



Fast, Accurate, Smooth Motion Control

# Ezi-SERVOII-EC set up manual for ACS



**Ezi-SERVO**<sup>®</sup>  
Closed Loop Stepping System

# ❑ Ezi-SERVOII-EC data Download [ESI(XML)]

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

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Fast, Accurate, Smooth Motion

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

Name : 관리자

FASTECH\_Ezi-SERVO2\_EtherCAT.XML (176.2K) [33] DATE : 2015-10-12 0 Hit : 426

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 [Manual]

□ Manual : Download from [www.fastech.co.kr](http://www.fastech.co.kr) webpage [Product information]



## Ezi-Servo II EtherCAT series

풍부한 기술력과 경쟁력을 가진 파스텍(주)을 소개합니다

Ezi-SERVO II EtherCAT series

[HOME](#) > [Production info](#) >

### Product Information

- ① Fastech Product Specifications
- ① Ezi-SERVO series
- ① Ezi-SERVO II EtherCAT series
  - MC4N
- ① Ezi-STEP series
- ① Ezi-LinearStep series
- ① Ezi-Robo series
- ① S-SERVO series
- ① Ezi-MOTIONGATE series
- ① Ezi-Motionlink series
- ① Motor Selection Tool

**Ezi-SERVO<sup>®</sup> II** EtherCAT<sup>™</sup>  
Closed Loop Stepping System

EtherCAT<sup>™</sup> CE  
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

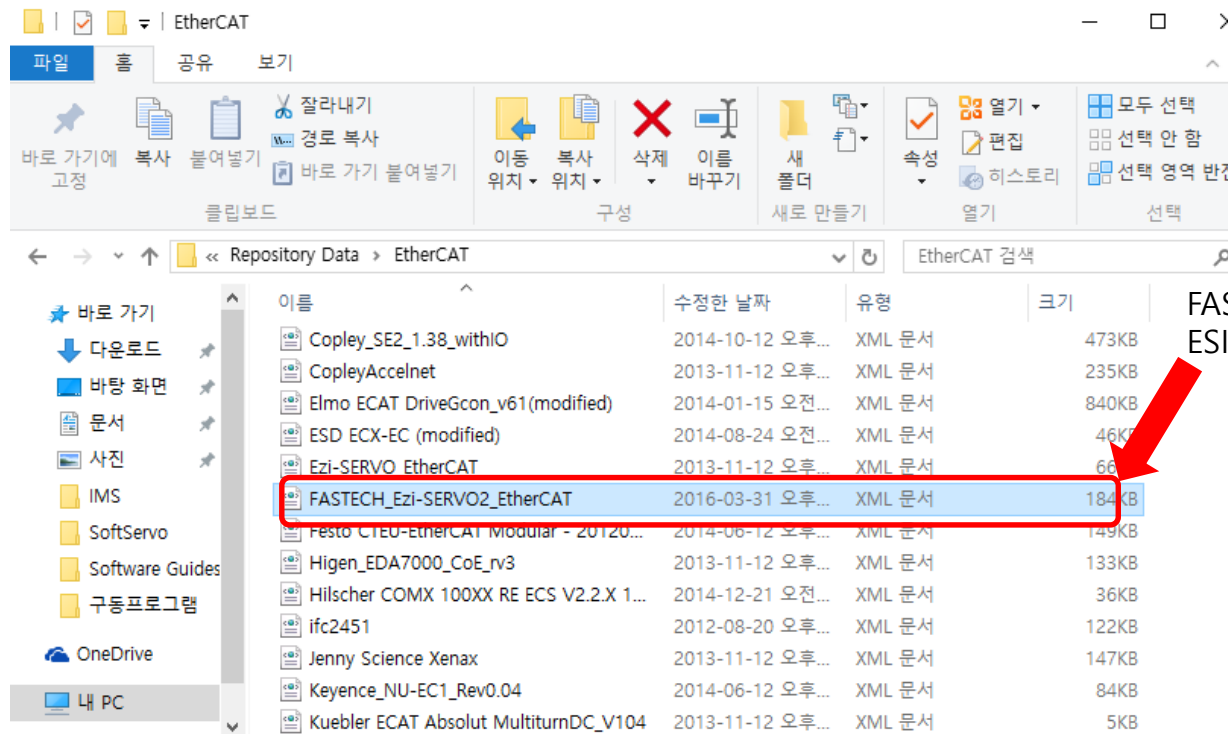
SPEC PART NUMBERING & DRAWING CATALOGUE **MANUAL**

**Ezi-SERVO<sup>®</sup>**  
Closed Loop Stepping System

# ESI(XML) file save

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

Path : C:\Program Files\ACS Motion Control\SPiiPlusNT Suite 2.28\SPiiPlus MMI Application Studio  
    \Repository Data\EtherCAT

