파일 만들기 – PDO Mapping]

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- 앞서 선택한 사용하는 PDO 항목을 **Check**
- **Check** 완료 후 **[OK]**클릭

- Ezi-SERVOII-EC 사용 시 필수 선택

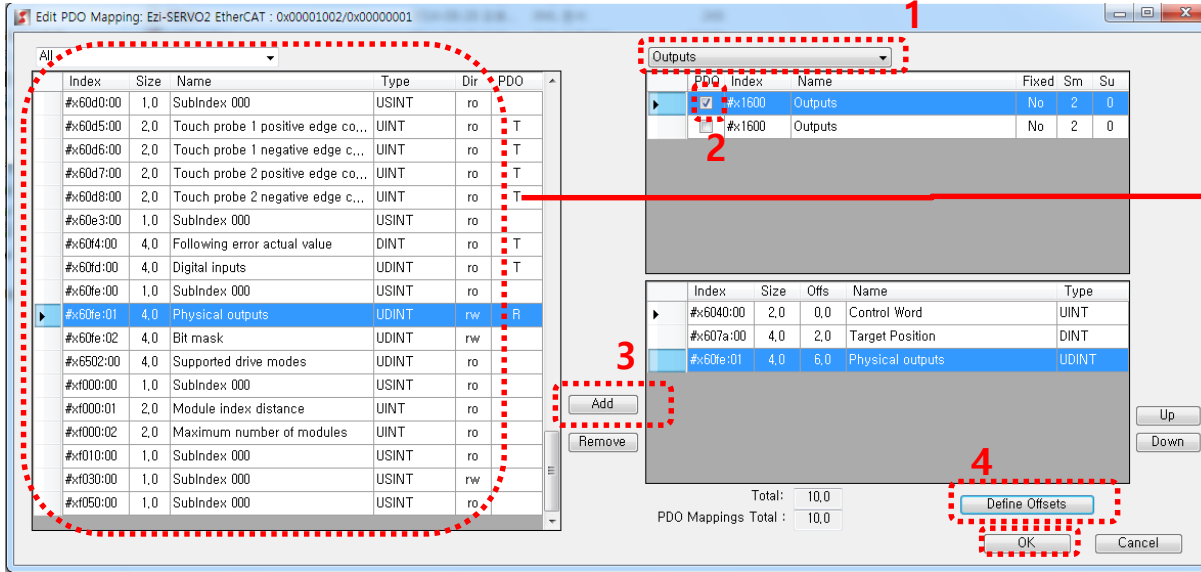
Input : 'Status Word' , 'Position Actual Value'

Output : 'Control Word' , 'Target Position'

☞ Ezi-SERVOII-EC의 I/O를 사용하기 위해서 Digital Inputs, Outputs 추가

1. InitFileEditor [Init 파일 만들기 - PDO Mapping]

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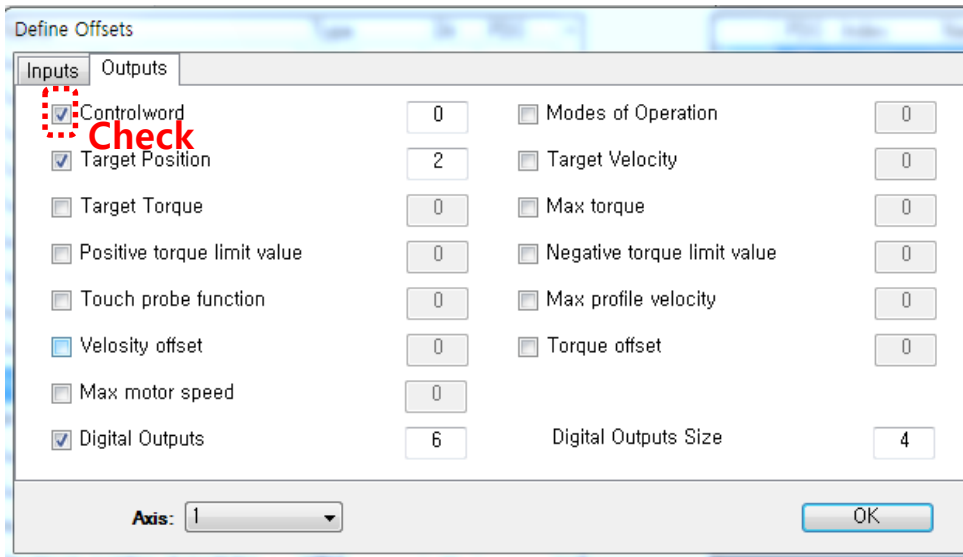
1 : Outputs로 변경