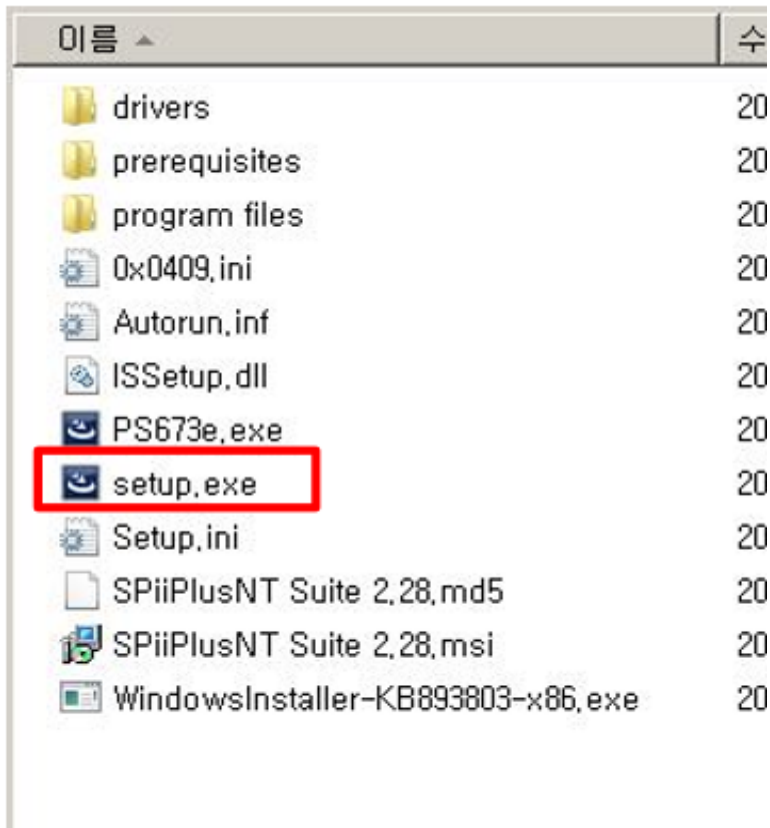




# 1. Program install [ACS operating program]

## □ MMI install

1. MMI install CD or unzip file and execute the setup.exe file.



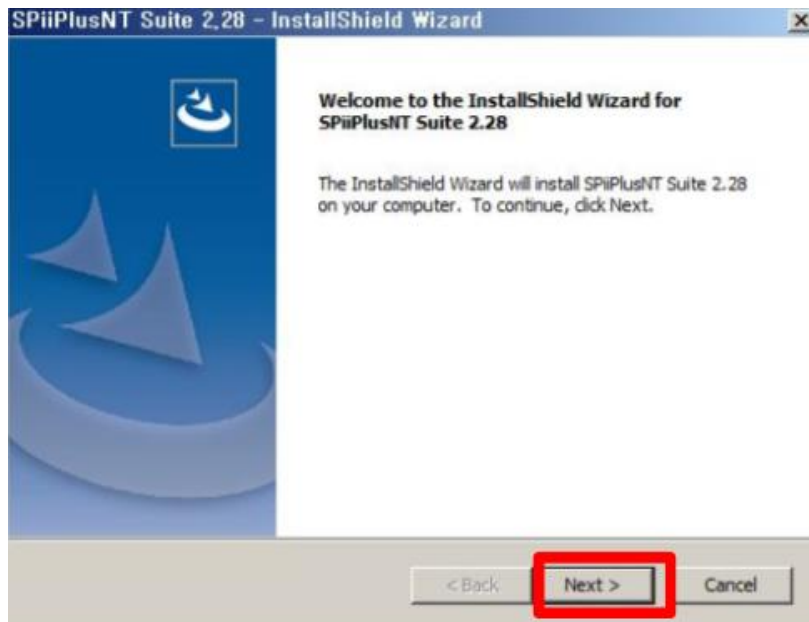
2. Stay during the Installation



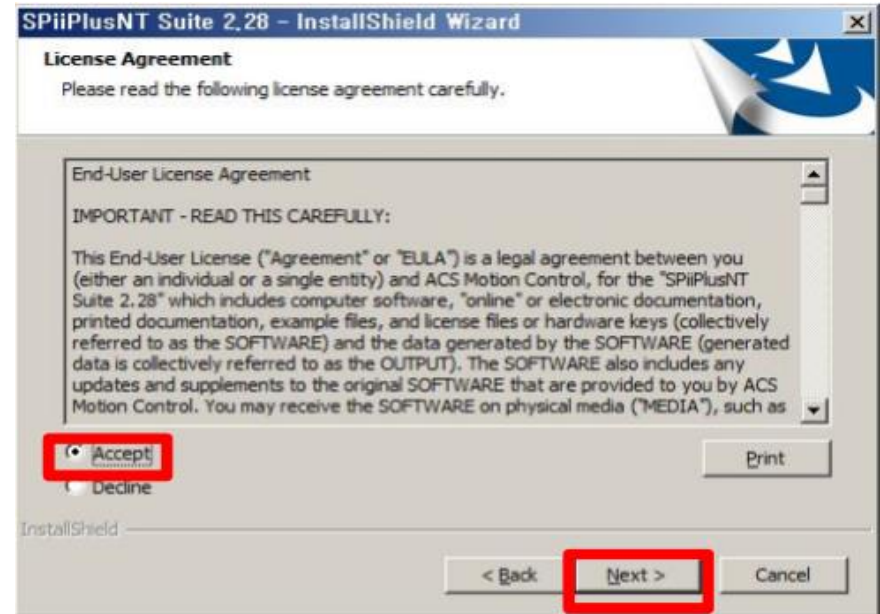
# 1. Program install [ACS operating program]

## ❑ MMI install

3. Click to Next button for next progress .



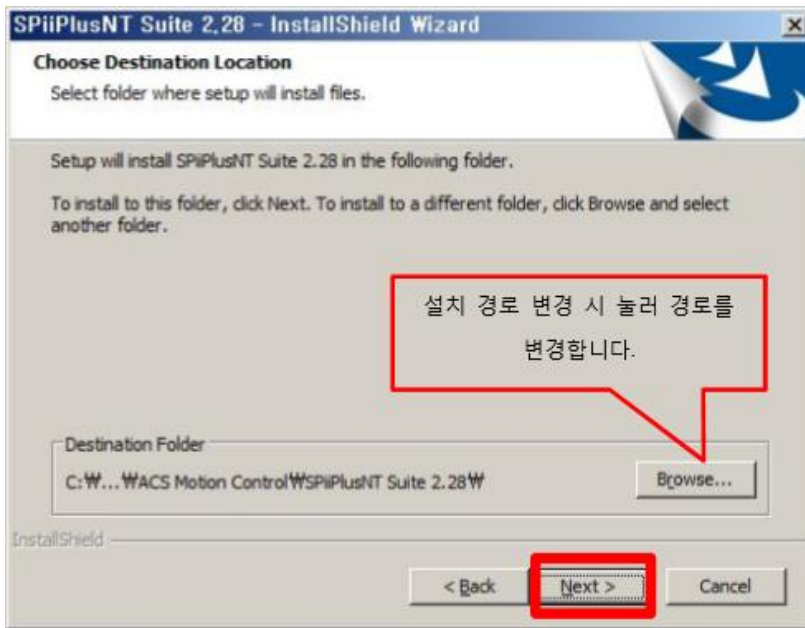
4. After checking the Accept , Click to Next.



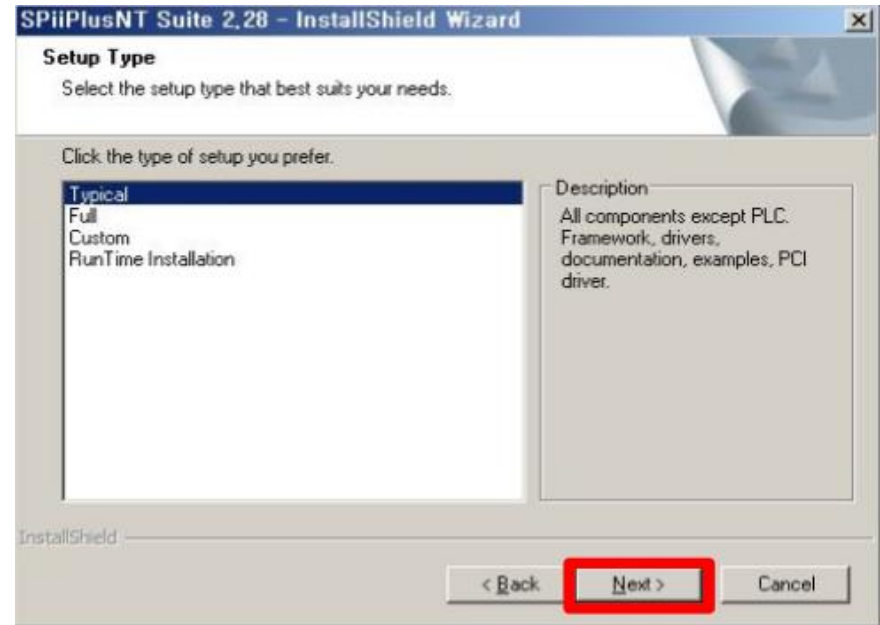
# 1. Program install [ACS operating program]

## □ MMI install

5. Click to Next button when using the standard path.



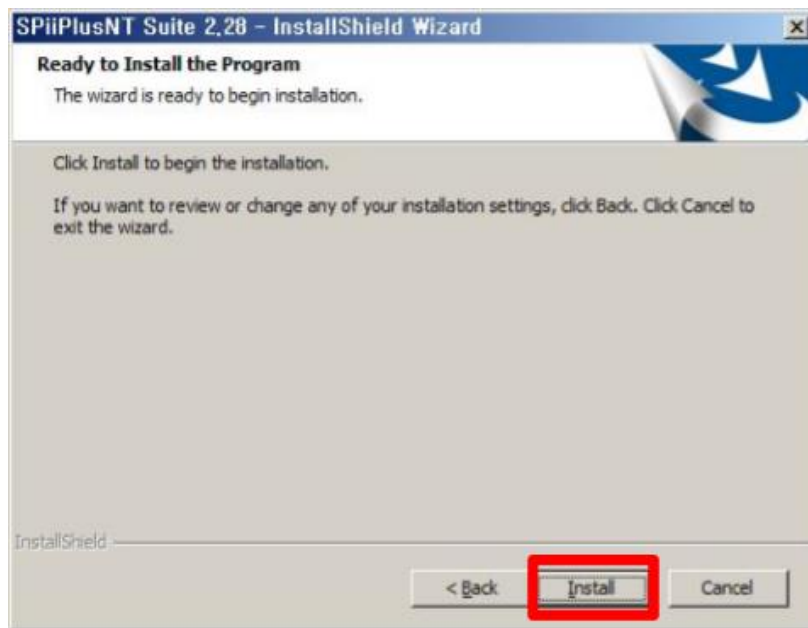
6. After select to program grade for install & Typical and then click to Next



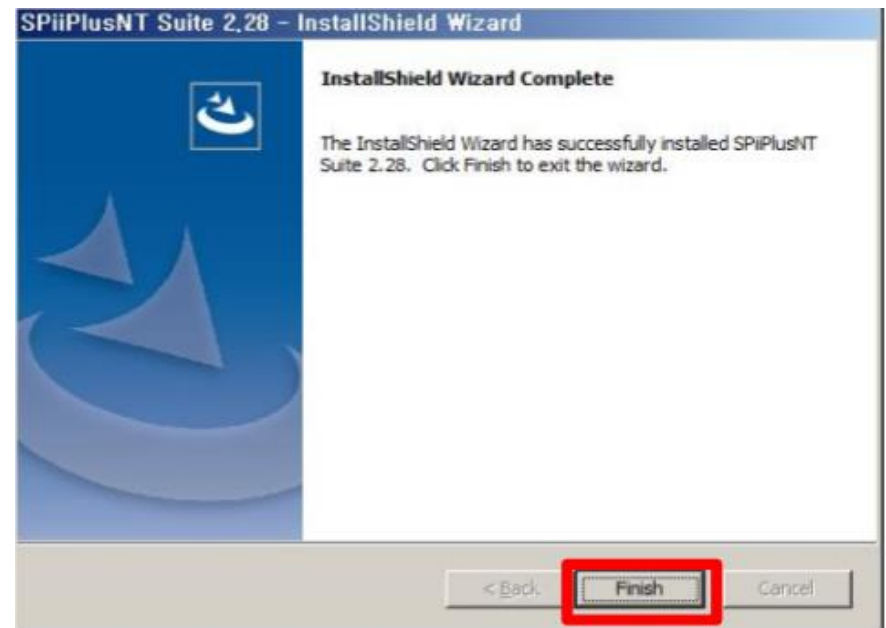
# 1. Program install [ACS operating program]