2 : Inputs PDO 체크박스 클릭

3 : Mapping하고자 하는 PDO
선택 후 [ADD]버튼 클릭

4 : 선택 완료 후
[Define Offsets] 클릭

5 : 모든 설정 완료 후 [OK] 클릭



□ 앞서 선택한 사용하는 PDO 항목을 Check

□ Check 완료 후 [OK]클릭

1. InitFileEditor [Init 파일 만들기 - 저장하기]

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The image shows two screenshots from a Windows environment. The top screenshot is of the InitFileEditor application window. The 'File' menu is open, and the 'Save' button is highlighted with a red dashed box and the word 'Click' next to it. The application shows fields for Vendor (FASTECH), Product (Ezi-SERVO2 EtherCAT), and # of Axes (1). The 'Init File Version' is set to 2. The bottom screenshot is a Windows Explorer window titled '다른 이름으로 저장' (Save with another name) showing a directory of files. The file '0fa00000_00001002' is selected. The file list includes columns for name, date, type, and size.

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

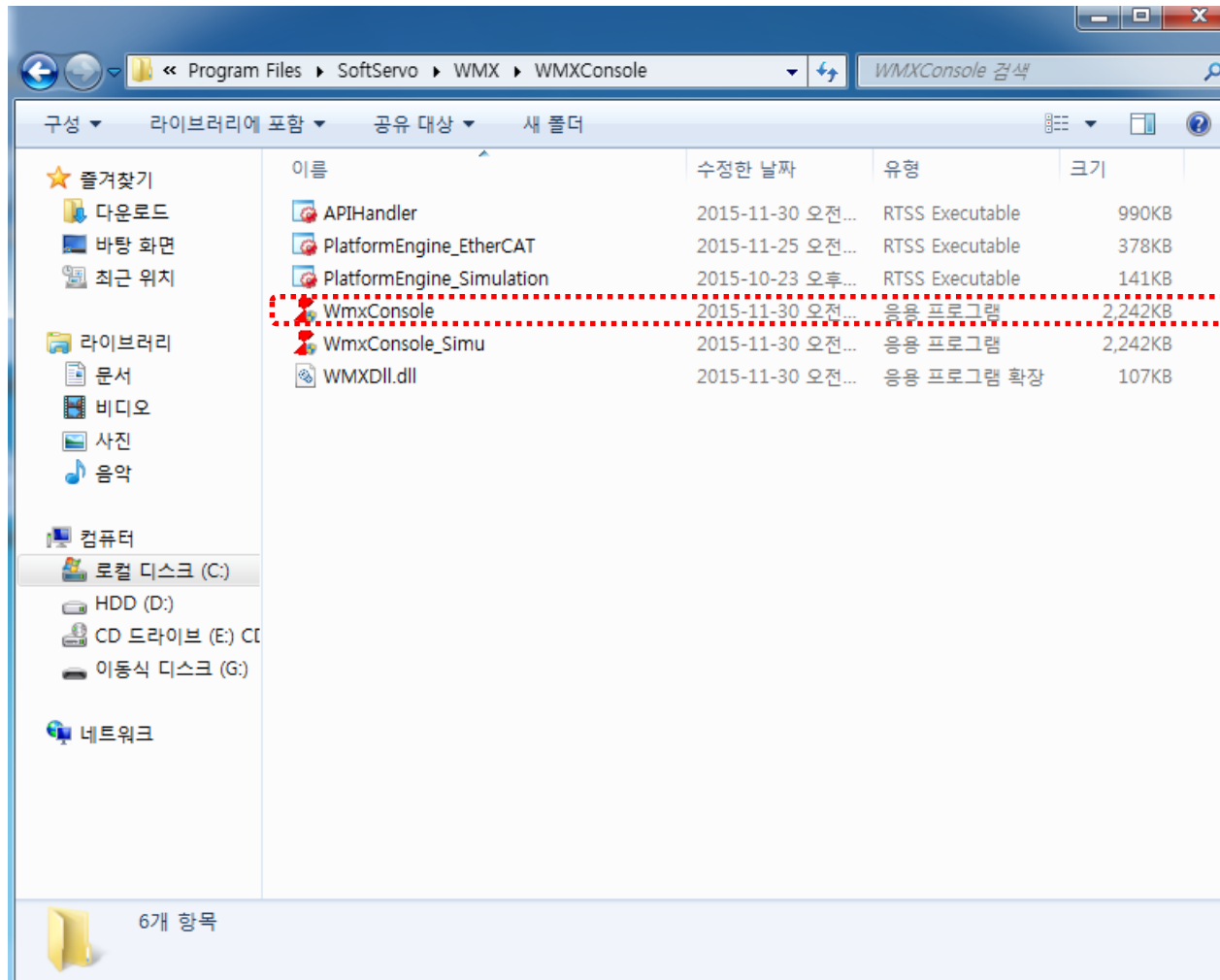
- 최초 저장시 기본 경로는 c:\winit 폴더에 저장
- [Vendor ID]_[Product Code].txt 구조
- 이후 Init 파일 수정 or 재 생성 시 동일한 이름을 사용해야 함