## ❑ MMI install

7. Click to Install



8. Click to Finish after done installation

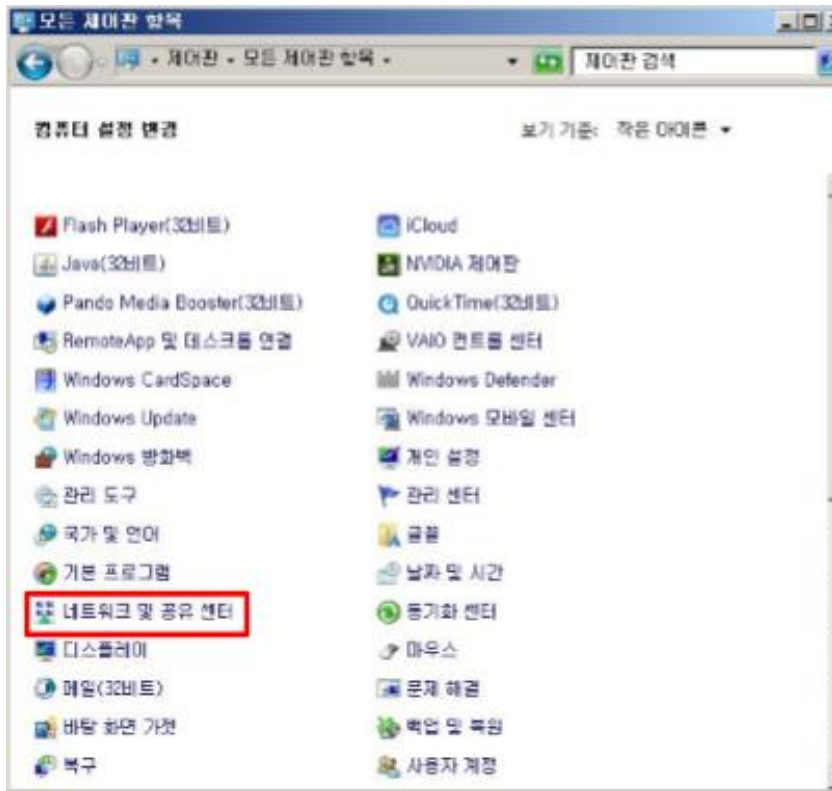




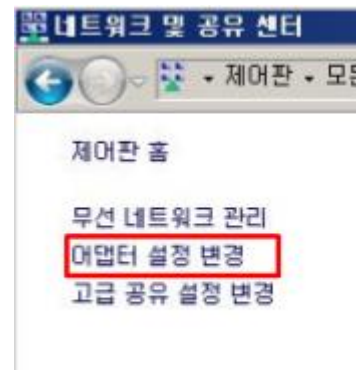
# 2. PC communication setting

## ❑ Communication set up on PC

1. Click to Network & sharing center in control panel



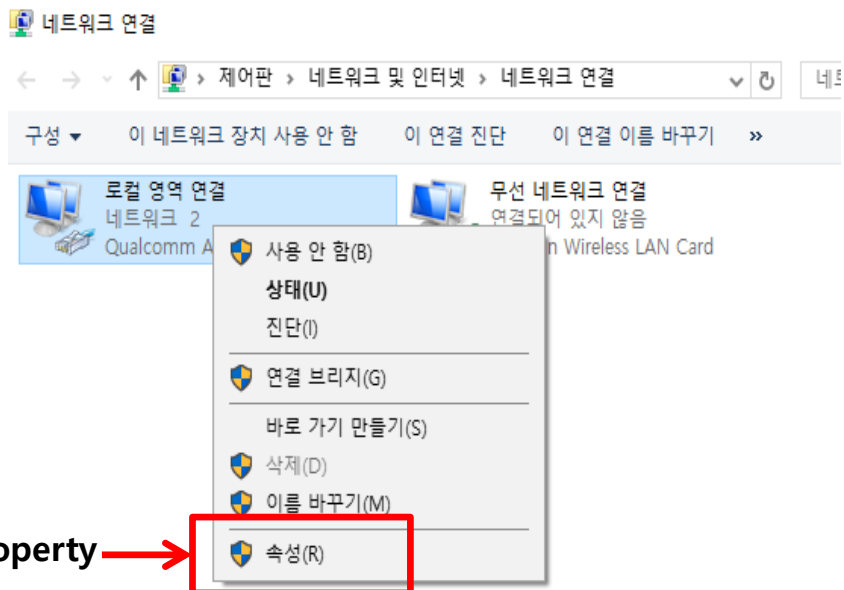
2. Select to adapter setting change



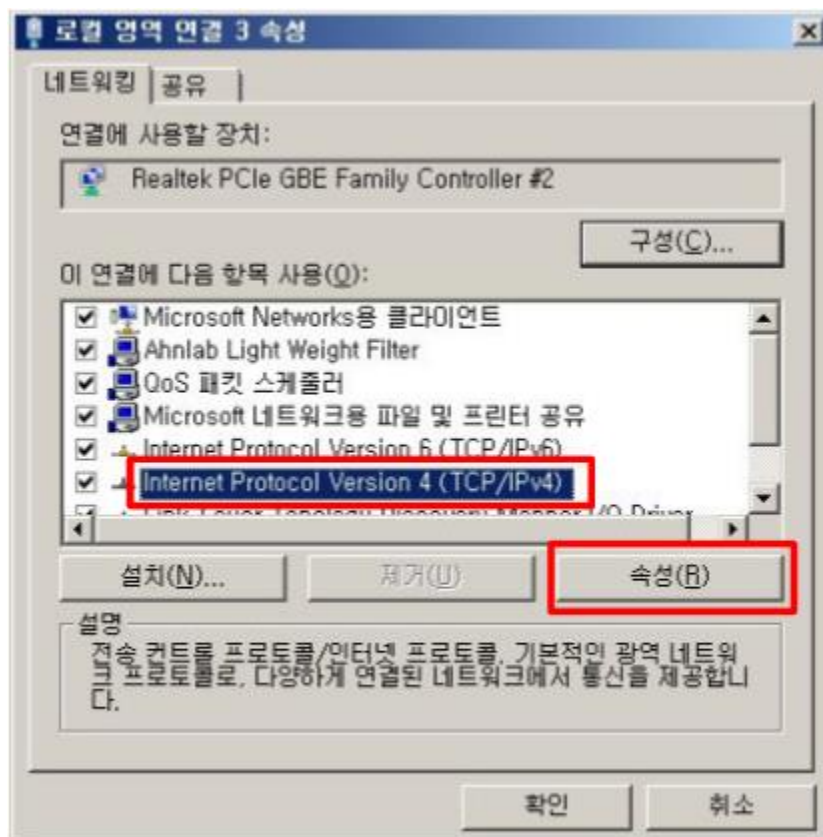
# 2. PC communication setting

## ❑ Communication set up on PC

3. Checking the not identified local area network connection , click to right mouse button to click the property.



4. Select to Internet Protocol Version 4(TCP/IPv4) , and click to property



# 2. PC communication setting

## ❑ Communication set up on PC

5. To check use of following IP address , and setting as below address .  
( Not to use IP address 10.0.0.100 , it already is using by Controller )

Internet Protocol Version 4 (TCP/IPv4) 속성

일반

네트워크가 IP 자동 설정 기능을 지원하면 IP 설정이 자동으로 할당되도록 할 수 있습니다. 지원하지 않으면, 네트워크 관리자에게 적절한 IP 설정값을 문의해야 합니다.

자동으로 IP 주소 받기(O)

다음 IP 주소 사용(S):

IP 주소(I): 10 . 0 . 0 . 50

서브넷 마스크(U): 255 . 255 . 255 . 0

기본 게이트웨이(D): . . .

자동으로 DNS 서버 주소 받기(B)

다음 DNS 서버 주소 사용(E):

기본 설정 DNS 서버(P): . . .

보조 DNS 서버(A): . . .

끝낼 때 설정 유효성 검사(L)

고급(V)...

확인 취소

# 3. Program operating [MMI program execution]

## □ SYSTEM SETUP

Path : C:\Program Files (x86)\WACS Motion Control\SPiiPlusNT Suite 2.28\SPiiPlus MMI ApplicationStudio  
WACS.Framework.exe



# 3. Program operating [MMI program execution]

## ❑ SYSTEM SETUP

The screenshot shows the Ezzi-Servo software interface. The main window is titled "Starting a New Motion" and contains several motion types with icons and descriptions:

- Absolute Move**: Absolute Move is used to move the motor(s) to a specific target position.
- Relative Move**: Relative Move is used to move the motor(s) a specific distance from current position.
- One Direction Incremental Repeated Move**: One Direction Incremental Repeated Move is used to move the motor(s) incrementally in one specified direction from current position repeatedly.
- Back and Forth Move**: Back and Forth Move is used to move the motor(s) back and forth between two points.
- Jog Motion**: Jog motion is a motion with constant velocity and without defined end point. The motion continues until the next motion command stops it, or the motion fails because of limit switch activation or other condition.

Annotations with red arrows point to various parts of the interface:

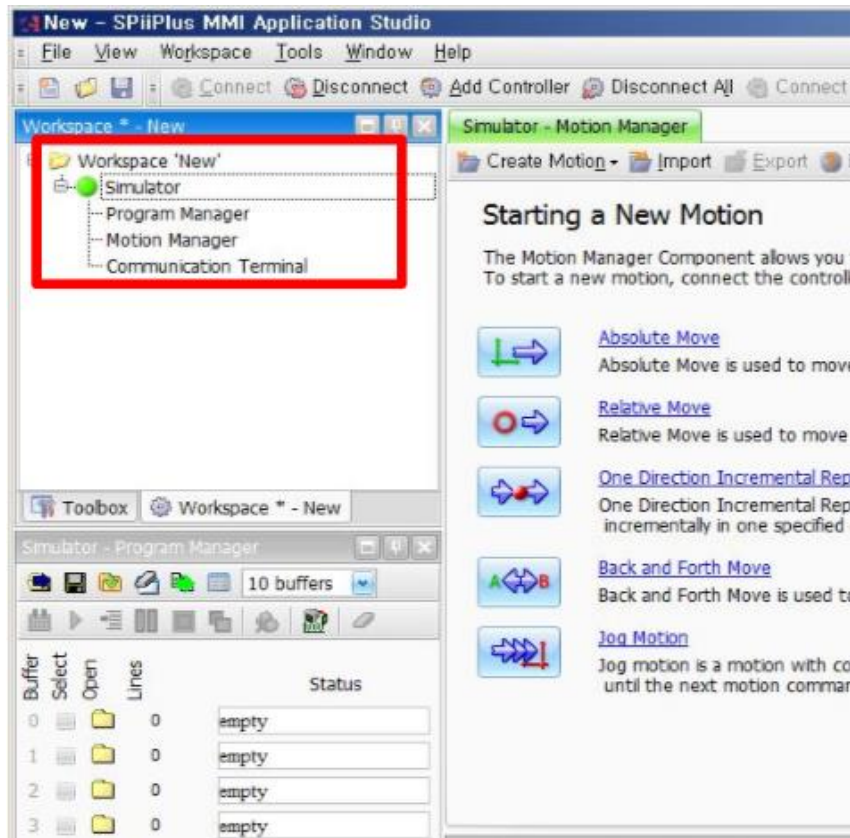
- Menu**: Points to the top menu bar.
- Tool**: Points to the toolbar.
- Workspace**: Points to the main content area.
- Status display**: Points to the bottom status bar.
- Program Manager**: Points to the left sidebar containing a tree view of folders and files.
- Terminal window**: Points to the bottom right window with "Send" and "Send And Trigger Stop" buttons.



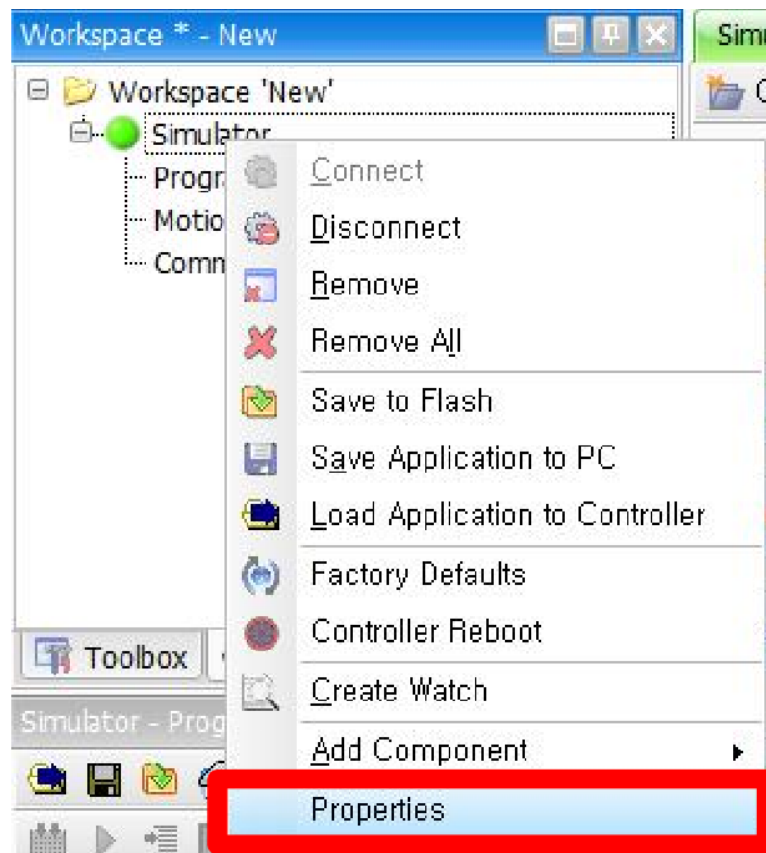
# 3. Program operating [MMI program execution]

## ❑ SYSTEM SETUP

1. When MMI executing , changes connection status



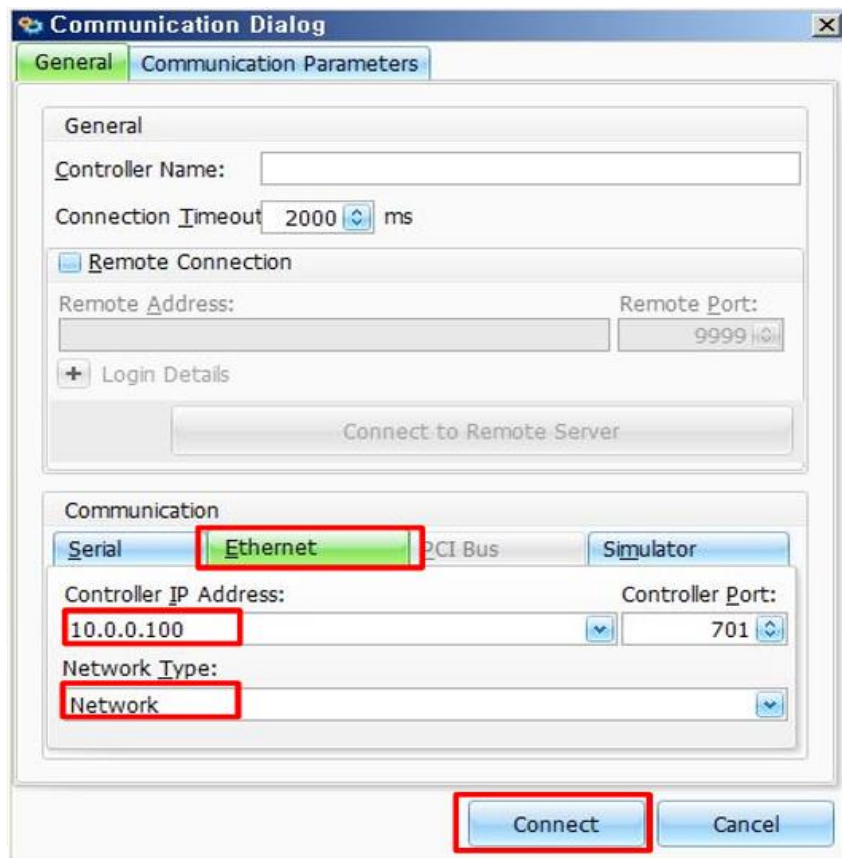
2. Click to right mouse button on the simulator , and click to Properties



# 3. Program operating [MMI program execution]

## □ SYSTEM SETUP

3. Ethernet -> 10.0.0.100 controller address check ->  
Network Type: Network setting -> Connect



# 3. Program operating [MMI program execution]

## ❑ SYSTEM SETUP

4. Click to right mouse button on serial number of master unit -> Add Component -> Setup -> System Setup

The screenshot displays the Ezzi-Servo software interface. On the left, a tree view shows a workspace named 'New' containing a master unit 'ECM00465A1'. A right-click context menu is open over this unit. The menu items are: Connect, Disconnect, Remove, Remove All, Save to Flash, Save Application to PC, Load Application to Controller, Factory Defaults, Controller Reboot, and Create Watch. The 'Add Component' option is highlighted with a red box. A secondary menu is open for 'Add Component', with 'Setup' highlighted. A third menu is open for 'Setup', with 'System Setup' highlighted. A red callout box points to the 'ECM00465A1' unit with the text: 'Changes to serial number of EtherCAT Master Unit when normal connection'. The bottom of the interface shows a 'Toolbox' and a 'Program Manager' window for 'ECM00465A1 - Program Manager' with a table of 10 buffers.