2. WMX Console [GUI 프로그램 실행하기]

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WMX Console

실행 파일 경로 : C:\Program Files\SoftServo\WMX\WMXConsole



2. WMX Console [GUI 프로그램 실행하기]

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WMX Console

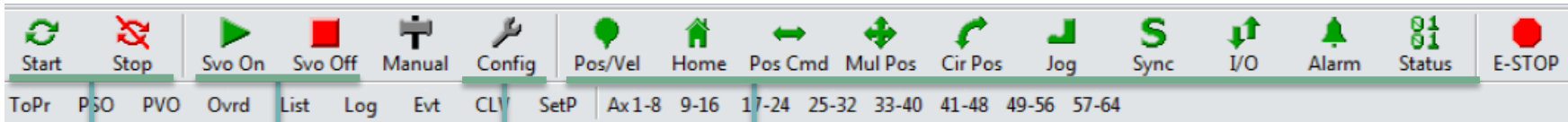
실행 후 초기 화면

The screenshot shows the WMX Console interface. The main window is titled 'Soft Servo Systems, Inc. - WMX Console - Servo On'. It features a menu bar (File, Engine, Control, Configure, View, Help) and a toolbar with various control buttons like 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 different servo groups (Ax 1-8, 9-16, 17-24, 25-32, 33-40, 41-48, 49-56, 57-64). The main display area is divided into two panes: 'Position/Velocity' and 'Servo On'. The 'Position/Velocity' pane shows a table of servo data for 64 axes. The 'Servo On' pane shows a grid of servo status indicators (On/Off) for 64 servos, with a 'Communication State: Off' indicator at the top. The 'All On' and 'All Off' buttons are visible at the bottom of the 'Servo On' pane.

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

2. WMX Console [Icon 설명]

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통신 On, Off

서보 On, Off

파라미터 설정

각종 다양한 기능

2. WMX Console [Ezi-SERVO II-EC 통신 연결]

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WMX Console

[Start] , [Stop] 아이콘을 클릭하여 통신 연결/해제



통신이 연결되지 않은 상태

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

통신이 연결된 상태

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

통신 상태 : On
1,2,3,4번 Servo 축 상태 : On

통신 상태 : Off
모든 서보 축 상태 : Off

Servo On

Communication State: **On**

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

All On All Off

Servo On

Communication State: **Off**

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

All On All Off

2. WMX Console [Jog 운전 실행]

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[Jog] 구동 해보기

☐ Start -> SERVO ON -> Jog 운전

The screenshot shows the WMX Console software interface. The top menu bar includes File, Engine, Control, Configure, View, and Help. The toolbar contains various control buttons: Start (1), Stop, Svo On (2), Svo Off, Manual, Config, Pos/Vel, Home, Pos Cmd, Mul Pos, Cir Pos, Jog (3), Sync, I/O, Alarm, Status, and E-STOP. Below the toolbar, there are several data windows. The 'Position/Velocity' window shows a table of axis data. The 'Servo On' window 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

1 : 프로그램 실행 후 [Start]