Changes to serial number of EtherCAT Master Unit when normal connection

Add Component

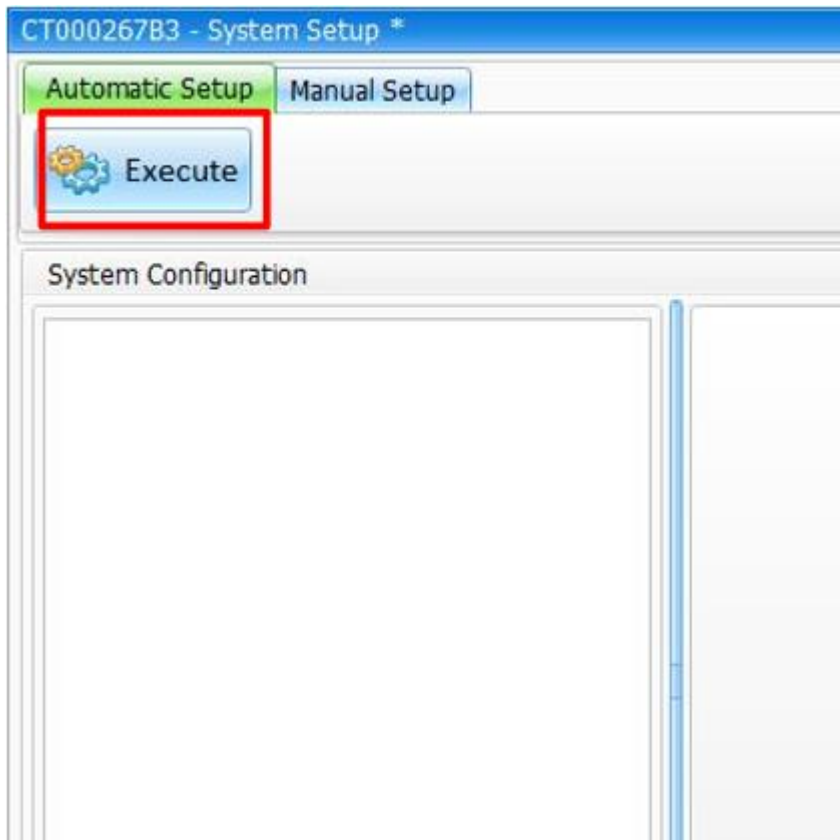
Setup

System Setup

# 3. Program operating [MMI program execution]

## □ SYSTEM SETUP

5. Click to Execute in System Setup window



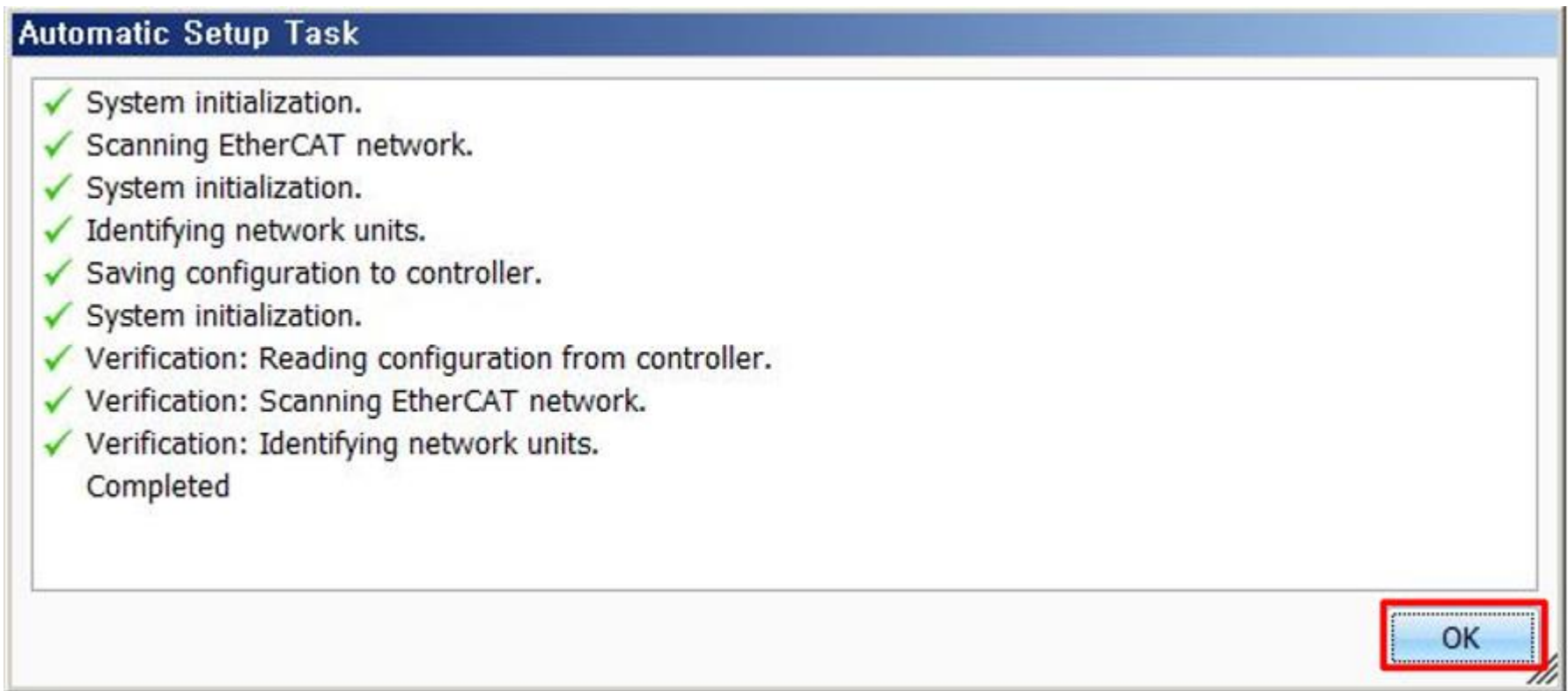
6. Click to Yes , rebooting the System & EtherCAT configuration and Set up progressing



# 3. Program operating [MMI program execution]

## □ SYSTEM SETUP

7. Process completed when all configuration is normally setting , then click to OK button





# 3. Program operating [MMI program execution]

## ❑ SYSTEM SETUP

8. To Check to match with connected Slave configuration.

The screenshot displays the 'System Configuration' window. On the left, a tree view shows the configuration hierarchy: 'SPiPlus EC' is expanded to show 'Ezi-SERVO2 EtherCAT' (highlighted with a red box), which contains 'EtherCAT Slave 0', 'Axes and I/O', 'Ezi-SERVO2 EtherCAT', 'EtherCAT Slave 1', 'Axes and I/O', 'Ezi-SERVO2 EtherCAT', 'EtherCAT Slave 2' (highlighted with a blue bar), and 'Axes and I/O'. The main area is titled 'EtherCAT Slave Information' and contains a 'Slave Properties' table. This table is also highlighted with a red box and lists the following details:

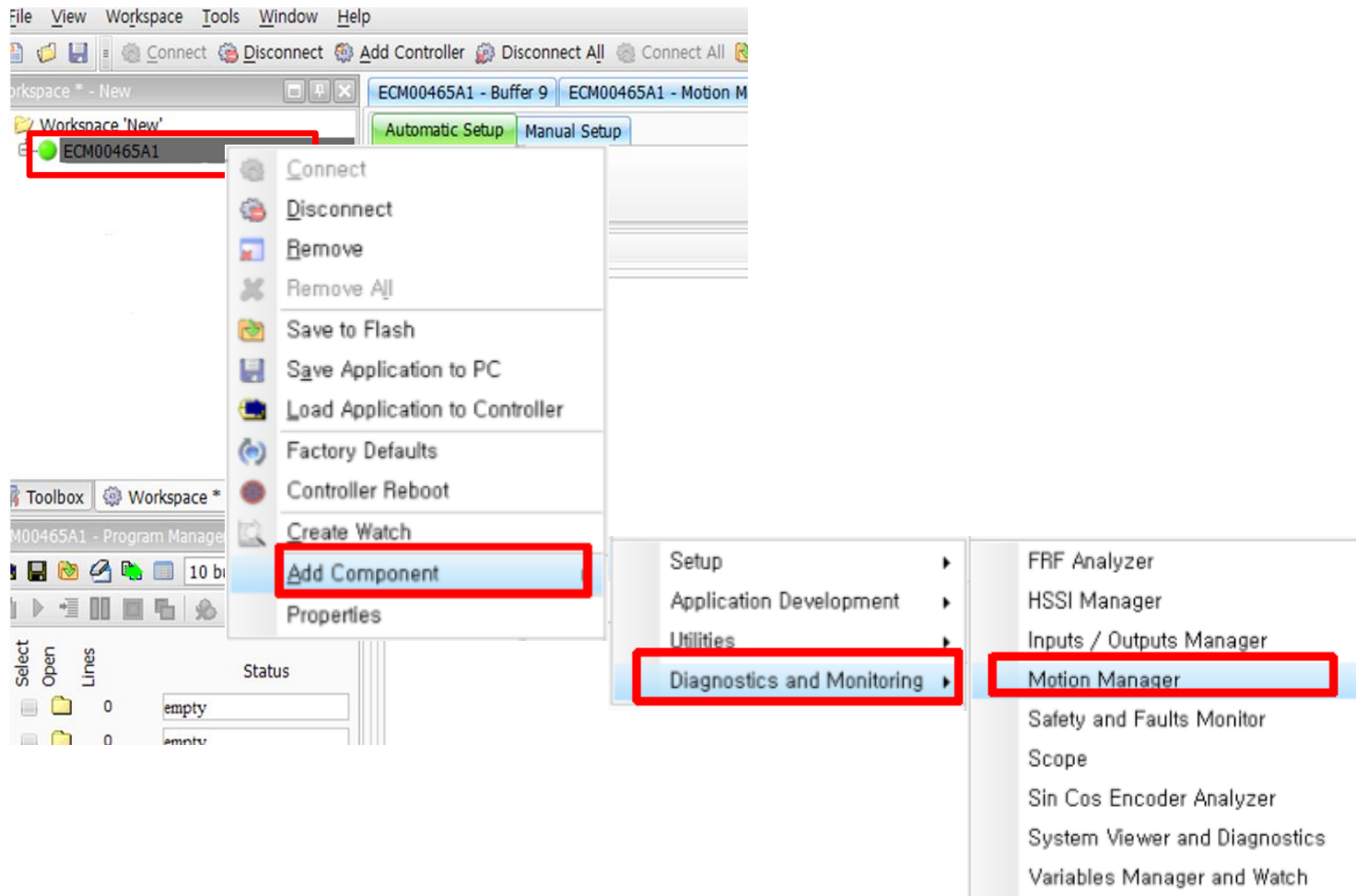
Slave Properties	
EtherCAT Slave Name	Ezi-SERVO2 EtherCAT
EtherCAT Slave Index	2
Vendor Name	FASTECH
Vendor ID	0x0FA00000
Product ID	0x00001002
Revision	0x00000001
Previous EtherCAT Slave	Index 1 (Port B)
Advanced	

Below the table is a 'Telegram Data' section with a 'Presented PDO Group' dropdown menu set to '<All>' and a table with columns: PDO Name, Type, Size, Address, and Transmit / Receive.

# 3. Program operating [MMI program execution]

## ❑ Motion Manager ( Motion operating command by using of MMI)

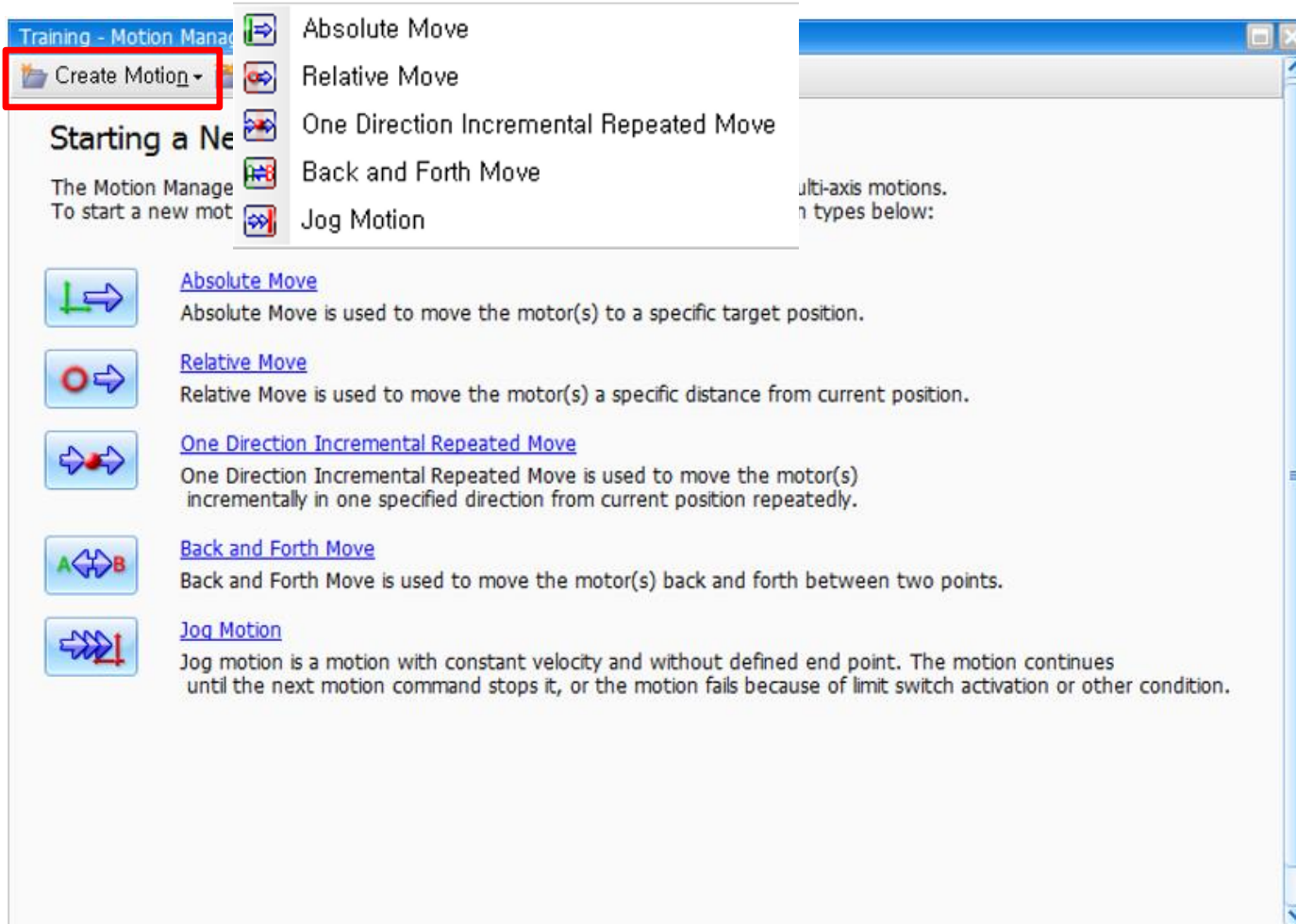
1. Activating the Motion Manager window following the path as below pic.



# 3. Program operating [MMI program execution]

## ❑ Motion Manager ( Motion operating command by using of MMI)

### 2. Select to Motion mode after click to Create Motion



# 3. Program operating [MMI program execution]

❑ Motion Manager ( Motion operating command by using of MMI)

3. Motion Manager creation check in the workspace status window

The screenshot displays the Ezzi-Servo software interface. On the left, the 'Workspace \* - New' window shows a tree view with 'Motion Manager' highlighted. The main window shows the 'ECM00465A1 - Motion Manager \*' configuration. The 'Relative Move' section is active, showing 'Axis 0' selected. The 'Move By' field is set to 10000. The 'Feedback' field is set to -0. The 'Position Error' is 0.0000. The 'Moving' status is off. The 'Accelerating' status is off. The 'In Position' status is on. The 'Motor State' is off, with an 'Enable' button. The 'Parameters' section lists the following values:

Parameter	Value
Velocity	10000
Acceleration	100000
Deceleration	100000
Kill Deceleration	100000
Jerk	2E+007