2 : [Svo On] 클릭

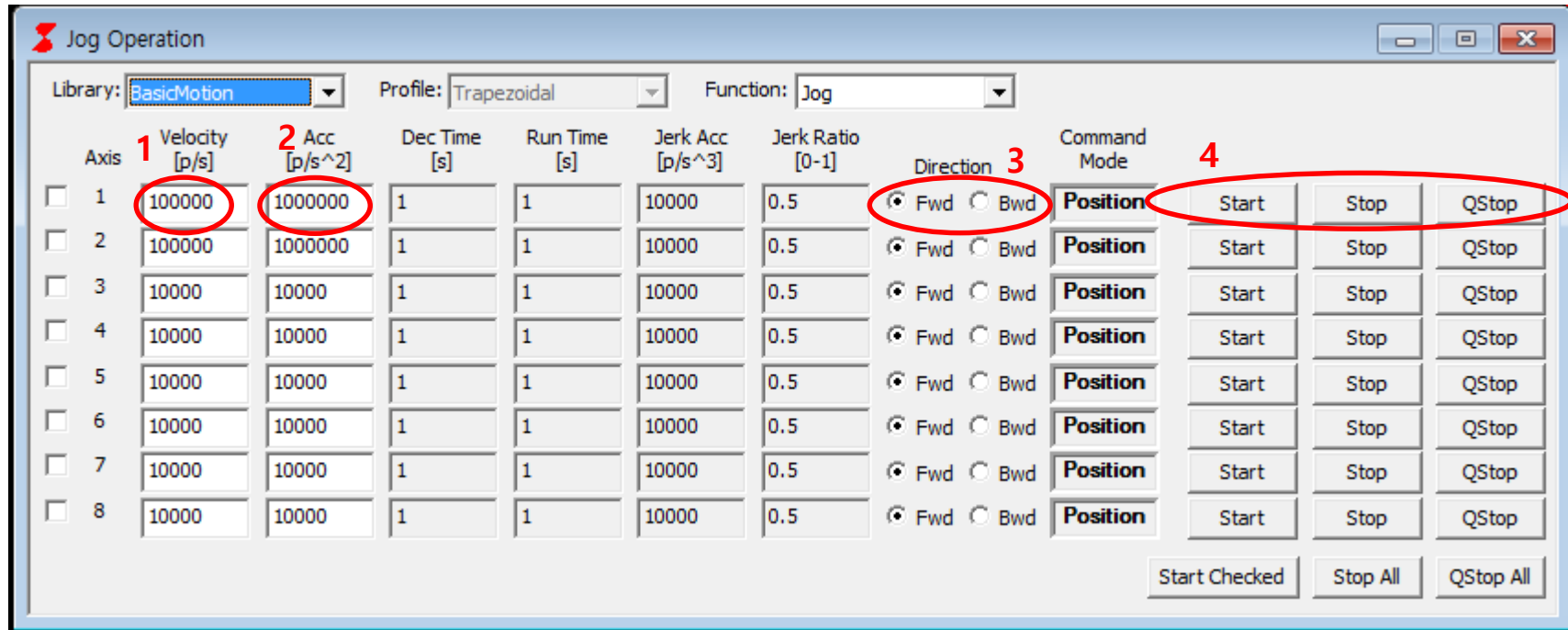
3 : [Jog] 클릭

2. WMX Console [Jog 운전 설정 및 구동]

Confidential

[Jog] 구동 해보기(BasicMotion)

□ [Velocity] → ACC → Direction 설정 후 Start 클릭



- 1 : Velocity(구동 속도)[p/s]
- 2 : ACC(가감속)[p/s^2]
- 3 : Direction(방향)
- 4 : 실행 명령(Start, Stop, QStop)

2. WMX Console [Pos Cmd 실행]

Confidential

[Pos Cmd] 구동 해보기

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

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 : 프로그램 실행 후 [Start]

2 : [Svo On] 클릭

3 : [Pos Cmd] 클릭

2. WMX Console [Pos Cmd 설정 및 구동]

Confidential

[Pos Cmd] 구동 해보기(BasicMotion)

- [Target],[Velocity] → [ACC],[Dec] → Repeat Mode(반복 사용 시) 설정 후 Start 클릭

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.

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

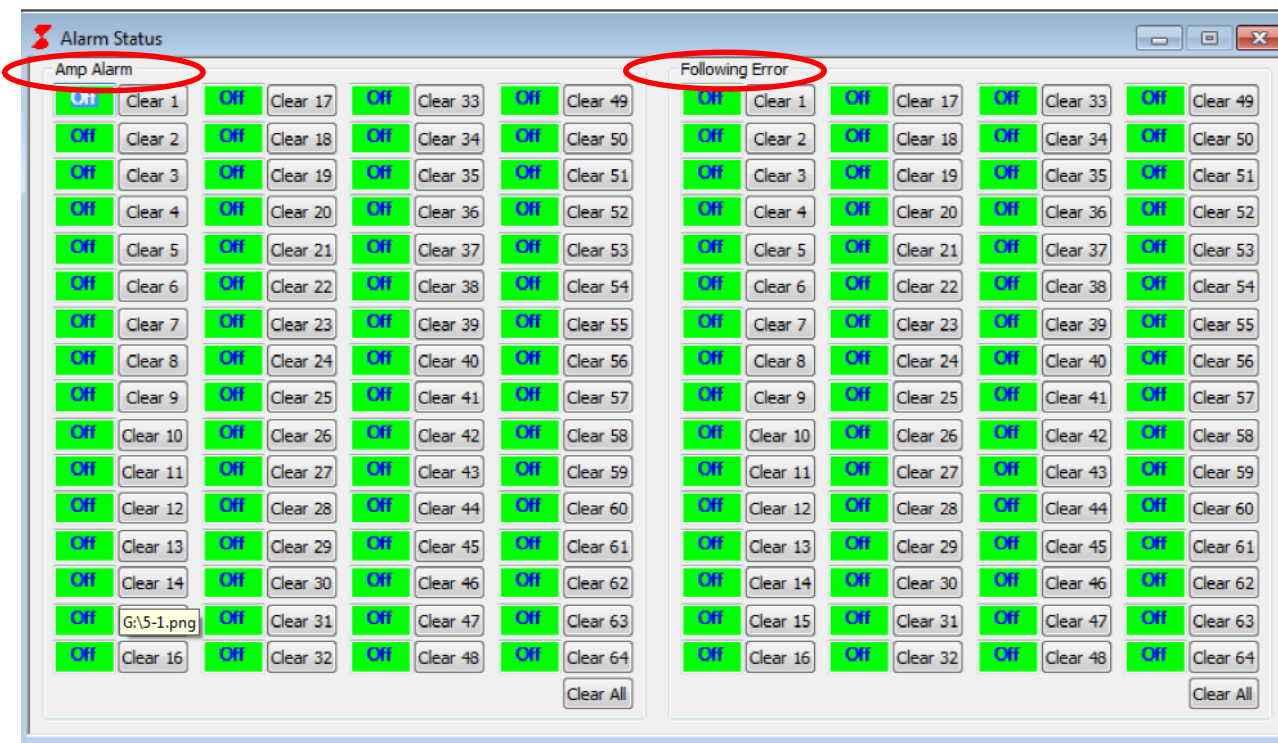
- 1 : Absolute, Relative : 구동법 선택
- 2 : Target, Velocity 설정
- 3 : Acc, Dec 설정
- 4 : 반복 유무 설정
- 5 : 실행 명령(Start, Stop, QStop)