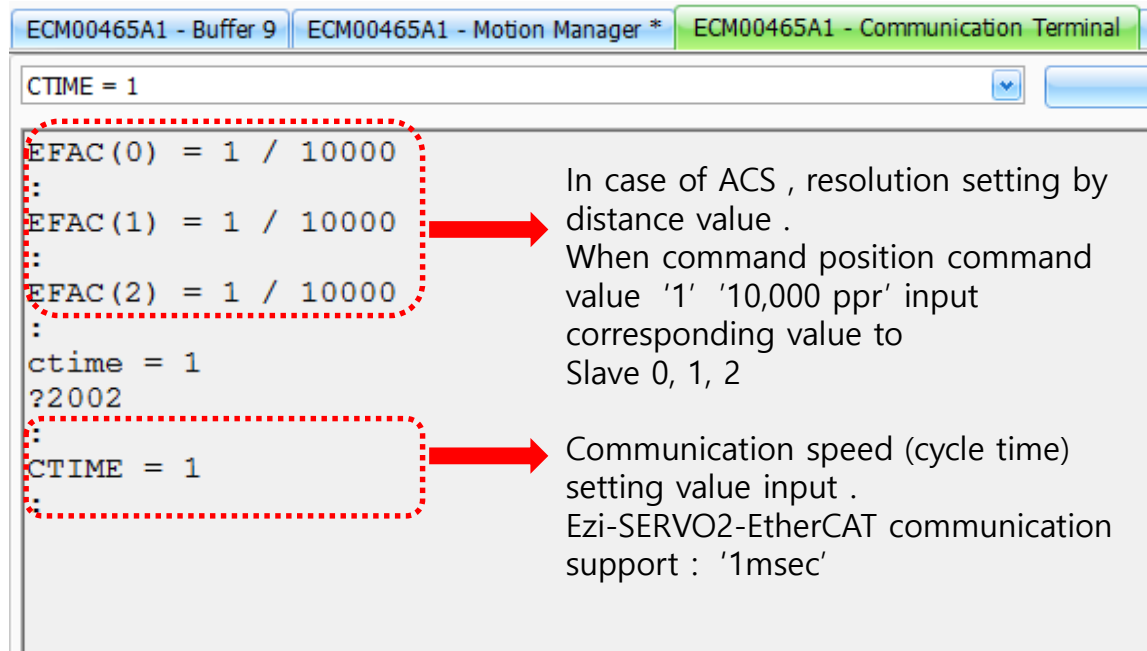
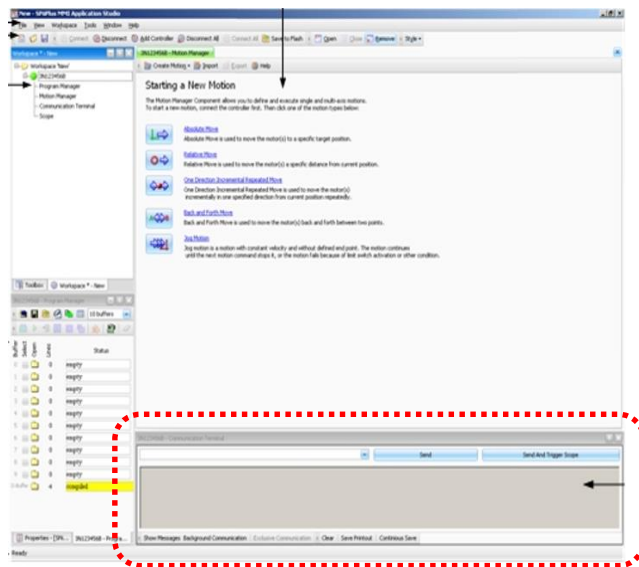
Legend:

- 1 : Velocity( Operating speed) [p/s]
- 2 : ACC(Acceleration) [p/s<sup>2</sup>]
- 3 : DEC(Deceleration) [p/s<sup>2</sup>]

# 3. Program operating [MMI program execution]

## ❑ Motion Manager ( Motion operating command by using of MMI)

### 4. Resolution & communication speed set up in window



In case of ACS , resolution setting by distance value .  
When command position command value '1' '10,000 ppr' input corresponding value to Slave 0, 1, 2

Communication speed (cycle time) setting value input .  
Ezi-SERVO2-EtherCAT communication support : '1msec'

- Terminal Window  
Parameter & command value operating by using of ACS program language



# 3. Program operating [MMI program execution]

❑ Motion Manager ( Motion operating command by using of MMI)

5. Click to Select Axis(Axes) and select activating 'Axis'

Relative Move

Axis	<input checked="" type="checkbox"/>	Axis 0	<input type="checkbox"/>	<input type="checkbox"/>
Move By	<input type="checkbox"/>	+/-	10000	
Feedback	<input type="checkbox"/>	0	-35717.0000	
Position Error			0.0000	
Moving		<input type="checkbox"/>		
Accelerating		<input type="checkbox"/>		
In Position		<input checked="" type="checkbox"/>		
Motor State		<input type="checkbox"/>	<input type="button" value="Enable"/>	

Parameters

Velocity	10000
Acceleration	100000
Deceleration	100000
Kill	100000
Deceleration	100000
Jerk	2E+007

Trigger Scope on Motion

- Axis 0
- Axis 0
- Axis 1
- Axis 2
- Axis 3
- Axis 4
- Axis 5
- Axis 6
- Axis 7



Additionally creating Axis (1), (2)

Relative Move

Axis	<input checked="" type="checkbox"/>	Axis 0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Move By	<input type="checkbox"/>	+/-	10000	<input type="checkbox"/>	+/-	10000	<input type="checkbox"/>	+/-	10000
Feedback	<input type="checkbox"/>	0	-35717.0000	<input type="checkbox"/>	0	-58036.0000	<input type="checkbox"/>	0	-7760.0000
Position Error		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000
Moving		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>	
Accelerating		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>	
In Position		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
Motor State		<input type="checkbox"/>	<input type="button" value="Enable"/>		<input type="checkbox"/>	<input type="button" value="Enable"/>		<input type="checkbox"/>	<input type="button" value="Enable"/>

Parameters

Velocity	10000	10000	10000
Acceleration	100000	100000	100000
Deceleration	100000	100000	100000
Kill	100000	100000	100000
Deceleration	100000	100000	100000
Jerk	2E+007	2E+007	2E+007

Trigger Scope on Motion

# 3. Program operating [MMI program execution]

❑ Motion Manager ( Motion operating command by using of MMI)

6. Enable -> Position information input -> Enable Motor(s) -> Start Motion

The screenshot displays the 'Relative Move' configuration window in the Motion Manager software. The window is divided into several sections:

- Menu Bar:** Create Motion, Import, Export, Help.
- Axis Configuration Table:** A table with columns for Axis 0, Axis 1, and Axis 2. Each column contains settings for Move By, Feedback, Position Error, Moving, Accelerating, In Position, and Motor State. The 'Enable' buttons for each axis are highlighted with red boxes.
- Parameters Table:** A table with columns for Axis 0, Axis 1, and Axis 2. It lists parameters such as Velocity, Acceleration, Deceleration, Kill Deceleration, and Jerk. The 'Velocity' parameter for Axis 0 is highlighted with a red box.
- Control Buttons:** A section at the bottom containing buttons for 'Enable Motor(s)', 'Start Motion', 'Select Axis(Axes)', and 'Scope Autoset'. The 'Enable Motor(s)' and 'Start Motion' buttons are highlighted with red boxes.

Axis	Axis 0	Axis 1	Axis 2
Move By	+/- 1	+/- 1	+/- 1
Feedback	-0 -35717.0077	-0 -58036.0000	-0 -7760.0000
Position Error	0.0000	0.0000	0.0000
Moving	●	●	●
Accelerating	●	●	●
In Position	●	●	●
Motor State	● Enable	● Enable	● Enable

Parameters	Axis 0	Axis 1	Axis 2
Velocity	1000	1000	1000
Acceleration	10	10	10
Deceleration	10	10	10
Kill Deceleration	100	100	100
Jerk	100	100	100

**We are a pioneer changing  
the history of step motor !!**



**Ezi-SERVO<sup>®</sup>**  
Closed Loop Stepping System