2. WMX Console [알람 확인/해제]

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[Alarm] 확인/해제

 Alarm [Alarm] 버튼 클릭하여 확인 / 해제 가능



Alarm Status

1. Amp Alarm : Ezi-SERVO II – EC 드라이버에서 출력되는 알람
 2. Following Error : WMX Software에서 발생한 알람
- ☞ 알람 발생 시 Clear 버튼을 클릭하여 해제 가능

2. WMX Console [I/O 확인]

Confidential

[I/O] Control

-  [I/O] 버튼 클릭하여 입력 확인 및 출력 가능



설정된 주소로 이동

Green : Enable
Red : Disable

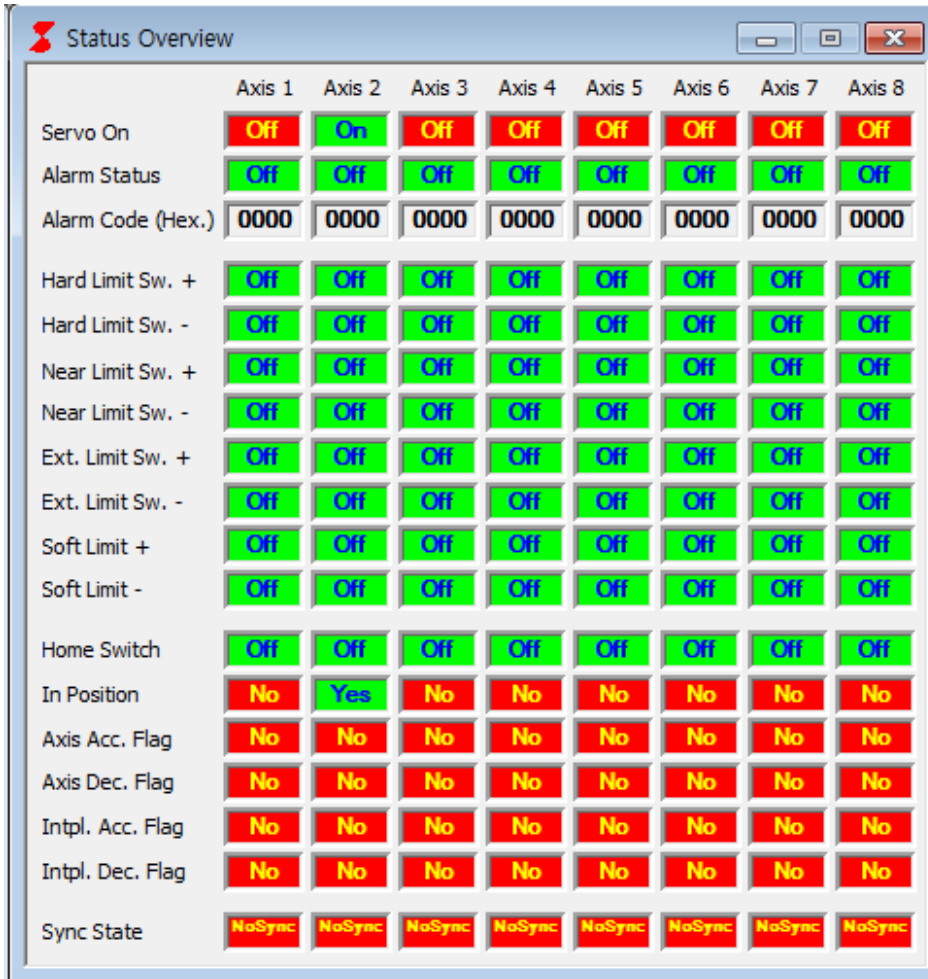
Input 신호 확인

2. WMX Console [Status 확인]

Confidential

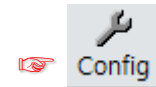
[Status] Overview

-  Status [Status] 버튼을 클릭하여 각 Axis의 상태를 확인 가능



	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

- 상세 설정(Sensor Logic)등 Config 창에서 가능



클릭하여 설정 가능

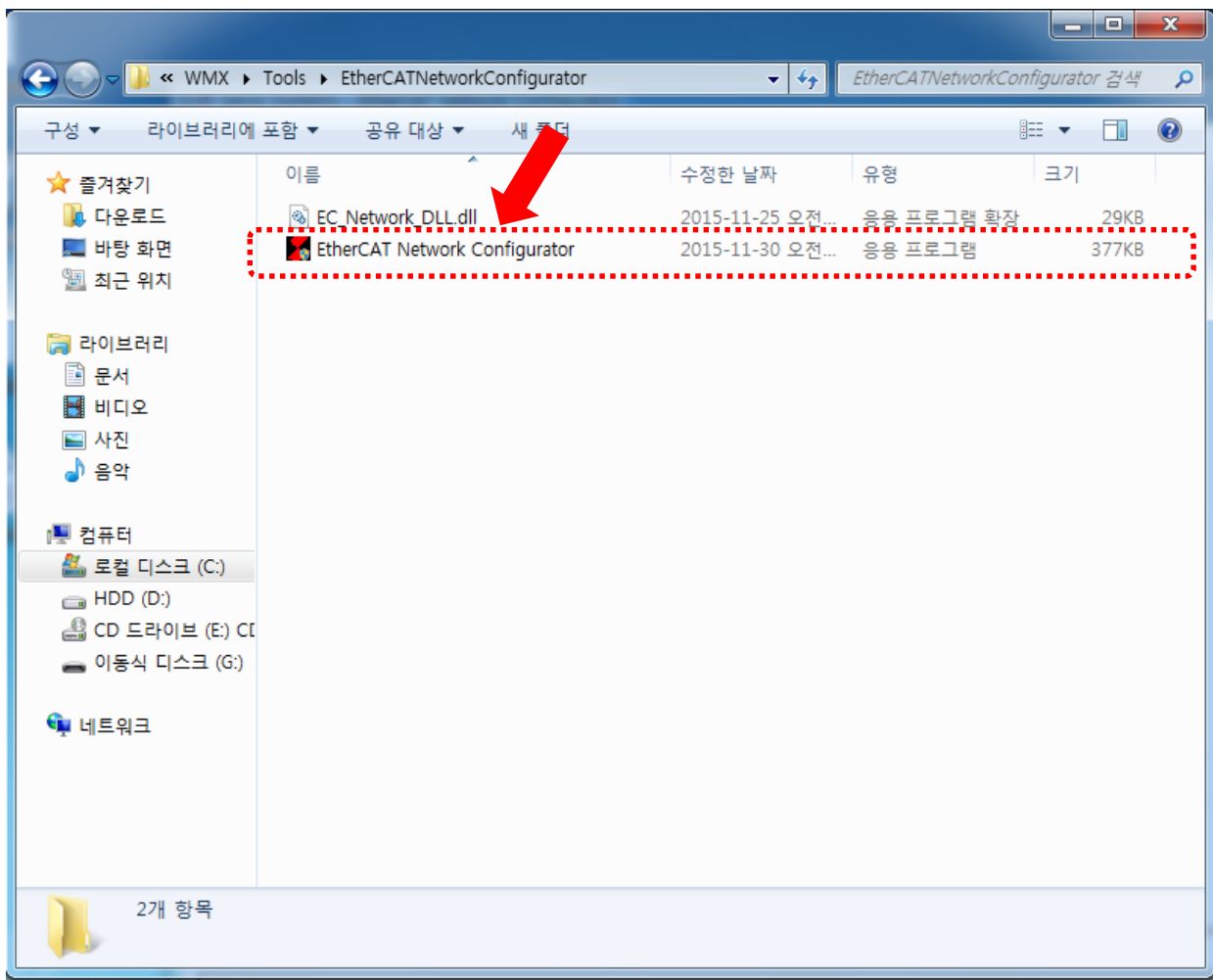
3. EtherCAT Network Configurator

[Tool 실행]

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□ EtherCAT Network Configurator 실행

실행 파일 경로 : C:\Program Files\SoftServo\WMX\Tools\EtherCATNetworkConfigurator



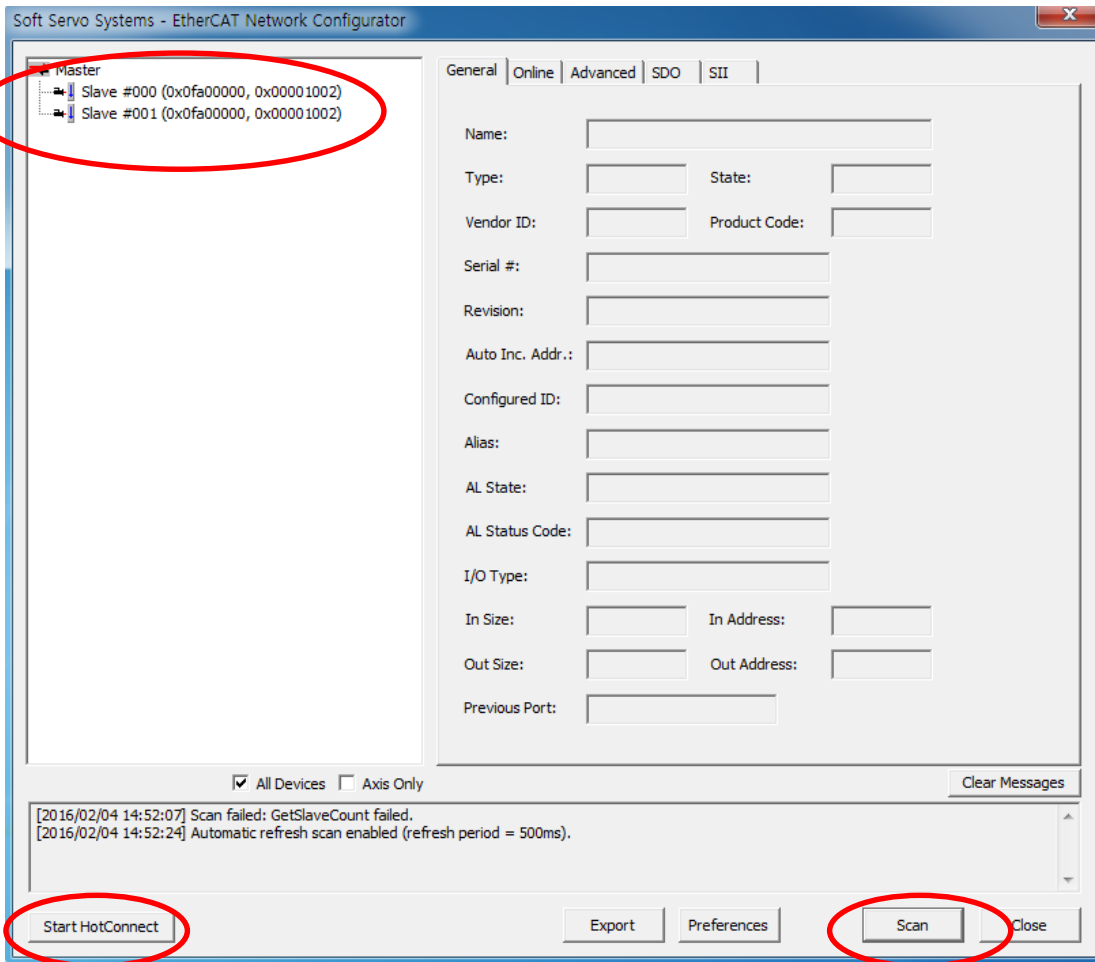
3. EtherCAT Network Configurator

[EtherCAT 접속]

Confidential

□ Ezi-SERVOII-EC 연결

1. WMX Console 실행 → 2. EtherCAT Network Configurator 실행
→ 3. [Start HotConnect]클릭 → 4. Scan 클릭 → 현재 연결된 Slave 정보 표시



- EtherCAT Master 상태를 모니터
- EtherCAT Slave 상태와 세팅을 모니터
- 각 Device에 대한 SDO 기능을 지원
- SDO 기능과 FoE를 이용하여 각 Slave의 설정이나 f/w 갱신 가능
- 네트워크 정의 생성과 수정

3. EtherCAT Network Configurator

[제품 정보 확인]

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□ General Information

Soft Servo Systems - EtherCAT Network Configurator

Master

- Slave #000 (0x0fa00000, 0x00001002)
- Slave #001 (0x0fa00000, 0x00001002)

General | Online | Advanced | SDO | SII

Name:

Type: State:

Vendor ID: Product Code:

Serial #:

Revision:

Auto Inc. Addr.:

Configured ID:

Alias:

AL State:

AL Status Code:

I/O Type:

In Size: In Address:

Out Size: Out Address:

Previous Port:

All Devices Axis Only

[2016/02/04 14:52:07] Scan failed: GetSlaveCount failed.
[2016/02/04 14:52:24] Automatic refresh scan enabled (refresh period = 500ms).

- **Vendor ID** : 파스텍 Vendor ID
- **Product Code** : 파스텍 Ezi-SERVO II-EC 제품 Code
- **AL State** : 알람 상태
- **AL Status Code** : 알람 상태 / 0000은 정상을 의미함
- **In Size** : 입력 데이터 사이즈
- **In Address** : 출력 데이터 사이즈
- **Out Address** : 출력 데이터 시작 주소

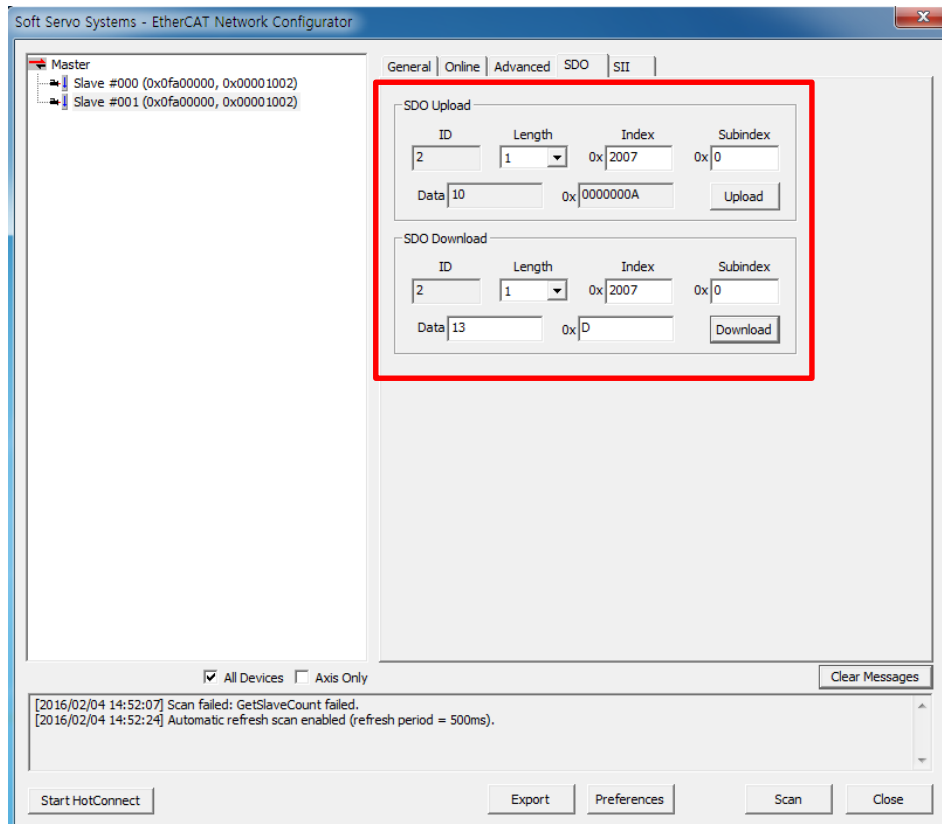
3. EtherCAT Network Configurator

[SDO 확인/수정]

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□ SDO 데이터 확인 / 삽입 / 저장

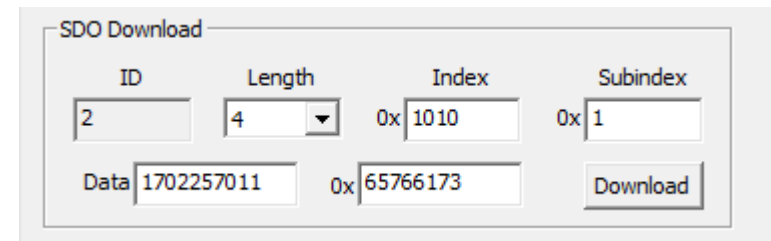
- Index, Data 정보는 'Ezi-SERVOII_EtherCAT Manual' 참조



- **SDO Upload :**
 - 현재의 Object 값 확인
 - 좌측의 Object는 'Run Current'

- **SDO Download :**
Object 값을 '13'(130%)으로 변경

👉 변경한 Object를 EEPROM에 저장하기 위해서는 Store Parameters(1010h) 과정이 필요(아래 참조)



우리는 40년 Stepping Motor의 역사를 바꾸는 주인공입니다!!



Ezi-SERVO[®]
Closed Loop Stepping System